

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

#### **3.1 Research Design**

This research is done in survey design, which according to Check & Schutt (2012) is the collection of information from a sample of individuals through their response to questions. Studies conducted to establish cause-and-effect relationships using the same natural environment in which the subjects under study normally function are called field experiments. The time horizon of the research is one-shot or cross-sectional, which according to Sekaran & Bougie (2017) is the study undertaken in which data are gathered just once, perhaps for days or weeks or months, to answer the research question.

#### **3.2 Research Context**

This research will focused on Telkom Witel Yogyakarta which is the part of the 4th region office. This quantitative research will use questionnaires to gather the data needed to be analyzed. The research will be done in the office of Telkom Witel Yogyakarta, which addressed in Jalan Yos Sudarso No.9, Kotabaru, Gondokusuman, Yogyakarta, Daerah Istimewa Yogyakarta 55224. The time span of work is September-October 2019.

### **3.3 Population and Sampling**

#### **3.3.1 Population**

Population refers to the entire groups of people, events, or things of interest that the researcher wishes to investigate. (Sekaran& Bougie,2017). The population of this research is 92 employees of Telkom Witel Yogyakarta.

#### **3.3.2 Sample**

The sample is thus a subgroup or subset of the population, by studying the sample, the researcher should be able to draw conclusions that are generalizable to the population of interest. (Sekaran&Bougie, 2017). The sampling method of this research is purposive sampling, which according to Cooper & Schindler (2014), means a nonprobability sample that conforms to certain criteria. Specifically, the sampling method is the judgment sampling, which occurs when a researcher selects sample members to some criterion. (Cooper & Schindler, 2014) .The criterion here in the research is the employees who have done the job rotation in the company or at least has worked for more than a year in the company to make sure they understand and have a perception about job rotation in the company. Below is the table of sample size formulated by Krejcie & Morgani (1970) :

**Table 3.1**  
**Sample and Population Size**

<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
<b>90</b>	<b>73</b>	460	210	4500	354
<b>95</b>	<b>76</b>	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384
Note – <i>N</i> is population size <i>S</i> is sample size					

Source : Krejcie & Morgan (1970)

The population size of this research is 92, and there is no 92 number of population stated in the table 3.1. The sample size of this research is determined as seen in the table below :

**Table 3.2**  
**Determining the Sample Size**

<i>N</i>	<i>S</i>
90	73
91	<b>74</b>
<b>92</b>	
93	75
94	
95	76

Source : Modified from Krejcie & Morgan (1970)

or using the formula, if the sample for 95 number of population is 76, then how many sample needed for 92 number of population. The calculation is as follows :

$$\frac{92}{95} = \frac{x}{76}$$

$$95 x = 92 \times 76$$

$$x = \frac{92 \times 76}{95}$$

$$x = 73.6 \approx \mathbf{74}$$

The population size of this research is in between the listed number 90 and 95 in Krejcie & Morgan (1970) table of sample and population size. According to the assumption as showed in Table 3.2 and the calculation, this research is targeting 74 samples to be collected and analyzed.

### 3.4 Data Resource

The data used in this research will be the primary data. According to Sekaran&Bougie (2017), primary data refers to information obtained first-hand by the researcher on the variables of interest for the specific purpose of the study. Individuals provide information when interviewed, administered questionnaires, or observed.

### **3.5 Data Collection Method**

A questionnaire is a preformulated written set of questions to which respondents record their answers, usually within instead carefully defined alternatives (Sekaran&Bougie,2017). This quantitative research will combine three sets of questionnaires from previous research. The independent variable, job rotation will be measured using seventeen items developed by Zin, Shamsudin, & Subramaniam (2013). Twenty items of the short version of the Minnesota Satisfaction Questionnaire (MSQ) will be used to measure the dependent variable, job satisfaction. The questionnaire from the previous research of Boomaars (2008) will be used in this research to measure the moderating variable, workplace learning in thirty-six items.

### **3.6 Data Measurement Method**

These variable measurement questionnaire scaling is the likert scale, which according to Sekaran & Bougie (2017) is a commonly used way of measuring opinions and attitudes, they measure the extent to which participants agree or disagree with a given statement, and typically range from 1 to 5 with a neutral point in the middle.

