



Determinant of Students' Academic Satisfaction

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Abstract

This study aims to analyze the effect of the quality of service, educational fees, facilities and infrastructures towards the students' academic satisfaction and to analyze its influence which can be moderated by the image towards the students' academic satisfaction at the Economics and Business Faculty of STIKUBANK university. The method of the research is a quantitative approach. The population of the study are 2467 students of the Faculty of Economics and Business, University of STIKUBANK Semarang, with a total sample are 96 respondents. The data collection used is a questionnaire. The methods of data analysis are descriptive analysis and hypothesis testing with moderation regression analysis (absolute value test). The results shows that there is influence on the quality of service, educational fees, facilities and infrastructures towards the students' academic satisfaction, while the effect is positive and significant. Image variable does not moderate the effect of quality of service on the students' academic satisfaction.

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INTRODUCTION

Education is crucial for the progress of a nation, because developing a country is started with education. Sari, et al. (2017) stated that, "if the quality of education increases, so does the quality of human resources that can bring a nation to an increasingly advanced civilization."

The function of educational institutions is not only to educate but to provide qualified graduates that give the qualified workforce as well. Students should get what they want and what they expect; and to achieve that, the university must synergize between students' expectations with the vision, mission, and goals of the university.

STIKUBANK University is an educational institution that provides services to the students. The good process of learning is a learning which is supported by the good facilities and services. The existence of good facilities and services will support the quality of a university and give the academic satisfaction for the students. To achieve their expectation, the university should synergize between students' expectation and its vision, mission and organizational goals.

The results of observations regarding the students' academic satisfaction of Economic and Business Faculty, UNISBANK shows that not all students were satisfied with the friendliness of service, smooth administration, facilities and infrastructure, educational fee, and image. This shows the gap between the conditions expected by the students and the conditions obtained by them. These gaps can affect the students' academic satisfaction of the Economic and Business Faculty, UNISBANK.

The satisfaction of the consumers is the perception of consumers that their expectations have been met or exceeded (Gerson, 2004). Agreeing with Gerson, Kotler dan Keller (2008) stated that, "customers satisfaction is the level of feeling in which someone states the results of the comparison of the performance of products or services received and expected." Someone with a high level of satisfaction indicates a positive attitude. Conversely, someone who is dissatisfied with his job indicates a negative attitude. This theory is based on the satisfaction theory of assimilation-contrast theory by Fandi Tjiptono.

Another factor that influences satisfaction is the educational fee. It is a problem that cannot be completely resolved. Education funding is an essential component and cannot be separated in the teaching-learning process. Ramadhan & Kardoyo (2019) said that, "without the support of the educational fee, the process of organizing education will not go well." There is almost no educational effort that can ignore the role of costs, so it can be said that without costs, the educational process in the school will not run Nafisah, et al. (2017).

The university management must be able to manage the funds obtained from university stakeholders, especially students, to provide various facilities that can improve the convenience and comfort in accordance with the students' needs. Not only the cost of education, facilities and infrastructure are the factors that expedite the implementation of learning. Ferdi (2013) stated that, "educational facilities are equipment that are directly used and support the educational process, especially teaching and learning processes such as buildings, classrooms, tables and chairs, as well as learning tools and media, and educational infrastructure is a learning facility that indirectly supports the course of the process of education or teaching such as the yard, garden, school garden, and the road to the university. "

Every higher education wants a good image in the society. To build a good image doesn't just build a name, but also the quality of services which is very important. When students receive the good quality of services, the community will be happy and the experience will make them return to use the service again. Companies must realize that customer service is basically the heart and soul of brands (Knapp, 2000).

This research is expected to be able to measure students' academic satisfaction and provide knowledge about academic satisfaction, quality of service, facilities and infrastructures, educational fee, and image. So that, what the community expects can be achieved. This study aims to analyze the effect of the quality of service, educational fees, facilities and infrastructures towards the students' academic satisfaction and to analyze its influence which can be moderated by the image towards the students' academic

satisfaction at the Economics and Business Faculty of STIKUBANK university.

METHODS

This method of the research is quantitative methods. Descriptive analysis and moderation regression analysis are used to analyze the data. The population of this study are 2467 students of the Faculty of Economics and Business at UNISBANK. The sampling technique used is cluster stratified random sampling. Determination of the number of samples from the population in this study uses the slovin formula for an error rate of 10% obtained a total sample of 96 students consisting of students in the 5th and 7th semester.

