

THE MEDIATING EFFECTS OF EMPLOYEES' ATTITUDES IN THE  
RELATIONSHIP BETWEEN TRANSFORMATIONAL LEADERSHIP  
AND ORGANIZATIONAL CITIZENSHIP BEHAVIOR IN MALAYSIA

WAN YI FENG

MASTER OF PHILOSOPHY

FACULTY OF ACCOUNTANCY AND MANAGEMENT  
UNIVERSITI TUNKU ABDUL RAHMAN

2015



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MALAYSIA**

By

**WAN YI FENG**

A dissertation submitted to the Department of International  
Business,

Faculty of Accountancy and Management,

Universiti Tunku Abdul Rahman,

In partial fulfilment of the requirements for the degree of

Master of Philosophy

May 2015

## **DEDICATION**

To all my lovely family members who have given me a dedicated endless support.

## **ABSTRACT**

### **THE MEDIATING EFFECTS OF EMPLOYEES' ATTITUDES IN THE RELATIONSHIP BETWEEN TRANSFORMATIONAL LEADERSHIP AND ORGANIZATIONAL CITIZENSHIP BEHAVIOR IN MALAYSIA**

**Wan Yi Feng**

This study examines the impact of transformational leader behaviors (TLBs) on organizational citizenship behavior (OCB), and the potential mediating role played by employees' satisfaction and their commitment to their work. Measures of five TLBs (idealized attributes (IA), idealized behavior (IB), inspirational motivation (IM), intellectual stimulation (IS), individualized consideration (IC)), the employees job satisfaction level, and their commitment towards their organization as well as their willingness to perform OCB were obtained from six hundred and eighty two (682) employees from the list of public listed companies in Malaysia. In order to examine such complex direct and indirect relationship among the variables, structure equation modeling was employed to analyze the results of testing for direct relationship. Macro language PROCESS was used to examine the indirect relationship simultaneously. The results indicate that the effect of the each TLBs is a mixture of direct relationship on OCB and fully mediated by job satisfaction, and organizational commitment on OCB. These results were found not to be wholly attributable to the effects of common method biases. The implication and contribution for future research on TLBs, JS, OC, and OCB were then discussed.

Finally, this study had contributed to extent the prior transformational leadership literature and research methodology in analyzing a concurrent intervening variables.

## **ACKNOWLEDGEMENT**

Humbly I would like to express my deepest and sincerest appreciation to my supervisors; Dr. Lau Teck Chai and Ms Goh Poh Jin. I thank them for their dedication, insight, guidance and encouragement. I like to thank Dr. Lau Teck Chai for being always there to answer my questions besides allowing me to receive external consultation from other professors. My deep gratitude goes to all the supporting staffs from SAS Malaysia Inc for giving me unstinting support throughout my study. A great thanks to both of my previous supervisors; Dr. Lim Yet Mee, and Dr. Yap Ching Seng for their earlier guidance.

At the same time, I wish to record my sincere thanks to my supportive family members in sustaining me and providing me with the necessary help which has enabled me to complete my master studies. My parents are always there and ever willing and ready to provide aid when help is needed. I am a no body without them.

Last but not least, I am also indebted to my close friends; Lim Sze Looi, Ng Kah Chuan, Pok Wei Fong, Rajaram, who have extended a strong helping hand for me throughout my studies. Finally, a special thanks to my fellow housemates; Jagathesan, and Yeap Yee Lin who had made themselves available for me all the time. God bless you all.

## APPROVAL SHEET

This dissertation entitled “**THE MEDIATING EFFECTS OF EMPLOYEES’ ATTITUDES IN THE RELATIONSHIP BETWEEN TRANSFORMATIONAL LEADERSHIP AND ORGANIZATIONAL CITIZENSHIP BEHAVIOR IN MALAYSIA**” was prepared by WAN YI FENG and submitted as partial fulfilment of the requirements for the degree of Master of Philosophy at Universiti Tunku Abdul Rahman.

Approved by:

---

(Asst. Prof. Dr.LAU TECK CHAI)  
Assistant Professor/Supervisor  
Department of International Business  
Faculty of Accountancy and Management  
Universiti Tunku Abdul Rahman

Date:.....

---

(Ms. GOH POH JIN)  
Co-supervisor  
Department of International Business  
Faculty of Accountancy and Management  
Universiti Tunku Abdul Rahman

Date:.....

**FACULTY OF ACCOUNTANCY AND MANAGEMENT**  
**UNIVERSITI TUNKU ABDUL RAHMAN**

Date: \_\_\_\_\_

**SUBMISSION OF DISSERTATION**

It is hereby certified that (Wan Yi Feng) (ID No: (10UKM02047)) has completed this dissertation\* entitled “(THE MEDIATING EFFECTS OF EMPLOYEES’ ATITUDES IN THE RELATIONSHIP BETWEEN TRANSFORMATIONAL LEADERSHIP AND ORGANIZATIONAL CITIZENSHIP BEHAVIOR IN MALAYSIA)” under the supervision of (Dr. Lau Teck Chai) from the Department of International Business, Faculty of Accountancy and Management, and (Ms. Goh Poh Jin) from the Department of Management, Faculty of Accountancy and Management.

I understand that the University will upload softcopy of my thesis/dissertation\* in pdf format into UTAR Institutional Repository, which may be made accessible to UTAR community and public.

Yours truly,

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(WAN YI FENG)

## DECLARATION

I, Wan Yi Feng hereby declare that the dissertation is based on my original work, except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UTAR or other institutions.

\_\_\_\_\_  
(WAN YI FENG)

Date \_\_\_\_\_

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## LIST OF ABBREVIATIONS

AC	Affective Commitment
DS	Datastream
IA	Idealized Attributes
IB	Idealized Behavior
IC	Individualized Consideration
IM	Inspirational Motivation
IS	Intellectual Stimulation
CFI	Comparative-Fit Index
JS	Job Satisfaction
LPI	Leadership Practice Inventory
MLQ	Multifactor Leadership Questionnaire
MSQ	Minnesota Satisfaction Questionnaire
NFI	Normed-Fit Index
NNFI	Non-Normed-Fit Index
OCB	Organizational Citizenship Behavior
OC	Organizational Commitment
PLCs	Public Listed Companies
PNFI	Parsimonious Normed-Fit Index
PR	Parsimony Ratio
RMSEA	Root Mean Square Error of Approximation
RNFI	Relative-Normed-Fit Index
RPMI	Relative Parsimonious-Fit Index
RPR	Relative Parsimonious Ratio
SAS	Statistical Analysis System
TJSQ	Teacher Job Satisfaction Questionnaire
TLBs	Transformational Leadership Behaviors
TLI	Transformational Leadership Inventory

## **CHAPTER 1**

### **INTRODUCTION**

This dissertation presents a quantitative research study to inspect the relationship among transformational leadership behaviors (TLBs), job satisfaction (JS), organizational commitment (OC), and organizational citizenship behavior (OCB). Basically, there are three main purposes for this study:

- (1) To examine the direct relationship between TLBs and OCB/ performance.
- (2) To understand how management theories will influence employee in an organization in the developing country, especially among the Malaysian public listed companies.
- (3) To examine the indirect relationship between TLBs and OCB in terms of JS, and OC.

The purpose of this chapter is to introduce the following major components of this study. They are: (1) Introduction to the problem(s), (2) Background of the study, (3) Statement of the problem, (4) Research objective(s), (5) Research question(s), (6) Summary of hypothesis, (7) Simple research theoretical framework, (8) Significances of the study, (9) Assumption and limitation, and (10) Definition of terms or variables. This chapter will end with a summary as well as the organization of the dissertation.

## **1.1. Introduction to the Problems**

It is difficult to study the concept of leadership, followers' attitude, and organizational performance owing to the complexity of the variables. All these terms are hard to be defined or described, leave alone to be measured systematically. The discord among theories concerning the definition of these variables has led to further bickering about the research design and instrument. To exacerbate this situation, there seems to be a limitation of methods to raise the understanding of these important concepts. Leadership is a crucial concept that needs to be fully appreciated and understood. Burns (1978) commented that "Leadership is one of the most observed and least understood phenomena on earth" (p. 19). With this powerful statement, the interest to understand its corollary has intensified. The term leadership has existed for the last 60 years and has been frequently researched mostly in the government agencies. The growing number of research in the public sector, for the middle level-management department manager as a leader, is becoming the focus of researchers.

When the massive body of leadership literature was reviewed, there appeared to be two clear distinctions made by the scholars. One body of work focused on the internal disposition or characteristics of the leader while the other was concerned with the behaviors of the same leaders. However, the connection between these two distinct views is not always clear or easy to understand. The most confusing part is that most of the studies are focused on government organizations, specific

industry, and non-profit organization (e.g. McMurray, Pirola-Merlo, Sarros, & Islam, 2010; Reychav & Sharkie, 2010). Their results have not been validated against the middle level-managers or department managers. The current study was undertaken in an effort to address some of the gaps in the empirical research and to apply the result of TLBs in the public listed companies in Malaysia where there is a little information available.

In the 1980s, most of the studies had shifted their focus from examining the effects of transactional leadership to the deification and an examination of those behaviors exhibited by the leader that make followers more aware of the importance and values of task outcomes, activate their higher-order needs, and induce them to transcend self-interest for the sake of the organization (B. M. Bass, 1985; Yukl, 1989b). Transformational or known as charismatic behaviors' are believed to augment the impact of transactional leader behaviors on employee outcome variables, because "followers feel trusted and respect toward the leader and they are motivated to do more than they are expected to do" (Yukl, 1989b, p. 272). For instance, the new focus on leadership includes some of the research work done by Bass, and others (B. M. Bass, 1985; Bass, Avolio, & Goodheim, 1987; Bennis & Nanus, 1985; Conger & Kanungo, 1987; Howell & Frost, 1989) where each of them will have a specific different behavior associated with transformational leadership. However all of them share a common perspective whereby effective leader transform or change the basic values, beliefs, behaviors, and attitudes of the followers so that they are willing to perform beyond the limit set by the organization.

TLBs provide an interest to many of the researchers in the field of organizational leadership in the past decades. The theory was first developed by Burns (1978) and later strengthened by Bass (1985) and others (Bass & Avolio, 1994; Northouse, 2007). The major contribution of the transformational leadership theory is the leader's ability to inspire their followers to accomplish beyond the follower's plan to accomplish (Krishnan, 2005). There are four components of the TLBs, namely; idealized influence, IM, IS, and IC (B. M. Bass, 1985). Burns noted that, transformational leaders inspire followers to achieve more by concentrating on the follower's values and helping the follower to achieve these values with the values of the organization. In addition, Burns identified transformational leadership behaviors as a relationship in which both the leaders and followers motivate each other to higher levels, which resulted in the value system congruence between the leader and the follower (Krishnan, 2002).

TLBs has been linked to the personal outcomes (Barling, Weber, & Kelloway, 1996; Hater & Bass, 1988; Kirkpatrick & Locke, 1996) of the follower as well as the organizational outcome (Barling et al., 1996; Boerner, Eisenbeiss, & Griesser, 2007; Felfe & Schyns, 2004; Howell & Avolio, 1993; Zhu, Chew, & Spangler, 2005). Research has shown that transformational leadership impact follower satisfaction (Hater & Bass, 1988; Podsakoff, MacKenzie, Moorman, & Fetter, 1990). On the other hand, transformational leadership also impacts followers' commitment towards the organization to the OCB (Al-sharafi &

Rajiani, 2013). According to Aarons (2006) “Leadership is associated with organizational and staff performance” (p. 1163). This means that, individuals and organization may be inter related to leadership and, therefore, TLBs may also have positive or negative impact on the staff and organization. This links to one of the purposes of this study which is to examine the direct relationship between TLBs and OCB.

## **1.2. Background of Study**

A number of researches on leaders’ behaviors and OCB were carried out previously (Moorman, 1991; Podsakoff, MacKenzie, & Bommer, 1996; Podsakoff et al., 1990). However, researchers still argued with regards to their effectiveness of OCB in influencing subordinates performance. There was much controversy in the past research about leadership and OCB. Several studies had found that TLBs result in enhanced effectiveness and subordinate satisfaction (Podsakoff et al., 1996; Podsakoff et al., 1990).

OCB has become one of the primary topics that gets attention and interests of the practitioners and researchers (Stamper & Van Dyne, 2003). In the research done by Smith (1977) with the sample size of over 3000 managers, representing around 27 functional groups in a private company. It has shown a significant relationship between attendance and JS. Thus, confirming that the theory work

attitudes can predict work-related behavior. On top of that, the study provided the basic work specifically related to defining and developing the OCB concept.

Next, Organ (1977) theoretical article discussed the fundamental and development of the OCB theory. He evaluated numerous perspectives on equity and reciprocity in social exchange theories to initiate a discussion on extending them into the workplace setting. He also identified factors that generated beneficial workplace behavior, but were not part of employee's job description. These behaviors were not a source of reward or punishment and included things such as cooperating with others, volunteering for additional duties, and helping others with their work (Lin, Lyau, Tsai, Chen, & Chiu, 2010).

Later, Bateman and Organ (1983) defined the term OCB and examined whether employee attitudes such as JS, turnover intentions and OC were demonstrated through employee OCB. The research was targeting university graduates, and employees which found that there was a strong relationship between JS and an aggregate measure of OCB.

In the recent decades of OCB study, two main areas were found. First, research had attempted to determine specific factors that impact OCB in order to foster them in the workplace (Turnipseed & Murkison, 2000). Second, research had focused on trying OCB on a particular leadership styles, such as charismatic or

TLBs, (Hackett, 2008) in an attempt to determine what style of leaders may promote or practice OCB within their organization (Podsakoff, MacKenzie, Paine, & Bachrach, 2000). The TLBs and employees' JS, additional employees' behavior need to be explored. With these theories, there is a need to identify the most suitable TLBs that will influence the practice of OCB.

Furthermore, Jahangir, Akbar, and Haq (2004) argued that like most behaviors, there exists no single course of OCB. Although there were many studies that identified the factors that promote or enhance OCB in an organization, there were very few studies that examine in detail each TLBs with OCB. This links to another research objective which is to examine each TLBs affects to the two specific followers' attitudes (JS and OC) which impact the practice of OCB.

### **1.3. Statement of Problem**

As leader was defined, it has the most direct and greatest effect on their followers in the workplace. The main rule in practicing to be a good leader is the ability to effectively motivate followers to engage in behaviors which lead to a positive outcome for the organization. In particular interest of this study, is the influence of TLBs on OCB of their followers. There are a number of research gaps that have been identified; the study planned to examine each specific TLBs which influence the OCB of the followers systematically (Avolio, Zhu, Koh, & Bhatia, 2004). Next, it is not sufficient to just examine the direct relationship between

the two as it might have well-documented by the past researchers. In spite of the lack of research, a few mediators of the transformational leadership – follower outcome relationship have been identified (Koh, Steers, & Terborg, 1995).

Organizations need to meet the challenges to orchestrate transformational change and simultaneously building employees commitment and morale. In this case, organizations which focus on both transformational and transactional leaders and the development of their followers are essential and need to be addressed. Many of the researchers recognized that transformational leadership is one of the most prominent of contemporary approaches to leadership. Almost all theories apply to the transformational leadership claim that among its more direct effects are employees motivation and commitment leading to the extra-role require for significant organization change (Yukl, 2012). According to Nguni, Slegers, and Denessen (2006) TLBs does affect employee attitude, effort, in-role performance. These include JS, OC, and OCB. Besides (B. M. Bass, 1985; Bass, 1997a; Bass & Avolio, 1990; Bycio, Hackett, & Allen, 1995; Hater & Bass, 1988; Podsakoff et al., 1990), had also studied the relationship among those variable in various field. On the contrary, there are some researchers mentioned that the theory JS and OC need to be considered together when they mediate the relationship in between TLBs and OCB (Farkas & Tetrick, 1989; Mathieu, 1991; Schappe, 1998). Therefore, the next research gap is to analyze the mediators in the current study simultaneously to increase the accuracy.