### **3.7 Operational Definition**

There are three variables in this research, a dependent variable, an independent variable, and a moderating variable. The dependent variable is the variable of primary interest to the researcher, and independent variable is one that influences the dependent variable in either a positive or negative way while moderating variable is one that has a strong contingent effect on the

independent variable-dependent variable relationship. (Sekaran & Bougie, 2017). In this research, the dependent variable (Y) is the job satisfaction, the independent variable is the job rotation (X1), and the moderating variable (X2) is the workplace learning.

### **3.8 Goodness of Measures**

It is important to make sure that the instrument we developed to measure a particular concept is indeed accurately measuring the variable. The two most important and fundamental characteristics of any measurement procedure are reliability and validity and lie at the heart of the competent and effective study. (Bajpai & Bajpai, 2014) Both reliability and validity are fundamental measures of the strength of the association, or correlation, between different variables. Reliability is the correlation between results obtained on repeated administrations of a test, while validity is the correlation between the test and a reference standard (Karras, 1997).

#### **3.8.1 Validity Test**

Validity is the extent to which a test measures what we wish to measure (Cooper & Schindler, 2014). And according to Sekaran & Bougie (2016) is a test of how well an instrument that is developed measures the particular concept it is intended to measure. Bajpai & Bajpai (2014) mentioned that it ensures that the measure includes an adequate a representative set of items that tap the concept. The more the

scale items represent the domain or universe of the concept being measured, the higher the content validity.

The validity of this research measurement will be tested using Karl Pearson's product-moment correlation coefficient  $r$  developed in 1948. The correlation coefficient  $r$  is scaleless and assumes a value between -1 and +1. A value of  $r$  near or equal to 0 implies little or no linear relationship between two variables ( $y$  and  $x$ ). In contrast, the closer  $r$  comes to 1 or -1, the stronger the linear relationship between  $y$  and  $x$ . And if  $r = 1$  or  $r = -1$ , all the sample points fall precisely on the least-squares line. Positive values of  $r$  imply a positive linear relationship between  $y$  and  $x$ ; that is,  $y$  increases as  $x$  increases. Negative values of  $r$  indicate a negative linear relationship between  $y$  and  $x$ ; that is,  $y$  decreases as  $x$  increases (McClave, et al., 2018)

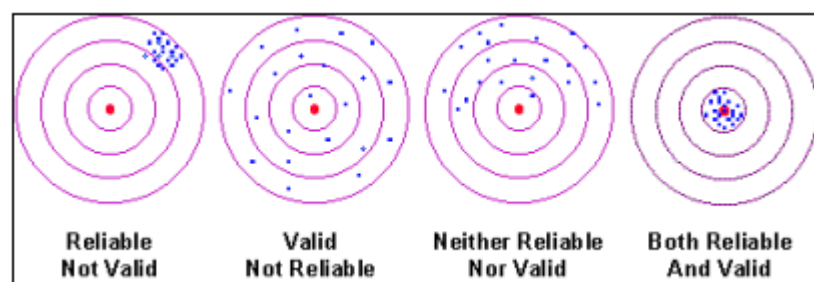
### **3.8.2 Reliability Test**

Reliability has to do with the accuracy and precision of a measurement procedure. It is concerned with estimates of the degree to which a measurement is free of random or unstable error (Cooper & Schindler, 2014). The reliability of a measure indicates the extent to which it is without bias (error-free) and hence ensures consistent measurement across time (Sekaran & Bougie, 2016). Bajpai & Bajpai (2014) mentioned that if a measurement device or procedure consistently assigns the same score to individuals or objects with equal values, the instrument is considered reliable.