The variables used in this study consist of the dependent variable: students' academic satisfaction (Y); the independent variable: quality of service (X1), educational fee (X2), infrastructures (X3); and the moderation variable: image (X4). The data collection method uses a questionnaire and Likert scale. The questionnaire method is used to obtain information related to quality of service, educational fees, facilities, infrastructure, images, and students' academic satisfaction. The measurement technique used is a likert scale with a score range of 1 to 5.

The method of data analysis uses descriptive statistical analysis and inferential statistics. The classic assumption test includes the normality test, the multicollinearity test, the heteroscedasticity test, and the linearity test. Regression analysis moderation of the absolute difference in value used in this study is to analyze the image as a moderating variable on students' academic satisfaction. These are the equation models in this study:

$$Y = \alpha + \beta_1X_1 + \beta_2X_4 + \beta_3 |X_1-X_4| \dots\dots\dots(1)$$

$$Y = \alpha + \beta_4X_2 + \beta_5X_4 + \beta_6 |X_2-X_4| \dots\dots\dots(2)$$

$$Y = \alpha + \beta_7X_3 + \beta_8X_4 + \beta_9 |X_3-X_4| \dots\dots\dots(3)$$

RESULTS AND DISCUSSION

The results of this study is the descriptive analysis to explain the variables; those variables are the quality of service as X1, educational fee as X2, facilities and infrastructures as X3, image as X4, and students' academic satisfaction as Y. The

following table is a descriptive analysis of each variable.

Table 1. Results of Descriptive Analysis of the Research Variables

Variables	Mean	Category
Students' Academic Satisfaction	34.29	Satisfied
Quality of Service	51.80	Very Good
Educational Fee	33.58	Affordable
Facilities and Infrastructures	59.68	Very Good
Image	35.29	Very Good

Source: Research data processed in 2019

From Table 1, it can be seen that the results of descriptive analysis in this study indicate that students' academic satisfaction has an average of 34.29 in the satisfied category. The Quality of service has an average of 51.80 in the very good category. Educational fee has also average of 33.58 in Affordable. Facilities and infrastructures have an average of 59.68 in the very good category, and image has an average of 35.29 in the very good category.

Based on the results of the quality of service variable, the data shows that the students feel that the quality of services provided by Economic and Business Faculty of UNISBANK is very good. This is proved by the results of the descriptive analysis which shows that 51.80 quality of service is included in the excellent category.

The result of the study of educational fee variable shows that the Economic and Business Faculty students feel that the cost of education is quite good. This is proved by the average result of 33.58 which falls into the good category.

Based on the results of a descriptive analysis of facilities and infrastructures at Economic and Business Faculty of UNISBANK, it is stated that 35.29 of facilities and infrastructures are classified as very good category. This illustrates that the facilities and infrastructure in Economic and Business Faculty, UNISBANK have been very good in increasing students' academic satisfaction.

In this study a classical assumption test was carried out consisting of a normality test, a multicollinearity test, a heteroscedasticity test, and a linearity test. Normality test aims to test whether in the regression model, confounding or residual variables have a normal distribution or not (Ghozali, 2013). Test for normality in this study

using the P-P plot Plots around the diagonal line. Based on the graph it was found that the points are scattered and are around diagonal lines and follow the direction of diagonal lines so that it can be concluded that the data is normally distributed. According to Ghozali (2013) linearity test is needed to see whether the specifications of the model used are correct or not. Linearity test in this study obtained the results that can be seen in the Linearity column on the ANOVA Table.

Based on the results of the linearity test between variables X1 and Y, it shows the significance in the Linearity column of 0,000; between the variables X2 and Y, it also shows the significance in the Linearity column of 0,000; between the variables X3 and Y, the significance in the Linearity column of 0,000 is obtained; between variables X4 and Y, the significance in Linearity column of 0,000 is also obtained. So, it can be concluded that between variables X1, X2, X3, and X4 have a linear relationship with the Y variable, because the significant value in the Linearity column of each variable of independent and the dependent variable is <0.05 .

Multicollinearity test is used to test whether the regression model has a correlation between independent variables or not. Multicollinearity test results can be seen that the tolerance value of X1 is 0.715, X2 is 0.545, X3 is 0.574, and X4 is 0.596. If the tolerance value > 0.1 and VIF < 10 then a data is free from multicollinearity. VIF value in this study is smaller than 10. So, it can be concluded that the data in this study are free from multicollinearity because the Tolerance value of the independent variable is greater than 0.1 and VIF is smaller than 10.

