

CHAPTER IV

RESEARCH RESULTS AND DISCUSSION

A. General Description of Objective and Subjective Research

1. General Description of Objective Research

Autocare Universitas Muhammadiyah Yogyakarta (Autocare UMY) is one of the business units built by the Universitas Muhammadiyah Yogyakarta (UMY). Autocare UMY is a business unit engaged in the automotive field. Service hours at Autocare UMY start at 8 A.M to 4 P.M from Monday to Saturday. Autocare UMY in its field has services such as car wash, motorcycle wash, and carpet cleaning for the UMY community as well as the public. This service is aimed at the UMY community, including students, lecturers and UMY employees and also the general public. Autocare Universitas Muhammadiyah Yogyakarta is located on the Universitas Muhammadiyah Yogyakarta's Campus, Geblagan, Tamantirto, Yogyakarta, Bantul, Special Region of Yogyakarta, 55184. The location of Autocare UMY is still within the UMY campus environment.

The Autocare UMY business unit began to be established on January 1, 2014. However, the introduction of Autocare UMY was carried out several weeks before it was officially launched. This was done at the vehicle exhibition event conducted by BMT UMY. The

exhibition was held on December 26-28 2013 at the Sportorium Universitas Muhammadiyah Yogyakarta.

The presence of Autocare UMY can make UMY's revenue in the non-tuition fee sector increase. Where, the non-tuition fee sector is revenue generated from business units created by Universitas Muhammadiyah Yogyakarta, one of which is Autocare UMY.

2. General Description of Subjective Research

The subjects of this study were the Universitas Muhammadiyah Yogyakarta community and the general public. The groups that can be categorized as the people of the Universitas Muhammadiyah Yogyakarta (UMY) are students, lecturers, and employees who are at UMY. While the general public is a group of individuals outside Universitas Muhammadiyah Yogyakarta.

3. Description of Respondents

The sample of this study were students, lecturers, employees who were at Universitas Muhammadiyah Yogyakarta (UMY), and the general public outside the UMY. The determination of the sample in this study used a purposive sampling technique by distributing questionnaires. Then, the number of respondents or samples is determined according to the Slovin formula. The results of the Slovin formula calculation show that there are 99 respondents in this study. The profiles of 99 respondents in this study include:

a. Characteristic of Respondent Based on Gender

Table 4.1 below shows the characteristic of respondents based on gender namely male and female.

Table 4.1
Characteristic of Respondent Based On Gender

Gender	Frequency	Percent
Male	63	63.6%
Female	36	36.4%
Total	100	100%

Source: Appendix 1

Table 4.1 shows that from 99 respondent in this research there are female respondents as many as 63 people with percentage 63.4%. While, the male respondents as many as 36 people with percentage 36.6%. Then, it can be concluded that the most respondents in this research is female.

b. Characteristic of Respondent Based on Age

Here is the characteristic of respondent based on age showed in table 4.2 below.

Table 4.2
Characteristic of Respondent Based On Age

Age	Frequency	Percent
18-21	76	76.8%
22-25	10	10.1%
26-29	1	1%
Above 30	12	12.1%
Total	99	100%

Source: Appendix 2

Table 4.2 above shows from 99 respondents in this research, the respondents who is in the age around 18-21 years old as much as 76 people or 76.8%. The respondents with the age around 22-25 years old as much as 10 people or 10.1%. Then, 1 person or 1% for the respondent who is in the age around 26-29 years old. 12 people or 12.1% for the respondents who in the age of above 30 years old. In this study, the respondents in the age around 18-21 years old has the highest number.

c. Characteristic of Respondent Based On Jobs

The characteristic of respondent based on jobs status can be seen in table 4.3 below.

Table 4.3
Characteristic of Respondent Based on Jobs

Jobs	Frequency	Percent
Student of UMY	85	85.9%
Employee of UMY	9	9.1%
Lecturer of UMY	2	2.0%
Other	3	3.0%
Total	99	100%

Source: Appendix 3

Table 4.3 above shows the amount of respondents that has student of Universitas Muhammadiyah Yogyakarta (UMY) status is 85 people with the percentage 85,9%. The respondents that has the status of UMY's lecturer is 2 people with the percentage of 2%. While the respondents with UMY's employees is 9 people or 9.1%. Then, the respondents that choose option "other" reach 3% or 3

people. The respondents who chooses the “other” option is those who is from the general public or outside of UMY environment. So, based on the data in table 4.3 it shows the highest respondents are from the student of Universitas Muhammadiyah Yogyakarta.

d. Characteristic of Respondent Based on Frequency of Using Autocare Universitas Muhammadiyah Yogyakarta

The characteristic of respondent based on the frequency of using Autocare Universitas Muhammadiyah Yogyakarta showed in table 4.4 below.

