

CHAPTER III

RESEARCH METHOD

1.1 Research Design

The focus of this research is to analyse the variable of crowdsourcing and fountain system adopted in the context of the government of Surabaya social media. This research used quantitative (statistical analysis of survey data) and qualitative (basically of content analysis of interview responses) approaches (Nasehuddin & Gozali, 2012). Qualitative method is the investigation of social phenomena in order to gather an in-depth understanding of human behaviour and reasons that govern such as behaviour. It seeks out the “why” and not the “how” of specific phenomena through the analysis of unstructured information. On the other hand, quantitative research is the method that emphasises objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques. The notion of this study originated from the fact that social media now a communication aide. The survey and interview method were utilised for the gathering of data while purposive sampling was used to determine sample population.

1.2 Research Location

The research location was in Surabaya Government. The government of Surabaya has been doing initiatives towards digitalisation; hence, has been awarded by the central government various recognitions due to its social media utilisation. Whereas, this research shall determine the efforts exerted by the government of Surabaya towards digitalisation.

1.3 Data Classification

The classification data of this research are primary and secondary data. The primary data of this research is the result of interviews, questionnaires, and some data gathered from

Facebook and Twitter. Whereas the secondary data are books, journals, works of literature, documents, and reports that are related to the social media used by the government.

Table 3.1 Data Classification

No	Data	Primary	Secondary	Sources
1	Interview with Department of Communication and Information of Surabaya City	√		Questionnaire and voice records.
2	Interview with 15 Department/Division Heads of Surabaya City Government	√		Questionnaire and voice records.
3	Crowdsourcing system in ICT of Social Media	√	√	Information from social media of each department in Surabaya's government, Questionnaire and voice records, Journal Articles.
4	Fountain Technology Enactment	√	√	Information from social media of each department in Surabaya's government, Questionnaire and voice records, Journal Articles.

Source: Data by author (Kasiwi, 2018)

1.4 Technique Analysis

Data collection techniques in quantitative and qualitative research can use four techniques such as:

- a. Observation.

Data derived from observations can facilitate researchers in explaining the interrelationship of real phenomena (Sugiono, 2012). This observation technique is done by observing directly to obtain a description of the pattern and behaviour of what is studied. In this study, researchers observed how the response, both action and reaction of social media users in articulating the sources of information obtained through social media. It should be

reiterated that in this study the users of social media are divided into two groups namely the public and bureaucrats.

b. Document analysis

This technique is done by collecting and tracing documents relevant to the research. The materials in question are scientific journals, theories, and online digital and online newspapers (Kholid, 2016). The data obtained from the search and analysis of this document is secondary data that also supports the primary data that collected from questionnaire and observation techniques.

c. Questionnaires

Sugiono (2012) stated that the questionnaire as a technique of data collection that is done by giving a set of questions or written statement to the respondent to answer. Questionnaires of this study used a close-ended question that can be measured by the Likert scale. Using this Likert scale, each item in the questionnaire has five answers as follows:

Table 3.2 Score of Questioner

Question	Score
Strongly Agree	5
Agree	4
Neutral	3
Disagree	2
Strongly Disagree	1

Source: Sugiono, 2012

1.5 Unit of Data Analysis

The unit of analysis in this study are employees of the 15 departments of the government of Surabaya that have been using social media in disseminating and informing the public of the issues concerning social welfare.

1.6 Population

The population of this research is the all of the public servants from the 15dearments of Surabaya government city that have been using social media to give the information and communicate with the public.

3.7 Sampling Technique

The sampling technique of this research is purposive sampling to ensure bias reduction; this includes employees from the staff and middle-level bureaucracy. By using purposive sampling, the researcher can determine the respondents by identifying a particular characteristic that suitable to the purpose of the research. Thus, respondent job assignment in the government shall be related to social media utilisation. Hence, upon identification, 98 qualified respondents were given questionnaires to answer with an allocation of at least five questionnaires for each department

The sample size of Surabaya city government is presented below according to department and position.

Table 3.3 Distribution of Surabaya Respondents by Department/Agencies and position.

