CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the methodological aspects of this study, including epistemology, research design, population and sample, data collection method and procedure, measures, and finally the method of data analysis.

3.2 Epistemology

Epistemology is the study of knowledge. It answers the questions of how we know and what we know. Epistemology is concerned with the claims that what is assumed to happen can be understood. Interpretivism and positivism are examples of epistemological positions (Collis & Hussey, 2013).

3.2.1 Interpretivism

The purpose of an interpretive explanation is to encourage understanding. The interpretive theorist tries to discover the meaning of an event or practice by placing it within a specific social context. The researcher tries to appreciate or believes the operation of the social world, as well as get a sense of or to see the world as another person does (Neuman, 2007). Interpretive inquiry uses qualitative and naturalistic approaches to understand human experience inductively and holistically in context-specific settings.

The interpretivism paradigm refers to how one makes sense of the world around him (Saunders et al., 2012). It contends that science is an ongoing social process, and

that the full epistemic understanding of scientific theories can only be achieved through observation of the dynamics of theory development. Interpretive philosophy is based on the belief that science is subjective and allows alternative models of reality (Easterby-Smith et al., 2012).

3.2.2 Positivism

Positivism remains the dominant paradigm in business research, as in other fields of social sciences. The selection of the positivist approach ought to be based on the nature of the problem addressed and previous literature in a similar domain. Positivism is an epistemological position that advocates applying scientific methods to observable social reality and beyond (Bryman & Bell, 2011; Saunders et al., 2012). This paradigm also believes that the only reliable knowledge is based on sense, facts, and positive justification (Bryman & Bell, 2011; Creswell, 2009). It posits that the real world is objective and there is a relationship between the world and our understanding and perception of it. Positivism is regarded as a one-way mirror of inquiry in which researchers and researched objects are presumed to be independent entities; in other words, neither side influences the other (Guba & Lincoln, 1994). Positivism assumes that all phenomena, whether physical, natural, social, or psychological, exhibit persistent rhythms or regularities that can be studied. It belongs to the school of thought that predominantly advocates value-free (i.e., objective) natural sciences methods to study social reality and beyond (Bryman & Bell, 2011). Positivism refers to a set of epistemological perspectives and philosophies of science that hold the scientific method as the best approach to uncovering the processes by which physical and human events occur. According to logical positivism, there are only two sources of knowledge: logical reasoning and empirical experience (Easterby-Smith et al., 2012).

The fundamental notion of positivism is that the social world exists externally. Therefore, its properties should be examined and measured through objective methods rather than being inferred subjectively through reflection, sensation, or intuition. Positivism advocates the belief that scientific research starts with hypotheses that are then tested to prove whether they are supported or not. This is known as the hypothetico-deductive model (Collis & Hussey, 2013). Positivist researchers look for what has caused a particular relationship or phenomenon and the effects of this relationship or phenomenon. They favour quantitative data, which can be easily turned into numbers and statistics. Hence, they prefer using official statistics, structured interviews, and questionnaires with closed-ended questions. The theory–practice link in the positivist philosophy is mostly technical. Positivists generally believe that scientific inquiry is value-free and that researchers are neutral observers of phenomena. In general, positivists believe in the empirical testability of theories and that data provide objective, independent benchmarks for examining theories (Creswell, 2018).

In summary, the positivist approach examines reasoning using a deductive process (Hirschheim & Klein, 1992). The following outline briefly illustrates its characteristics: a) the formulation of hypotheses, models, or assumptions of causal relationships among constructs; b) the probable use of quantitative methods to test relationships; and c) the researcher's value-free interpretation objective (Chen & Hirschheim, 2004). The positivist approach can clearly distinguish between objective and subjective data interpretation (McKenzie et al., 1997). This paradigm enables social phenomena to be scientifically observed and measured, and it is claimed that the collected data has the merit of reliability. Moreover, the collected data and statistical results have been characterized as unbiased or value-free. Therefore, the positivist paradigm was regarded as appropriate and was therefore adopted in this study.