**Table 4.4
Characteristic of Respondent Based On
Frequency of Using Autocare
Universitas Muhammadiyah Yogyakarta**

Frekuensi of Use/week	Frequency	Percent
1x /week	77	77.8%
2x /week	20	20.2%
3x /week	2	2.0%
4x /week	0	0%
5x /week	0	0%
Total	99	100%

Source: Appendix 4

In table 4.4 above shows that of the 99 respondents in this study, there were 77 people or 77.8% who used the services of Autocare UMY within a period of 1 time a week. Meanwhile, respondents who used the services of Autocare UMY within a period of 2 times a week were 20 people or 20.2%. Then, respondents with the frequency of using UMY Autocare services 3

times a week are 2 people or 2%. Then, respondents with a frequency of 4 times a week were 0 people or 0%. Whereas for respondents with a frequency of 5 times or more in a week as many as 0 people or 0%. Thus, the most frequent frequency of respondents using the Autocare UMY service is once a week.

B. Result of Instrument and Data Quality Test

The instrument and data quality test aims to determine whether the instrument that used in this study are valid and reliable or not. In this study there were 20 statements related to variables in this study which had 99 respondents. There are 4 statements that represent each variable used in this study. Then, the data obtained is processed using the Statistical Product and Service Solutions (SPSS) version 21.

1. Result of Quality Instrument Test

The results obtained from testing the quality of the instrument with a validity test and a reliability test using SPSS version 21 can be seen in tables below.

a. Validity Test

According to Basuki and Imamudin (2017), if the value of KMO (Keiser-Meyer-Olkin) and Bartlett's Test is greater than 0,50, it means the instrument is valid ($KMO > 0,50$), the anti image's value is higher than 0,50 and the factor of loading of instruments is higher than 0,50.

In the questionnaire used in this study, there were 4 statements to represent each independent variable, namely Service Quality (X_1), Price (X_2), Corporate Image (X_3), and Location (X_4) and the dependent variable namely Customer Satisfaction (Y). The following are the results of the validity test in this study:

a) The Result of Validity Test for Service Quality (X_1)

Table 4.5 below shows the results of the validity test for service quality (X_1).

Table 4.5
KMO and Bartlett's Test for Service Quality (X_1)

Keiser-Meyer-Olkin Measure of Sampling Adequacy.		.714
Bartlett's Test of Sphericity	Approx. Chi-Square	84.940
	df	6
	Sig.	.000

Source: Appendix 5

Based on table 4.5, every indicators that represents the service quality variable is declared valid. It can be seen in the value of KMO is greater than 0,50 ($0,714 > 0,50$).

Table 4.6
Anti-image Matrices for Service Quality (X_1)

	X1.1	X1.2	X1.3	X1.3
Anti-image Correlation	.809^a	-,239	-,167	-,123
	-,239	.664^a	-,521	-,125
	-,167	-,521	.673^a	-,132
	-,123	-,125	-,132	.846^a

Source: Appendix 6

Table 4.6 shows that the anti-image correlation have a high correlation for each instrument that represent the variable of

service quality which are 0.809, 0.664, 0.673, 0.846 where those number are higher than 0.50. Then, it can be concluded that the instruments are valid.

Table 4.7
Total Variance Explained for Service Quality (X₁)

Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	2,204	55,092	55,092

Sources: Appendix 7

Total variance explained on table 4.7 shows that the instruments that used, the result of extraction of SPSS become 1 factor with the ability to explain the construct of 55,09%.

Table 4.8
Component Matrix for Service Quality (X₁)

	Component
	1
X1.1	,705
X1.2	,834
X1.3	,820
X1.4	,583

Source: Appendix 8

Table 4.8 shows all of the instruments has factor of loading is more than 0,50. So, it can be conclude that every instruments are valid.

b) The Result of Validity Test for Price (X₂)

The results of the validity test for price (X₂) can be seen in table 4.9.

Table 4.9
KMO and Bartlett's Test for Price (X₂)

Keiser-Meyer-Olkin Measure of Sampling Adequacy.		.827
Bartlett's Test of Sphericity	Approx. Chi-Square	190.070
	df	6
Sig.		.000

Source: Appendix 9

Table 4.9 shows every indicators that represents the price variable is declared valid. It can be seen in the value of KMO is greater than 0,50 ($0,827 > 0,50$).

Table 4.10
Anti-image Matrices for Price (X₂)

	X2.1	X2.2	X2.3	X2.3
Anti-image	.867^a	-,282	-,254	-,119
Correlation	-,282	.803^a	-,307	-,382
	-,254	-,307	.827^a	-,318
	-,119	-,382	-,318	.822^a

Sources: Appendix 10

Table 4.10 shows the anti-image correlation have a high correlation for each instrument that represent the variable of price which are 0.867, 0.803, 0.827, 0.822 where those number are higher than 0.50. Then, it can be concluded that the instruments are valid.