Heteroscedasticity test aims to test whether in the regression model there is an inequality of variance from one residual observation to another or not (Ghozali, 2013). Heteroscedasticity test in this study uses scatterplot graphs, and it is said that heteroscedasticity does not occur if the points spread evenly.

Based on the results of the study, it is found that the points spread evenly both above and below the number 0 on the Y axis and it can be concluded that the data in this study did not occur the heteroscedasticity.

The results of the study through the t test showed that the quality of service variable has a

significance value of $0.00 < 0.05$. So, it can be said that H1 was received significantly.

The partial determination test results indicate that the magnitude of the effect of quality of service on students' academic satisfaction is 20.25%, and it can be interpreted that the quality of service variable affects the students' academic satisfaction by 20.25%. These results indicate that the quality of service at Economic and Business Faculty of UNISBANK can affect 20.25% on students' satisfaction. The higher the quality of Economic And Business Faculty services, the higher the academic satisfaction of the students. On the contrary, the lower the quality of Economic and Business Faculty services, the lower the academic satisfaction of the students.

Then these results are also in line with the theory of Tjiptono (2017) which stated that the quality of service can affect sustainable competitiveness in which companies must seek services that can provide satisfaction to consumers, satisfying service is the attitude and way of employees serving consumers satisfactorily. The results of this study are consistent with the research conducted by Rusdarti (2019) stating that the contribution of quality of service to students' academic satisfaction is 50.5%. The results are marked positively, which means that better quality of service will increase academic satisfaction of UNNES Postgraduate Program students. This is also in accordance with research conducted by Wijaya, Said, and Landra (2016) which obtained the results that academic quality of service has a positive and significant effect on the students' satisfaction. The results of this study are consistent with research findings by Rinala, Yudana, dan Natajaya (2013), Hartanto, Rusdarti, Yanto, dan Purwanti (2019) Budiarti, Supriyanto, dan Sunandar (2018), Suharyanto (2018) who stated that the quality of academic services has a positive and significant effect on students' satisfaction.

Based on the research results of hypothesis 2 test, it is known that the cost of education has an effect on students' academic satisfaction of the Economic and Business Faculty at UNISBANK. The statement is based on the results of the t test that the educational fee variable (X2) has a significant level of $0.00 < 0.05$. So, it can be said that H2 is received significantly and there is

influence of educational fee on students' academic satisfaction. The results showed that the effect of educational fee on students' academic satisfaction was based on the results of the partial coefficient test influencing 21.25%. The better the tuition fees of Economic and Business Faculty of UNISBANK, the higher the academic satisfaction of students, and vice versa, the more inappropriate the educational fee at Economic And Business Faculty, UNISBANK, the lower the academic satisfaction of the students. Organizing good educational fee will optimize university services for the students and the community, but conversely if organizing tuition fees is not optimal then all forms of university services will not provide academic satisfaction to students.

The results of this study are in line with the research by Suharyanto (2018), Suhaylide (2014) and Wijaya et al. (2016) that the cost of education has a positive and significant impact on the student satisfaction.

Based on the research of hypothesis 3, it is known that the facilities and infrastructure has an effect on the students' academic satisfaction of the Economic and Business Faculty, UNISBANK. The statement is based on the results of the t test, namely the variable means of facilities and infrastructure (X3) has a significance level of 0.00 <0.05. So that, it can be said that H3 is significantly accepted and there is influence between facilities and infrastructures on students'

academic satisfaction. The magnitude of the influence of infrastructure on students' academic satisfaction is based on the results of the partial determinant coefficient test influencing 24.40%. The better the facilities of Economic and Business Faculty UNISBANK, the higher the academic satisfaction of students, and vice versa, the facilities provided are not comprehensive and do not support the students' learning activities of Economic and Business Faculty of UNISBANK, the lower the academic satisfaction of students.

The results of this study are in line with research conducted by Wijaya et al., (2016), Bachtiar (2011), Ashraf, Osman, dan Ratan (2016), Kriswandari (2011), Martirosyan (2015), Weerasinghe dan Fernando (2017) that the cost of education has a positive and significant impact on students' satisfaction.

This study uses the absolute difference value test to examine the effect of moderating variables in moderating the effect of independent variables on the dependent variable. If the significance value is smaller than alpha 0.05, the moderating variable is stated to moderate the effect of the independent variable on the dependent variable. However, if a significance value of greater than alpha 0.05 is obtained, the moderating variable is declared unable to moderate the effect of the independent variable on the dependent variable.