3.3 Research Design

This study employed a quantitative research design to answer the research questions. This design involves either identifying the characteristics of an observed phenomenon or exploring possible associations among two or more phenomena (Leedy & Ormrod, 2013). Yin (2009) described the quantitative research design as an empirical inquiry that investigates a phenomenon in-depth in order to understand the underlying patterns and causes. Quantitative findings are likely to be generalized to a whole population or a sub-population because it involves a larger, randomly selected sample (Carr, 1994). Besides sampling, data analysis is less time-consuming as it uses statistical software (Connolly, 2007). Quantitative data consist of numbers as information. This information can then be evaluated using statistical analysis which offers researchers the opportunity to dig deeper into the data and look for greater meaning (Creswell, 2014).

3.4 Population

The population of this study was permanent employees at BUMN Karya. They were selected because they have more working experience and competency compared to contract or temporary employees. In total, approximately 11,603 employees work at nine companies under BUMN Karya across Indonesia, including Aceh (Sumatera Island), Jawa (Jakarta, Bandung, Bogor, Bekasi, Depok, Tangerang, Surabaya, Semarang, Malang, etc.), Sulawesi, Kalimantan, Bali, Nusa Tenggara Barat, Nusa Tenggara Timur, and Papua.

3.5 Sample

The minimum sample size for the population was 373 employees (Krejcie & Morgan, 1970). Nonetheless, the questionnaires were distributed to 800 employees to

account for unreturned and incomplete questionnaires. The 800 respondents were selected from the population using a simple random sampling technique. Simple random sampling is a type of probability sampling in which the researcher randomly selects a subset of participants from a population. Each member of the population has an equal chance of being selected. Simple random sampling also produces samples that are more representative of the population (Neuman, 2006). Every member of the population was assigned a code (personnel number). This code was listed along with the list of employee names obtained from the human resources department. All codes were placed in a box, and 800 codes were then randomly selected (Neuman, 2006).

3.6 Data Collection Method and Procedure

The research data were collected using a questionnaire. The questionnaire consists of items relating to HRM practices, transformational leadership, OCB, work motivation, and job performance. The questionnaire was distributed in person to all selected respondents. Management approval was sought through a formal letter. A copy of the questionnaire was attached with the letter. After obtaining the approval, the questionnaire was distributed in-person to the selected respondents with the assistance of nine enumerators. Each respondent received a questionnaire and an envelope. The respondents were given three days to complete the questionnaire. They were requested to place the completed questionnaire in the provided envelope, seal it, and return it directly to the appointed enumerators.

3.7 Measurement

All measures in this study were based on established scales. HRM practices items were adapted from Langford (2009); transformational leadership from Bass and Avolio

(1995); OCB items from Williams and Anderson (1991); and work motivation items from Gagne et al. (2010). These established scales were preferred because of their validity and reliability. The five-point Likert scale was used to measure each item, ranging from strongly disagree (1) to strongly agree (5). Each measurement is discussed in the following sections.

3.7.1 Human Resource Management Practices

HRM practices were measured using a scale developed by Langford (2009), which consists of four dimensions: compensation, training and development, career development, and work-life balance. The items are detailed below.

A. Compensation:
   1. The rewards and recognition I receive from this job are attractive.
   2. The remuneration and rewards are fair.
   3. I am satisfied with the income I receive.
   4. I am satisfied with the benefits I receive.
   5. I feel that I am rewarded fairly for the work that I do.

B. Training and development:
   1. When people start in new jobs here, they are given enough guidance and training.
   2. There is a commitment to ongoing training and development of staff.
   3. The training and development I have received have improved my performance.
   4. The training and development contents meet my expectations.
   5. I feel the training program is necessary for developing my skill.

C. Career development:
   1. Enough time and effort are spent on career planning.

2. I am given opportunities to develop skills needed for career progression.
3. There are enough opportunities for my career to progress in this organization.
4. I feel that I am in control of my career path and that I am progressing in my personal and professional development at this company.
5. I can predict my future career path in this organization by observing other people's experiences.

D. Work-life balance:

1. I can have a good balance between work and other activities.
2. I can be involved in both work and non-work-related activities.
3. My work allows me to have time for social activities outside work.
4. I have enough time when I get home to decompress from my workday.
5. My work schedule allows me to spend time with my family and friends.