Table 4.11
Total Variance Explained for Price (X₂)

Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	2,894	72,339	72,339

Sources: Appendix 11

Total variance explained on table 4.11 shows that the instruments that used, the result of extraction of SPSS become 1 factor with the ability to explain the construct of 72,33%.

Table 4.12
Component Matrix for Price (X₂)

	Component
	1
X2.1	,804
X2.2	,879
X2.3	,864
X2.4	,853

Source: Appendix 12

Table 4.12 shows all of the instruments has factor of loading is more than 0,50. So, it can be conclude that every instruments are valid.

c) The Result of Validity Test for Corporate Image (X₃)

Table 4.13 below shows the results of the validity test for the corporate image (X₃).

Table 4.13
KMO and Bartlett's Test for Corporate Image (X₃)

Keiser-Meyer-Olkin Measure of Sampling Adequacy.		.722
Bartlett's Test of Sphericity	Approx. Chi-Square	152.391
	df	6
Sig.		.000

Source: Appendix 13

Based on table 4.13, it shows that every indicators that represents the corporate image variable is declared valid. It can

be seen in the value of KMO is greater than 0,50 (0,722 > 0,50).

Table 4.14
Anti-image Matrices for Corporate Image (X₃)

	X3.1	X3.2	X3.3	X4.3
Anti-image Correlation	.758^a	-,384	-,219	-,364
	-,384	.691^a	-,306	,194
	-,219	-,306	.741^a	-,476
	-,364	,194	-,476	.682^a

Sources: Appendix 14

Table 4.14 shows the anti-image correlation have a high correlation for each instrument that represent the variable of corporate image which are 0.758, 0.691, 0.741, 0.682 where those number are higher than 0.50. Then, it can be concluded that the instruments are valid.

Table 4.15
Total Variance Explained for Corporate Image (X₃)

Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	2,609	65,218	65,218

Sources: Appendix 15

Total variance explained on table 4.15 shows that the instruments that used in this research, the result of extraction of SPSS become 1 factor with the ability to explain the construct of 65,21%.

Table 4.16
Component Matrix for Corporate Image (X₃)

	Component
	1
X3.1	,861
X3.2	,699
X3.3	,868
X3.4	,791

Source: Appendix 16

Table 4.16 shows all of the instruments has factor of loading is more than 0,50. So, it can be conclude that every instruments are valid.

d) The Result of Validity Test for Location (X₄)

Table 4.19 below shows the results of the validity test for the location (X₄).

Table 4.17
KMO and Bartlett's Test for Location (X₄)

Keiser-Meyer-Olkin Measure of Sampling Adequacy.		.785
Bartlett's Test of Sphericity	Approx. Chi-Square	141.638
	df	6
	Sig.	.000

Source: Appendix 17

Based on table 4.17, it shows that every indicators that represents the location variable is declared valid. It can be seen in the value of KMO is greater than 0,50 ($0,785 > 0,50$).

Table 4.18
Anti-image Matrices for Location (X₄)

	X4.1	X4.2	X4.3	X4.4
Anti-image Correlation	.796^a	-,318	-,073	-,340
	-,318	.766^a	-,424	-,148
	-,073	-,424	.776^a	-,278
	-,340	-,148	-,278	.806^a

Sources: Appendix 18

Table 4.18 shows the anti-image correlation have a high correlation for each instrument that represent the variable of location which are 0.796, 0.766, 0.776, 0.806 where those number are higher than 0.50. Then, it can be concluded that the instruments are valid.

Table 4.19
Total Variance Explained for Location (X₄)

Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	2,651	66,274	66,274

Sources: Appendix 19

Total variance explained on table 4.19 shows that the instruments that used in this research, the result of extraction of SPSS become 1 factor with the ability to explain the construct of 66,27%.

Table 4.20
Component Matrix for Location (X₄)

	Component
	1
X4.1	,797
X4.2	,839
X4.3	,812
X4.4	,807

Source: Appendix 20

Table 4.20 shows all of the instruments has factor of loading is more than 0,50. So, it can be conclude that every instruments are valid.

e) The Result of Validity Test for Customer Satisfaction (Y)

Table 4.21 shows the results of the validity test for customer satisfaction (Y).

Table 4.21
KMO and Bartlett's Test for Customer Satisfaction (Y)

Keiser-Meyer-Olkin Measure of Sampling Adequacy.		.685
Bartlett's Test of Sphericity	Approx. Chi-Square	94.806
	df	6
Sig.		.000

Source: Appendix 21

Based on table 4.21, it shows that every indicators that represents the customer satisfaction variable is declared valid. It can be seen in the value of KMO is greater than 0,50 (0,685 > 0,50).

