

## CHAPTER V

### RESEARCH RESULTS AND DISCUSSION

#### A. Data analysis

##### 1. Descriptive Statistics Analysis

Based on the conducted research related to Willingness To Pay for improvement and development of Tirtamaya beach, the results of a descriptive analysis are as follows:

**Table 5. 1**

#### Descriptive Variable Statistics

	N	Min	Max	Mean	Std. Deviation
Age	270	15	58	29.11	10.545
Income	270	1000	2500	1515.74	289.729
level of education	270	6	16	12.32	2.116
Distance	270	7	75	37.62	13.575
frequency of visits	270	1	4	1.65	0.725
visitor satisfaction	270	0	1	0.82	0.383
recreation budget	270	10	150	54.30	26.339
visiting hours	270	1	4	2.05	0.567
WTP	270	0	1	0.74	0.441
Valid N (list wise)	270				

Source: primary data processed

The minimum value for WTP is 0 and average value at 0,74. This indicates the *Willingness to pay* variable is dominated by respondents who are willing to pay more for entrance ticket that is used for improvement and development of Tirtamaya beach as much as IDR 10.000. Furthermore, the standard deviation of WTP is 0.0441, which is smaller than the average value of WTP variable. It can be said the distribution of questionnaires are 270 respondents for WTP variable which is indicated to be good. The age variable has an average value of 29.11. The highest age is 58 years and the lowest age is 15 years. While the standard deviation value is 10,545.

The income variable level has an average of IDR 1,515,074, the highest income level is IDR 2,500,000 and the lowest income level is IDR 1,000,000. While the standard deviation value of the level of income is IDR 289,729,000.

The level of education variable has an average of 12.32 the highest level of education level that is 16 and the lowest value of income level is 6. While the standard deviation value of the education level is equal to 2.116.

The distance variable is an average of 37.62 km. The farthest distance traveled is 75 km, the closest distance traveled is 7 km. While the standard deviation value is 13,575.

The frequency variable of visit has an average of 1.65 values of the highest frequency of visit, namely 4 and the lowest frequency level of visit is 1. While the standard deviation value of the frequency of visits is equal to 0.725.

The level of visitor satisfaction variable has an average of 0.82, the highest value of visitor satisfaction is 1 and the lowest value of visitor satisfaction is 0. While the standard deviation value of the level of visitor satisfaction is 0.383.

The budget variable has an average of 54.30 the value of the highest Recreational budget level of 150 and the value of the lowest level of recreation costs is 10. While the value of the standard deviation of the level of recreation costs is 26,339.

The level of visit time variable has an average of 2.05 the highest level of visit time level, namely 4 and the lowest level of visit time level is 1. While the standard deviation value of visiting hours level is 0.567.

## 2. Binary Logistic Test Regression Results

In this study, the researchers used a binary logistic analysis tool which has *dummy* variable as the dependent variable. While the biased independent variable is in the form of dummy and scale. The binary logistic regression is the analytical tool that use to find out the relationship between independent and dependent variable. The following are the results of research with a logistical binary analysis tool:

### a. Classification Accuracy Test

Classification accuracy test is a test that aims to determine the accuracy of a regression model in predicting respondents' choice of Willingness to Pay for the improvement and development of tourist attractions Tirtamaya beach in Indramayu.

**Table 5. 2**  
**Classification Accuracy Test**

Observed		WTP		Percentage
		Disagree	Agree	
WTP	Disagree	3	68	26,29
	Agree	4	195	73,71
Overall Percentage				100

Source: primary data processed

Table 5.2 above indicates that in the prediction column, there are 199 respondents who are willing to pay whereas the actual observations shows that the total respondents who are willing to pay is 195 respondents. Meanwhile, as many as 71 respondents are willing to pay but in the real observation only 68 that are willing to pay. In this study, the percentage of the accuracy of the model taken by the researcher classifying his privacy or the exact level was 26.29 percent for those who were not willing and 73.71 percent for those who were willing.