In brief, the research gaps that were identified are;

1. Each TLBs influenced on OCB systematically.
2. JS and OC have been identified as mediators between TLBs and OCB.

#### **1.4. Research Objectives**

The purpose of this study is to address the two research questions as displayed below. The two research objectives are;

1. To determine whether or not each TLBs have a direct impact on OCB in Malaysia.
2. To evaluate each TLBs that affect two specific followers' attitudes (JS, and OC), thereby, impacting the practice of OCB in Malaysia.

#### **1.5. Research Questions**

The research questions that guide this research study are presented below;

Question 1: Is there a significant direct relationship between the TLBs and OCB for public listed companies in Malaysia?

Question 2: Is there a significant indirect relationship between TLBs and OCB by mediating followers' attitudes (JS, and OC)?

## **1.6. Summary of Hypotheses**

From the research objectives, there are ten hypotheses being developed to be tested based on the research framework;

Hypothesis 1a Idealized attributes is positively related to OCB.

Hypothesis 1b Idealized behavior is positively related to OCB.

Hypothesis 1c Inspirational motivation is positively related to OCB.

Hypothesis 1d Intellectual stimulation is positively related to OCB.

Hypothesis 1e Individualized consideration is positively related to OCB.

Hypothesis 2<sub>a</sub> Idealized attributes and OCB is fully mediated by JS and OC.

Hypothesis 2<sub>b</sub> Idealized behavior and OCB is fully mediated by JS and OC.

Hypothesis 2<sub>c</sub> Inspirational motivation and OCB is fully mediated by JS and OC.

Hypothesis 2<sub>d</sub> Intellectual stimulation and OCB is fully mediated by JS and OC.

Hypothesis 2<sub>e</sub> Individualized consideration and OCB is fully mediated by JS and OC.

## **1.7. Theoretical Framework**

After discussing the theoretical and empirical studies, researchers suggested that there is a good reason to believe that TLBs influence the OCB. However, there

are several potential ways that it might happen. One way that TLBs directly influence OCB, which is consistent with the research of Smith, Organ, and Near (1983) finding that only individualized support as one of the TLBs that has a direct effect on OCB.

Figure 1.1 shows that there are five TLBs (i.e. idealized attributes, idealized behavior, inspirational motivation, intellectual stimulation, and individualized consideration) that have a direct impact on OCB. The figure also suggests that each of the TLBs has an indirect relationship on OCB. The flow of the figure also presents that idealized attributes, idealized behavior, inspirational motivation, intellectual stimulation, and individualized consideration influence followers' JS, and OC. No matter how TLBs positively or negatively impact followers' JS, and OC, the OCB is improved or worsened.



**Figure 1.1: Simplified Theoretical Research Framework**

## **1.8. Significance of the Study**

The significance of this study is divided into contribution to the theory and contribution to the management practices.

### **1.8.1. Contribution to Theory**

The study aims to extend prior theoretical and empirical work in at least three ways. First, the widespread of leadership literature is important for organizational success within the public sector organizations. There is little scientific evidence to verify this speculation (Boyne, 2003; Brewer & Selden, 2000). A review of OCB literature by Organ, Katherine, Podsakoff, and Mackenzie (2005) has identified several areas in researching the OCB theory. In the study done by Podsakoff et al. (1990), five clusters of variables had been tested in the studies. They are; resources, regulation, markets, organization, and management. On top of these, management/ leadership is found to be one of the most important variables affecting OCB.

Next, despite from the overflow of the TLBs, not many researchers had really looked into the relationship of transformational leadership in the private sector except for the few which examine the impact of leadership on OCB. Therefore, this proposed study seeks to fill in the gap. That is the study of direct and indirect relationship of TLBs and the OCB.

Last, little empirical evidence is offered about the indirect effect of leadership on OCB, this proposed study also seeks to contribute to the theory by examining how each TLBs will impact the practice of OCB by moderating followers' attitudes and behaviors (JS, and OC).

### **1.8.2. Contribution to Management Practice**

Employees are one of the important assets to every organization, it is necessary to continue research and improve the organization optimum level of success. Leaders may need to decide whether or not to reward their employees for outstanding job performance. In this situation, the social and demographic information will be one of the key important tools in identifying plans for implementation. Organizational leaders have to be ready to step out to influence and reward their employees for personal or/ and organizational successes. As noted by Schiffbauer, O'Brien, Timmons, and Kiarie (2008), succession planning is extremely important in creating a successful organization. By selecting a skillful employee for promotion opportunities, especially those who exhibited OCB to a high degree, leaders can lead employees over the time within the organization. The identification of the leadership mounts allows for the selection and training of the future leaders of the organization while sustaining the continuity of business performance and lowering the stress of change among organizational management.

Organizations depend on hiring suitable employees to perform necessary tasks in order for the organization to reach the organization strategic goals. Therefore, it should strive to hire the best employee with knowledge, skills, abilities, experience, and education necessary to produce and sell goods and services at a profitable price to ensure the organization sustains the organization strategic goals. According to Organ (1988), high levels of OCB lead to high levels of organizational efficiency, effectiveness, and adaptability. It can be considered as one of the most important factors influencing organizational effectiveness. Due to the lack of recognition and rewarding processes regarding employees' performance, additional duties as not included as a part of the official task of the position at the time of hire may not become part of daily employee's performance. This will lower down the organizational effectiveness. Finally, by understanding the impact of transformational leadership either on an organization or person, leaders may motivate their behaviors in such a way which the behaviors will bring a positive benefit to the organization.

### **1.9. Assumption and Limitation**

It is preferable for a researcher to conduct a comprehensive study. The assumption and limitation of the study are listed as below:

Assumption:

1. Since parametric testing is used, it is assumed that the following conditions are met: (1) normal distribution, (2) homogeneity of variables, and (3) independent of observation (Hair, Black, Babin, Anderson, & Tatham, 2006).
2. The target population is representative of all the public listed company in Malaysia.
3. The researcher has had no contact with the sampling frame and target population. Therefore, this researcher is independent from the target population which may able to reduce the sampling bias (Zikmund, 2003).
4. The Multifactor Leadership Questionnaire Short Form (MLQ 5X Short Form is a valid and reliable research instrument (Antonakis, Avolio, & Sivasubramaniam, 2003).
5. Confidentially of the data from the instrument is ensured by the researcher.

Limitation:

1. The sample can only represent the population characteristics of the public listed company in Malaysia which does not take into consideration of those companies which own their subsidiary company out of Malaysia.

### 1.10. Definition of Terms or Variables

For the purpose of this study, the key terms listed below are defined.

1. *Direct effect* is a directional relationship between two variables without intervening variables.
2. *Indirect effect* is the effect of one variable (independent) on another (dependent) through one or more intervening (mediators or moderators) variables.
3. *Leaders* are those individual with a full range of powers, including the authority to hire, fire, promote or demote department heads and/ or branch managers.
4. *Followers* are employees who report directly to the department manager selected as a participant in the study.
5. *Leadership* is a process whereby an individual influences a group of individuals to achieve a common goal (Northouse, 2007, p. 3).
6. *Leadership behaviors* are actions that leaders do that to bring establish transmutation in a group.

7. *Transformational leadership* is leading by raising the level of awareness about the importance and value of desired outcomes and influencing the followers to transcend their own self-interest for the sake of the organization. It involves altering and expanding the needs and wants of followers (B. M. Bass, 1985; Bass, 1990b) by acting as a role model and motivating followers to reach their fullest potential (Bass & Avolio, 1990).

According to Northouse (2007), transformational leadership can be divided into 4 dimensions:

- (a) *Idealized Influence* is the leaders' ability to provide followers with a vision, to gain respect and trust, and to instil faith in followers. A leader who demonstrated idealized influence demonstrated high standards of ethical and moral conduct. In addition, he/she does not use power for personal gain.
- (b) *Inspiration Motivation* is the leaders' ability to inspire and motivate followers by providing examples for followers through symbols, images, emotional appeals, and effective communication of expectations.
- (c) *Intellectually Stimulating* leader aroused followers to recognize their own beliefs and values. The leader emphasizes problem-solving and promotes intelligence and rationality. Intellectually stimulating leaders do not criticize followers when they differ from their own ideas rather they stimulate follower to think in new ways and try new approaches.

(d) *Individualized Consideration* is when a leader will provide a supportive environment for his/ her followers. This leader will also give a personal attention to each follower by treating, coaching, and advising each follower individually. This type of leader will also treat followers with respect and they provide continuous follow-up and feedback. More importantly, the leader with individualized consideration aligns each follower's needs with organizational goals and mission.

8. *Job Satisfaction* is defined as a pleasurable or positive emotional state, resulting from the appraisal of one's job or job experiences (Locke 1976 as cited in Kim, 2005).

9. *Organizational Commitment* refers to employees' emotional attachment to, identification with, and involvement in the organization (Allen & Meyer, 1996).

10. *Organizational Citizenship Behavior* refers to individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system (Organ et al., 2005).

## **1.11. Chapter Organization**

Chapter 2 presents a review of the literature, focusing on the TLBs theory. The employee's attitude (JS and OC) will also be review. Along with it, the relationship in between each study variable will be discussed under each sub-topic. A research framework and list of hypotheses will be enclosed at the end of the chapter.

In Chapter 3, the research methodology is discussed. This chapter includes the data collection method, population and sample selection procedures, operationalize of the study variable, and research instrument validity, data analysis method and it related software. Finally, a chapter summary will be presented to conclude for the chapter.

Chapter 4 presents a detailed review of the data analyses, including descriptive statistics, and inferential analyses. The descriptive statistics will be detailed on response rate and demographic characteristics of the study. Meanwhile, the pre-test analyses, factor analysis, structure equation modeling and the multiple intervening tests by Hayes (2013) will be presented. The chapter will continue with hypothesis testing until the chapter summary.

Finally, Chapter 5 continues with a discussion of the findings, implications, limitations and future research considerations, and culminates with a conclusion.

### **1.12. Chapter Summary**

Many studies have proposed that leadership plays a critical role in determining the success of the organization (Bass, 1985; Brewer & Selden, 2000; Howell & Avolio, 1993; Podsakoff et al., 1990; Rainey & Steinbauer, 1999; Wolf, 1997). Among the studies of leadership in private sector organizations, many have several limitations: First, there is a lack of empirical studies on the relationship among TLBs and OCB. Second, with fewer numbers of available studies which examined the relationship between TLBs and OCB systematically, there is a lack of knowledge in the current field of study especially in the Malaysian context. Third, very few researchers looked into each TLBs with OCB as well as taking into consideration of both mediators (JS and OC) simultaneously in a single model.

Therefore, the current study is unique and provides an extension of knowledge of leadership theory in which idealized attributes, idealized behavior, inspirational motivation, intellectual stimulation, individualized consideration, JS, OC, and OCB in a model. (See Figure 1.1).

To have a clearer understanding on these variables, the variables theory and each relationship are explained in Chapter 2. Chapter 2 will also display a research framework and research hypotheses diagrams.

## **CHAPTER 2**

### **LITERATURE REVIEW**

This chapter is divided into six major sections. Namely, they are: (1) Leadership, (2) OCB, (3) JS, (4) OC, (5) Research framework and hypotheses development, and finally, a chapter summary. The relationship between the variables will be presented after each variable theory.

#### **2.1 Leadership**

This section describes the theories relevant to the literature review of this study. The major emphasis is the development of the leadership theory leading/ contributing to the transformational leadership. In addition, this research also examines the relationship between TLBs and OCB by mediating difference of followership attitudes. It begins first by defining leadership related to this study. Second, it explores the role of leadership contributing to the practice of OCB. Third, it reviews various methods for measuring leadership style. It concludes with a summary of the relevant research between leadership and OCB.

In the early stages of the leadership literature, the researchers had included trait or behavioral and situational leadership styles as a basis for leadership literature. The first broad category of leadership includes individual leadership behavior or traits that are self-defining and may result in an active response by an employee

(Bass, 1997b; Cope & Waddell, 2001; Kazemek, 1990a; Prewitt, 2003). The second category, situational and contingency theories include leadership actions that affect an organization and its policies and procedures (B. Bass, 1985; Bossink, 2004; Northouse, 2007). Leadership styles are aggregated leadership traits, behaviors, situations, and actions (Yukl, 2010). The literature review of the leadership style is as follows.

### **2.1.1 Leadership Theory**

For the last 20 years, the transformational leadership and transactional leadership had been developed by Burns (as cited in Judge & Piccolo, 2004), this initial ideas were associated with transformational leadership theory. In his classical work, Burns (1978) attempted to link the roles of leadership and followership (Northouse, 2007). According to Northouse (2007), Burns (1978) “wrote of leaders as those individuals who tap the motives of followers in order to reach the goal(s) faster by the leader and follower”. Based on the qualitative analysis of the biographies of various political leaders, Burns (1978) studied leadership in two-dimensional construct. He classified the two dimensions as transformational and transactional leadership. He characterized transactional leadership as being based on an economic relationship between the leader and the follower. In short, he viewed transactional as an interaction between leaders and followers in which something of value was exchanged.

On the other hand, Burns (1978) characterized transformational as being based on noneconomic sources of influence. A transformational leader motivates followers to move beyond their self-interest and commit themselves to organizational goals (Bass, 1990b; Northouse, 2007). According to Burns (1978), (as cited in Northouse, 2007) transformational leadership could be defined as the ability of the leader to engage followers in such a way that they would mutually lift one another to a higher level of motivation and morality. Such engagement will encourage followers to perform beyond expectation (B. Bass, 1985; Burns, 1978).

Meanwhile, according to Northouse (2007), a charismatic leader embodies of the following characteristics: (1) possess self-confidence, (2) have strong moral value, (3) have the ability to influence others, and (4) possess a charismatic leadership. He should have a firm connection in believes in the values that he would want their followers to adopt. At the same time, set a high expectation among his followers. On his part he should forth in the followers' abilities to meet these expectations (Northouse, 2007).

In the mid of 1980's Bass (1985) identified and operationalized the construct that had been expounded by Burns (1978) and developed a transactional/transformational model of leadership. He also identified three categories in the model of transactional and transformational leadership; (1) transactional, (2) transformational, and (3) laser-faire. As for this research, the TLBs have been

planned to be studied as the independent variables, therefore, the TLBs will be discussed in more detail in the next section.

### 2.1.2 Transformational Leadership Behaviors (TLBs)

Transformational leadership refers to the process whereby a person engages with others and creates a connection that raises the level of motivation and morality in both the leader and the follower (Northouse, 2007, p. 176). As stated earlier, a transformational leader helps followers to perform beyond expectation (Avolio, Bass, & Jung, 1999; Bass & Avolio, 1990). To achieve the desired outcome, a transformational leader influence followers by; raising the level of awareness about the importance and value of desired outcomes, influencing follower to transcend their own self-interest for the sake of the organization; altering and expanding the needs and wants of followers (B. Bass, 1985; Bass, 1990b) and by acting as a role model motivating followers to reach their fullest potential (Bass & Avolio, 1990).

