CHAPTER III

RESEARCH METHODOLOGY

A. Objective of Research

Objective of this research is the visitors of Pangandaran Beach. This study is conducted in Pangandaran District, West Java province. This research is began from December 2016 until January 2017

B. Data Types

The types of data that use in this research is:

1. Primary data.

   Primary data is called the original data or the new data. Data that obtained or collected directly by the researcher is also called primary data. Primary data in this study obtain by spreading the questionnaire directly to each individual visitors of Pangandaran beach.

C. Technique of Sampling

The samples that used in this research object is using random sampling method. Random sampling method is a method of sampling that gives equal opportunity for each element or member of the population to be elected as a random sample. The advantage of this sampling method is easy sample selection, sample selection unit is only one kind, misclassification can be
avoided simply by picture outline of the population and sample design the most simple and easy.

Because the number of visitors Pangandaran is not yet known at this year of research, then the expected number of visitors during the year of research using adaptive expectation with regards the number of tourists who visited in 2015 is the same as 2015 (Khariere, 2014). The number of tourists who visited Pangandaran beach in 2015. Determination of the sample using the formula Slovin sought in Sari, 2015, namely:

\[ n = \frac{N}{1 + N(e)^2} \]

Where:

\( n \) = Number of samples to be studied

\( N \) = Number of visitors in Pangandaran year 2014

\( e \) = per cent leeway carefully situations due to lack of sampling error is still tolerated (set at 10%).

\[ n = \frac{N}{1 + Ne^2} \]

\[ = \frac{1.838.646}{1 + 1.838.646 (10\%)^2} \]
This result obtained from the Slovin formula, the number of respondents that used amounted 100 respondents as a minimum number of respondents.

D. Technique of Collecting Data

1. Questionnaire.

A written statement that is used to obtain information to respondents in terms of reporting about the person or the things that the key knew is called questionnaire (Arikunto, 2006). While according to Sugiyono (2008) a questionnaire is a technique of collecting data conducted by giving a set of questions or a written statement for respondent to answer.

2. Documentation.

Documentation means search Finding and collecting existing data, whether in books, magazines and newspapers, the Department of Tourism and Culture, BPS or data available on the Internet and other sources that related to this research.

3. Literature study.

One of way to get information or data with reading some literature or journal that related with the problem that are being sought.
4. **Interview.**

Interviews in general is a process of acquiring information for research purposes by way gave question and answer that had been prepared in the questionnaire between the writer and the respondents.

**E. Variable Definition Operational Research**

In this research use two variables, the dependent and independent variables. The dependent variables in this research is Willingness To Pay, while the independent variables in this research are: age, income level, education level, recreation fee and visit frequency.

1. **Dependent variable.**

Based on Aryani (2013) in Sasmi (2016) Willingness to pay is the individual's willingness to pay for something or environmental conditions assessment of natural resources and natural services in order to improve environmental quality. In WTP calculated how far the ability of individuals or communities in the aggregate to pay or spend money in order to improve environmental conditions to suit the desired conditions.

2. **Independent variable.**

   a. Age

   Age means the the time that measure the presence of object or a living creature. In this research means the age the visitors of Pangandaran Beach.
b. Education Level

Education in this research referred to duration of formal education that has been achieved by visitors of Pangandaran Beach. In this research the length of education measured from primary school level and by the size of the normal time for education.

c. Income Level

The level of income in this research means the amount of income in a month that received by tourist or respondents that worked and has income. In this research the level of income for students is determined by the amount of pocket money that received per month.

d. Recreation Fee

Cost of vocation expenses incurred on the costs of the visitor, which includes transportation costs, parking fees, entrance fees, the cost of consumption, documentation fees, and other costs. The cost of travel in this research is the overall cost incurred travelers in Pangandaran beach.

e. Visit Frequency

The frequency of visits is how often travelers visiting tourist sites or how many times tourists ever visited tourist site in the year.

F. Data Analysis Method
This study used Contingent Valuation Method is a directly survey method to ask visitors about the willingness to pay for environmental conservation on Pangandaran Beach tourism. Contingent Valuation Method also can measure the value of an item that does not exist in the market. This method can determine the maximum level of willingness to pay and simply provide clear information about the items to beneficiaries.

The primary data is using SPSS16 softwere with multiple regression model in order to know the factors thats influencing the willingness to pay the visitors of Pangandaran Beach.

G. Research Model

To analyze Willingness To Pay (WTP) of visitors on Pangandaran Beach can be formulated as follows:

\[ WTP = f (\text{Age, Edu, Inc, BR,Fis}) \]

Then the function is expressed in the form of WTP relationship with Age, Edu, Inc, Br and Fk then:

\[ WTP = \beta_0 + \beta_1 \text{Age} + \beta_2 \text{Edu} + \beta_3 \text{Inc} + \beta_4 \text{BR} + \beta_5 \text{Fis} + e \]

Where:

- \( WTP \) = Willingness to Pay
- \( \beta_0 \) = intercept
- \( \beta_1, ..., \beta_4 \) = regression coefficient
- \( \text{Age} \) = Age
- \( \text{Edu} \) = Education
Inc = Income Level
Br = The Total Recreation fee to Pangandaran Beach
Fk = Visit Frequency (kali)
E = Error Term