Cronbach's Alpha developed by Lee Cronbach in 1951 will be used to test the reliability of the measurement in this research. It is expressed as a number between 0 and 1. According to Tavakol & Dennick (2011) alpha is a commonly employed index of test reliability, and alpha is grounded in the 'tau equivalent model' which assumes that each test item measures the same latent trait on the same scale. A low value of alpha could be due to a small number of questions, poor inter-relatedness between items or complex constructs. For example if a low alpha is due to poor correlation between items, then some should be revised or discarded (Streiner, 2003 in Tavakol & Dennick, 2011). A general accepted rule is that 0.6-0.7 indicates an acceptable level of reliability, and 0.8 or greater a very good level. However, values higher than 0.95 are not necessarily good, since they might be an indication of redundancy (Hulin, Netemeyer, & Cudeck, 2001 in Ursachi, Horodnic, & Zait, 2015)

**Figure 3.1**

**Validity and Reliability of Instrument**



Source : Bajpai & Bajpai (2014)



### 3.9 Data Analysis Method

#### 3.9.1 Descriptive Statistic Analysis

Descriptive statistics are the elementary transformation of raw data in a way that describes the basic characteristic such as central tendency, distribution, and variability (Zikmund, et al., 2013). Descriptive statistic analysis according to Sekaran & Bougie (2017) is broken down into :

1. **Measures of central tendency.** Measuring the mean or average, the median and mode.
2. **Measures of dispersion.** Measuring the range, variance and standard deviation.

The interval can be determined by seeing the minimum and maximum value which is as follow :

Minimum score = 1

Maximum score = 5

$$Interval = \frac{Max - Min}{Number\ of\ Class} = \frac{5 - 1}{5} = 0.8$$

So, it could be perceived as follows :

**Table 3.3**

#### **Descriptive Analysis Criteria**

<b>Interval</b>	<b>Criteria</b>
1.0-1.80	Very Low
1.81-2.61	Low
2.62-3.42	Average
3.43-4.23	High
4.23-5.04	Very High

Source : Processed Data (2019)

### 3.9.2 One Sample t-Test

The one sample  $t$ -test is a statistical procedure used to determine whether a sample of observations could have been generated by a process with a specific mean. (Statistics Solutions, 2019). And according to Stattrek.com (2019), one-sample  $t$ -test is used to test whether a population means is significantly different from some hypothesized value. The test here is to find out whether the means of the variables are perceived high. The hypothesis will be as follow :

$$\mu > M$$

which,  $\mu$  = the true population mean

$M$  = the hypothesized value

the value hypothesized ( $M$ ) in this research will be the middle value of the measurement range, which is three. Three is assumed as the average number of the measurement, and if the population mean is more than the average means it is perceived high. The first three research problems will be answered using this method.

### 3.9.3 Simple Regression Analysis

To analyze the first hypothesis, this research will be using simple regression analysis. According to Levine, et al. (2017), simple regression models use a single numerical independent variable,  $X$ , to predict a numerical dependent variable,  $Y$ . Simple linear regression models

represent the simplest relationship of a straight-line or linear relationship.

The equation of the model is as follow :

$$Y_i = \beta_0 + \beta_1 X_i + \varepsilon_1$$

where  $\beta_0$  = Y intercept for the population

$\beta_1$  = slope for the population

$\varepsilon_1$  = random error in Y for observation i

$Y_i$  = dependent variable for observation i

$X_i$  = independent variable for observation i

In the interest of finding out the relationship between the two variables, this research will use the SPSS program.

#### 3.9.4 Moderated Regression Analysis

Moderated Regression Analysis will be used to analyze the second hypothesis of this research. Adapted from Liana (2009) Moderated Regression Analysis (MRA) is a unusual multiple linear regression which the model has the interaction element (the multiplication of two or more independent variable) with the equation as follows :

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_1 X_2 + e$$

the multiplication of  $X_1$  and  $X_2$  is called the moderated variable because it is describing the effect of moderating variable  $X_2$  toward the relationship of  $X_1$  and Y. While  $X_1$  and  $X_2$  is direct affect from variable  $X_1$  and  $X_2$  towards Y.

### 3.10 F-test

F-test is used if the independent variable of the regression model is more than one to test whether all the independent variables are simultaneously affecting the dependent variable significantly. The test will be done using the SPSS program and the result of the prob/sig (p-value) will be compared with the  $\alpha$  (0.05) with the criteria as follows :

if  $P\text{-Value} > \alpha \rightarrow$  The independent variables is not simultaneously affecting the dependent variable significantly.

$P\text{-Value} < \alpha \rightarrow$  The independent variables is simultaneously affecting the dependent variable significantly.