The following factors constitute the TLBs;

- *Idealized influence.* Idealized influence is the leaders' ability to provide followers with a vision, to gain respect and trust, and to instill faith in followers. A leader who demonstrated idealized influence demonstrated high standards of ethical and moral conduct. In addition, he/she does not use power for personal gain. There are two dimensions of idealized influence, namely attributed idealized influence and behavioral idealized influence. Attributed idealized influence refers to the followers' perceptions of the characteristics attributed to the leader. Behavioral idealized influence refers to the follower's perception of the observable behavior.
- *Inspiration motivation.* Inspiration motivation is the leaders' ability to inspire and motivate followers by setting examples for followers through symbols, images, emotional appeals, and effective communication of expectations.
- *Intellectual stimulation.* An intellectually stimulating leader aroused followers to recognize their own beliefs and values. The leader emphasizes problem-solving and promotes intelligence and rationality. Intellectually stimulating leaders do not criticize followers when they differ to their ideas rather they stimulate their followers to think in new ways and to try new approaches.
- *Individual consideration.* The leader with individualized consideration will provide a supportive environment for his/ her followers. This leader will also give a personal attention to each follower by teaching, coaching, and advising each follower individually. This type of leader will also

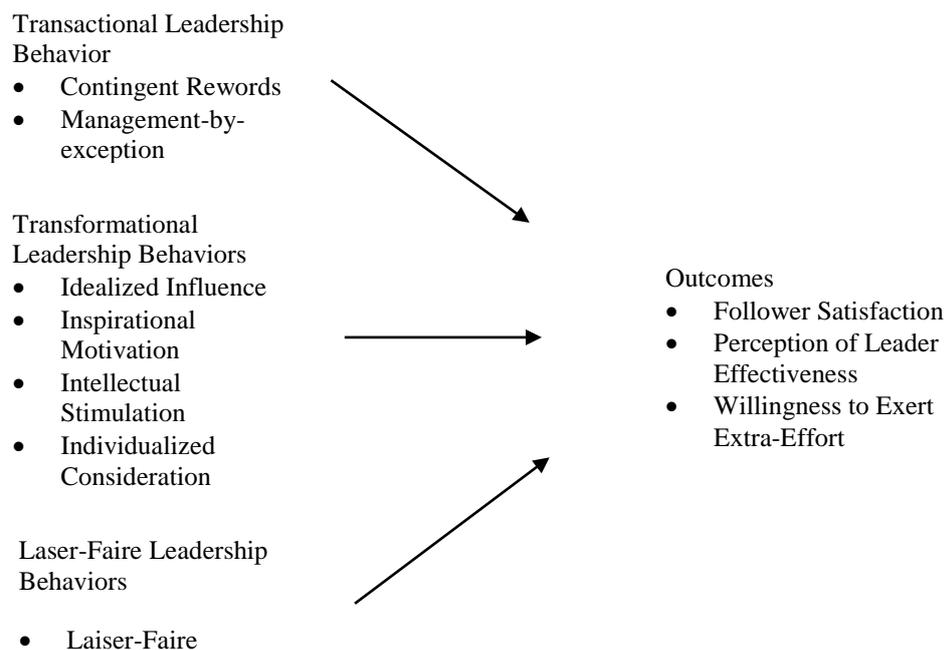
treat followers with respect and they provide continuous follow-up and feedback. More importantly, the leader with individualized consideration aligns each follower's needs with organizational goals and mission.

A detailed summary table of the description of each of these can be found in Table 2.1

**Table 2.1: Definition of transformational leadership behaviors (Adapted from Bass & Avolio, 1994)**

<b>Behavior</b>	<b>Description</b>
Visioning	The leader clearly communicates a vision of the future, broadly shared by the members of the organization. This vision describes the ultimate outcomes which people need to achieve, and the leader expresses optimism about the future with strong expressions of personal confidence and enthusiasm. Transformational leader by example, serve as role models and themselves behave in ways consistent with their vision.
Inspiring	The leader generates excitement at work and heightens expectations of others through symbols and images. In communicating about their vision, they express their dreams in highly motivational language. They give pep talks with high energy optimism and passion, which in turn builds confidence in their vision and self-confidence in their followers.
Stimulating	The leader arouses interest in new ideas and approaches and enables employees to think about problems in new ways. This transformational leader anchorages rethinking of ideas and questioning of old ways of doing things. He/she actively consider "wild ideas" and anchorages divergent thinking. Intelligence and clear reasoning are anchorage to select from among the creative ideas and to solve problems.
Coaching	The leader coaches, advises and provides "hands-on" help for others to improve their performance. They listen attentively and express encouragement, support and confidence in others' abilities in achieve the high expectations inherent in the vision. They give positive feedback for strong performance and effort and provide opportunities for development by giving challenging and interesting tasks to their followers (as distinct from keeping all these kinds of jobs for themselves)
Team-building	The leader builds effective teams by selecting team members with complementary skills. They increase trust and self-confidence in the team by sharing information, giving positive feedback utilizing individual members' skills and removing obstacles to team performance

Bass (1985) classified transactional, transformational, and laissez-faire leadership as the interactions between leaders and followers that produce desired outcomes (see Figure 2.1). For instance, in the case of transformational leadership, the desired outcomes (positive follower satisfaction, positive follower perception of leader effectiveness, and willingness to put in extra effort) could be achieved when the leader negotiates with followers with an exchange relationship of reward for compliance (Bass, 1985).



**Figure 2.1: Bass' Model of Leadership (Adapted from Northouse, 2007)**

In his original discussion of the transactional and transformational leadership, Burns (1978) viewed the transactional and transformational leadership as the

occupying two ends of the same continuum. In other words, these leadership behaviors diverged into two extreme constructs, which could not coexist within the same leader. A leader is actually either transactional or transformational, thus he/she could not be both. On the other hand, Bass (1985) argued that while the behaviors used by the transactional leaders may differ from those of transformational leaders, these two leadership styles should not be seen as incongruent, because they are often the most useful when used in conjunction. Therefore, Bass (1985) viewed TLBs as building on and augmenting transactional leadership behaviors in contributing to the desired outcomes. In other words, TLBs could provide satisfaction, effort, and effectiveness beyond what can be produced by the transactional leadership behaviors.

Although there is still a wide scope found in the study of the relationship on TLBs with OCB within the private companies in developed countries (Podsakoff et al., 1990; H. Wang, Law, Hackett, Wang, & Chen, 2005), however, though results cannot represent the same behavior and practice in Asian countries due to the politics, culture and time frame of the research done within developing Asian countries especially in Malaysian private listed companies. In the next section of this study, the literature review will present the relevant theories that are to be used to evaluate the OCB.

## **2.2 Organizational Citizenship Behavior (OCB)**

Some researchers have recognized the importance of behaviors that they are not specifically required by the formal job in an organization, but it does contribute to the organizational performance/ effectiveness (C. A. Smith et al., 1983; Weiss, Dawis, & England, 1967). Barnard (1967) stated in his book that there is a distinction between in-role behavior and extra-role behavior. He pointed that in-role behaviors are these behaviors that are required by one's job or role in an organization, and extra-role behaviors include acts such as assisting other employees to attain their tasks and voluntarily working extra hours in order to help the organization achieve its goals. He believed that the eagerness of employees to engage in extra-role behaviors was indispensable (Weiss et al., 1967, p. 83).

Other pioneers citing the importance of extra-role behaviors of employees included Katz and Kahn (1966; as cited in Muterera, 2008). The authors suggested that the effective functioning of an organization requires employees to do, not only the job scope within their job, but they must also engage in behaviors to go beyond the formal requirements of their job scope. In the second edition of their book, first published in 1966, the author's argued that "an organization which depends solely upon its blueprint prescribed behavior is a very fragile social system" (Katz & Kahn, 1978, p. 132 as cited in: Muterera, 2008). They believed that organizations that depended only on the in-role behaviors of employees would mostly lead to a breakdown. Therefore, extra-role behaviors were necessary for the continuity of an organization.

From the earlier authors, their research work had become the starting point in the OCB concept. Smith, et al., (1983) introduced the OCB concept. He defined OCB as “individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system, and that in the aggregate promoted the effective functioning of the organization” (Smith et al., 1983, p. 656) .

Since its conception, various dimensions of OCB had been suggested Smith, et al., (1983) were among the first to suggest the measures of OCB. In their study, the authors identified two dimensions of the OCB construct. Altruism refers to the behavior which is intended to help co-workers and generalized compliance, which represents behavior that is associated with characteristics defining a good worker. For instance, the items which classified as altruism included, “Helps others who have been absent,” and “Orient new people even though it is not required” (Smith et al., 1983, p. 656). Examples of the items which can be classified under the generalization compliance included, “Does not spend time in idle conversation,” and “gives advance notice if unable to come to work” (Smith et al., 1983, p. 656).

A few years later, some researchers (Organ et al., 2005; P. Podsakoff & S. MacKenzie, 1989; Van Dyne, Graham, & Dienesch, 1994) proposed other taxonomies of OCB. Perhaps the most of the popular taxonomy being used is the Podsakoff & MacKenzie, (1989). Based on the empirical findings, there are

five-dimension scales developed by them to measure the employees' OCB. The five-dimension generally accepted in the literature are altruism, conscientiousness, sportsmanship, courtesy, and civic virtue. The details of each dimension are discussed as follows;

- *Altruism.* Altruism refers to the discretionary behaviors that are directed toward helping fellow employees with an organizationally relevant task or problem.
- *Conscientiousness.* Conscientiousness refers to the various instances in which organization members carry-out tasks well beyond the minimum required levels. For instance, working extra hours even if you do not get paid or volunteering to work on the public holidays or weekends.
- *Sportsmanship.* Sportsmanship refers to refraining from making complaints, petty grievance, and making big issues out of matters of little or no consequence in the overall scheme of things.
- *Courtesy.* Courtesy includes such actions as “touching base” with those parties whose work would be affected by one’s decisions or commitments. Advance notice, reminders, passing along information, consultation, briefing, all suggest in the intrinsic quality of courtesy.
- *Civic virtue.* Civic virtue refers to the voluntary participation in and support of organizational functions. For instance, keeping abreast of issues of the day, being involved in what policies are adopted and attending meetings, and participating in the political life of the organization.

On top of that, Organ (1990, p. 96; as cited in Organ et al., 2005) identified another two categories, namely: Peacekeeping and cheerleading:

- *Peacekeeping*. Peacekeeping refers to the behavior that helps to prevent and resolve destructive conflict.
- *Cheerleading*. Cheerleading refers to actions of encouragement and reinforcement of coworkers' accomplishments and development.

### **2.2.1 Transformational Leadership Behaviors (TLBs) and Organizational Citizenship Behavior (OCB)**

The relationship between TLBs and the OCB has found a positive relationship (Moorman, 1991; Podsakoff et al., 1996; Podsakoff et al., 1990).

Podsakoff, et al., (1990) examined the effects of TLBs on OCB. The transformational leadership inventory (TLI) was used to measure the leadership behaviors in the research. The results of the research suggested that the effect of TLBs on OCB could occur in three ways. First, the TLBs could directly influence the employees' OCB. Second, TLB could also indirectly influence employees' OCB through the followers' trust and satisfaction. The third, TLBs could have both direct and indirect relationship on the employees' OCB. According to Podsakoff, et al., (1990), there is a significant relationship found between the indirect relationship between the TLBs and the OCB which mediate by the trust in the supervisor and employee satisfaction.

A sample of n=1,539 employees was selected across a wide variety of organizations from different industries. Podsakoff, et al., (1996) examined the relationship between TLBs and OCB. In the process of examining the relative contributions of TLBs to OCB Podsakoff and his colleagues used the TLI instrument to operationalize TLBs theory. A scale of OCB was introduced to measure the five dimensions of the employees' OCB namely; altruism, conscientiousness, courtesy, civic virtue, and sportsmanship.

According to Podsakoff, et al., (1996, pp. 269-279), the authors study indicated the detail relationship between TLBs and OCB as follow:

1. One leader behavior (individual support) had a significant effect on employees' altruism ( $\beta = .14$ ). According to the authors, this result showed that followers who found their leaders were more altruistic than those who did not feel that leaders were supportive.
2. One leader behavior (individual support) had a significant positive effect on employees' conscientiousness ( $\beta = .11$ ). It indicated that followers who viewed their leaders to be supportive tended to be more conscientious than followers who did not perceive their leaders as supportive.
3. Two leader behaviors (articulating a vision,  $\beta = .12$ ; individualized support,  $\beta = .09$ ) were found to be positively related to employees' sportsmanship. Subordinated who perceived their leaders to clearly articulate a vision of the future or be supportive, tended to exhibit more

sportsmanship than subordinates who perceived their leaders not to exhibit this behavior.

4. Two of the TLBs had significant effects on followers' courtesy. Individual support had the greatest positive effect ( $\beta = .29$ ) on followers courtesy. At the same time, high performance expectations had a significant positive effect ( $\beta = .06$ ) on followers' courtesy. These results suggested that followers who perceived their leaders to be supportive or to have high-performance expectations will be more courteous to their co-workers than followers who perceived their leaders to be less supportive or practices low-performance expectations.
5. One leader behavior (individualized support) had a significant positive effect ( $\beta = .08$ ) on civic virtue. The results indicated that followers who perceived their leaders to be supportive were more likely to engage in civic virtue behaviors than followers who did not perceive their leaders to be supportive.

In short, the factor under TLBs (individualized support) appeared to be the most important determinant of employees' OCB. The findings in the study indicate that in general, followers who view their leaders as supportive are more likely to engage in OCB than followers who did not.

In another research done by MacKenzie, et al., (1991) with the sample size of  $n = 477$ , sales agent working in the national insurance company examined the

relationship between transformational and transactional leadership behaviors and the sales people OCB. The TLI is used to measure the TLBs in this study. The authors found a significant direct relationship between (1) individualized support and civic virtue, (2) intellectual stimulation and civic virtue, and (3) high-performance expectations and sportsmanship. On the other hand, the study also found several significant indirect relationships between TLBs and the other dimensions of OCB such as trust is one of the important mediate variables in the relationship between TLBs and employees' OCB.

### **2.3 Job Satisfaction (JS) and Organizational Commitment (OC) as Mediators**

Researchers (e.g., Farkas & Tetrick, 1989; Mathieu, 1991; Schappe, 1998) have argued that JS and OC need to be considered together because these factors reciprocally affect each other. This results in a high correlation between the two concepts. This study will research both of the theory, and investigate their roles as mediating variables between the TLBs and OCB.

### **2.4 Job Satisfaction (JS)**

Job satisfaction (JS) has become one of the most popular study variables in organizational behavior research. As a result, the construct has been conceptualized and been defined in a variety of ways. For instance, Churchill, Ford, and Walker (2005) defined JS as “all characteristics of the job itself and

work environment which (people) find rewarding, filling, and satisfying, or frustrating and unsatisfying” (p. 255). Locke (2004) defined JS as “positive emotional state resulting from the appraisal of one’s job or job experiences” (p. 1300). Balzor, Kihm, Smith, Irwin, Bachiochi and Robie (1997, as cited in Boerner et al., 2007) defined JS as “the feelings a worker has about his or her job experiences in relation to previous experiences, current expectations, or available alternatives” (p. 10). In short, a common theme for JS is about how people feel about their job and the various aspects of their work.

Most scholars recognize and agree that the concept of JS is complex and involve several dimensions (Felfe & Schyns, 2004; Howell & Avolio, 1993; Hunt, Baliga, Dachler, & Schriesheim, 1988). Locke (1969, p. 1302) identified nine aspects of JS including satisfaction with the work, pay, promotion, recognitions, benefits, working conditions, supervision, co-workers, and company management. However, Howell and Avolio (1993) argued that employees will typically be satisfied with their job if they are pleased with the nature of their work, received adequate compensation, happy with their leader, believe there are opportunities to growth and advancement.

According to Locke (2004) satisfaction in work, involves satisfaction with various aspects of the work such as; opportunity for growth and learning; the amount of work; the amount of responsibility; control over work methods and work pace; job achievement; and complexity. Satisfaction with pay involves

satisfaction with the amount, fairness and methods of payment. Satisfaction with the promotions entails satisfaction with opportunities for promotion and fairness of promotion policies within an organization. Recognition includes praise and credit for work done. Satisfaction with benefits includes being happy with the pension, medical, and vacation benefits offered by the organization. Satisfaction with work conditions includes; satisfaction with things such as working hours, lunch breaks and others. Satisfaction with supervision refers to satisfaction with “supervisory style and influence, technical, human relation, and administrative skill” (Felfe & Schyns, 2004, p. 1302). Satisfaction with co-workers entails satisfaction with the “competence, helpfulness, friendliness” of employees (Felfe & Schyns, 2004, p. 1302). Finally, satisfaction with a company and management includes satisfaction with most of the facts discussed above “including concern for the employee as well as pay and benefits policies” (Felfe & Schyns, 2004, p. 1302).