Table 2. Test Results for Absolute Difference Value Model 1

Variables	Koef.Reg	S.E	t-hitung	Sig.	Information
Constant	34.654	0.353	98.193	0.000	-
Zscore(X1)	0.763	0.236	3.228	0.002	Significant
Zscore(X4)	1.350	0.237	5.692	0.000	Significant
Moderating_1	-0.413	0.316	-105	0.194	Not Significant
R ² =0.413	<i>Adjusted R² = 0.394</i>		Fhitung = 21.613		

Source: SPSS Output, 2019.

$$Y = 34.654 + 0.763X_1 + 1.350X_4 + (-0.413) |X_1-X_4| \dots\dots\dots(4)$$

The value of constants based on model 1 equation is 34,654 which means that the variables X1, X4 and | X1-X4 | 0 value or other factors that affect academic satisfaction are considered permanent, then the academic satisfaction of students is worth 34,654. Variable | X1-X4 | in this equation is the absolute value of the difference zscore of quality of service (X1) with zscore of

image variable as a moderating variable (X4) has a negative regression coefficient value of -0.413. This value indicates that the image cannot strengthen the effect of quality of service on students' academic satisfaction.

The significance value of the variable | X1-X4 | is 0.194 which means that this significance value is greater than alpha 0.05 and it is stated that the presence of image moderation

variables cannot strengthen the effect of quality of service on students' academic satisfaction.

Based on the test results the absolute difference in model 1 shows that the standardized image variable has a significance level of $0.00 < 0.05$ and the difference between standardized quality of service and standardized image values shows a significant value of $0.194 > 0.05$. Then it can be concluded that the image variable is not a moderating variable and H4 is rejected. The moderating coefficient which is negative shows that the image variable is not able to strengthen the effect of quality of service on students' academic satisfaction.

If the quality of service of Economic and Business Faculty at UNISBANK has a positive image, students will support, participate, play an active role, and take other positive actions so that students' academic satisfaction increases. Based on the results of this study, the public image of Economic and Business Faculty, UNISBANK

cannot moderate the quality of services to the students' satisfaction. The image formation model shows how external stimuli are organized and affect responses. Students get a stimulus that comes from outside the university and will affect the response. Students will feel satisfied if they get good experience and information about the university, but if they get bad experience and information about the university, students will be less satisfied or even dissatisfied.

Stimulus given to individuals can be accepted or rejected. If the stimulus is rejected then the next process will not run. The stimulus obtained by each individual regarding UNISBANK was rejected, so that this result was due to the students' satisfaction regarding the quality of service felt directly when conducting lectures so that it could not be influenced by stimuli originating from inside or outside university.

Table 3. Model 2 Absolute Difference Test Results

Variabel	Koef.Reg	S.E	t-hitung	Sig.	Information
Konstanta	33.684	0.362	93.041	0.000	-
Zscore(X2)	0.802	0.279	2.880	0.005	Signifikan
Zscore(X4)	1.190	0.265	4.495	0.000	Signifikan
Moderasi_2	0.811	0.383	2.119	0.037	Signifikan
$R^2=0.401$	<i>Adjusted R</i> ² = 0.381		Fhitung = 20.504		

Source: SPSS Output, 2019

$$Y = 33.684 + 0.802X_2 + 1.190X_4 + 0.811 |X_2 - X_4| \dots\dots\dots(5)$$

Value of constants based on model 2 equation is 33,684 which means that if the variables X2, X4, and $|X_2 - X_4| = 0$ value or other factors that affect students' academic satisfaction are considered permanent, then students' academic satisfaction is worth 33.684.

Variable $|X_2 - X_4|$ in this equation is the absolute value of the difference between the zscore of educational fees variable (X2) with zscore of image variables (X4) has a positive regression coefficient value of 0.811. This value shows that the image can strengthen the effect of educational costs on students' academic satisfaction. Thus, it means that the better the cost of education is supported by a good image, the academic satisfaction of students will increase. The significance value of the variable $|X_2 - X_4|$ is 0.037 which means that this significance value is

smaller than alpha 0.05 and it is stated that the presence of image moderation variables can strengthen the effect of educational fees on students' academic satisfaction.

Based on the test results of the absolute difference in model 2, it can be seen that the standardized image variable has a significance level of $0.00 < 0.05$ and the difference between the standardized educational fees and image shows a significance value of $0.037 < 0.05$. Then it can be concluded that the image variable is a moderating variable and H4 is accepted. The positive coefficient of the difference between standardized educational fee and standardized image shows that moderating variables can strengthen the quality of service to the students' academic satisfaction.