## b. Model Conformity Test

### 1) Test the Nagelkerke R Square

The Nagelkerke R-square test is used to see the percentage that describe how compatible model used in this study with range value of 0 to 1. The negative value of the R Square 1 shows that there is a perfect match between the dependent variable and the independent variable, while the negative value of R Square 0 indicates that there is no relationship between variables bound to independent variables. The Nagelkerke R Square test results are shown in Table 5.3 below:

**Table 5.3**

#### **Nagelkerke R Square Test Results**

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	288,961 <sup>a</sup>	0,079	0,115

Source: primary data processed

From the results of Nagelkerke R Square in Table 5.3, the Nagelkerke R Square value of 0.079 or 0.115 percent showed that the dependent variable can be explained by variables of age, income, education level, distance, frequency of visits, visitor satisfaction, recreation costs, and visiting hours in the model of this research. While the rest, which is equal to 0.921 or 92 percent are explained outside of the models.

### 2) Hosmer and Lemeshow Tests

Hosmer and Lemeshow test is a test that is used to test whether the empirical data in accordance with a model that will show the feasibility of model regression. If the statistical value of Hosmer and Lemeshow is greater than  $\alpha = 0,10$  (10%) shows that the model is able to predict the value of its observations,

meaning that the model is acceptable because it is in accordance with observation data.

**Table 5. 4**

**Hosmer and Lemeshow Test Results**

Step	Chi-square	Df	Sig.
1	6,194	8	0,626

Source: primary data processed

Based on the Hosmer and Lemeshow test shown in Table 5.4 above, it can be seen that the *Chi*- squares value is 6.194 with a probability value of 0.626 > 0.10, so the model can be said to be fit and able to predict the value of its observations. Thus, it can be concluded that the regression model used in this study is suitable to be used for further analysis.

**c. Significance Test**

1) Simultaneous Significance Test

Simultaneous significance test is used to determine how much the influence of independent variables simultaneously on the dependent variable. The test criteria that if the significance value > 0,05, and then all the independent variables are not air influence on the dependent variable.

Conversely, if the significance value is <0.05, then all independent variables are jointly declared to have influence the dependent variable or at least one independent variable that affects the dependent variable.

**Table 5. 5**  
**Simulta's Significance Test Results**

		Chi-square	Sig.
Step 1	Step	22,151	0,005
	Block	22,151	0,005
	Model	22,151	0,005

Source: primary data processed

Can be seen in Table 5.5. The above shows that the Chi-square value of 22.151 Models significance probability value of 0.005 less than 0.05. Thus it can be concluded that all independent variables can simultaneously influence the dependent variable or at least one independent variable that affects the dependent variable.

## 2) Partial Signification Test

Partial tests were conducted to determine how much the independent variables partially influence the dependent variable. The testing criteria are if the significance value is less than 0,05, then the independent variable does not affect the dependent variable. Conversely, if the significance value is less than 0,05, then the independent variable affects the dependent variable.

**Table 5. 6**  
**Significance and Coefficient of Regression**

		B	Wald	Exp (B)
Step 1 <sup>a</sup>	Age	(0.015) -0.025	2.704	0.975*
	Income	(0.001) 0.001	3.482	1.001*
	Level of education	(0.075) 0.069	0.842	1.071
	Distance	(0.013) -0.022	2.824	0.978*
	Frequency visit	(0.229) -0.398	3.009	0.672*
	visitor satisfaction (1)	(0.396) -0.863	4.753	0.422**
	Recreational budget	(0.009) 0.017	4.127	1.017**
	Visiting Hours	(0.278) 0.214	0.591	1.238
	Constant	(1.436) -0.576	0.161	0.562

Description: Dependent variable: *dummy* WTP; () shows the standard error coefficient; \* Significance at level 10% ( $\alpha = 0,10$ ); \*\* Significance at level 5% ( $\alpha = 0.05$ ); \*\*\* Significance at level 1% ( $\alpha = 0.01$ ).