3.7.2 Transformational Leadership

Transformational leadership was measured using the 20-item Multifactor Leadership Questionnaire Short Form (Bass & Avolio, 1995). The scale measures four dimensions of transformational leadership: idealized influence, intellectual stimulation, inspirational motivation, and individualized consideration (Al-Tahitah, Almaamari, Zumrah, Abdulrab, 2017). The items are detailed below.

A. Dimension 1: Idealized influence (attribute):

1. Instils pride in others.
2. Goes beyond self-interest for the good of the group.
3. Acts in ways that build others.
4. Displays a sense of power and confidence.

B. Dimension 1: Idealized influence (behaviours)

1. Talks about most important values and beliefs.
2. Specifies the importance of having a strong sense of purpose.
3. Considers the moral and ethical consequences of decisions.
4. Emphasizes the importance of having a collective sense of mission.

C. Dimension 3: Inspirational motivation

1. Talks optimistically about the future.
2. Talks enthusiastically about what needs to be accomplished.
3. Articulates a compelling vision of the future.
4. Expresses confidence that goals will be achieved.

D. Dimension 4: Intellectual stimulation

1. Re-examines critical assumptions to question whether they are appropriate.
2. Seeks differing perspectives when solving problems.
3. Gets others to look at problems from many different angles.
4. Suggests new ways of looking at how to complete assignments.

E. Dimension 4: Individualized consideration

1. Spends time teaching and coaching.
2. Treats others as an individual rather than just as a member of a group.
3. Considers an individual as having different needs, abilities, and aspirations from others.
4. Helps others to develop their strengths.

3.7.3 Organizational Citizenship Behavior

OCB was measured using Williams and Anderson's (1991) scale. It comprises four dimensions of altruism, helping behavior, civic virtue, and sportsmanship (Asiah, 2018). The items are detailed below.

A. Dimension 1: Altruism

1. I give my time to help colleagues who have work-related problems.
2. I am willing to take time out of my busy schedule to help new colleagues.
3. I take steps to try to prevent problems with other personnel in the company.

B. Dimension 2: Helping Behaviour

1. I act as a 'peacemaker' when others in the company have disagreements.
2. I am a stabilizing influence in the company when dissention occurs.
3. I 'touch base' with others before initiating actions that might affect them.

C. Dimension 3: Civic Virtue

1. I attend functions that are not required but help the organization's image.
2. I attend information sessions that agents are encouraged but not required to attend.
3. I attend and participate actively in organization meetings.

D. Dimension 4: Sportsmanship

1. I consume a lot of time complaining about trivial matters.
2. I tend to make mountains out the molehills.
3. I always focus on what is wrong with my situation rather than the positive side of it.
4. I always find fault with what the company is doing.

3.7.4 Work Motivation

Work motivation was measured using a scale adopted from Gagne et al. (2010). It consists of four dimensions, namely intrinsic motivation (3 items), identified regulation (3 items), introjected regulation (3 items), and external regulation (3 items), as detailed below.

A. Intrinsic motivation

1. Because I enjoy this work very much.
2. Because I have fun doing my job.
3. For the moments of pleasure that this job brings me.

B. Identified regulation

1. I choose this job because it allows me to reach my life goals.
2. Because this job fulfils my career plans.
3. Because this job fits my personal values.

C. Introjected regulation

1. Because I have to be the best in my job, I have to be a 'winner'.
2. Because my work is my life and I don't want to fail.
3. Because my reputation depends on it.

D. External regulation

1. Because this job affords me a certain standard of living.
2. Because it allows me to make a lot of money.
3. I do this job for the paycheck.

3.7.5 Job Performance

Job performance was measured using William and Anderson's (1991) seven-item scale. It was used in a recent study to measure job performance (Bruque, Moyano, & Piccolo, 2016). The items are detailed below:

1. I adequately complete assigned duties.
2. I fulfil responsibilities specified in the job description.
3. I perform tasks that are expected from me.
4. I meet formal performance requirements of the job.
5. I engage in activities that will directly affect my performance evaluation.
6. I neglect aspects of the job that I am obligated to perform.
7. I fail to perform essential duties.

