

## **CHAPTER 3**

### **3.0 Research Methodology**

#### **3.1 Introduction**

In this chapter, the development of hypotheses is described, followed by the selection of instruments and measures. The sampling design, data collection procedure and data analysis techniques are explained thoroughly.

#### **3.2 Development of hypotheses**

The below hypotheses are developed from the research framework based on the literature review.

Hypothesis 1: All the six transformational leadership factors will be positively related to climate for organizational innovation

Hypotheses 2: All the six transformational leadership factors will be positively related to a competitive, performance oriented organizational culture

Hypothesis 3: A competitive, performance oriented organizational culture will be positively related to climate for organizational innovation

Hypothesis 4: A competitive, performance oriented organizational culture mediates the relationship between transformational leadership and climate for organizational innovation

### **3.3 Selection of measures**

The questionnaire is adopted from previous research work by Sarros, Cooper & Santora (2008). The questionnaire consists of four sections as per below. The scale for Section B transformational leadership was modified to 5- points Likert scales (from 7- points Likert scale).

#### **Section A**

Participants' demography information (eg age, gender, education level, ethnic group, organization level, type and function) are measured on nominal scale. These variables are dummy coded, where they are used as control. For example gender is split into two new categories where female is coded as 1 and male is coded as 2.

#### **Section B**

The Transformational Leadership Scale by Podsakoff et al. (1990) was used to examine the six transformational factors of (a) articulates vision (5 items), (b) provides appropriate role model (3 items), (c) fosters the acceptance of Goals (4 items), (d) sets high performance expectations (3 items), (e) provides individual support (4 items), and (f) provides intellectual stimulation (4 items). Each of the 23 items was evaluated using 5- points Likert scales from 1 indicates "*strongly disagree*" and 5 indicates "*strongly agree*". The Transformational Leadership Scale has been shown in previous studies to have acceptable internal

consistency reliability (all Cronbach's alpha coefficients > .70) and evidence of content and construct validity (Podsakoff et al., 1990).

Cronbach's alpha coefficients in this study's sample ranged from 0.583 (provides individual support) to 0.949 (provides intellectual stimulation), which was considered acceptable given the relatively small number of items in each subscale.

### **Section C**

Climate for organizational innovation was operationalized using the support for innovation and resource supply measures which developed by Scott and Bruce (1994). Support for innovation (16 items) measures the degree to which individuals view the organization as open to change, and resource supply (6 items) measures the degree to which resources (e.g., personnel, time) are perceived as adequate in the organization. Similarly, each of the 22 items was evaluated using Likert scales from 1 indicates "*strongly disagree*" and 5 indicates "*strongly agree*". As noted above, the degree of support and encouragement an organization provides its employees to take initiative and explore innovative approaches is predicted to strongly influence the degree of actual innovation in that organization (Martins & Terblanche, 2003, pp. 67-68; Mumford & Gustafson, 1988, p. 37). Scott and Bruce (1994) reported adequate reliability for the two measures of innovation ( $\alpha = .92$  for support for innovation and  $.77$  for resource supply).

Cronbach's alpha coefficients were 0.982 for the support for innovation and 0.972 for the resource supply for innovation in this study sample.

## **Section D**

Organizational culture was operationalized using the Organizational Culture Profile (OCP) which developed by O'Reilly, Chatman, and Caldwell (1991) and amended by Cable and Judge (1997). A recently revised version of the OCP by Sarros, Gray, Densten, and Cooper (2005) was used in this study. The revised OCP consists of 28 items measuring the following seven dimensions: supportiveness, innovation, competitiveness, performance orientation, stability, emphasis on rewards, and social responsibility. Similarly, each of the 28 items was rated on 5- points Likert scales from 1 indicates "*not at all*" and 5 indicates "*very much*". In this study, we focused and used the competitiveness (4 items) and performance orientation (4 items) as organization culture in private sector.

These two factors had acceptable internal consistency reliability, with Cronbach's alpha coefficients  $> .70$  in this study sample (0.936 for competitiveness and 0.950 for performance orientation).

### **3.4 Sampling design**

This research is designed to test hypotheses which listed in part 3.2 by using structured questionnaires. In this study, the unit of analysis is the individual manager in private organizations. This research is designed to be conducted in

which data are gathered just once (cross sectional) for a period of one month in order to meet the research objectives

### **3.5 Data collection procedures**

The data for this study was self administered and collected personally by the author or through friend's assistance to examine the preceding issues of: (1) responses could be easily quantified and summarized, (2) data could be collected quickly, inexpensive and efficiently and (3) large number of respondents could be reached in a short span of time.

Questionnaires were distributed by hand to 200 managers in private organizations in Klang Valley, Malaysia. This non probability convenience sampling was used in this case due for time and cost effectiveness for the research.

Volunteered respondents were asked to complete the questionnaire which consists of 4 sections, namely Section A: demographic information (8 Items), Section B: six transformational leadership factors (23 Items), Section C: climate for innovation which are support for innovation (16 items) and resource supply (6 items) and Section D: seven organization culture type (28 items).

### **3.6 Data analysis techniques**

Data was analyzed using SPSS Version 16.0. Descriptive statistics such as frequency, distributions, means, standard deviations and tests for normality are used to develop a profile of the respondents and to summarize variables. Each scale was tested on the reliability with reliability coefficients, cronbach's alpha. In addition, standard pearson correlation, ANOVA and regression procedures were used to examine the interrelationships among the study variables.

Besides, multiple regression analysis was also used to determine the mediating effect of organizational culture in the relationship between transformational leadership and climate for organizational innovation.