According to Hunt et al. (1988), JS constitutes a complicated components It may relate differently to other variables of interest in a manner that advances the science and practice of organizational research. Spector (1997 as cited in Hunt et al., 1988) stated that there is two district components: intrinsic JS and extrinsic JS. Intrinsic JS is how people feel about the nature of the job tasks themselves, whereas extrinsic JS is how people feel about aspects of the work situation that are external to the job tasks and the work itself.

### **2.4.1 Transformational Leadership Behaviors (TLBs) and Job Satisfaction (JS)**

Several studies in both private and public sectors have addressed the relationship between transformational leadership and employee satisfaction (Braun, Peus, Weisweiler, & Frey, 2013; Mirkamali, Thani, & Alami, 2011; X. Wang, Chontawan, & Nantsupawat, 2012). For instance, in the study by Bycio, Hackett, and Allen (1985) with n = 1,376 number of nurses; it was found that there was a positive association between transformational leadership scales and satisfaction with the leader. They found that a contingent reward was positively related to satisfaction with the leader. However, management-by-acceptation was negatively related to satisfaction with the leader. With regards to the argumentation that transformational leadership generates enhanced levels of follower outcome; the author stated that it was clear that transformational leadership or more specifically known as charismatic leadership, by itself, was the dominant predictor of the satisfaction with their leader.

In another research carried in the secondary school in Singapore by Koh et al. (1995) who examined the influence of TLBs and how they relate to OC, OCB, teacher satisfaction with the leader, and students' academic performance. Specific to the transformational leadership – satisfaction relationship, the authors found that transformational leadership had a significant impact on satisfaction but not the transactional. As the regression  $R^2$  increases, the model

changes from insignificant to significant. In the discussion of the research, the authors stated that:

The regression analyses show that when transactional leadership factors were entered into the regression equations, the *F-ratio* was insignificant. However, when the transformational leadership factors were added, the *F-value* for the change in  $R^2$  was statistically significant ( $p < 0.01$ ) and substantial (26%).

In another research, Stamper and Van Dyne (2003) examined the relationship between TLBs and OC and JS. The study was conducted across two countries; namely, Kenya and United States respectively. The participants were from seven banks from Kenya and five banks from the United States. They were asked to rate for their leader's behaviors in connection with their own JS level and their commitment level towards their organizations. Ratings of transformational leadership were obtained by using the Multifactor Leadership Questionnaire (MLQ). Mowday, Steers, and Porter (1979) measured the OC used in the study. For the JS concept, the participants were asked to rate their satisfaction with the leader and their satisfaction with their work in general. The results from the study showed that transformational leadership has a strong and positive impact on JS and OC.

Recently, Lin et al. (2010) stated transformational and transactional leadership is related to JS. The participants for this study came from the teachers from the colleges and universities in Taiwan. This study used the MLQ and Teacher Job Satisfaction Questionnaire (TJSQ) to measure the transformational and transactional and JS. The study concluded that in Taiwan, higher education

teachers were more satisfied with their jobs perceived their supervisors to higher significantly greater TLBs than teachers who are less satisfied with their jobs.

Emery and Barker (2000) also examined the effects of transactional and transformational leadership on JS with customer contact personnel in banking and food store organizations in the United states. In the study, the MLQ was used to measure the transactional and TLBs. The JS concept was measured by the Job Descriptive Index. The research came to a conclusion that TLBs had a stronger correlation compared to the transactional leadership factors with the JS.

#### **2.4.2 Job Satisfaction (JS) and Organizational Citizenship Behavior (OCB)**

Research had found that employees who are more contented with their jobs appear to be more likely in practicing OCB. (e.g., Ilies, Scott, & Judge, 2006; Tepper, Duffy, Hoobler, & Ensley, 2004). Kopeland, Brief, and Guzzo (1990) stated that JS is likely to induce OCB, which encompasses behaviors, such as cooperative attitude which is a beneficiary to the organizational effectiveness. Smith et al. (1983) found that JS, measured in an affective or emotional aspect, predicted the altruism dimension of OCB but not the generalized compliance dimension. However, Williams and Anderson (1991) found that JS, measured in a cognitive aspect, is positively related to both altruism and generalized compliance.

Organ and Ryan (1995) stated that there is a relationship between JS and OCB. They showed that the mean correlation between altruism and JS was .24 after reviewing .28 related studies and that between generalized compliance and JS was .22 after reviewing .25 in their meta-analysis. Finally, Spector (1997) noted that the correlation alone could not establish causality.

## **2.5 Organizational Commitment (OC)**

It is one of the common study constructs in social science; OC has been conceptualized and measured in various ways. There are more than twenty commitments related concepts and measures in the literature (Morrow, 1983, p. 486). Nevertheless, the various conceptualizations of OC appear to reflect at least three general three sub-constructs; (a) affective commitment, (b) continuance commitment, and (c) normative commitment (John P. Meyer & Allen, 1991; John P. Meyer, Allen, & Smith, 1993).

Affective commitment is most prevalent and also the most research approach to representing OC in the literature (Allen & John, 1990). Many studies have used this approach (Brewer & Selden, 2000; Preacher & Hayes, 2004). However, the concept of affective commitment is perhaps best represented by the work of Porter and colleagues (Hayes & Preacher, 2012; Mowday et al., 1979; Preacher & Hayes, 2008) who defined affective commitment as “the relative strength of

an individual's identification with and involvement in a particular organization” (Mowday et al., 1979, p. 226).

Continuance commitment refers to a commitment based on the employee's recognition of the costs associated with discontinuing work (Allen & John, 1990). For instance, the employee will be committed to an organization if there are profits associated with continued participation or if the costs associated with leaving the organization are too high.

Normative commitment is the less prevalent approach to OC in the literature (Allen & John, 1990; John P. Meyer et al., 1993). It refers to the internalized moral obligation to maintain employment with the organization. In other words, an employee with high levels of normative commitment has a belief that staying with an organization is the 'right' and moral thing to do.

Although the literature recognized three main dimensions of the OC construct, there is not yet a significant support for using the three-dimensional definition of OC (Allen & John, 1990; Balfour & Wechsler, 1990; Kim, 2005; Liou & Nyhan, 1994). For instance, some researchers have questioned the clarity of the concept of normative commitment (Allen & John, 1990; Liou & Nyhan, 1994). The authors also argued that a normative commitment is moderately correlated (.51) with an affective commitment to the extent that it cannot be considered as

a separated construct (Allen & John, 1990). For this reason, there is not much literature found for the use of normative commitment construct.

Although there is a little literature found on the concept of continuous commitment, several scholars have found the construct validity of the concept to be problematic: There is, however, much support for the importance of affective commitment in public organization (Allen & Meyer, 1996; Conger & Kanungo, 1987; Howell & Frost, 1989; Liou & Nyhan, 1994).

### **2.5.1 Transformational Leadership Behaviors (TLBs) and Organizational Commitment (OC)**

Prior research suggests that several factors serve as key determinants of the OC concept (Allen & John, 1990; Allen & Meyer, 1996; Delwiche & Slaughter, 2012). One of the factors that can be considered as an important determinant is leadership (B. M. Bass, 1985; Emery & Barker, 2007; Gang Wang, Oh, Courtright, & Colbert, 2011; Stamper & Van Dyne, 2003; Yung & Zhang, 2011).

In a study with a sample of registered nurses, Bass (1985) conceptualization of leadership and Meyer and Allen (1991) three-components commitment model to analyze the relationship between these constructs. The authors found that the affective commitment had a strong positive relationship with the TLBs (B. M.

Bass, 1985, p. 474). Furthermore, the strong positive relationship between the TLBs and the affective commitment scale was significantly higher than those involving the continuous commitment scale and the normative commitment scale (B. M. Bass, 1985, p. 475).

In the study done within the schools in Singapore Koh, et al., (2011) examined the influence of TLBs as they relate to OC, OCB teacher's satisfaction with their leader, and students' academic performance. A more specific to the leadership-commitment relationship, the authors found that TLBs had significant positive add-on effects (i.e. increase of change of  $R^2 = 17\%$ ,  $p < 0.01$ ) compare with transactional leadership behaviors in predicting subordinate (teachers) commitment level to the school (p. 328).

As discussed earlier, Walumbwa and his colleagues (2003) examined the relationship among the TLBs, OC and JS in Kenya and United States. Participants were drawn from the banking industry in those two areas. The concept of the transformational leadership was measured by the MLQ. Meanwhile, the OC was measured by Mowday, et al., (1979). The results of the study showed that TLBs had a strong positive effect on OC in the both countries.

In another study conducted in the petroleum products redistribution and Services Company and a hedge-fund financial trading company. Judd and Kenny (1981)

investigated the relationship between leadership and OC. Leadership was measured by using the Leadership Practice Inventory (LPI) questionnaire and OC was measured by the OC scale developed by Meyer & Allen, (1991). The study results indicated that the affective commitment was positively correlated with leadership. The researcher also stated in the result of the research that the  $R^2$  showed that approximately 49% of the variance in affective commitment was accounted for by the leadership. The results also indicated that normative commitment was positively correlated with the leadership. Linear regression results showed that approximately 25% of the variance in normative commitment was accounted for by leadership.

In a later study, Emery and Barker (2007) examined the impact of transactional and TLBs on OC of customer contact personnel in banking and food companies in the United States. In this study, the researcher used the MLQ to measure the transactional and transformational leadership. Meanwhile the 15 items developed by Porter, et al., (1974) was used to measure the OC. In short, this study can be summarized that TLBs were more strongly correlated with the OC than the transactional leadership behaviors.

In short, transformational leadership literature suggested that transformational leaders are able to influence followers' OC by improving loyalty, recognizing the different needs of each follower, developing each follower's potential, and Avolio et al. (1999); (Podsakoff and MacKenzie, 1989) stated encouraging

followers to think in innovative ways. Shamir, Zakay, Breinin, and Popper (1998) suggested that transformational leaders influenced followers' OC by encouraging increase personal commitment to a common vision, mission, and organization goals. Bycio, et al., (1985) suggested that OC was higher for followers whose leaders emphasized considerations. Finally, it is shown that OC is higher for followers whose leaders show support and concern for their followers' development (Allen & John, 1990; Allen & Meyer, 1996).

### **2.5.2 Organizational Commitment (OC) and Organizational Citizenship Behavior (OCB)**

OC is another important antecedent in the relationship between JS and OCB. O'Reilly and Chatman (1986) and Becker (1992) found a significant relationship in between OC and OCB.

Indeed, Meyer and Allen (1997) noted that the role of affective commitment, 'as many managers have suspected all along, employees with a strong affective commitment appear much more willing to engage in OCB than those with weak affective commitment' (p. 34). At the same at the same time, Shore, Barksdale, and Shore (1995, p. 1596) stated that:

Logically, a manager may infer that an employee, who ... goes above and beyond its requirements, thus demonstrating organizational citizenship behavior, has a high level of affective commitment, or emotional attachment, to the organization. In contrast, low level of organizational citizenship behavior may signify to the manager that the employee remains with the organization only because he or she has little or no choice in the manner (continuance commitment).

## **2.6 Research Hypotheses**

### **2.6.1 Transformational Leadership Behaviors (TLBs)**

As reviewed earlier, transformational leadership studies involving individual work structures have found that TLBs is positively related to all the five dimensions of OCB (Podsakoff et al., 1990; Podsakoff et al., 2000). In addition, (Lapierre, 2007) reported that supervisors' of benevolence toward their subordinates, which is a form of TLBs, had a positive influence on subordinate willingness to provide their supervisors with extra-role efforts. Smith et al. (1983) argued that transformational leaders, which is characterized by leading, inspiring and stimulating followers, may influence OCB in a team context because the leader's behavior in giving support and showing consideration for to the work team, which is a form of OCB, is modelled by the team members. Literature has suggested that the essence of transformational leadership is that transformational leaders 'lift ordinary people to extraordinary heights' (Boal & Bryson, 1988, p. 11 c.f. Omar, Zainal, Omar, & Khairudin, 2009) and cause followers to do beyond than they are expected to do (Yukl, 2010).

Many theoretical and empirical researches have suggested that there is a strong positive relationship between TLBs and OCB. Besides the main transformational leadership theory has the direct relationship with the OCB,

there are very few researchers found on each behavior of transformational leader link directly to OCB. Bass (1985) found a direct effect between intellectual stimulation with some form of OCB (conscientiousness). Recently, Nguni et al. (2006) found a positive direct relationship between two of the TLBs with OCB, which are individual consideration and intellectual stimulation. The direct relationship paths are shown in Figure 2.2

The following are the direct relationship hypotheses;

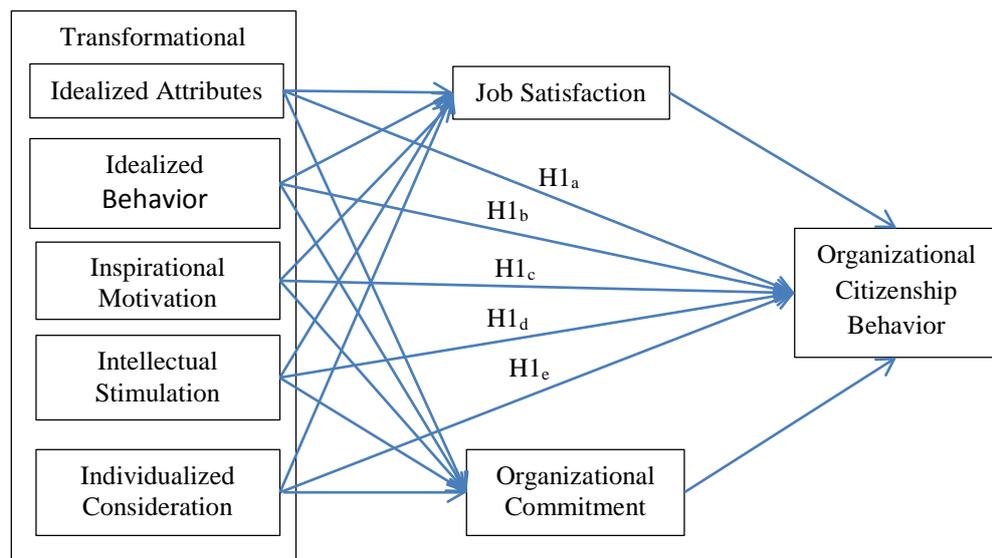
Hypothesis 1<sub>a</sub> Idealized attributes is positively related to OCB.

Hypothesis 1<sub>b</sub> Idealized behavior is positively related to OCB.

Hypothesis 1<sub>c</sub> Inspirational motivation is positively related to OCB.

Hypothesis 1<sub>d</sub> Intellectual stimulation is positively related to OCB.

Hypothesis 1<sub>e</sub> Individualized consideration is positively related to OCB.



