

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

#### **3.1. Reserch design**

The research method is basically a scientific way to get the data with a specific purpose and its usefulness. This study uses a mixed method between qualitative and qualitative. Using quantitaive methods that aim to connect between variables, this study employs a combination of SmartPLS and Structural Equity Models with AMOS techniques. The type of this research is quantitative approach based on the philosophy of positivism, used to examine in a particular population or sample, data collection using research instruments, quantitative/statistical data analysis, with the aim to test the predefined hypothesis, Sugiyono (2016: 11). Supplementing the statistical result is the qualitative technique of guided interviews with respondents from government and the society knowledgable of the mobile application in Sleman. Qualitative research refers to the meanings, concepts definitions, characteristics, metaphors, symbol, and description of the things and not to ther counts or measures (Sugiyono, 2016).

### **3.2. Research Setting**

The research location in this research is Sleman regency, Special Region of Yogyakarta (SRY). The reason for choosing Sleman regency is primarily because it is a pilot area for the implementation of smart city in the Yogyakarta region. It is the only regency in SRY that was awarded a commendation in recognition of its commitment to the implementation of smart city. Futhermore, Sleman regency has the vision of achieving the status of a smart regency by the year 2021. Hence, the geographical scope of the research is relevant in analyzing the citizen behavior on the utilization of technology on smart citizen 2021, through the Lapor Sleman mobile application.

### **3.3. The Type Of The Data**

There are two kinds of data utilized in this research namely, primary data and secondary data.

#### **3.3.1. Primary data**

Primary data refer to the first hand source of verified information gathered by the researchers (Sugiyono, 2016: 308). They are in the form of opinion, or description of the

object (person) obtained from the group or individual, the result of observation of an object (physical), event or activity. Primary data in this study is a source of data obtained through a primary source of information about the citizens' behavior in the use of technology obtained from distributed questionnaires from the respondents.

### **3.3.2. Secondary Data**

Secondary data is usually evidence of records, reports, regulations, policies, or historical reports that have been compiled in an archive or documentary form, either published or unpublished files (Sugiyono, 2016). The secondary data in this research is based on the newspaper of smart regency in Sleman, regional regulations and policies in documentary form and journal reports relevant to the sleman lapor app.

### **3.3.3. Data Classification**

In this research uses the primary and secondary data classification. The primary data is the data that is directly

collected from main sources of the study such as spread the questionnaires to the society based on the sampling that already choosen. The secondary data are not directly collected from main sources of the study. The secondary data collected form various sources such as books, journals, literatures, documents and either form the media related to smart citizen in use technology in Sleman, Yogyakarta.

### **3.4. Data Collection Technique**

To obtain the necessary data, this study used data collection techniques tailored to the intent and purpose of the study, all data required in this study were collected through:

#### **3.4.1. Observation**

According to Cristensen (2004) in Sugiyono (2016: 196) observational research is interpreted as an observation of the pattern of human behavior in certain situations in obtaining information about the desired phenomenon.

### **3.4.2. Questionnaire**

Creswell (2012) in Sugiyono (2016: 192) argued that a questionnaire is a data collection technique in which respondents fill in questions or statements to be filled in and collected back by the researcher.

### **3.4.3. Interview**

This method retrieves data with information from directly relevant information conducted with the community stakeholders and the identified officers from the local government of Sleman regency.

### **3.4.4. Documentation**

According Sugiyono (2016: 326) the data collection techniques with documentation can record events that have passed. Whether in the form of writing, drawing, or the monumental works of a person. Writing documents such as diaries, life history, stories, biographies, regulations, policies. Documents in the form of images, such as bibs, live pictures, sketches and others. Documents in the form of works such as works of art, which can be images, sculptures, films, and others. Document study is a complement of the use of

observation methods and questionnaires in quantitative research.

### **3.5. Population and Sample**

#### **3.5.1. Population**

According to Sugiyono (2016: 80) population is a generalization consisting of: objects/subjects that have certain qualities and characteristics set by researchers to learn and then draw conclusions. In the case of this study, population refers to the citizens of Sleman regency which utilize *Lapor Sleman* application. Based on the complaints in the website of Sleman 2016 and 2017 there is an average of 800-1500 users of the Lapor Sleman app.

#### **3.5.2. Sample**

The sample is part of the number and characteristics possessed by the population when large populations and researchers are not possible to learn everything in the population, such as due to limited funds, time, etc. Therefore, the researcher uses the sample taken from population, as in the case of the study residents from Sleman utilizing the

application of *Lapor Sleman*. This research uses the purposive sampling that choose the location in Sleman sub-district (Sleman City). Consideration of the sample in this study are the citizens who use the *Lapor Sleman application*. The sample size population is obtained using the Solvin's Formula:

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

Details below:

n = the number of sample

N = the number of population

e = margin error

Therefore, the sample will be:

$$n = \frac{1500}{1+1500 (0,1)^2}$$

$$n = 97,82 = \mathbf{100 \text{ Sample}}$$

### 3.6. Data Analysis Units

According to Hamidi (2005: 75-76), the unit of analysis is the unit can be individuals, groups, objects or a background of social events being subjected to analysis. In the case of this study,

the researcher did preliminary interviews and survey to gauge the respondents who have adequate information in the process of data collection. Unit analysis in this research data are individuals as the community in Sleman Regency who knows and use the *Lapor Sleman* application.

### **3.7. Method of Data Analysis**

This research uses AMOS as the method of data analysis. AMOS is a statistical software which stands for analysis of a moment structures. It is an added SPSS module, and is specially used for Structural Equation Modeling, path analysis, and confirmatory factor analysis. It is also known as analysis of covariance or causal modeling software. In AMOS, we can draw models graphically using simple drawing tools. It quickly performs the computations for SEM and displays the results.

#### **1.3.1. Hypothesis Testing**

According to Hartono (2008) in Jogiyanto and Abdillah (2009), the size of significance of hypothesis support can be used in comparison of T-table and T-statistic value. If T-statistic is higher than T-table value, the hypothesis is



supported or accepted. In this study for a 90 percent confidence level (alpha 90 percent) then the T-table value for the one-tailed hypothesis is  $> 1.68023$ .

The data validity testing technique which is utilized in this study includes the process of identification, classification, reduction, comparison and interpretation (Lexy J. Moloeng, 1995). This is the triangulation method used as a source of validity and reliability in this research. Detailed techniques can be explained as follows:

- a) Comparing observational data with interview data.
- b) Compare what people say in public with what is said personally.
- c) Compare what people say about the research situation with what is said all the time.
- d) Comparing a person's perspective with various opinions and views of people such as ordinary people, people who are middle or high educated, people are, government people.

- e) Comparing the results of interviews with the contents of a related document.
- f) Comparing the situation and conditions of public policy management before and after the researcher intervenes in the process of managing local public policy.