CHAPTER III
RESEARCH METHOD

A. Object or Subject of The Research

The object of research is a trait or value of the person who has the variation determined by the researcher in order to be examined and to draw conclusions (Sugiyono, 2012). The object of this research is the individual at Cilegon which aims to determine the extent of the influence of the application of e-Registration, e-Billing, e-Filing, and tax system justice on taxpayer compliance. The reason for choosing the Cilegon area as the object of this research is the development of Cilegon tax in an annual average of 58.54% even though the national development is only 51% annually.

B. Data Type

Quantitative method is the method used in this study. According to Sugiyono (2012), quantitative methods can be referred to as research methods that focus on positivist philosophy, used to examine samples the data collection was using research instruments, and quantitative data analysis that aims to test the hypothesis that has been set.

The data source used is the primary data source. The data was collected by researchers by distributing questionnaires directly to taxpayers to find out the effect of implementing e-Registration, e-Billing, e-Filing, and tax system justice on individual taxpayer compliance at Cilegon.

C. Sampling Technique

Sugiyono (2010) states that non probability sampling is a technique that does not provide equal opportunity for each member of the population to be selected as a sample. This non-probability sampling technique includes systematic, quota, accidental, purposive, saturated, and snowball samples.

Convenience sampling is a non probability sampling method used in this study.

Samples that use convenience sampling are information that will be collected from members of the populatic 26 can be found easily to provide that information. Meanwhile, the determination of the number of samples in the study used the opinions of Gay. According to Umar (2011) Gay's opinion states that the sample size that can be accepted based on the research design used has a sample size of at least 30 subjects.

D. Operational Definition of Research Variables

According to Indriantoro et al., (2009) variables are something that can be included in a variety of values. Theory expresses events systematically through statements of relationships between variables. Variables give a more real picture of the phenomena generalized in construct.

The variables in this study are the obedience of Individual Taxpayers at Cilegon, the application of e-Registration, e-Billing, e-Filing, and justice of the taxation system. The indicators in the variables described have been developed into question items in the questionnaire using a Likert scale with four choices of answers, namely Strongly Agree (SS), Agree (S), Disagree (TS), and Strongly Disagree (STS).

a. Dependent Variable

The dependent variable is the variable that is influenced by the independent variable. Dependent variables can also be referred to as, affected variables or effect variables. The dependent variable used in this study is taxpayer compliance.

1) **Taxpayer Compliance**

Taxpayer compliance is the fulfillment of tax obligations by taxpayers to contribute to national development which is carried out voluntarily (Khasanah, 2013). The indicators are compliance in registering themself, compliance with calculation and payment of tax payable, compliance with payment of tax arrears, and compliance to report Annual Tax Return.

b. **Independent Variable**

Independent variables are variables that affect the dependent variable. This independent variable is also called the confounding variable. It can be called an independent variable because it can affect other variables. The independent variables in this study are the application of e-Registration, e-Billing, e-Filing, and tax system justice.

1) **The Application of e-Registration**

The e-Registration system is one of the service products from the Directorate General of Taxes which is used to register new Taxpayers who wish to obtain a NPWP (Widarto, 2013). The indicators are the understanding of Taxpayers regarding the use of the e-Registration system, understanding of tax regulations, and taxpayer's perception of the ease of the e-Registration system.

2) **The Application of e-Billing**

The e-Billing system is an online payment system in which taxpayers can pay their tax obligations online via ATM, internet banking, bank or post office (Sari, 2017). The indicators are the understanding of Taxpayers regarding the use of e-Billing systems, perception of Taxpayers regarding the ease of e-Billing, and perception of Taxpayers regarding the usefulness

of the e-Billing system.

3) The Application of e-Filling

The e-Filing system is a way of submitting SPT or submission of SPT extension online through the Directorate General of Tax web or application service provider (Noviandini, 2012). The indicators are the understanding of Taxpayers regarding the use of the e-Filing system, the understanding of tax regulations, perception of Taxpayers regarding the ease of e-Filing, and perception of Taxpayers regarding the usefulness of e-Filing.

4) Justice of the Tax System

The purpose of this justice is for taxpayers to adhere to the existing system and to implement their tax obligations wisely (Hidayati, 2014). The indicators are understanding of Taxpayers regarding the Justice of the Taxation System and perception of Taxpayers regarding to the usefulness of the Justice of the Tax System.

E. Data Analysis Techniques

1. Descriptive Statistics

Descriptive statistics are statistical methods used to describe the data that have been collected into information, namely information about the characteristics of the data including the maximum value, minimum value, mean, standard deviation (data deviation) (Sugiyono, 2010).

2. Data Quality Test

In analyzing the data in this study, the researcher used the following methods:

a. Instrument Validity Test

Validity testing is done to measure the validity of a questionnaire. A questionnaire is regarded to be valid if the statements on the questionnaire are able to reveal something that will be measured by the questionnaire

(Ghozali, 2011).

This study used the validity test with factor analysis method. Factor analysis identifies the structure of relationships between variables or respondents by looking at correlations between variables or correlations between respondents. The data matrix must have sufficient correlation so that factor analysis can be carried out.