**Figure 2.2: A Model of Transformational Leadership Behaviors, Its Mediators, and Organizational Citizenship Behavior**

## 2.6.2 Mediation Model

According to Piccolo and Colquitt (2006) suggested that there should be a consideration of an alternative model in researching TLBs with other variables. It will be most appropriate to analyze or investigate an alternative model which does not include paths connecting TLBs to OCB, which is shown in Figure 2.3

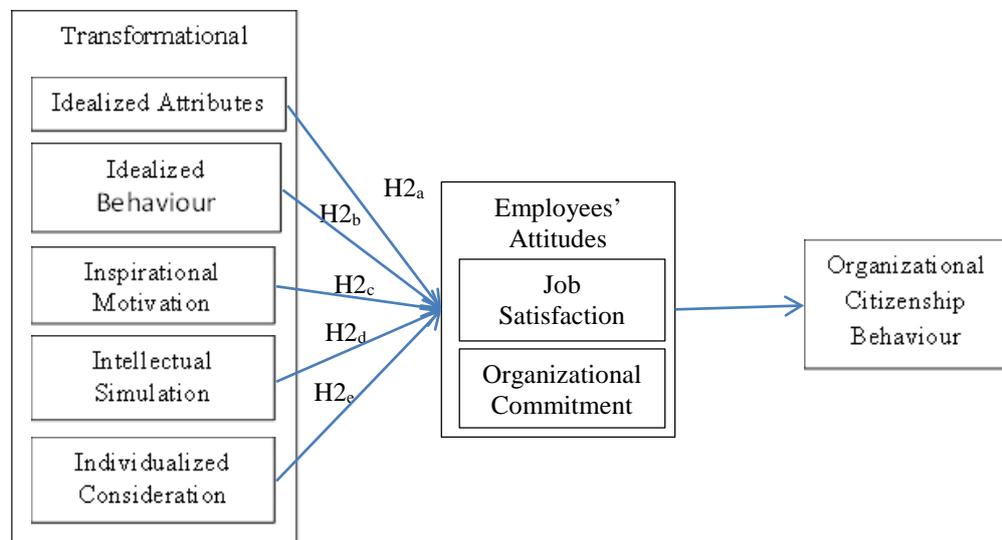
Hypothesis 2<sub>a</sub> Idealized attributes and OCB is fully mediated by JS and OC.

Hypothesis 2<sub>b</sub> Idealized behavior and OCB is fully mediated by JS and OC.

Hypothesis 2<sub>c</sub> Inspirational motivation and OCB is fully mediated by JS and OC.

Hypothesis 2<sub>d</sub> Intellectual stimulation and OCB is fully mediated by JS and OC.

Hypothesis 2<sub>e</sub> Individualized consideration and OCB is fully mediated by JS and OC.



**Figure 2.3: The Mediation Model of Transformational Leadership Behaviors, Its Mediators, and Organizational Citizenship Behavior**

## **2.7 Chapter Summary**

In a conclusion the relevant literature to each particular relationship of the variables have been reviewed systematically; (1) the direct relationship between TLBs and OCB, (2) each mediator theory and its relationship with other variables, (3) the relationship between the two employees' attitudes (JS and OC). It is the priority desire of this study to investigate these mediators simultaneously with all the TLBs with OCB as there is very little or no related research being done in Malaysian context.

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

This chapter expands the research methodology for the proposed study. This includes; (1) Research design, (2) Study population and sampling procedures, (3) Data collection methods, (4) Questionnaire design, (5) Reliability and validity of the instrument, and (6) Data analysis software and methods. Finally, the chapter will end with a chapter summary.

#### **3.1 Research Design**

This proposed study attempts to examine the direct relationship between TLBs with the OCB, and the indirect relationship between TLBs and the OCB by mediating employees' attitudes.

This is a non-experimental research with a cross-sectional data collection study. In this study, the unit analysis will be used with the organization employees as individual as a unit of analysis. The cross-sectional design involves the data collection at one point of time. The individual as a unit analysis will be targeting the employees for the particular company whose works under the same leader. This is because the employees will have a better and a clearer judgment on their own attitudes and behavior.

### **3.2 Population and Sampling Procedures**

The organizations chosen for the proposed study comprise all the public listed companies in Malaysia. There are about 900 companies listed on Bursa Malaysia. These companies are diverse; they vary in size, geographic, population, and the company structure. For example, in terms of size and geographical, in the 'Kuala Lumpur' state and 'Selangor' state, there are more companies being established, and population in the states as around 7.0 million population as compared to 'Sabah' and 'Sarawak', most of the companies there are smaller and the population is summed up to around 5.5 million (Federal-States, 2010).

A list of all the Malaysian companies was extracted from Thomson Reuters Datastream as dated on March 27, 2010 according to the industries listing in the database. There are all 884 companies been listed on the main board at the particular time. On top of the total numbers of companies, only 854 companies do have the 'Mnemonic Code' provided by the Datastream (DS). On top of that, some of the company's information was incomplete, such as incomplete of the company's address, no employees working in the main board listed company (holding company). They summed up to 43 companies. Thus, the sample size is reduced to 811 of companies in public listed companies (PLCs).

### **3.3 Sampling Procedures/ Participant Selection**

The sample of the participant in this study consisted of individuals as followers in all the main board companies in Malaysia. Several steps were taken to identify these individuals.

#### **Step 1: Sample Size**

According to Blumberg, Cooper, and Schindler (2008), sample size is a function of the population, the desired confidence level and, the desired precision. Since the study is focusing on followers in all the PLCs in Malaysia, all the main board companies are used as a sampling frame. There are currently 854 companies listed in Malaysia's main board that their data are available from DS. Next, due to the incomplete information of 43 companies the sampling frame reduces to 811 companies. The research sought to produce findings at the 95% confidence level with an error rate of 5%. With this criterion, the minimum number of questionnaire responses needed to produce meaningful results was estimated to be 265 sets responses (Dillman, 2007).

#### **Step 2: Selection of Target Organization**

After determining the required total sample, for the purpose of this study, the sample will be randomly chosen from the list of the companies sorted according

to the industry. Each industry will be represented by a few numbers of companies.

First, the 811 companies identified as the target population of organizations for the study were sub-grouped according to a few groups of industries; namely; automobiles and parts, banks, beverages, and so on. After stratification, proportionate random samples were drawn from each stratum (industry). To ensure proportional representation of each industry of the sample, a sampling ratio of the  $n/N$  (where  $n$  = sample size and  $N$  = population size) was used.

### Step 3: Selection of Participants

Following the identification of target organizations, employees in these organizations were identified. First, the employees were classified into the job function so that it is better in generalizing the research results; for instance, sales, marketing, human resource and so on. Individuals who report directly to the department leader were selected to participate in the study.

### **3.4 Data Collection Method**

The purpose of this survey research is to generalize from a sample to a population so that inferences can be made about some characteristics, attitudes

or behavior of this population. The primary method of data collection of the proposed study is by mail survey questionnaire. The mail survey questionnaire is chosen based on several reasons. First, there is a very little research found in the leadership and followership behaviors in Malaysian context. Second, survey research of data collection may be one of the best ways in data collection of human behaviors as one of the limitations of observation research is some of the inner behaviors of the leaders or followers can't be observed by the researcher at the working location. Through the mail questionnaire survey, the respondents may indicate their perceptions towards their TLBs characteristics, their behaviors/ attitudes towards their company.

There are a few disadvantages of mail survey questionnaire. These include; low response rate and inability to collect an in-depth detail of the participants' behaviors/ attitudes to make a detailed analysis on their behaviors/ attitudes. These disadvantages can be overcome by providing the respondents with a small appreciation token, develop the questionnaire in more interesting, creative, and easy-to-answer manner. A follow-up call will be made to all the main board companies to increase the response rate, checking on the status of the questionnaire, and to seek for updates from the companies. As the study plans to have a cross-sectional data collection, the data collection at one point of time will start from 16<sup>th</sup>-March-2012 till 31<sup>st</sup>-July-2012.

### **3.5 Survey Questionnaire**

The survey questionnaire (see Appendix B) asked respondents to respond to questions regarding their leaders' leadership behavior. In addition, the survey questionnaire asked respondents to give a rating on their OCB and OC, as well as JS. It is also designed to collect background and demographic data that would help to understand the sample characteristics of the population. With the exception of background and demographic data, the survey questionnaire included instrument that have been developed and established by other researchers and its content has been validated widely in the respective field of study.

#### **3.5.1 Background and Demographic Information**

Section V of the survey questionnaire (Appendix B) solicited information from participants with regard to (1) gender, (2) age, (3) race, (4) marital status, (5) length of service in the current company, (6) length of service in the current position, (7) current monthly gross income, (8) educational background, and (9) current position.

#### **3.5.2 Transformational Leadership Behaviors (TLBs)**

In the section I of the survey questionnaire (Appendix B) solicited information to measure the independent variables, i.e. TLBs. The Multifactor Leadership

Questionnaire Short Form (MLQ 5X Short Form) ((Antonakis et al., 2003). TLBs included influence (attribute), idealized influence (behavior), inspirational motivation, intellectual stimulation, and individualized consideration. The leadership outcome factors consist of extra effort, effectiveness of a leader, and satisfaction. The scale are measured in a 5-point Likert scale, which ranges from (1) “not at all” to (5) “frequently, if not always”.

For the purpose of this study, the researcher adopted 20 questions designed to measure transformational leadership. Table 3.1 shows the dimensions related to the factors of the leadership behaviors and the questions designed for each dimension. All items in the MLQ 5X short form were coded such that higher scores indicate a “positive” response. The scale scores for the MLQ 5X short form were calculated as average scores for the item comprising each score. The higher the score, the greater is the perceived incidence of the transformational leadership behavior. For the purpose of this study, each of the transformational leadership factors is measured separately.

**Table 3.1: Transformational Leadership Dimension and Related Survey Items**

Transformational Leadership	Survey Items
Idealized Attributes	5, 9, 11, 13.
Idealized Behaviors	2, 7, 12, 19.
Inspirational Motivation	4, 6, 14, 20.
Intellectual Stimulation	1, 3, 16, 18
Individualized Considerations	8, 10, 15, 17

### 3.5.3 Organizational Citizenship Behavior (OCB)

Section IV of the survey questionnaire (Appendix B) solicited information on the participant's willingness to go beyond their job scope for their organization. From the literature review, it is discussed that there are five dimensions in the organizational citizenship theory. Namely: (1) Conscientiousness, (2) Sportsmanship, (3) Civic virtue, (4) Courtesy, and (5) Altruism. The instrument was developed by Podsakoff and MacKenzie (1989) with a modified version that validated by Podsakoff et al. (1990). The scale are measured on a 5-point Likert scale, which ranges from (1) "not at all" to (5) "frequently, if not always".

For the purpose of this study, the researcher adopted 24 questions designed to measure OCB. Table 3.2 shows the dimensions related to the dimension of the behavior and the questions designed for each dimension. All items in the instrument were coded such that higher scores indicate a "positive" response. Each dimension will be represented by a few questions.

**Table 3.2: Organizational Citizenship Behavior Dimension and Related Survey Items**

Organizational Citizenship Behavior	Survey Items
Conscientiousness	3, 18, 21, 22, 24
Sportsmanship	2, 4, 7, 16, 19
Civic Virtue	6, 9, 11, 12
Courtesy	5, 8, 14, 17, 20
Altruism	1, 10, 13, 15, 23

### **3.5.4 Job Satisfaction (JS)**

Section II of the survey questionnaire (Appendix B) solicited information on the participant's feeling about their current job and tells the researcher what things the respondent is satisfied and dissatisfied with their job. The short version of the JS instrument was developed by Weiss et al. (1967). This is named as the Minnesota Satisfaction Questionnaire (MSQ) and is made available at [http://www.psych.umn.edu/psylabs/vpr/pdf\\_files/MSQ%201977%20Short%20form.pdf](http://www.psych.umn.edu/psylabs/vpr/pdf_files/MSQ%201977%20Short%20form.pdf). In general, there are two dimensions under this theory; namely, (1) intrinsic, and (2) extrinsic. In order to simplify this research, the theory will be studied as a whole with some additional general dimension questions which sum up to 20 items. It is measured on 5-point Likert scale, which range from (1) very dissatisfied till (5) very satisfied.

Table 3.3 shows the items in measuring the JS theory. The higher the score means the participant is most likely feeling more satisfied with their present job. In order to determine the JS score for the employee, the results of the 20 questions were added together, and then an average score was determined by dividing the total score by the total number of questions (20).

**Table 3.3: Job Satisfaction Dimensions and Related Survey Items**

Job Satisfaction Dimensions	Survey Items
Job Satisfaction	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20

### **3.5.5 Organizational Commitment (OC)**

Section III of the Follower Survey Questionnaire (Appendix B) solicited information on the participant's level of commitment to their organization. OC included; affective commitment, continuance commitment, and normative commitment (Allen & Meyer, 1996; John P. Meyer et al., 1993; John P. Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). The OC is measured by the Organizational Commitment Questionnaire (OCQ) (John P. Meyer et al., 1993). The information from the respondents (by answering the OCQ) will provide the researcher with which commitment dimension does the employees committed to the organization. The scales are measured on a 5-point Likert scale which ranges from (1) "Strongly Disagree" to (5) "Strongly Agree".

In order to determine the OC score for the employee, the results of the six questions were added together, and then an average score was determined by dividing the total score by the total number of questions (6). Finally, the resulting average score represents the follower's commitment to the organization. Table 3.4 presents the OC dimensions and the questions designed for each dimension of the OC.

**Table 3.4: Organizational Commitment Dimensions and Related Survey Items**

Organizational Commitment Dimensions	Survey Items
Affective Commitment	1, 2, 3, 4, 5, 6

### **3.6 Reliability and Validity of the Instrument**

Bass, and Avolio, (2000a) conducted a validation study of the MLQ form 5X. In the studies consisting of 14 samples with a total N = 3,860, they also reported that the reliabilities for the total items and leadership factor scales ranging from .74 to .94. The validity coefficient for the MLQ was .91 (Bass & Avolio, 2000a). In another confirmatory factor analysis using LISREL (one of the structural equation modeling software package) to compare the Goodness of Fit Index (GFI) and the Root Mean Squared Residual (RMSR) estimate with the MLQ, the authors reported the GFI with a value of .91 and RMSR with a value of .04 for the MLQ 5X.

According to Bentler (1990), GFI values or Comparative Fit Index (CFI) values higher than .90 will generally indicate a better fit between the model and the available data. According to Hair, Black, Babin, Anderson, and Tatham (2006), RMSR values or Root Mean Square Error of Approximation (RMSEA) value of less than .05 are considered a poor fit. The authors see that each of the values reported by (Bass & Avolio, 2000a) was above the benchmark of the cut-off point respectively.

Podsakoff et al. (1990) conducted a validation study for the OCB instrument developed by Podsakoff and MacKenzie (1989). A confirmatory showed evidence for a five-factor model, with a Tucker-Lewis fit index of 0.94. Further, it is also reported in Moorman (1991), the confirmatory factor analysis Lambda ( $\lambda$ ) values were reported as .90 for altruism, .94 for courtesy, .93 for sportsmanship, .91, conscientiousness, and .87 for civic virtue (Moorman, 1991). Besides that, Podsakoff et al. (1990) reported that all the five dimensions: altruism  $\alpha = .85$ , conscientiousness  $\alpha = .79$ , sportsmanship  $\alpha = .82$ , civic virtue  $\alpha = .68$ , and courtesy  $\alpha = .79$ . The fit indexes also fell within the acceptable range ( $\chi^2 = 415.67$ ,  $df = 235$ ; RMSEA = .07; CFI = .93; TLI = .87).

In previous use of MSQ the reliability coefficients obtain for the MSQ short-form were high. The coefficient ranged from .84 for the 'assembler group' to .91 for 'engineers' for the intrinsic satisfaction scale and ranged from .77 for 'electronic assemblers' to .84 for 'engineers and machinists' on the extrinsic satisfaction scale. For the general scale, the coefficient was reported to range at .87 for 'assemblers' to .92 for 'engineers'.

Currently, there is very little data available concerning the stability of scores for the short-form MSQ. However, for the general satisfaction scale, it may be inferred from data on the General satisfaction scale of the long-form MSQ, since both scales use the same 20 items, test-retest the General Satisfaction scale

scores yield coefficient of .89 over the one-week period and .70 over a year interval (Weiss et al., 1967).

As the short-form of MSQ is based on of the subset of the long-form items, validity of the short-form may in part be inferred for validity of the long form. Evidence for the validity of the MSQ long-form is mainly driven from its performance according to theoretical expectation. This form of validity is named 'construct validity'. From the research results, there was good evidence of construct validity for most scales of the MSQ. On the other hand, evidence suggested that the MSQ scales of Compensation, Independent, and Social Services were not performing according to theoretical expectation and therefore should be used with caution until further evidence of validity for these three scales is available (Weiss et al., 1967).