H. Classical Assumption Test

1. Multicollinearity Test.

Multicollinearity test was conducted to test whether the regression model found any correlation between the independent variables. Otherwise there is a problem multicollinearity, if there is a correlation. A good regression model should not happen correlation between independent variables. How to detect there is multicollinearity or not in the regression model are:

a. $R^2$ is quite high (0.7-0.1), but the t-test for each regression coefficient was not significant.

b. The high of $R^2$ is a sufficient condition, but not a necessary condition for the multicollinearity. Because in a low $R^2 < 0.5$ can also occur multicollinearity.

c. Regressing variable independent X with another independent variable, then its $R^2$ calculated by using F test;
If $F^* > F$ table its mean $H_0$ is rejected, and there is a multicollinearity.
If $F^* < F$ table its mean $H_0$ is accepted, and there is no multicollinearity.
The problem of multicollinearity can also be seen on the value of tolerance and the variance inflation factor (VIF) in the regression analysis in SPSS 16. If the tolerance value is greater than 0.1 and less than 10 VIF then there is no multicollinearity problem.

2. Heteroskedasticity Test.

Heteroskedasticity test aims to test whether the regression model occurred inequality residual variance from one observation to another observation. If the variance of the residuals of the observations to other observations is remains, it is called homoskedasticity and if the variance of the residuals of the observations to other observations different is called heteroskedasticity. A good regression model is that has homoskedasticity or did not happen heteroskedasticity.

How to detect the presence or absence of heteroskedasticity is using glejser test. General principle decision whether there is or not heteroskedasticity is see significant value after glejser test, if the significant value > 0.05, this data can be said homoskedasticity or not exposed heteroskedasticity, and vice versa if the significance value <0.05 then the data is exposed heteroskedasticity (Sari, 2015).

3. Normality Test.

Normality test on the regression model was used to test whether the residual value is normally distributed or not. A good regression model is one that has residual value that is normally distributed.
Way to detect it is to see the spread of the data on the source of the diagonal on the graph Normal P-P Plot of regression standardized as the basis for decision making. If spread around the line and follow the diagonal line, the regression model has been normal and proper to be used to predict the independent variable and vice versa. (Ghozali, 2016).

Another way is by using normality test One Sample Kolmogorov Smirnov test. The test criteria are as follows: (Priyatno, 2013).

If the value Significance (2-tailed Sig Asym) > 0.05, then the normal distribution of data.

If the value Significance (2-tailed Sig Asym) < 0.05, then the data are not normally distributed.

I. Hypothesis Test

1. Parameter Individual Test (t test statistic).

Based on Ghozali (2011) in Sasmi (2016) said that the t test statistic basically shows how far the influence explanatory variable / independent variable individually explain variation of dependent variable. In this test we assume the other variables in a constant.

t test is using Hypothesis as follows:

\[ H_0 : \beta_i = \beta \]
\[ H_0 : \beta_i \neq \beta \]
\( \beta_i \) is the independent coefficient variable to \( I \) it is as the value parameter of the hypothesis. B value is usually taken to be zero, its mean no effect on the variable \( X_i \) to variable \( Y \). If the value of \( t \) is greater than \( t \) table, then \( H_0 \) is rejected. This shows that the independent variables significantly influence to the dependent variable. Coefficient \( t \) formulated as follows:

\[
t_{\text{hitung}} = \frac{(\beta_1 - \beta)}{S_b}
\]

while:

\( \beta_i \) = Free Coefficient Ke-\( i \)
\( \beta \) = Hypothesis Value is Zero
\( S_b \) = The standard deviation of the independent variable to-\( i \)

2. **Significance Simultaneous Test (F Test).**

According Ghozali (2011) in Sasmi (2016) said that the F test statistic basically indicate whether all of the independent variable or free variables that are included in the model have influence the dependent variable / bonded. \( H_0 \) hypothesis that will be tested is whether all of the parameters in the model is equal to zero, or:

\[
H_0: b_1 = b_2 = \ldots = b_k = 0
\]

Its mean, whether if all the independent variables are not significant to explanation the dependent variables. The alternative is hypothesis \( (H_a) \), not all parameters simultaneously equal to zero, or:
Ha: \( b_1 \neq b_2 \neq \ldots \neq b_k \neq 0 \)

Its mean, all of independent variable simultaneously is significant explanatory on the dependent variables.

To test this hypothesis is using F statistic with criteria decisions as follows:

a. Quick look: when the value \( F \) is greater than 4, \( H_0 \) can be rejected at 5% confidence level. In other words, we accept the alternative hypothesis, which states that all independent variables simultaneously and significantly affect the dependent variable.

b. Comparing the results value of \( F \) value calculation with \( F \) table, when \( F \) value more greater than \( F \) table its mean \( H_0 \) is rejected and \( H_a \) is accepted.

3. Coefficient Determination (\( R^2 \)).

\( R^2 \) value is between 0 and 1 (\( 0 \leq R^2 \leq 1 \)). If \( R^2 \) is 1 means that the regression line explain 100% the variation of dependent variable. However, if \( R^2 = 0 \), its mean that the regression line does not indicate the slightest variation in the dependent variable. Therefore, a model is good if the coefficient of determination is one.

The coefficient of determination is to know how much percentage of the independent variables on the dependent variable in a percentage form.