No	Department/ Agencies	Head	Staff
1	Surabaya Tourist Information Center (Dinas Kebudayaan dan Pariwisata Kota Surabaya)	1	12
2	<i>Satpol PP</i>	1	15
3	<i>Bag. Administrasi dan OtDa</i>	1	1
4	<i>DPUBMP</i>	1	2
5	<i>Bagian Humas</i>	1	13
6	<i>Dispendukcapil</i>	1	2
7	<i>Dispendik</i>	1	5
8	<i>Badan Kepegawaian dan Diklat</i>	1	1
9	<i>Badan Perencanaan Pembangunan Kota</i>	1	1
10	<i>Dinkominfo</i>	1	25
11	<i>Dinas Pengelolaan Bangunan dan Tanah Pemerintahan</i>	1	1
12	<i>Dinas Koperasi dan Usaha Mikro</i>	1	2
13	<i>Dinas Kesehatan</i>	1	2
14	<i>Dinas Perhubungan</i>	1	14
15	<i>Dinas Pengendalian Penduduk, Pemberdayaan Perempuan dan Perlindungan Anak</i>	1	2
	Total		98

Source: Department of Communication and Information Technology, 2018

1.8 Data Analysis Technique

The analysis of this research made use of mixed method approaches. All variables were operationalised with its respective indicators which were utilised based on the questionnaire and interview guide. Cross-section analyses were used to the collected primary data. Further, an extensive review of the literature was made to ensure that each construct and items were fully understood and sufficiently measured. Several modifications were made to the questionnaire as each item was reviewed to have a contextualised material. The researcher proposed a research model to show the relationship among variables that were tested using the structural equation model-partial least square. Data gathered from the survey were analysed using a licensed version of IBM SPSS, Smart Partial Least Squares (PLS) and network analysis.

1.8.1 Regression Analysis

Jovita (2018) stated that regression analysis is applied to measure which of the independent variables has a significant effect on the dependent variables. Specifically, Partial Least Square (PLS) is utilised because it is a quick, efficient, and optimal regression method based on covariance. PLS is also recommended in cases of regression where the number of explanatory variables is high and where it is likely that the explanatory variables are correlated based on the value, and each result based on the PLS have a different value based on the model fit itself.

The assessment of the reliability and concurrent validity of the constructs was done through the determination of the coefficient of Cronbach's alpha. The minimum Cronbach's alpha values must be higher than 0.70 to indicate the reliability and validity of constructs. In PLS, the individual path coefficients of the structural model can be interpreted as the standardised beta coefficients of ordinary least squares regression (Henseler, 2009). Although PLS is used to confirm the theory, it can also be used to explain whether or not the relationship exists between latent variables. PLS can analyse as well as constructs formed with reflexive indicators and formative indicators.

PLS is a soft modelling analysis method because it does not assume data must be measured by an absolute scale, which means the sample size can be small (under 100 samples). There are several reasons why PLS was used in a study. First, PLS (Partial Least Square) is a method of data analysis based on the assumption of the sample should not be large, i.e., the number of examples less than 100 can be done a study, and residual distribution. Secondly, PLS (Partial Least Square) can be used to analyse theories that are still said to be weak, because PLS (Partial Least Square) can be used for prediction. Third, PLS (Partial Least Square) enables algorithm by using ordinary least square (OLS) series analysis

to obtain the efficiency of logarithm calculation (Ghozali, 2006). Fourth, in the PLS approach, it is assumed that all sizes of variance can be used to explain.

This measurement method also requires validity test and instrument reliability test. Validity test is conducted to determine the ability of research instruments in measuring what should be measured. While the reliability test is used to measure the consistency of measuring devices in measuring a concept or used to measure the viscosity of respondents in answering the question items in the questionnaire or research instrument. The indicator is considered valid if it has an AVE value > 0.5 .

1.8.2 Network Analysis

The function of this data network analysis is to measure and understand the social media structure of the government of Surabaya based on their information gathered. In doing so, Gephi (version 0.9.2) software was used to process and analyse the data. On the other hand, centrality analysis gives a rough indication of how the identified nodes are connected to each other and the flow of information and interaction. Whereas, a highly centralised network is dominated by one account which controls the information flow.