Table 4.22
Anti-image Matrices for Customer Satisfaction (Y)

	Y.1	Y.2	Y.3	Y.4
Anti-image Correlation	.756 ^a	-.364	-.149	-.197
	-.364	.653 ^a	-.015	-.521
	-.149	-.015	.727 ^a	.006
	-.197	-.521	.006	.686 ^a

Sources: Appendix 22

Table 4.22 shows the anti-image correlation have a high correlation for each instrument that represent the variable of customer satisfaction which are 0.756, 0.653, 0.727, 0.686 where those number are higher than 0.50. Then, it can be concluded that the instruments are valid.

Table 4.23
Total Variance Explained for Customer Satisfaction (Y)

Component	Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	2,790	69,759	69,759
2	1,007	25,124	78,765

Sources: Appendix 23

Total variance explained on table 4.23 shows that the instruments that used in this research, the result of extraction of SPSS become 1 factor with the ability to explain the construct of 78,765%.

Table 4.24
Component Matrix for Customer Satisfaction (Y)

	Component	
	1	2
Y.1	,800	,087
Y.2	,840	,013
Y.3	,861	,997
Y.4	,839	-,075

Source: Appendix 24

Table 4.24 shows all of the instruments has factor of loading is more than 0,50 except the instrument of Y.3. So, it can be continue to component 2 then the result of the Y.3 is greater than 0,50. So, it can be conclude that every instruments are valid.

b. Reliability Test

A reliable research instrument is an instrument that has a Cronbach's Alpha value that is equal to or greater than 0.60 (Cronbach's Alpha \geq 0.60). This is in accordance with what was explained by Ferdinand (2014). The test results for each independent variable namely Service Quality (X_1), Price (X_2), Corporate Image (X_3), and Location (X_4) and the dependent variable namely Customer Satisfaction (Y) are as follows:

a) The Result of Reliability Test for Service Quality (X_1)

The reliability test results for the service quality variable are shown in table 4.25.

Table 4.25
The Result of Reliability Test for Service Quality (X_1)

Cronbach's Alpha	N of Items
0,718	4

Source: Appendix 25

Table 4.25 shows the Cronbach's Alpha value of the variable in this study is greater than 0.60 which is 0.718. So, based on the test results data in table 4.10 above, the research instrument on the service quality variable is declared reliable and can be used for this research.

b) The Result of Reliability Test for Price (X_2)

The reliability test results for the price variable are shown in table 4.26.

Table 4.26
The Result of Reliability Test for Price (X_2)

Cronbach's Alpha	N of Items
0,872	4

Source: Appendix 26

Table 4.26 shows the Cronbach's Alpha value of the variable in this study is greater than 0.60 which is 0.872. Then, based on the test results in table 4.26, the research instrument on the variable price is declared reliable and can be used for this research.

c) The Result of Reliability Test for Corporate Image (X_3)

The reliability test results for corporate image variable are shown in table 4.27.

Table 4.27
The Result of Reliability Test for Corporate Image (X_3)

Cronbach's Alpha	N of Items
0,816	4

Source: Appendix 27

Table 4.27 shows the Cronbach's Alpha value of the variable in this study is greater than 0.60 which is 0.816. So, based on the test data in table 4.27 above, the research

instrument on the corporate image variable is declared reliable and can be used for this research.

d) The Result of Reliability Test for Location (X_4)

The reliability test results for location variables are shown in table 4.28.

Table 4.28
The Result of Reliability Test for Location (X_4)

Cronbach's Alpha	N of Items
0,828	4

Source: Appendix 28

Table 4.28 shows the Cronbach's Alpha value of the variable in this study is greater than 0.60 which is 0.828. So, based on the test results in table 4.28 above, the research instrument on location variables is declared reliable and can be used for this research.

e) The Result of Reliability Test for Customer Satisfaction (Y)

The reliability test results for the variable customer satisfaction are shown in table 4.29.

Table 4.29
The Result of Reliability Test for Customer Satisfaction (Y)

Cronbach's Alpha	N of Items
0,642	4

Source: Appendix 29

Table 4.29 shows the Cronbach's Alpha value of the variable in this study is greater than 0.60 which is 0.642. So,

based on the test data in table 4.29 above, the research instrument on the variable of customer satisfaction is declared reliable and can be used for this research.

C. Result of Research

1. The Result of Classic Assumption Test

a. Normality Test

In this study, the normality test uses one sample Kolmogorov-Smirnov. A data can be said to be normally distributed if the level of significant value owned is greater than 5% or 0.05.

Table 4.30
The Result of Normality Test

		Unstandardized Residual
N		99
Normal Parameters	Mean	.0000000
	Std. Deviation	1.27313102
Most Extreme Differences	Absolute	.079
	Positive	.069
	Negative	-.079
Kolmogorov-Smirnov Z		.785
Asymp.Sig. (2-tailed)		.569

Source: Appendix 30

Table 4.30 shows the results of the normality test. It can be seen that the significance value of Kolmogorov-Smirnov is greater than 0.05 which is equal to 0.569 which indicates that the data is spread normally. This indicates that all variables used in this study did not have a problem of normality.