The test equipment used to measure the level of intercorrelation between variables can be done by analyzing factors such as Kaiser-Meiyer-Olkin (KMO) and Barlette's Test. The value of KMO and Barlette's test must be > 0.50 to be able to do factor analysis (Ghozali, 2011). Each question will be regarded as valid if it has factor loading> 0.5. Question items that have factor loading of 0.5 or more are considered to have validity that is strong enough to explain latent constructs (Hair et al., 2010).

b. **Instrument Reliability Test**

Reliability test is a tool to measure a questionnaire which is an indicator of a variable or construct (Ghozali, 2011). Reliability testing was carried out in this study to measure whether the questionnaire submitted to respondents was consistent and reliable.

Ghozali (2011) explains that a construct or variable is regarded as reliable if it gives the value of Cronbach's Alpha > 0.6. The higher the value of Cronbach Alpha, the higher the reliability of a questionnaire. If based on the results of the calculation produced a coefficient of > 0.6 then the research instrument is regarded as reliable. However, if the coefficient is < 0.6 then the instrument is not reliable and must be replaced or changed.

3. Classic Assumption Test

Test assumptions that must be fulfilled in regression analysis (Gujarati, 2004) include normality, multicollinearity, and heteroscedasticity tests.

a. Normality Test

This test is used to determine that the data collected has a normal distribution (Nazaruddin and Basuki, 2015). Normality statistical tests that can be used include Chi-Square, Kolmogorov Smirnov, Shapiro Wilk, and Jarque Bera. To find out the results of this study Kolmogorov Smirnov was used. If the probability value is significant > 0.05 then the data has a normal distribution (Ghozali, 2009).

b. Multicollinearity Test

The linear relationship between X independent variable in the multiple regression model is called multicollinearity. If the linear relationship of each X independent variable in the multiple regression model is a perfect correlation, these variables have perfect multi collinearity (Nazaruddin and Basuki, 2015). To detect the presence or absence of multicollinearity in the regression model is by looking at the tolerance value and the value of Variace Inflation Factor (VIF). If the tolerance value is less than 0.10 and the VIF value is greater than 10, multicollinearity occurs.

c. Heteroscedasticity Test

The inequality of variants from residuals for all observations in the regression model is the Heteroscedasticity Test (Nazaruddin and Basuki, 2015). Heteroscedasticity test is done through regression (regressing) absolute residual value with independent variables in the model. If the significant value is $>$ alpha 0.05 then the data is not exposed to heteroscedasticity.

4. Data Hypothesis and Analysis Test

a. Determination Coefficient Test (R^2)

Determination coefficient test (R^2) has the purpose of measuring the ability of independent variables to explain the dependent variable. Determination coefficient test (R^2) is to show the percentage of the level of correctness of predictions from the regression tests performed. R^2 has a range between 0 to 1. If the R^2 value is closer to 1, then the greater the independent variable in explaining the variation of the dependent variable (Nazaruddin and Basuki, 2015).

There are some researchers who recommend using R^2. The adjusted R^2 value is value which is adjusted. More than two independent variables regression with uses adjusted R^2 as the coefficient of determination (Santoso, 2001). Meanwhile, the Standard Error of The Estimate is a measure of the number of errors in the regression model in predicting the value of Y (Priyatno, 2013).

b. Simultaneous Significance F Statistic Test

The F test is used to prove whether the independent variables simultaneously have an influence on the dependent variable. If the significance value is less than 0.05, Ha is accepted or Ho is rejected. On the other hand, if a significance value is more than 0.05, Ha is rejected or Ho is significance (Ghozali, 2009).

c. Individual Significance Parameter Test (t Statistic Test)

This test has the purpose of knowing the influence between independent variables on the dependent variable partially. To find out whether it has a significant effect of each independent variable on the dependent variable, then the significance value is of t compared to the degree of trust. If the

significance value is > 0.05, Ho is accepted or Ha is rejected. On the other hand, if the significance value is < 0.05, then Ho is rejected or Ha is accepted. If Ho is rejected, it means there is a significance relationship between the independent variables on the dependent variable (Ghozali, 2009).

d. Multiple Linear Regression Analysis

Multiple linear regression is a regression analysis with two or more independent variables. Multiple linear regression analysis was used to test the effect of the application of e-Registration, e-Billing, e-Filing, and the tax justice system on taxpayer compliance. In this study, the application used to process the data was by using the SPSS application (Nazaruddin and Basuki, 2015).

The multiple linear regression equation models used in this study are as follows:

$$\textbf{KWOP} = \boldsymbol{\alpha} + \boldsymbol{\beta_1}\ \textbf{PER} + \boldsymbol{\beta_2}\ \textbf{PEB} + \boldsymbol{\beta_3}\ \textbf{PEF} + \boldsymbol{\beta_4}\ \textbf{KSP} + \boldsymbol{\varepsilon}$$

Information:
KWOP	= Individual Taxpayer Compliance
α	= Constant
β1	= e-Registration Regression Coefficient
β2	= e-Billing Regression Coefficient
β3	= e-Filing Regression Coefficient
β4	= Regression Coefficient of Tax System Justice
PER	= Application of e-Registration
PEB	= Application of e-Billing
PEF	= Application of e-Filing
KSP	= Taxation Justice System
ε	= Error (Disturbance Error)

e. Hypothesis Acceptance Criteria

Ha　　　= e-Registration, e-Billing, e-Filing, and Tax System Justice Implementation has a positive effect on Mandatory Compliance.

Criteria　= Ha is accepted if the value of sig. $\leq$ alpha (0.50) and regression coefficients of $\beta1$, $\beta2$, $\beta3$, and $\beta4$ are in the same direction of the hypothesis or the three hypotheses have positive effort if the result of analysis is positive and they have negative effect if it is negative.