Finally, the OC dimension possesses the validity and reliability to suggest a high degree of confidence in measuring the employees' OC level. For instance, the validity and reliability of the OCQ have been tested by Allen and Meyer, (1996) with the measures of the coefficient alpha for sample for ACS, CCS, and NCS to be .85, .79, and .73 respectively. The OCQ has also been validated and found reliable for use in the public sector, non-profit organization, and profit making sector (Goulet & Frank, 2002).

### **3.6.1 Pilot Testing and Instrument Revision**

Before the research survey form was distributed to the target respondents, first it was analyzed by a panel of expert around (3-5) people or professors in the field of study and a pilot test was accomplished. The principle of performing a pilot test is to refine the survey questions, reduce the risk that the full study will be fatally flawed, and the appropriateness and the simplicity of the items in the survey. 20 employees from two non-listed private companies were selected to answer the survey form and the time check was carried out by the researcher. Consequently, any corrections were made based on the feedback provided by these individuals.

### **3.7 Descriptive Statistics**

The main objective of this study is to look at the indirect effects of the mediators (JS, and OC) between TLBs and OCB. The next objective of this study is to examine the relationship between TLBs and the OCB. Besides meeting these objectives, the study is also to look into some demography characteristics. This includes; gender, age, education background, working experience, industrial, and others.

#### **3.7.1 Validity and Reliability Analysis**

A self-administrated questionnaire will be used in this study to measure each concept or variables. Therefore, the survey form has to be validated and later

test the reliability. Reliability of this proposed study will be tested by using Cronbach's Alpha Reliability Coefficient. By the rules of thumb, Alpha value larger than 0.8 is good, over 0.7 is acceptable, less than 0.6 is questionable, less than 0.5 is poor and is unacceptable (as cited in Lyytinen, 2000). The purpose to run the reliability test is to measure if there is a consistent measurement across time and across the various items in the instrument (Sekaran, 2003).

### **3.8 Structural Equation Modeling (SEM)**

Structural Equation Modeling (SEM) is chosen to be used in this study to analyze the questionnaire and to test certain hypotheses in the proposed study. SEM is able to analyze the relationships among multiple variables. This included observed and unobserved variables and/or independent and dependent variables. In SEM, a series of equations is used to examine the structure of interrelationships (Hair et al., 2006). It can be divided into three major steps; Measurement model, Structure model, and model fit. Measurement model is a stage done by Confirmatory Factor Analysis (CFA) model in which there is the unmeasured covariance between each possible pair of latent variables (Garson, 2008). Characteristics of SEM are as follow;

- (a) Multiple and interrelated dependence relationships,
- (b) Represent unobserved concepts in the relationships and correct for measurement error in the estimation, and
- (c) Defining a model to explain the whole set relationships.

Next structure model is a set or more dependence relationships linking the hypothesized model's constructs. It is most useful in representing the interrelationships between variables and constructs.

### **3.8.1 Evaluating the Model Fit Indexes**

The validity of the quantification model was evaluated by sundry goodness-of-fit indexes categorically, this study examine the absolute, parsimony, and incremental fit indexes.

#### **3.8.1.1 Absolute Fit Index**

An absolute measure of fit postulates the ultimate model fit is equipollent to zero (Hair et al., 2006). Especially, the absolute fit indices sanction the researchers to evaluate how well the research amassed samples correlated with the proposed research model. It comprises the root mean square residual (RMSR), goodness-of-fit index (GFI) and chi-square ( $\chi^2$ ).

In the past and current SEM analysis, most of the researchers have highly fixated on evaluating the absolute fit indices, by which RMSR provides the quantifications of the average residual between the estimated and observed variance and covariance. The index must range between 0 to 1 and have a value

less the .05 (Hoyle, 1995). Goodness-of-fit index (GFI) summarizes the discrepancy between total covariance and explained covariance (Hoyle, 1995). The range of the GFI value should be between 0 to 1; value at least or more than .95 denote a vigorous of goodness of fit (Hoyle, 1995). Chi-square ( $\chi^2$ ) betokens the differences between the estimated and observed covariance matrices (Chin, 1998). The  $\chi^2$  statistic is presented along with the probability level that designates whether the statistics are statistically significant. Therefore, a researcher is rather preferred to obtain a more minute value or proximate to zero  $\chi^2$  indexes which are non-significant  $\chi^2$  with an associated degree of freedom (*df*).

### **3.8.1.2 Parsimonious Fit Index**

Parsimonious measure of fit, decides which theoretical model is best among a set of alternative models (Hair et al., 2006). Specifically, two of the most frequently use measures are the parsimonious goodness-of-fit index (PGFI) and the parsimonious normed fit index ((PNFI). PGFI adjusts the goodness-of-fit index (GFI) by multiplying it by the parsimony ratio, meanwhile, the PNFI adjusts the normed fix index (NFI) utilizing the parsimony ratio as well (Hoyle, 1995). Both of the values are range between 0 to 1, with a value more preponderant than .90 denoting a more vigorous parsimonious fit (Hoyle, 1995).

### **3.8.1.3 Incremental Fit Indices**

The incremental fit index evaluates how the research model fits some alternative models (Hair et al., 2006). It assesses various alternative models to determine if the proposed model is a more preponderant fit to the data (Hair et al., 2006). Incremental fit indices include the comparative fit index (CFI), incremental fit index (IFI), Tucker-Lewis index (TLI), and normal fit index (NFI).

Comparative fit index (CFI) is cognate to the non-centrality measure (Hoyle, 1995). The CFI values are from 0 to 1; with a value more than .90 designating that there is a vigorous fit (Hoyle, 1995). Both TLI and IFI offered a statistical comparison between a baseline model (null) and a particular theoretical measurement model (Hair et al., 2006). In addition, the higher the value of TLI and IFI, the stronger the goodness of fit of the model will be. NFI assesses the percentage improvement between a particular theoretical measured model and the baseline model. The value is range between 0 to 1, value above .90 indicate a strong goodness of fit (Hoyle, 1995).

### **3.8.1.4 Goodness-o-Fit Indices in This Study**

Since after so many decades, there is no single literature about this topic which illustrated the perfect or best fit indices; this study will follow the recommendations from Hair et al. (2006). The authors suggested that several fit

indices should be assessed and applied. Especially a model goodness-of-fit should include; (1) the chi-square value and its subsequent degree of freedom; (2) one of the incremental fit index measure ((TLI or CFI); (3) one absolute index measure (RMSEA or GFI); (4) one badness-of-fit index measure (RMSEA or RMSR); and (5) one goodness-of-fit index measure (TLI, CFI, or GFI). Since this research is using SAS, the fit indices to assess the proposed model's fit comprise RMSEA, CFI, IFI, NNFI, and  $\chi^2$ . If the fit indices do not signify a strong fit, the researcher will adjust the measurement model accordingly. Table 3.5 illustrates the cutoff values for the selected fit indices.

**Table 3.5: Fit Indices for the Cut off Values**

Fit Index	Cutoff Values
Root Mean Square Error of Approximation (RMSEA)	< .10 is considered a good fit
Bentler-Bonett Non-Normed Fit Index (NNFI)	< .05 is considered a good fit
Comparative Fit Index (CFI)	> .90 is considered a good fit
Bollen Fit Index (IFI)	> .90 is considered a good fit
Chi-Square ( $\chi^2$ )	Low $\chi^2$ value with non-significant <i>p</i> value

### 3.8.2 Testing the Measurement Model

First, an investigation of the construct validity will be carried out. These include; nomological, discriminant, and convergent validity. Nomological validity determines, based on prior research or theory, whether the scale demonstrates that a relationship exists. Specifically, nomological validity can be determined by showing that the variables are linked to other variables not integrated with the proposed research model, but are related theoretically (Hair et al., 2006). In

addition, nomological validity can be determined through the construct correlation matrix to determine the degree to which the constructs are anticipated to be correlated to each other (Hair et al., 2006).

Next, discriminant validity determines the degree to which a construct is accurately distinct from another construct. Discriminant validity can be determined by studying the covariance of the inter construct (Hair et al., 2006). Specifically, it is attained when all of the variances extracted estimates are larger than the squared correlation. Thus, high discriminant validity indicates that a construct is distinctive and occupies some phenomena that are not possessed by other constructs.

Finally, convergent validity determines the extent to which two measures of the identical concept are related. The factor loadings, which are evaluated to determine convergent validity, must be at least .5 (preferably .7), while the variance extracted estimates must not exceed .5 (preferably .7) to ensure construct reliability (Hair et al., 2006). If any of the items has a high cross-loading, a small commonality, or no significant loadings, it will be removed and a re-determined model will be created.

### **3.8.3 Testing the Structural Model**

According to Anderson and Gerbing (1988), there are two steps necessary for testing a structural model. First step entails testing the construct validity and fit of the proposed model while the second step entailed testing the structural model. When a suitable model is attained, the evaluation of the validity of the structural model can be assessed. A path diagram that symbolizes the structural relationships among the variables will be constructed.

### **3.9 Multiple Mediators Analysis**

Mediation analysis explains how the independent variable(s) affects the dependent variable(s). each mediation analysis that is being performed will include three relationships: (a) the effects of the independent variable(s) on the mediator(s), (b) the effects of mediator(s) on the dependent variable(s), and (ab) the indirect effects of the independent variable(s) on the dependent variable(s) through the mediator(s) (Hayes & Preacher, 2012; Preacher & Hayes, 2004, 2008). Path (c') represents the direct effects of the independent variable(s) on the dependent variable(s) when the mediators exist in the model and path (c) represent the total effect of the independent variable(s) on the dependent variable(s) which is the sum of the direct and indirect effects, which is  $c = c' + ab$  (Preacher & Hayes, 2008).

However, if there is more than one mediator present in the model or complex mediator model, it is assumed that  $a_k$  relationship link to the independent (X) to the different mediators ( $M_j$ ) and ( $b_k$ ) relationship link ( $M_j$ ) to the dependent variable (Y) (Hayes, 2012, 2013). Typically, a complex model should have at least two or more mediators and similarly to the simple mediation, the total effect (c) of the independent variable(s) on the dependent variable(s) would be the sum of direct ( $c'$ ) and the indirect relationships ( $a_k b_k$ ). For instance, it will be  $c = c' + a_1 b_1 + a_2 b_2$  in the case of two mediators.

It is important to analyze a multiple mediators in a single context rather than each specific mediator from the specific indirect effect as it provides a different results unless, all the mediator(s) are not correlated with each other (Preacher & Hayes, 2008). The advantages of specifying and testing a single multiple mediation model in lieu of separate simple mediation models are: (1) testing the total indirect effect of X analogous to conduct a regression analysis with several predictors with the aim of testing the total effect, (2) to determine to what extent a specific mediator mediates the relationship in between  $X \rightarrow Y$  effect, with take into consideration of others mediators, (3) the increase of likelihood of parameter bias due to omitted variable is reduced, and (4) to determine the magnitudes of the specific indirect effects associated with all mediators.

### **3.10 Analysis Tools**

The main statistical package to analyze the collected data is Statistical Analysis System (SAS). It can be divided into the procedure steps to conduct the direct relationship (Hypothesis 1 to 5 and the macro language to analyze the indirect relationship (Hypothesis 6 to 10).

#### **3.10.1 Statistical Analysis System (SAS)**

Statistical Analysis System (SAS) is a software product developed by SAS Institute Inc. in the 1970s. It comprises a library of syntax command or procedures to be called by the researchers and/ or programmers by specifying their needs. It enables the researchers and/ or programmers to perform data entering, retrieve information, data management, statistical analysis until a report writing and graphics and etc. (Delwiche & Slaughter, 2012). SAS Base 9.3 to be used in this research in carrying out all the steps. This includes: data steps, procedure steps, and macro language. The main procedures will be employed in this research to test the hypotheses 1 to 5 is PROC CALIS (SAS, 2011). Despite, the research has a need to conduct more SAS/STAT statistical procedures such as: PROC FREQ, PROC FACTOR, PROC CORR and others for data preparation purpose.

As PROC CALIS (METHOD = FIML) is applied to analyze the SEM to estimate the model parameter. FIML stands for full information maximum likelihood and sometimes it is also called direct maximum likelihood method. It takes into consideration the complete and incomplete cases in an integrated manner (Yung & Zhang, 2011).it estimates the maximum of the sum of the log-likelihood function for individual observation for both the complete and incomplete cases.

The mediation hypotheses were tested using the steps outlined (Preacher & Hayes, 2008) in the technique for computing mediation. A macro, called PROCESS ver. 2.04, was downloaded from Hayes' professor website (Hayes (2013). Retrieved from <http://afhayes.com/introduction-to-mediation-moderation-and-conditional-process-analysis.html>) and the syntax was pasted into SAS BASE to test the hypotheses. The macro allows the simultaneous testing of multiple mediators and moderators with multiple independent and dependent variables by an option to use a bootstrap method. In addition, it also allows testing for a direct effect between the independent and dependent variables, as well as for an indirect effect between the independent and dependent variables with taking consideration of the intervening variable and also measures the different parameter can be explained by each intervening variable separately in a model.

Bootstrapping is a statistical technique that test for indirect relationships among the variables by resampling the data so that the sample in the study is more

representative of the population (Preacher & Hayes, 2008). This study utilized 10,000 bootstrap samples with a confidence interval (*CI*) of 95% which gives more representative results to the studied population. This method is superior compared with other methods because of its flexibility in incorporating multiple mediators and its ability to infer power calculations based on a small sample size and regardless of the shape of the distribution of the sample (Hayes, 2013).

The advantages of investigating a multiple intervening variable simultaneously in a single integrated model are:

- (1) Most of the effects and phenomena which scientifically study probably operates through a series of mechanism at once.
- (2) A direct effect could be interpreted as an estimate of the influence of one or more un-modeled mechanism which link X to Y other than M already included in the model.
- (3) A proposed mediator could be related to a dependent variable not because it causes the outcome, but other mediator is having casual influence on the outcome.
- (4) The inclusion of more than one mediator between the antecedent and a consequent allows one to pit competing theories of mechanism against each other.

### 3.11 Chapter Summary

This quantitative study was a non-experimental with a cross sectional data collection. A probability sampling was chosen to select the respondents from public listed companies in Malaysia. Each employee is given a set of the survey form to rate their leadership behaviors as an independent variable by completing the MLQ (5X-short form), their satisfaction level with their current job which measured by MSQ and their own commitment level towards their organization measured by OCQ. Both of these attitudes are the mediators of the current study. Last, the survey form also need the respondents to rate their OCB as the dependent variable for the study. The null hypothesis stated there was no statistical significant relationship among the variables; meanwhile, the alternative hypothesis stated there was a statistically significant relationship among the variables. The alternative hypothesis is no direction or two-tailed, meaning that the direction of the relationship was no known at the time this study was designed.

As the level of statistical significant selected for this study was  $\alpha = .05$ , there is a possible in rejecting the null hypothesis. All the direct relationship hypotheses will be tested by SEM and for those non-direct hypotheses will be tested by using the PROCESS.

## **CHAPTER 4**

### **DATA ANALYSIS**

This dissertation examines how TLBs directly affect the OCB. It also examines how the TLBs indirectly influences the employees in practices OCB through employees' behaviors/ attitudes (i.e. JS, and OC) in the public listed companies in Malaysia. Consistency with the literature of this study, the literature review was presented in chapter 2. The research questions, hypotheses, description of the survey, instrument utilized, identification of the sample, and method of data collection, as well as the data analysis methods were discussed in chapter 3. This chapter presents the various steps in pre-analysis of the data and the final data analysis of results of this study. It begins with missing data analysis, outliers and normality analysis and then, with the provision of a brief description of the demographic data of the respondents. Second, it presents a confirmatory factor analysis (CFA) for all the variables. Next, the measurement model and structural model will be presented. Later, follow by the analysis of the mediating effects on the relationship in between independent variables and the dependent variable. The following section presents a discussion on the research hypotheses and the findings of this research study.