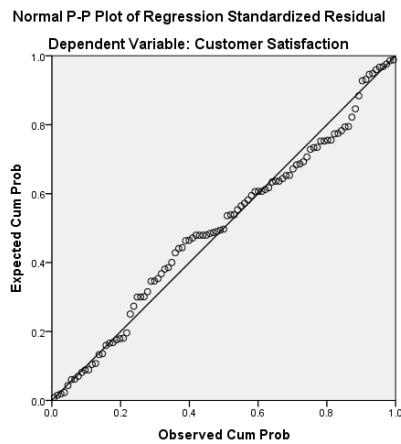


Figure 4.1
Normality Test

Source: Appendix 31

Figure 4.31 above is a picture of plots that shows normally distributed data, where if the plots follow the direction and are not far from the diagonal line in Figure 4.1, it can be said that the data is normally distributed. However, if the plot is far from the diagonal line, it can be said that the data is not normally distributed.

b. Heteroscedasticity Test

Heteroscedasticity test aims to see whether or not there are similarities of the variance of a residue from one observation to another. Heteroscedasticity test in this study used a glacier test. Regression models that do not have heteroscedasticity are models that have a significant value of more than 0.05 ($\text{sig} > 0.05$).

Table 4.31
The Result of Heterocedasticity Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig
	B	Std. Error	Beta		
1 (Constant)	.595	.943		.631	.530
Service Quality	.055	.058	.121	.953	.343
Price	-.071	.048	-.181	-1.486	.141
Corporate Image	.026	.057	.060	.461	.646
Location	.013	.052	.035	.257	.798

Source: Appendix 32

From table 4.31, it can be seen that the significant value of each independent variable used in this study has a significant value of more than 0.05 (sig > 0.05). So, it can be concluded that each independent variable used does not contain heteroscedasticity problems.

c. Multicollinearity Test

Multicollinearity test is used to see whether there is a relationship between the independent variables used in research (Janie, D.N.A., 2012). The Variance Inflation Factors (VIF) value is smaller than 10 (VIF < 10) and the tolerance value is greater than 0.1 (tolerance > 0.1). The results of multicollinearity test in this study are in table 4.32.

Table 4.32
The Result of Multicollinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Service Quality	.637	1.569
	Price	.696	1.437
	Corporate Image	.599	1.670
	Location	.561	1.784

Source: Appendix 33

Table 4.32 shows that the tolerance value of each independent variable in this study is greater than 0.1. As for the value of the Variance Inflation Factors (VIF) of each independent variable has a value smaller than 10. This shows that each independent variable used in this study does not have a correlation with each other.

2. The Result of Data Analysis

a. Multiple Linear Regression Test

In this study, the statistical analysis used is Multiple Linear Regression to see the effect of the independent variables on the dependent variable. The independent variables used in this study are Service Quality (X_1), Price (X_2), Corporate Image (X_3), and Location (X_4). Meanwhile, the dependent variable in this study is Customer Satisfaction (Y). Following are the results of the Multiple Linear Regression test can be seen in table 4.34.

Table 4.33
The Result of Multiple Linear Regression Test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.099	1.493		1.406	.163
	Service Quality	.185	.092	.186	2.008	.048
	Price	.168	.076	.196	2.214	.029
	Corporate Image	.253	.090	.269	2.817	.006
	Location	.193	.082	.231	2.348	.021

Source: Appendix 34

From table 4.33, we can see the value of the coefficients of each independent variable on the dependent variable. The coefficient value of each variable can be seen in the Beta column in table 4.33 above, where the independent variable, namely service quality has a regression coefficient of 0.186, price of 0.196, corporate image of 0.269, and location of 0.231. While, the significant value of each variable shows less than 0.05, then each independent variable has a significant effect on the dependent variable which is customer satisfaction.

Then the regression equation that is formed is as follows:

$$Y = 0,186 X_1 + 0,196 X_2 + 0,269 X_3 + 0,231 X_4$$

From the regression equation above, it can be seen the coefficient value of each independent variable. Then it can be concluded that:

- a) β_1 = The coefficient value for the independent variable, namely service quality (X_1) is 0.186 and the significant value owned is .048. Based on the coefficient and significant value of the service quality, the service quality has a positive and significant relationship to customer satisfaction. So, it can be concluded that when the level of service quality increases, the level of customer satisfaction will increase and vice versa.
- b) β_2 = The coefficient value for the independent variable price (X_2) is 0,196 and a significant value of 0.029. Based on the coefficient and significant value of the variable price, the price has a positive and significant relationship to customer satisfaction. Then, it can be concluded when the price level increases, customer satisfaction will increase.
- c) β_3 = The coefficient value for the independent variable company image (X_3) is 0,269 and the significant value is 0,006. Based on the coefficient and significant value of the corporate image variable, the corporate image has a positive and significant relationship to customer satisfaction. So it can be concluded when the level of company image gets better, customer satisfaction will increase.
- d) β_4 = The coefficient value for the location independent variable (X_4) is 0,231 and a significant value of 0,021. Based on the coefficient and significant value of the location variable, the

location has a positive and significant relationship to customer satisfaction. So it can be concluded, the better the customer's perception of the location of UMY Autocare, customer satisfaction will increase.