In this study, *Forum Group Discussion* (FGD) define conduct the survey of 20 respondents. The average value of willingness to pay (EWTP) from the respondents is IDR 10.000. The value of EWTP used Dichotomous choice

method as dependent variable. The dependent *dummy* variable of WTP has been define when the variable dummy is 1, describe the value of WTP is equal to IDR 10,000. Moreover, the variable dummy defines as 0 if WTP is not equal to IDR 10,000. The test results for partial significance are shown in Table 5.6, afterwards.

This study uses logistic regression with dependent variable equal to 1 if respondent agree to pay of IDR 10.000 for improving the quality and development of Tirtamaya beach in Indramayu, 0 if respondent disagree to pay of IDR 10.000 for improving the quality and development of Tirtamaya beach in Indramayu.

Based on the results of the partial significance test in Table 5.6, it can be obtained that from the 8 independent variables, there are 6 variables that influence Willingness to pay to improve the quality and development of Tirtamaya beach in Indramayu

The age variable shows a significantly level of 0.1, where  $0.1 = 0.1$  that  $H_0$  is rejected and  $H_1$  is accepted. It can be concluded that the variables of age have a significantly influence the Willingness to Pay to improve the quality and development of Tirtamaya beach in Indramayu.

On the income variable shows a significantly level of 0.062 where  $0.062 < 0.1$  then  $H_0$  is rejected and  $H_1$  is accepted. That way, There is significant influence between the income variable on Willingness to Pay to improve the quality and development of Tirtamaya beach in Indramayu.



On the distance variable shows a significantly level of 0.0923 where  $0.093 < 0.1$  then  $H_0$  is rejected and  $H_1$  is accepted. Thus, there is significant influence between the variable distance to Willingness to Pay to improve the quality and development of Tirtamaya beach in Indramayu.

The frequency of visit variable shows a significantly level of 0.083 where  $0.083 < 0.1$  then  $H_0$  is rejected and  $H_1$  is accepted. Thus, there is significant influence between the variable frequencies of visits to Willingness to Pay to improve the quality and development of Tirtamaya beach in Indramayu.

The variable visitor satisfaction shows a significance level of 0.029 where  $0.029 < 0.1$  then  $H_0$  is rejected and  $H_1$  is accepted. Thus, there is significant influence between the variables of visitor satisfaction on Willingness to Pay to improve the quality and development of Tirtamaya beach in Indramayu.

The recreation budget variable shows a significant level of 0.042 where  $0.042 < 0.1$  then  $H_0$  is rejected and  $H_1$  is accepted. Thus, there is significant influence between the variable cost of recreation on Willingness to Pay to improve the quality and development of Tirtamaya beach in Indramayu.

Whereas in the education level variable and the visiting hours showed significant level  $> 0.1$  then  $H_0$  was accepted and showed that there was no significantly influence between the education level variable and the time of the visit to Willingness to pay to improve the quality and development of Tirtamaya beach in Indramayu.

a) Age

Age variable indicates a probability of 0,01. In significant level of 0,05 with alpha of 10%, the age variable has significant influence on *WTP*. Thus, age variable in this study has negative and significant influence to the Willingness to pay to improve the quality and development of Tirtamaya beach in Indramayu. The *Odds ratio value* of the age variable shows a number of 0.975, which means that each respondent who is older will have less willingness to pay 0.975 times than respondents who have a lower age.

b) Income Variables

Income variable shows a probability value of 0.062. In significance level of 0.062 with alpha 10%, the income variable has a significantly influence on Willingness to Pay for improvement and development of Tirtamaya beach. Therefore, income variable in this study has positive and significantly influence to the Willingness to pay for improvement and development of Tirtamaya beach. *Odds ratio* value of the variable income of 1.001 which means that each respondent who have high incomes will have a greater willingness to pay as much as 1,001 times compared to respondents who have a lower income.