#### **4.1 Missing Data, Outliers, and Normality Analysis**

Data collection was conducted by direct mail questionnaires to all the public listed companies in Malaysia within a period of five months. A total of 807 companies participated in the survey, from which 89 responses were returned and only 83 were analyzable, giving a response rate of 10.3%. The invalid responses are those with some random missing variables, answers or the same response answers for the whole section in a particular questionnaire. Proximity of ten sets of questionnaires was sent to each company employee whereby 682 survey forms were received.

In the process of data keyed-in, a total of 60 sets of questionnaires was founded to be unusable due to various data missing from each section of the questionnaire or a series of questions had not been answered by the respondent. As a result, these questionnaires had been filtered out of this research analysis process with a final total of 620 sets of completed survey forms.

Next, outliers can be defined as “observation with the combination of characteristics identifiable as distinctly different from the other observations”(Hair et al., 2006, p. 73). The current study uses the Mahalanobis Distance technique to evaluate the outliers. Based on the sample size of 620, if the Mahalanobis Distance, if the value Mahalanobis distance value is greater than 4, it is considered that the case is an outlier case. After considering the statistic, the final sample size for this study is reduced to 619 respondents.

In the process of conducting SEM, one of the major assumptions is that the data must be free from excess kurtosis and normally distributed (Herzog & Boomsma, 2009). This applies to either univariate or multi-variate data. Both types of the data have to be normally distributed. This is done by examining the kurtosis and skewness of the data not to exceed  $\pm 2.0$  (Kunnan, 1998). A detail of all the study variables kurtosis and skew values is presented in Table 4.1.

**Table 4.1: Kurtosis and Skewness Index**

Variables	Kurtosis	Skewness
Transformational Leadership		
Idealized Attributes	-0.0315	-0.2305
Idealized Behaviors	-0.2612	-0.3383
Inspirational Motivation	-0.5124	-0.2239
Intellectual Stimulation	0.0486	-0.4477
Individualized Considerations	-0.4178	-0.1726
Job Satisfaction	0.4616	-0.3856
Organizational Commitment		
Affective Commitment	-0.3193	-0.6935
Organizational Citizenship Behavior	0.1070	-0.5821

All the variables kurtosis and skewness indexes came within the acceptable range of  $\pm 2.0$ . Therefore, the kurtosis and skewness value for each individual variable gave an indication of being normally distributed.

## 4.2 Descriptive Statistic

The details of the survey demographic statistics is present in Table 4.2;

**Table 4.2: Respondents Demographic Statistics**

Description	Frequency	Percentage
Gender		
Female	329	53.20
Male	290	46.80
Age		
Below 20	2	0.30
20 – 29	274	44.30
30 – 39	223	34.40
40 – 49	85	13.70
50 – 59	22	3.60
Race		
Chinese	339	54.80
Malay	218	35.20
Indian	47	7.60
Others	14	2.30
Marital Status		
Single	306	49.40
Married	294	47.50
Others	19	3.10
Monthly Pay		
Less than MYR1,500	11	1.80
MYR1,500 – MYR3,000	232	37.50
MYR3,001 – MYR5,000	168	27.10
MYR5,001 – MYR8,000	70	11.30
MYR8,001 – MYR10,000	39	6.30
MYR10,001 – MYR15,000	11	1.80
MYR15,001 and Above	7	1.10
Education Level		
Secondary	28	4.50
Diploma	82	13.20
Undergraduate	432	69.80
Master	62	10.00
Doctorate	4	0.60
Average Organizational Tenure (Years)	6.42 (s.d. = 6.37)	
Average Job Tenure (Years)	6.19 (s.d. = 5.58)	

The majority of the respondents comes from the female group which is 53.20% (n = 329) and the remaining of the 46.80% (n = 290). In the age group, there is a small number of 0.30% (n = 2) of teenager employees, a majority respondents

of from the age 20 – 29 which is young adults at 44.3% (n = 274) than followed by the adult age group 30 – 39 reported at 34.40% (n = 223). Later followed by 40 – 49 with a 13.70% (n = 85) and lastly, a senior group of age 50 – 59 reported at 3.60% (n = 22). Unfortunately, there are 23 missing cases for this variable. For the race group, Chinese stands the highest percentage which is 54.80% (n = 339), followed by Malay and Indian which reported 35.20% (n = 218) and 7.60% (n = 47) each in Table 4.1 and the remaining of 2.30% (n = 14) was from other races.

The marital status was covered by most of those who stay single and married group which reported at 49.40 % and 47.50% with (n = 306 and n = 294) each. There is a minority group of people who fold out these categories who sum for 19 people. The majority of the sample 82.20% reported that they are earning between MYR1, 501 and MYR10, 000 for their monthly gross income. There are 11 employees who are earning less than MYR1, 500 per month. It is also reported that less than 18 participated employees earning an income of more than MYR10, 000 monthly.

More than 10 percent (13.20 %) of the respondents obtained at least a diploma qualification in the education. And more than half (69.80%) of them had completed their undergraduate study; with slightly more than 10 percent (16.60%) of those holding advanced degree (Master's or Ph.D). Overall, the

participants have been working in the same company for 6.42 years with an s.d = 6.37 and those people had stayed in the same job with a mean of 6.19 years.

### **4.3 Validity Analysis**

At this point, the factor analysis (FA) or better known as principal component analysis (PCA) has focused on the convergent validity of the constructs in this research. However, a little attention has been given to the discriminant validity. This section will continue with the discriminant validity of the whole set of construct by conducting an overall confirmatory factor analysis, and examine the factor inter-correlations, the complete construct before factor rotation is shown in Figure 4.1.

All the construct items were subjected to a principal component analysis using ones as prior community estimates. The principal axis method was used to extract the components, and this was followed by a varimax rotation. Questionnaire items and corresponding factor loadings are presented in Table 4.3.

Questionnaire items and each item loadings are presented in Table 4.3a to 4.3d. In interpreting the rotated factor pattern, it is suggested by the theory that, the load on the given component must be greater than .40 for one of the components

and less than .40 for the rest of the components. However, it is found that, some items failed to meet the requirement. These items will be removed from the instrument before proceeding with the measurement model.

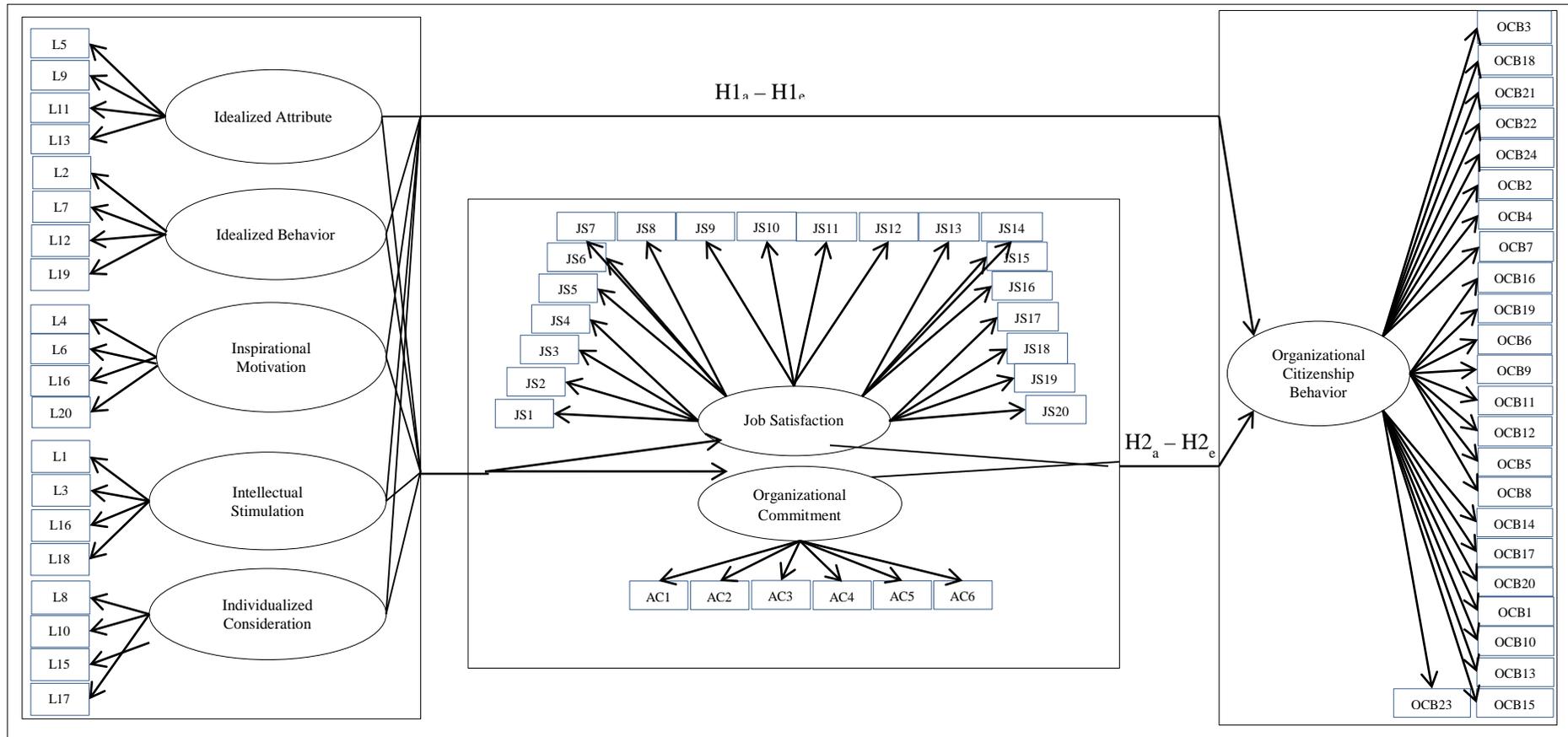


Figure 4.1: Initial Model

**Table 4.3a: Confirmatory Factor Analysis for the Instrument - Transformational Leadership Scale**

<b>Item No.</b>	<b>Item</b>	<b>Idealized Attributes</b>	<b>Idealized Behaviors</b>	<b>Inspirational Motivation</b>	<b>Intellectual Stimulation</b>	<b>Individualized Considerations</b>
5	Instils pride in others for being associated with him/ her.	0.53				
9	Goes beyond self-interest for the good of the group.	0.56				
11	Acts in ways that build my respect.	0.54				
13	Displays a sense of power and confidence.	0.58				
2	Talks about his/ her most important values and beliefs.		0.53			
7	Specify the importance of having a strong sense of purpose.		0.51			
12	Considers the moral and ethical consequences of decisions.		0.54			
19	Emphasizes the importance of having a collective sense of mission.		0.62			
4	Talks optimistically about the future.			0.54		
6	Talks enthusiastically about what needs to be accomplished.			0.48		
14	Articulates a compelling vision of the future.			0.61		
20	Expresses confidence that goals will be achieved.			0.66		
1	Reexamines critical assumptions to question whether they are appropriate.				0.50	
3	Seeks different perspectives when solving problems.				0.51	
16	Gets me look at problems from many different angles.				0.58	
18	Suggests new ways of looking at how to complete assignments.				0.57	
8	Spends time teaching and coaching.					0.49
10	Treats me as an individual rather than just as a member of a group.					0.46
15	Considers me as having different needs, abilities, and aspirations from others.					0.59
17	Helps me to develop my strengths.					0.60

**Table 4.3b: Confirmatory Factor Analysis for the Instrument – Job Satisfaction Scale**

Item No.	Item	Job Satisfaction
1	Being able to keep busy all the time.	0.54
2	The chance to work alone on the job.	0.48
3	The chance to do different things from time to time.	0.50
4	The chance to be ‘somebody’ in the community.	0.47
5	The way my boss handles his/her workers.	0.42
6	The competence of my supervisor in making decisions.	0.32
7	Being able to do things that don’t go against my consciences.	0.38
8	The way my job provides for steady employment.	0.49
9	The chance to do things for other people.	0.39
10	The chance to tell people what to do.	0.50
11	The chance to do something that makes use of my abilities.	0.43
12	The way company’s policies are put into practice.	0.38
13	My pay and the amount of work to do.	0.48
14	The chances for advancement on this job.	0.46
15	The freedom to use my own judgment.	0.53
16	The chance to try my own methods of doing the job.	0.40
17	The working conditions.	0.35
18	The way my co-workers get along with each other.	0.53
19	The praise I get for doing a good job.	0.48
20	The feeling of accomplishment I get from the job.	0.61

**Table 4.3c: Confirmatory Factor Analysis for the Instrument – Affective Commitment Scale**

<b>Item No.</b>	<b>Item</b>	<b>Affective Commitment</b>
1	I would be very happy to spend the rest of my career in this organization.	0.37
2	I really feel as if this organization's problems are my own.	0.32
3	I do not feel a strong sense of "belonging" to my organization.	0.55
4	I do not feel "emotionally attached" to this organization.	0.62
5	I do not feel like "part of the family" at my organization.	0.53
6	This organization has a great deal of personal meaning for me.	0.41

**Table 4.3d: Confirmatory Factor Analysis for the Instrument – Organizational Citizenship Behavior Scale**

Item No.	Item	Organizational Citizenship Behavior
3	I believe in giving an honest day's work for an honest day's pay.	0.43
18	My attendance at work is above the norm.	0.17
21	I do not take extra breaks.	0.43
22	I obey company rules and regulations even when no one is watching.	0.51
24	I am one of the most conscientious (taking care to do things carefully and correctly) employees.	0.42
2	I am the classic "squeaky wheel" that always needs greasing. (I am the one who complain the most to get attention)	0.69
4	I consume a lot of time complaining about trivial matters.	0.70
7	I tend to make "mountains out of molehills" (to exaggerate an unimportant matter out of proportion).	0.57
16	I always focus on what's wrong, rather than the positive side.	0.72
19	I always find fault with what the organization is doing.	0.43
6	I keep abreast of changes in the organization.	0.39
9	I attend meetings that are not mandatory, but are considered important.	0.41
11	I attend functions that are not required, but help the company image.	0.57
12	I read and keep up with organization announcements, memos, and so on.	0.27
5	I try to avoid creating problems for co-workers.	0.33
8	I consider the impact of my actions on my co-workers.	0.29
14	I do not abuse the rights of others.	0.26
17	I take steps to try to prevent problems with other workers.	0.67
20	I am mindful of how my behavior affects other people's jobs.	0.28
1	I help others who have heavy workloads.	0.43
10	I am always ready to lend a helping hand to those around me.	0.37
13	I help others who have been absent.	0.29
15	I willingly help others who have work related problems.	0.39
23	I help orient new people even though it is not required.	0.58

Note: TLI = 0.8052

Chi-Square with 1883 degree of freedom = 3897.7293 ( $p < .0001$ ).

From Table 4.3a, it is shown that, all the items were loaded perfectly to its component and most of the item's loading indices were more than .50. Next, there were five items (from the JS scale from Table 4.3b) were found to have a loading less than .40 (*italic*). The five items will be removed when conducting the initial measurement model later. It goes the same for the first 2 items in Table 4.3c, whereby only the remaining four items with their loading higher than .40 will be taken into consideration as items to represent the construct. Lastly, there are 10 items presented in Table 4.3d having loadings lower than .40. However, even though in stage one a confirmatory factor analysis needs to be done, the theoretical model was able to be modified so that it can more represent the theoretical model of interest.

#### **4.4 Measurement Model**

The data were analyzed using the SAS System's CORR and CALIS procedures (SAS, 2011), and the model tested were covariance structure models with multiple indicators for each latent construct. In the step-two of (Anderson & Gerbing, 1988), the measurement model was modified so that it came to represent the theoretical model of interest. The means, standard deviations, and inter-correlations for this study's 70 manifest variables are presented (Appendix C).

In path analysis with latent variable, (a) measurement model describes the nature of the relationship among them) a number of latent variables, or factors, and (b) the manifest indicator variable that measure those latent variables. The model investigated in this study consist of eight latent variables or construct with each latent variables measured by at least four observe variables. Namely, the latent variables are idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, individualized considerations, JS, AC, and UCB.