3. The Result of Hypothesis Test

a. Determination Coefficient Test (R^2)

The coefficient of determination (R^2) test is used to see how much influence or contribution made by the independent variable on the dependent variable. The results of the coefficient of determination test (R^2) can be seen in table 4.36 below.

Table 4.34
The Result of Determination Coefficient Test (R^2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.698	.488	.466	1.300

Source: Appendix 35

Based on table 4.36, it shows the coefficient of determination (R^2) of 0.466 or 46,6%. Based on the coefficient of determination (R^2), it shows that the independent variables used in this study are Service Quality (X_1), Price (X_2), Corporate Image (X_3), and Location (X_4) can explain the dependent variable namely Customer Satisfaction (Y) of 46,6%. While 53,4% is explained by other variables outside the variables used in this study.

b. F Test

In this study, the F test is used to find out how much influence is obtained by the dependent variable (Customer Satisfaction) of the independent variable (Service Quality (X_1), Price (X_2), Corporate Image (X_3), and Location (X_4)). A hypothesis is said to be accepted if the significant value is less than 0.05 ($\text{sig} < 0.05$). However, if the significant value is more than 0.05 ($\text{sig} > 0.05$) then the hypothesis is rejected. F test results can be seen in table 4.35 below.

Table 4.35
The Result of F Test

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	151.176	4	37.794	22.365	.000
	Residual	158.845	94	1.690		
	Total	310.020	98			

Source: Appendix 36

Based on table 4.36, it can be seen that the significant value is less than 0.05 or 5% where the significant value is 0,000. This means that the independent variables namely Service Quality (X_1), Price (X_2), Corporate Image (X_3), and Location (X_4) have a significant influence on the dependent variable, namely Customer Satisfaction (Y) simultaneously.

c. T Test

T test in the research has a function to find out how much influence of the independent variables which in this study are

Service Quality (X_1), Price (X_2), Corporate Image (X_3), and Location (X_4) on the dependent variable, namely Customer Satisfaction (Y) partially. The results of the T test are in table 4.36.

Table 4.36
The Result of T Test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.099	1.493		1.406	.163
	Service Quality	.185	.092	.186	2.008	.048
	Price	.168	.076	.196	2.214	.029
	Corporate Image	.253	.090	.269	2.817	.006
	Location	.193	.082	.231	2.348	.021

Source: Appendix 37

Based on the results of the T test to test the hypothesis in table 4.21, it can be concluded that:

- a) H_1 = Service Quality (X_1) has a positive and significant effect on Customer Satisfaction (Y). From the T test results above, it can be seen that the t value for the independent variable service quality is .186 where the value is positive (+). While, the significant value is 0,048 is smaller than 0.05. So, it can be concluded that service quality has a positive and significant effect on Customer Satisfaction. Based on the results of the t test, it can be concluded that the first hypothesis (H_1) was accepted.

- b) $H_2 = \text{Price } (X_2)$ has a positive and significant effect on Customer Satisfaction (Y). From the t test results, it can be seen that the t value for the independent variable price is .196 where the value is positive (+). Meanwhile, the significant value is .029 where the significant value is less than 0.005. Then, it can be concluded that the price has a positive and significant effect on customer satisfaction. Based on the results of the t test, the second hypothesis (H_2) is accepted.
- c) $H_3 = \text{Corporate Image } (X_3)$ has a positive and significant effect on Customer Satisfaction (Y). From the T test results above, it can be seen that the t value for the independent variable of the corporate image is .269 where the value is positive (+). Meanwhile, the significant value owned by the corporate image is .006, where the significant value is smaller than 0.05. Then, it can be concluded that the corporate image has a positive and significant effect on customer satisfaction. Based on the results of the t test, it can be concluded that the third hypothesis (H_3) is accepted.
- d) $H_4 = \text{Location } (X_4)$ has a positive and significant influence on Customer Satisfaction (Y). From the result it shows the value of t for the location of 2012 where the value is positive. Then, the significant value of the location is .021 where the significant value is less than 0.05. So, it can be said that

location variable has a positive and significant effect on customer satisfaction. Based on the results of the t test, the fourth hypothesis (H_4) was accepted.