3.8 Data Analysis Method

The collected data were analyzed using SPSS and SEM AMOS. The analysis procedure was as follows. First, a demographic analysis was carried out to observe the gender, age, working experience, and work status of the respondents. The frequency and distribution of each variable was estimated to gain a general view of the demographic profile of the respondents. Second, regression assumptions, covering multicollinearity, outliers, normality, linearity, and homoscedasticity, were examined. Third, conducting an exploratory factor analysis (EFA). In multivariate statistics, EFA is a statistical method used to uncover the underlying structure of a relatively large set of variables. EFA is a technique under factor analysis whose overarching goal is to identify the underlying relationships between measured variables (Norris & Lecavalier, 2010). EFA is commonly used when developing a scale and serves to identify a set of latent constructs underlying a battery of measured variables. It should be used when the

researcher has no prior hypothesis about the factors or patterns of measured variables (Finch & West, 1997).

The procedure for conducting EFA is as follows. The first step is to check the suitability of the data for factor analysis. According to Pallant (2011) and Leech, Barrett, and Morgan (2005), data are considered suitable for factor analysis if the correlation in the correlation matrix table is 0.30 or greater. In addition, if Bartlett's test of sphericity is statistically significant, this means that the variables are correlated highly enough to provide a reasonable basis for factor analysis. Moreover, according to Leech, Barret, and Morgan (2005), the Kaiser-Meyer-Olkin (KMO) value should be 0.50 and greater to consider the data suitable for factor analysis. The second step is determining the number of components to extract. At this stage, the researcher looked at the total variance explained in the respective table to determine how many components to extract. The researcher was only interested in components with an eigenvalue of 1.0 and above and to see how much this component explains the total the variance (Pallant, 2011). The third step is assessing the item loading for each factor. At this stage, the researcher observed the component matrix in the table to check the loading of each item on each factor. The researcher was only interested in items with a loading of >0.30. The communalities table was also observed to give information about how much of the variance in each item was explained. A low value (<0.30) could indicate that the item does not fit well with the other items in its component.

Fourth, testing the measurement model. The purpose of measurement model assessment is to examine the causal relationships between the observed variables (items) and the latent variables. It was performed using confirmatory factor analysis (CFA). Through the process of CFA, the issues of unidimensionality, convergent validity, and construct reliability were addressed. To achieve unidimensionality, two

requirements must be fulfilled. First, the factor loading for the indicators of each construct should be >0.5. Any item with a low factor loading should be dropped from the analysis. Second, a number of goodness of fit indexes were used to assess whether the measurement model (CFA) fits the data. After unidimensionality was established, the validity and reliability of each construct were assessed (Hair et al., 2010).

Fifth, conducting a descriptive analysis to check the mean and standard deviation of each variable. The correlation between the variables was also examined. If the correlations among the variables are <0.90, there is a low probability of multicollinearity (Tabachnick & Fidell, 2007).

Sixth, testing the hypotheses. A regression analysis was conducted to test the proposed hypotheses. The regression analysis generates results related to the relationship between the variables, as well as its direction, strength, and significance. The mediation effect was tested following Baron and Kenny's (1986) four-step approach:

1. Step 1: Conduct a simple regression analysis between the independent variable (X) and dependent variable (Y).
2. Step 2: Conduct a simple regression analysis between the independent variable (X) and mediator (M).
3. Step 3: Conduct a simple regression analysis between the mediator and dependent variable. The purpose of steps 1-3 is to establish that there are zero-order relationships among the variables. If one or more of these relationships are non-significant, researchers usually conclude that mediation is not possible or likely. Assuming there are significant relationships from steps 1–3, one proceeds to step 4.

4. Step 4 : If the relationship between X and Y is no longer significant when M is controlled, the finding supports full mediation. If the relationship between X and Y is still significant when M is controlled, the finding supports partial mediation.

3.9 Chapter Summary

This chapter has described the methodological aspects of this study, including the research design, population and sample, data collection method and procedure, variable measurement, and finally the data analysis method and procedure. Chapter 4 will present the data analysis results.