Based on descriptive statistics the image is in the very good category that is equal to 35.29 comparable to the descriptive academic

satisfaction of students as much as 34.29 in the good category, and the cost of education is 33.58 in the good category. If educational fees at the Business and Economic Faculty of UNISBANK have a positive image, students will support, participate, play an active role, and carry out other positive actions so that students' academic satisfaction increases.

The image formation model shows how external stimuli are organized and affect responses. Students get a stimulus that comes from outside university and will affect the

response. Students will feel satisfied if they get good experience and information about the university. But if students get bad experience and information about the university, students will be less satisfied or even dissatisfied. Stimulus given to individuals can be accepted or rejected. If the stimulus is rejected then the next process will not run. Descriptive results show that the Economic and Business Faculty image of UNISBANK is very good. This shows where external stimulus is organized and affects students' academic satisfaction in response to that image.

Table 4. Model 3 Absolute Difference Test Results

Variabel	Koef.Reg	S.E	t-hitung	Sig.	Information
Konstanta	33,609	0,339	99,170	0,000	-
Zscore(X3)	0,843	0,280	3,013	0,003	Signifikan
Zscore(X4)	1,007	0,282	3,572	0,001	Signifikan
Moderasi_3	1,003	0,381	2,631	0,010	Signifikan
R ² =0,418 Adjusted R ² = 0,399 Fhitung = 21,993					

Source: SPSS Output, 2019.

$$Y = 33.609 + 0.843X_3 + 1.007X_4 + 1.003 |X_3_X_4| \dots \dots \dots (6)$$

Value of constants is based on model 1 equation that is 33,609 which means that if the variables X3, X4, and | X3_X4 | 0 value or other factors that affect students' academic satisfaction are considered permanent, then the interest in students' academic satisfaction is 33,609.

Variable | X3_X4 | in this equation is the absolute value of the difference zscore of facilities and infrastructures variable (X3) with zscore image variable (X4) has a positive regression coefficient value of 1.003. This value shows that image can strengthen the influence of facilities and infrastructures on students' academic satisfaction. Therefore, the better the facilities and infrastructures that is supported by a good image, the academic satisfaction of students will increase. The significance value of the variable | X3_X4 | is 0.010 which means that this significant value is smaller than alpha 0.05 and it is stated that the presence of image moderation variables can strengthen the influence of infrastructure on students' academic satisfaction.

Based on the test results of the absolute difference in model 3 it can be seen that the standardized image variable has a significance level of 0.001 <0.05 and the difference between the standardized infrastructure and standardized

image shows a significance value of 0.010 <0.05. Then it can be concluded that the infrastructure variable is a moderating variable and H4 is accepted. The positive coefficient of the difference between the standardized facilities and infrastructures and standardized image shows that the moderating variable can strengthen the facilities and infrastructures towards students' academic satisfaction.

Based on descriptive statistics the image is in the very good category that is equal to 35.29 comparable to the descriptive academic satisfaction of students as much as 34.29 in the good category, and facilities and infrastructures by 59.68 in the very good category. The results of this study prove that the image of the Economic and Business Faculty of UNISBANK in the community can influence student satisfaction. If the facilities and sinfrastructures at the Economic and Business Faculty of UNISBANK has a positive image, students will support, participate, play an active role, and take other positive actions so that students' academic satisfaction increases.

The image formation model shows how external stimuli are organized and affect responses. Students get a stimulus that comes from outside the university and will affect the response. Students will feel satisfied if they get good experience and information about the

university. But if students get bad experience and information about the university, students will be less satisfied or even dissatisfied. Stimulus given to individuals can be accepted or rejected. If the stimulus is rejected then the next process will not run. Descriptive results show that the Economic And Business Faculty image of UNISBANK is very good. This shows where external stimulus is organized and affects students' academic satisfaction in response to that image.

CONCLUSION

There is a positive and significant influence on the quality of service on students' academic satisfaction. Then the better the quality of service at the Economic And Business Faculty, UNISBANK, the academic satisfaction of students will increase.

There is a positive and significant influence of the cost of education on students' academic satisfaction. The more affordable the cost of education, the higher the academic satisfaction of students.

There is a positive and significant influence of facilities and infrastructures on students' academic satisfaction. The better the facilities and infrastructure at Economic And Business Faculty, UNISBANK, the higher the level of academic satisfaction of students will increase.

Image is not able to strengthen the effect of quality of service on students' academic satisfaction. Image is able to strengthen the effect of education costs on students' academic satisfaction. Image is able to strengthen the influence of infrastructure on students' academic satisfaction.

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