c) Education Level

The education level variable shows a probability value of 0.359 higher than alpha 5% which means the education level variable has an insignificantly influence towards the Willingness to Pay for improvement and development

of Tirtamaya beach. Therefore, education level has a positive but not significantly influence on the WTP.

d) Distance

Distance variable shows a probability value of 0.093 smaller than alpha 10% the distance variable has significant influence towards the WTP. Therefore, Distance level has of a negative and significant influence on Willingness to Pay for improvement and development of Tirtamaya beach. Distance variable *Odds ratio* value is 0.978, which means that respondents who have further distance will have a willingness to pay 0.093 times less than respondents who have closer mileage.

e) Frequency of Visit

Frequency of visit variable shows a probability value of 0.083 which it is smaller than 0.1 or alpha 10%, which means the frequency of visit variable is significant influence *the willingness to pay*. Hence, frequency of visit variable has a significant influence on the Willingness to pay for improvement and development of Tirtamaya beach. Frequency of visit variable *Odds ratio* value is 0.672 which means that respondents who have a higher frequency will have less of willingness to pay as much as 0.672 than respondents who have lower frequencies of Willingness to Pay for the improvement and development of Tirtamaya beach in Indramayu.

f) Variable Visitor Satisfaction

Visitor satisfaction variable shows a probability value of 0.029 which is than alpha 5%. It means the variable visitor satisfaction has a significant influence on Willingness to Pay for improvement and development of

Tirtamaya beach. Therefore, variable visitor satisfaction negatively influences the *Willingness to pay*. *Odds ratio* value of the variable visitor satisfaction is at 0.422 which means the respondents who are not satisfied will have less willingness to pay 0.422 than respondents who are more satisfied.

g) Recreational budget

The recreation cost variables shows a probability value of 0.042 which below the alpha of 5%. This indicated that the recreation cost variable of visitors has a significantly influence on Willingness to Pay for improvement and development of Tirtamaya beach. Thus, the recreation fee variable positive and significantly influence on the *willingness to pay*. *Odds ratio* value variable recreation fee of 1.017 described that the respondents who have a higher cost of leisure will have a greater willingness to pay as much as 1,017 bigger compared to respondents who have lower recreational fees.

h) Visiting Hours

Visiting hours variable shows a probability value of 0.441 higher than 10%, so the variable visiting hours indicated to have no significant influence on Willingness To Pay. Thus, variable visiting hours does not significant and positively influence on Willingness to for improvement and development of Tirtamaya beach in Indramayu.

## **B. Discussion**

### **1. Influence of Age on Willingness To pay**

Based on the results of the research that has been conducted, this research is in line with Sari research (2017); Masruroh (2017) about the influence of age variables. Based on the results of the research, the age variable statistically has a negative and significantly influence on the willingness to pay value that will be used for the improvement and development of Tirtamaya beach in Indramayu. In Indramayu region, it is found that the coefficient of age variable has a negative and significantly influence, this indicated that as

a person's age get older, the lesser their desire to pay because as they get older they are usually reluctant to travel.

This result is different from Sasmi (2016) study of the influence of age variables. Based on his result of the study the age variable is statistically positive and significant influence on Willingness To Pay. Meanwhile, in this study the age variable has insignificant and negative influence to the willingness to pay.

## **2. Influence of Income on Willingness To Pay**

Based on the results of the research that has been conducted, this research is in line with Saptutyningsih (2017) research; Pantari (2016); El-Bekkay (2013) about the influence of income variables on WTP. According to the research conducted the income variable has a positive and significant influence. It was found that respondents had a greater willingness to provide WTP when their income increased. The level of income greatly influences a person in terms of doing a vacation by traveling and is willing to pay more for the improvement of the quality of a tourist attraction. This is due to the high income that will make tourists have more funds to pay. The phenomenon that occurs at this time when someone income rises likely tend to make their desire to travel will even higher. Moreover, the higher income that a people earn will also encourages them to be more willing to pay the tourism place entrance ticket yet to improve the quality of tourism spots. Therefore, when they want to re-visit the tourist attraction they also have improved the quality of tourist attraction.