### 3.11 t-test

Each independent variable of the regression model will be tested using the t-test using SPSS program to see whether the variable is significantly affecting the dependent variable. The P-Value of the SPSS result will be compared with the  $\alpha$  (0.05) with the criteria as follow :

if  $P\text{-Value} > \alpha \rightarrow$  The independent variable is not significantly affecting the dependent variable.

$P\text{-Value} < \alpha \rightarrow$  The independent variable is significantly affecting the dependent variable.

### 3.12 Coefficient of Determination

The coefficient of determination measures the proportion of variation in Y that is explained by the variation in the independent variable X in the regression model. The range of  $r^2$  is from 0 to 1 and the higher the value, the more the variation in Y in the regression model can be explained by the variation in X. The coefficient of determination is equal to the regression sum of squares divided by the total sum of squares. (Levine, et al., 2017)

$$r^2 = \frac{\text{regression sum of squares}}{\text{total sum of squares}} = \frac{SSR}{SST}$$

### 3.13 Company Profile

PT Telkom Indonesia (Persero) Tbk (Telkom) is a state-owned information and communications technology enterprise and telecommunications network in Indonesia. The Government of Indonesia is the majority shareholder with 52.09 percent shares while the remaining 47.91 percent shares belong to public shareholders. Telkom's shares are traded on the Indonesian Stock Exchange (IDX) where it is listed as "TLKM" and on the New York Stock Exchange (NYSE), which lists it as "TLM".

As it transforms to become a digital telecommunication company, TelkomGroup implements a customer-oriented business and company operational strategy. The transformation aims to trim down TelkomGroup's organization to be leaner and more agile in adapting the

fast-changing nature of telecommunications industry. The new organization is expected to be able to improve efficiency and be more effective in producing a quality customer experience.

TelkomGroup's activities grow and change in accordance to the development of new technology, information and digitalization, but still within the corridor of telecommunications and information technology. This is evident in the newly developed business lines, which complements the company's existing legacy business (Telkom, 2019)

### 3.13.1 Company Business Portfolio

Telkom (2019) stated that TelkomGroup currently serve four customer segments, namely corporation, residential, individual and others with six business portfolios as follows :

1. **Mobile.** This portfolio offers mobile voice, SMS and value added service, as well as mobile broadband. These products are available through the company's subsidiary, Telkomsel, with its Kartu Halo signature postpaid SIM card and SimPATI, Kartu As and Loop prepaid ones.
2. **Fixed.** This portfolio provides fixed line service, which include fixed voice, fixed broadband, as well as Wi-Fi and other emerging wireless technology services through the IndiHome brand.

3. **Wholesale & International.** The services offered in this portfolio are namely interconnection, network service, Wi-Fi, VAS, hubbing data center and content platform, data and internet, and solution.
4. **Network Infrastructure.** This portfolio offers network service, satellite, infrastructure and tower.
5. **Enterprise Digital.** It offers an information and communication technology platform service and smart enabler platform service.
6. **Consumer Digital.** This portfolio consists of media and edutainment service, such as e-commerce (blanja.com), video/TV and mobile-based digital service. Moreover, we offer digital life services such as digital lifestyle (Langit Musik and VideoMax), digital payment such as TCASH, digital advertising and analytics for digital advertising business and mobile banking solution as well as enterprise digital service, which offers the Internet of Things (IoT) service.

### 3.13.2 Company Vision, Mission and Values

In accordance to the development of digital technology and company transformation, Telkom introduced a new vision and mission in 2016. The vision is to “Be the King of Digital in the Region” with the mission to “Lead Indonesian Digital Innovation and Globalization.” The company has “The Telkom Way” as its corporate culture and has “Always the Best” as the basic believe. The core values is “Solid, Speed, Smart as the core Values”, and the key behaviors is “Imagine, Focus, Action as the key behaviours” (Telkom, 2019)

According to Telkom (2019), as an Indonesian powerhouse company with an international business footprint, TelkomGroup has the strategic objective to become the Top 10 Market Capitalization Telco in Asia-Pacific by 2020. TelkomGroup has also established a corporate strategy for a sustainable competitive growth and realise Indonesia's goal to become the largest digital economy in Southeast Asia as follows :

1. Directional Strategy: Disruptive competitive growth

Amidst the challenging industry transformation, TelkomGroup is confident that its market capitalization will grow significantly, by providing added value for the customers through various services and product innovations, encouraging synergy and developing a strong digital ecosystem in the domestic and international market.