D. Discussion

Based on the analysis of the data that has been done, it can be seen that the independent variables namely Service Quality (X_1), Price (X_2), Corporate Image (X_3), and Location (X_4) simultaneously and partially have positive and significant effect on the dependent variable, namely Customer Satisfaction (Y). Based on those results, it can be concluded that:

1. Service Quality Has a Positive and Significant Impact on Customer Satisfaction.

Based on the results of the analysis using the Multiple Linear Regression test in table 4.33, it shows that the service quality variable has a positive and significant effect. It can be seen in the Beta coefficient value owned by the service quality variable of 0.186 which is positive. If the service quality variable increases by 1 unit, then the customer satisfaction variable will increase by 0.186. Meanwhile, the significant value of 0.048 is smaller than 0.05. So, service quality has a positive and significant effect on customer satisfaction.

The results of this study indicate that the quality of services provided by the Autocare Universitas Muhammadiyah Yogyakarta (Autocare UMY) is in accordance with customer expectations. By

fulfilling the hopes and desires of customers, then satisfaction can be felt by customers. In accordance with that described by Pontoh et., Al (2014).

This can be seen from customer good perception of the indicators used to represent the variable quality of service provided by Autocare UMY. The indicators used to represent service quality variables in this study are fast service, ease of transaction, understanding customer needs, and shuttle services performed by Autocare UMY employees.

These things indicate the ability of the Autocare UMY in providing services to customers is good. The better the quality of the services provided, the customer will feel satisfied. Conversely, the lower the quality of services provided, the smaller the level of satisfaction felt by customers. So, if the Autocare Universitas Muhammadiyah Yogyakarta continues to improve the quality of its services, the response from customers will be better. This is justified by the results of data analysis that the author have described in table 4.33.

The ability of Autocare UMY in customer service is inseparable from the work carried out by Autocare UMY employees. Although the quality of services owned by Autocare UMY has met customer expectation, but the Autocare UMY must maintain and improve service quality. Then, with that way customer will still feel the satisfaction after using the services of Autocare UMY. The company

will also get the benefit if they continue to prioritize customer satisfaction.

The result of this study is in line with the results of research conducted by Nurhalimah, S. et., al (2018), which shows the quality of service has a positive and significant effect partially and simultaneously. The result of the same study were also carried out by Kuntari, B.D. et., al (2016).

The same study was also carried out by Susilo, Heri et., al (2018), Suratno et., al (2016), Krisdayanto, Iqbal et., al (2018), Saktiani, G.A. (2015), Atmanegara, S.Y. et., al (2019), Namin, Aidin (2017), Minh, N.V. and Huu, N.Y. (2016), Liat, C.B. et., al (2017), Ali, Muhammad and Raza, S.A. (2015), Annamdevula, S. and Bellamkonda, R.S. (2016), Xu, Lu et., al (2017), Zameer, Hashim et., al (2015).

Based on the results of data analysis in this study, the first hypothesis (H_1) in this study which reads "Quality of service has a positive and significant effect on customer satisfaction" is accepted.

2. Price Has a Positive and Significant Impact on Customer Satisfaction.

The results of the Multiple Linear Regression test analysis in table 4.33 explain that price has a positive and significant effect on customer satisfaction. Beta regression coefficient values indicate the price variable has a positive value that is equal to 0.196. If the variable price

rises by 1 unit, then customer satisfaction will increase by 0.196. Then, a significant value of 0.029 which is smaller than 0.05. Thus, price variables have a positive and significant effect on customer satisfaction.

Price is the amount of money exchanged for products or services to get benefits from the product or (Iriyanti, E. et., al, 2016). This research shows that the tariff or price set by the Autocare Universitas Muhammadiyah Yogyakarta is in accordance with the ability of customers to pay for services and market prices. This is in line with research conducted by Arviantama et., al (2017).

Customer satisfaction with the price set can not be separated from the suitability of the price paid with the quality obtained. The more appropriate the price determination with the quality obtained, the level of customer satisfaction will continue to increase. As explained by Ferandi, et., al (2016) that the more appropriate the price, the higher the satisfaction customers get. Likewise, on the contrary, the more inappropriate the pricing, the lower the satisfaction that will be obtained.

In the price variable, there are indicators that can represent the price variable itself. Where, customer perception of these indicators are good. The indicators in question are the price according to the type of service, the price of each competitive service where the price set by Autocare UMY can compete with the market price, and the price is in

accordance with the benefits obtained. If customers' perceptions about the indicators are good, then the overall price at Autocare UMY is in accordance with customer desires and the ability of customers to pay for services. When customer desires have been fulfilled, then customer satisfaction will be achieved. This can be proven by the positive and significant relationship of the price variable to customer satisfaction. It can be seen in table 4.33.

Study on prices has a positive and significant effect on customer satisfaction also conducted by Krisdayanto, Iqbal et., al (2018), where there is a positive influence between price and customer satisfaction.