This research is different from the Riahayu (2017) study where the income variable has a negative and significant influence on Willingness to Pay.

### **3. Influence of Education Level on Willingness To Pay**

Based on the results of the research conducted, this study is in line with Fauziyah (2017) study of the influence of the Education Level variable on WTP, based on the results of research conducted by the education level variable statistically positive and not significant influence on fish. This is because the level of education is not someone's indicator of going to a tourist attraction, because everyone needs a vacation to calm their mind after doing daily activities. Empirically is different from the Saptutyingsih (2017) and Sari (2017) indicates that the variable level of education has a significant impact and positive influence on the willingness to pay.

### **4. Influence of Distance on Willingness To Pay**

Based on the results of the research conducted, this study is in line with the research of Masruroh (2017) and Rahmawati (2014) about the influence of the Distance variable on WTP, based on the results of research that has statistically a negative influence on *Willingness To Pay* of visitors to Tirtamaya beach in Indramayu . This means that if the distance is farther away, it will reduce its desire to pay for retraining the attractions of the Tirtamaya beach in Indramayu, because the distance that must be traveled by tourists is usually followed by additional recreational budget such as additional costs for lodging, gasoline and others.

This research is different from the research with Sari (2017) which shows that the influence of the distance variable has a negative and not significantly influence on Willingness To Pay.

### **5. Influence of frequency of visits on *Willingness To Pay***

Based on the results of the research conducted this study is in line with Fauziyah (2017) research; Riahayu (2017) and Pantari (2016) about the influence of frequency variables on WTP. Based on the results of research that has been done, the frequency of visits variable is statistically negative and significantly influence, this is because the more often a person visits the tourist attraction, it will cause boredom and want to try new attractions.

It is different from Rahmawati research (2014) where frequency of visitvariable has a positive and significantly influence on Willingness To Pay.

#### **6. Influence of Visitor Satisfaction on *Willingness To Pay***

Based on the results of the research conducted, this study is in line with Sari research (2017) about the influence of visitor satisfaction variables on WTP, based on the research that has been done the visitor satisfaction variable is statistically gives negative influence, because the facilities, infrastructure, and cleanliness offered are still inadequate. Why tourist would pay high for WTP? because when tourists visit the beach again the place will be much better than before.

In contrast to the El-Bekkay (2013) study, where the research shows the pointer satisfaction variable has a positive and significant influence on Willingness To Pay.

#### **7. Influence of Recreational budget on *Willingness To Pay***

Based on the results of the research conducted, this research is in line with the research of Riahayu (2017) with the same variable. Based on the research variables recreation costs and significantly positive influence on WTP, it is because if the entrance fee increases, WTP will also increase with the assumption of *ceteris paribus*. Visitors with high recreational budget, tend to be willing to pay higher than visitors who have low



recreational budget. Because tourists feel they have a lot of money, they don't hesitate to spend money to pay for quality improvements of tourism.

This research is different from the research conducted by Pantari (2016); Saptutyingsih (2017) which shows recreational budget have a negative and significantly influence on Willingness To Pay.

## **8. Influence Visiting on Willingness To Pay**

Based on the results of the research conducted, this study is in line with the research conducted by El-Bekkay (2013) but visiting hours has a positive and insignificant influence due to the surrounding attractions of Tirtamaya Beach in Indramayu there are other tourist objects that can be visited so tourists who want to visit other tourist objects usually do not linger on the beach of Tirtamaya in Indramayu because they have to go to other attractions that are around Tirtamaya beach in Indramayu , and vice versa if visitors do not want to go to other attractions usually visitors spend their time on the beach Tirtamaya in Indramayu .

Unlike the research conducted by Nugroho (2013) where the variable visiting hours has a positive and significant influence on Willingness to Pay.