2. Portfolio Strategy: Customer value through digital TIMES portfolio

TelkomGroup is focused on its TIMES (Telecommunication, Information, Media, Edutainment & Services) digital portfolio with a convergent and seamless services that provides high value for the customers.

3. Parenting Strategy: Strategic Control

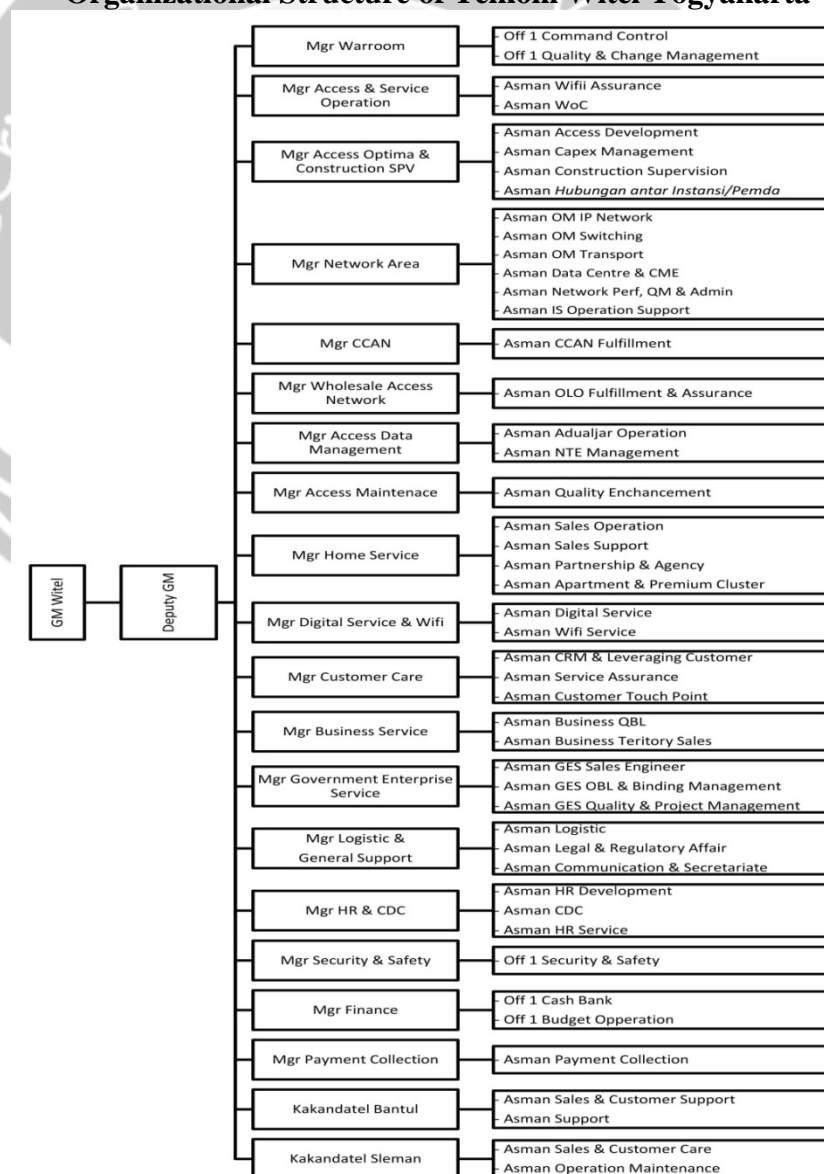
To support an effective business growth, TelkomGroup implements a strategic control approach to streamline its business and functional units and its subsidiaries so that the process would go in a more directive manner in synergy and effective in achieving the company's goal.



### 3.13.3 Telkom Witel Yogyakarta

This research will focus on Telkom Witel Yogyakarta, the part of PT.Telekomunikasi Indonesia,Tbk. which is in the forth regional area. Telkom Witel Yogyakarta itself is divided to 18 division and has two smaller regional office “*Datel (Daerah Telkom)*”. The organizational structure can be seen as follows :

**Figure 3.2**  
**Organizational Structure of Telkom Witel Yogyakarta**



Source : Telkom Witel Yogyakarta (2019)