The results of the same study were also carried out by Razak, I. et., al (2016), Nurhalimah, Siti et., al (2018), Susilo, Heri et., al (2018), Ferandi, S.M. et., al (2016), Namin, Aidin (2017), Hanaysha, Jalal (2016), Khuong and Dai (2016), Ehsani, and Zahra and Ehsani, M.H. et., al (2015). Based on the results of data analysis done in this study, it can be concluded that the second hypothesis (H_2) is accepted.

3. Corporate Image Has a Positive and Significant Impact on Customer Satisfaction.

The results of data analysis in this study indicate that the corporate image has a positive and significant influence. It can be seen in table 4.33 that the regression coefficient value of the corporate image variable in the Beta column is 0.269. If the corporate image variable

increases by 1 unit, then the variable customer satisfaction will increase by 0.269. Then, the significant value is 0.006. This shows the corporate image has a positive and significant effect on customer satisfaction.

Corporate image is the view or perception of customers towards a company (Pontoh et., al., 2014). The results of this study explain that the image of the Autocare Universitas Muhammadiyah Yogyakarta is good. The better the image of a company, the more customers will be interested in using the product or services of a company.

The good image of Autocare UMY, will make customers to feel comfortable and safe to use the services of Autocare UMY. If the customer feels comfortable and safe to use the services of Autocare UMY, then it is possible for customers to come back again to use the services of Autocare UMY. A good corporate image will also make customers believe in the quality of a company.

A good corporate image will make customers interested in using the services of these companies. This can happen because the quality they have is guaranteed, which is reflected in the good image of a company. As said Tjandra et., al (2016), the better the quality of the products offered, the higher the satisfaction obtained by customers. Therefore, the corporate image will also improve for the better. So, with the image held by Autocare UMY can make customers believe

their expectations will be fulfilled. By fulfilling the expectations of customers then satisfaction with customers will be achieved.

The perception of the customer towards the image held by Autocare UMY cannot be separated from the indicators that represent the variable of the corporate image. These indicators are the corporate good reputation, the name of the company that is easy to remember, the company can be trusted by customers, and good quality owned by the company. If the customer response is good to these indicators, then the overall image held by Autocare UMY will be good. This good response is evidenced by the positive and significant relationship of the corporate image variable to customer satisfaction at Autocare Universitas Muhammadiyah Yogyakarta, which can be seen in table 4.33.

Therefore, Autocare UMY must pay attention to the indicators used in this study to maintain the good image it has at the moment.

Similar research results were also conducted by Tjandra, Olivia et., al (2016) that company image has a positive effect on customer satisfaction. The same research was also carried out by Saktiani, G.A. (2015) and Zameer, Hashim, et., al (2015).

Based on the results of data analysis in this study, it can be concluded that the third hypothesis (H_3) which reads "corporate image has a positive and significant effect on customer satisfaction" is accepted.

4. Location Has a Positive and Significant Impact on Customer Satisfaction.

Based on the analysis results in table 4.33, location has a positive and significant effect on customer satisfaction. This can be proven by the regression coefficient of the location variable in the Beta column of 0.231. If the location variable increases by 1 unit, then the location variable will increase by 0.231. Meanwhile, the significant value of the location variable is 0.021. Then, it can be concluded that location has a positive and significant influence on customer satisfaction.

The results of this study indicate that the Autocare location of Universitas Muhammadiyah Yogyakarta influences customer satisfaction. Location is a place where a company carries out sales or manufacturing activities of goods or services (Atmanegara, et., al, 2019). So, determining the location of a company is important for the future of the company. The better and strategic location of Autocare UMY, the easier it will be for customers to meet their needs, in this case the vehicle maintenance needs. When the needs of customers are met then there will be a sense of satisfaction in customers because of the ease in accessing the location of the company. Moreover, location can influence the desire of customers to come to the company to meet their needs (Lupiyoadi in Atmanegara, S.Y. et., al, 2019). When customer needs are met, customer satisfaction will also be achieved.

The existence of a positive and significant relationship of location variables to the variable customer satisfaction can not be separated from good customer perceptions of indicators that can represent the location. These indicators are a safe company environment, easily accessible location, location can be reached by the transportation, and location is easy to find. If customers perceptions are good for these indicators, it can be concluded that customer perceptions of location variables are also good. This can be seen in table 4.33, where the significant level of location variable is 0.021 which is less than 5%.

The same research was also carried out by Krisdayanto, Iqbal et., al (2016). The results of his research show that location has a positive effect on customer satisfaction. Consistent research results were also conducted by Ferandi, S.M. et., al (2016) and Nurhalimah, Siti et., al (2018).

Based on the results of data analysis in this study, it can be concluded that the fourth hypothesis (H_4) which reads "Location has a positive and significant effect on customer satisfaction" is accepted.