The initial measurement model. In this study, the researcher follows Bentler (1989) convention of identifying latent variables with the letter “F” (for Factor), and labeling manifest variables with the letter “V” (for variable). Figure 4.1 uses these conventions in identifying the eight latent construct investigated in the study, as well as the indicators that measure these constructs. The figure shows that the OCB construct (F8) is measured by the manifest variables V47 through V70, the JS construct (F6) is measured by manifest variables V21 through V40, and so forth.

The measurement model assessment in the first stages in this analysis was not identical to the model in Figure 4.1. It is because in that figure posits certain unidirectional causal relationships among the latent constructs. On the other hand, it posits no unidirectional path between latent variables. Instead, in the measurement model, a covariance is estimated to connect each latent variable with every other latent variable which shown in ‘Appendix C’. In the figure, it

is shown with an arrow with two-headed connecting between the two latent variables. In other words, a measurement model more or less can play a role as a confirmatory factor analysis model in which each latent construct is allowed covarying with every other latent construct.

As it uses the maximum likelihood method in performing the estimation, and the chi-square value for the model was statistically significant,  $\chi^2$  (2318, N = 619) = 6547.767,  $p < .0001$ . Technically, when the proper assumptions are met, the chi-square value statistic value may be used to test the null hypothesis that the model fits the data. In reality, however, the statistic is very sensitive to the sample size and departure from multivariate normality, and will very often result in rejection of a well-fitting model. For this reason, it has been recommended that the model chi-square statistic be used as a goodness-of-fit index, it is preferable a chi-square value closer to zero the better it is (Hatcher, 1994).

After a number of testings and evaluating the model, it indicated that there was, in fact, a problem with the model's fit. The pattern of large normalized residuals, parameter significance tests, and Lagrange multiplier tests shown that there were some items were affecting the construct and the whole model's fit. These include those items which causally affected by both the alternative value construct (e.g. V64, v46, v51, and others), as well as the construct that it was expected to be affected by those observe variable(s). Meanwhile, there are also some variables which causally affected other constructs, perhaps they are not belong to that

construct item(s) (e.g. V49, V51, V64, and so others). Due to the drop of these items, the measurement model was re-estimated.

The revised measurement model. Goodness-of-fit for the re-specified measurement model ( $M_m$ ) are presented in Table 4.4. It shows that the revised measurement model displayed values greater than .9 on the non-normed-fit index (NNFI) and the comparative-fit-index (CFI), indicative of an acceptable fit (Bentler & Bonett, 1980). Therefore, model  $M_m$  was tentatively accepted as the study's 'final' measurement model, and follow with a number of tests were conducted to assess its reliability and validity.

**Table 4.4: Goodness-of-Fit and Parsimony Indices for the Study (Standard Model)**

Model	Combined Model							Structural Model		
	Chi-square	df	NFI	NNFI	CFI	PR	PNFI	RNFI	RPR	RPFI
M <sub>n</sub> Null Model	6547.767	2318	.599	--	--	--	--	--	--	--
M <sub>u</sub> Uncorrelated Factors	3056.252	405	.487	.484	.520	.175	.359	0.000	1.000	0.000
M <sub>t</sub> Theoretical Model	3994.872	1297	.671	.734	.749	3.202	4.773	-.701	32.857	-23.023
M <sub>r1</sub> Revised Model 1	2084.855	832	.788	.848	.860	.641	.814	.538	16.250	8.748
M <sub>r2</sub> Revised Model 2	1797.406	751	.803	.862	.874	.903	1.124	.668	13.357	8.918
M <sub>r3</sub> Revised Model 3	1718.640	712	.806	.863	.875	.948	1.177	.695	11.964	8.316
M <sub>r4</sub> Revised Model 4	1130.590	499	.839	.890	.902	.701	.835	.901	4.357	3.925
M <sub>r5</sub> Revised Model 5	913.547	436	.861	.910	.921	.874	1.015	.974	2.107	2.052
M <sub>r6</sub> Revised Model 6	831.840	406	.866	.915	.926	.931	1.076	.997	1.036	1.033
M <sub>m</sub> Measurement Model	796.715	377	.866	.912	.924	.929	1.072	1.000	0.000	0.000

Note: N = 619. NFI = normed-fit index; NNFI = non-normed-fit index; CFI = comparative-fit index; PR = parsimony ratio; PNFI = parsimonious normed-fit index; RNFI = relative-normed-fit index; RPR = relative parsimonious ratio; RPFI = relative parsimonious-fit index.

**Table 4.5: Properties of the Revised Measurement Model**

Construct and Indicators	Standardized Loading	$t^a$	Reliability	Variance Extracted Estimate
Idealized Attributes			.585 <sup>b</sup>	.310
L5	.560	13.744	.314	
L9	.586	14.414	.343	
L11	.549	13.459	.302	
Idealized Behaviors			.608 <sup>b</sup>	.351
L7	.548	13.719	.300	
L12	.522	13.010	.272	
L19	.677	17.287	.459	
Inspirational Motivation			.625 <sup>b</sup>	.380
L6	.489	12.054	.239	
L14	.602	15.223	.363	
L20	.695	17.858	.483	
Intellectual Stimulation			.653 <sup>b</sup>	.421
L1	.600	15.333	.360	
L16	.628	16.156	.395	
L18	.635	16.353	.403	
Individualized Considerations			.642 <sup>b</sup>	.403
L8	.556	14.153	.309	
L15	.641	16.613	.411	
L17	.637	16.497	.406	
Job Satisfaction			.817 <sup>b</sup>	.599
JS37	.559	14.059	.313	
JS39	.659	17.202	.434	
JS40	.655	17.100	.430	
JS41	.533	13.280	.284	
JS44	.523	12.977	.273	
JS46	.597	15.212	.356	
JS49	.552	13.834	.305	
JS52	.485	11.901	.235	
JS56	.606	15.496	.367	
Affective Commitment			.765 <sup>b</sup>	.634
AC59	.631	15.714	.399	
AC60	.849	22.063	.720	
AC61	.674	16.958	.455	
Organizational Citizenship Behavior			.537 <sup>b</sup>	.248
OCB71	.457	9.884	.209	
OCB83	.599	12.935	.358	
OCB85	.525	11.412	.275	

<sup>a</sup> All  $t$  tests were significant at  $p < .001$ .

<sup>b</sup> Denotes composite reliability.

The standardized factor loadings for the indicator variables are presented in Table 4.5. The SAS System's CALIS procedure provides approximate standardized errors for these coefficients to allow a large sample  $t$  sample tests of the null hypothesis that the coefficients are equal to zero in the population.

The  $t$  values obtained for the coefficients in Table 4.5 are ranging from 9.884 to 22.063. This indicates that all factor loadings are significant ( $p < .001$ ). This finding provides evidence supporting the convergent validity of the indicators (Anderson & Gerbing, 1988).

Table 4.5 also presented the reliabilities of the indicators (the square of the factor loadings), along with the composite reliability for each construct. The purpose of composite reliability is used to measure the internal consistency comparable to coefficient alpha (Fornell & Larcker, 1981). All eight scales demonstrated acceptable levels of composite reliability, with all the coefficients more than .50.

At the first column of Table 4.5 from the right, provides the variance extracted estimate for each scale. It is made to measure of the amount of variance captured by a construct, relative to the variance due to random measurement error (Fornell & Larcker, 1981). Only two of the eight constructs obtained variance extracted estimates in excess of .50, which the level recommended by Fornell and Larcker (1981).

In short, all the reported findings in Table 4.5 support the reliability and validity of the constructs and their indicators. The revised measurement model ( $M_m$ ) was, therefore, retained as the study's final measurement model against which other models would be compared.

## 4.5 Structural Model

The initial theoretical framework. The theoretical tested in this present study is identical to the one presented in the Figure 4.1, with those variables which obtain standardized loading lesser than .400 or the standardized estimates for those items were near to zero were remove from relative construct. The analysis of this model may be described as a path analysis with latent variables.

Goodness-of-fit indices for the model presented in Table 4.5, in the role headed with 'M<sub>t</sub> Theoretical Model.' Value on the NNFI and CFI were near to an acceptable level which is more than .9.

However, a review of the model residual revealed that the distribution of normalized was asymmetrical and that nine of the normalized residuals were relatively large (in excess of 2.0, with none of them excess of 3.0). On top of that, there were some items were casually affecting two constructs and some items were affecting on other than its own factor which cause the model goodness-of-fit indices. Table 4.6 shows that the standardized path coefficient from inspirational motivation (F3) to JS (F6) was only -.020 *ns*.

**Table 4.6: Standardized Path Coefficients**

<b>Dependent Variable / Independent Variable</b>	<b>Theoretical Model</b>	<b>Revised Model 1</b>	<b>Revised Model 2</b>	<b>Revised Model 3</b>	<b>Revised Model 4</b>	<b>Revised Model 5</b>	<b>Revised Model 6</b>
Organizational Citizenship Behavior (F8)							
Affective Commitment (F7)	0.481***	0.378***	-0.145*	0.367***	0.367***	0.420***	0.454***
Job Satisfaction (F6)	0.481***	0.564***	0.478***	0.337***	0.337***	0.327***	0.242**
Individualized Considerations (F5)	-3.157***	-3.477***	-2.469***	-0.238**	-0.238***	-0.325***	-0.347***
Intellectual Stimulation (F4)	2.747***	2.707***	3.493***	1.716***	1.716***	1.361***	1.409***
Inspirational Motivation (F3)	1.081***	1.270***	-0.656***	0.281**	0.281***	0.244**	0.300***
Idealized Behaviors (F2)	1.231***	1.055***	2.497***	-0.820***	-0.820***	-0.929***	-0.978***
Idealized Attributes (F1)	-1.993***	-1.670***	-2.684***	-0.832***	-0.832***	-0.233**	-0.218**
Affective Commitment (F7)							
Individualized Considerations (F5)	1.242***	1.440***	12.380***	0.120*	0.120*	-0.784***	-0.774***
Intellectual Stimulation (F4)	0.904***	0.743***	-7.862***	2.902***	2.902***	2.438***	2.437***
Inspirational Motivation (F3)	-1.935***	-2.060***	2.118***	0.639***	0.639***	0.950***	0.942***
Idealized Behaviors (F2)	-0.206**	-0.268**	31.480***	-0.530***	-0.530***	-1.272***	-1.273***
Idealized Attributes (F1)	0.344***	0.483***	24.616***	-2.802***	-2.802***	-0.954***	-0.954***
Job Satisfaction (F6)							
Individualized Considerations (F5)	-0.877***	-0.715***	2.303***	0.447***	0.447***	0.110*	0.378***
Intellectual Stimulation (F4)	2.030***	1.899***	-0.058	1.276***	1.276***	1.216***	1.096***
Inspirational Motivation (F3)	-0.020	-0.117*	0.665***	0.197**	0.197**	0.380***	0.145*
Idealized Behaviors (F2)	0.621***	0.570***	-7.092***	-0.601***	-0.601***	-0.890***	-0.797***
Idealized Attributes (F1)	-1.093***	-0.977***	4.751***	-0.648***	-0.648***	-0.117*	-0.126*

Note: N = 619

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

The nomological validity of the theoretical model can be evaluated by performing a chi-square difference test in which the theoretical model is compared to the measurement model. A finding of no significant difference in between theoretical model and final measurement model indicates that the theoretical model is yet successful in accounting for the observed relationships between the latent constructs (Anderson & Gerbing, 1988).

Next, the chi-square for the measurement model was subtracted from the chi-square of the theoretical model with the resulting chi-square difference value of  $3056.253 - 796.715 = 2259.538$ . The degree of freedom for the test is equal to the difference between the *df* for the two models, which generate an answer of 28 *df* associated with this chi-square difference test. The critical value in the classical values of the chi-square difference shows 41.337 at  $p = .05$ , 48.278 at  $p = .01$ , and 56.892 at  $p = .001$ . Since the finding observed chi-square difference value is 2259.5377, therefore is clearly significant at  $p < .001$ . This finding shows that the theoretical model was unsuccessful in accounting for the relationship between the latent constructs.

Combined, the results for the initial theoretical model did not provide an acceptable fit to the data. Therefore, a specification re-examine was conducted to arrive at the better-fitting model.

Revised Model 1. When conducting a specification re-examination using the data based on the relatively medium-small sample ( $N = 619$ ), there is a danger that data-driven model modification will capitalize on chance characteristics of the sample data and result in a final model that may not be able to generalize to the population or to other sample (MacCallum, Roznowski, & Necowitz, 1992). This research has begun the re-examination by attempting to identify parameters that could be dropped from the model without significantly hurting or may improve the model fit indices, as it is generally to drop parameters than adding new parameters when modifying models (Bentler & Chou, 1987).

First, before looking at other tests, those items with a standard error which near to zero (e.g. .002) were removed from the analysis, as these may affect the model chi-square and the goodness-of-fit of the model. Then, a Lagrange multiplier test (Bentler, 1989) supported that it was possible to drop some of the variables which casually affecting more than one construct. In this model, variables with standardized loadings lower than .500 were removed from relative constructs to significantly increase the chi-square. Thus, these variables were deleted; resulting in a revised model ( $M_{r1}$ ) was then estimated. The fit indices for this model were shown in Table 4.5. A new overall goodness-of-fit indices for the model were not met. The NNFI and CFI were .848 and .860 each. Table 4.7 shows that the path coefficients in revised model 1 were statistically significant.

By deleting, those variables would be acceptable if only if it did not result in a significant increase in model chi-square. A significant increase would indicate that  $M_{r1}$  provided a fit that was significantly worse than  $M_t$ . therefore, a chi-square difference test was conducted comparing in between  $M_t$  and  $M_{r1}$ , (refer to Table 4.5 for model chi-square values). The chi-square difference for this comparison was equal to  $3994.872 - 2084.855 = 1910.017$  which with  $df = 465$ , was not significant at ( $p < .05$ ).

Having passed the tests,  $M_{r1}$  was next compared to  $M_m$  to determine whether it successfully accounted for the relationships between the latent constructs. The chi-square difference was calculated as  $2084.855 - 796.715 = 1288.14$ , which, with 455  $df$  was statistically significant ( $p < .001$ ). Once again, the model failed to provide an acceptable fit and need to be revised.

Revised Model 2. One of the main criteria in analyzing a path model is the model needs to be first meeting the convergence criterion before looking at the rest of the rest of the summary tables. However, in this model, it failed to meet the data convergence criterion. The Lagrange multiplier tests suggested that V9 which casually affecting on its own construct and another construct need to be removed to improve the model chi-square and model fit indices. On the other hand, items which not suppose affecting other latent variables also have been removed from the path analysis.

A Lagrange multiplier test (Bentler, 1989) supported that it was possible to drop some of the variables which casually affecting more than one construct. In this previous model, it is suggested that V5 and V46 were be removed from relative constructs to significantly increase the chi-square. Thus, these variables were deleted; resulting in a revised model ( $M_{r2}$ ) was then estimated. The fit indices for this model were shown in Table 4.5. Once again overall goodness-of-fit indices for the model were not met. The NNFI and CFI were .862 and .874 each. Table 4.7 shows that the path coefficients between intellectual stimulation and JS was not statistically significant at ( $p < .05$ ) in revised model 2.

By deleting, those variables it would be acceptable if only if it did not result in a significant increase in model chi-square. A significant increase would indicate that  $M_{r2}$  provided a fit that was significantly worse than  $M_{r1}$ , therefore, a chi-square difference test was conducted comparing in between  $M_{r1}$  and  $M_{r2}$ , (refer to Table 4.5 for model chi-square values). The chi-square difference for this comparison was equal to  $2084.855 - 1797.406 = 287.449$ , which, with 81 *df*, was not significant at ( $p < .001$ ).

Having passed this test,  $M_{r2}$  was next compared to  $M_m$  to determine whether it successfully accounted for the relationships between the latent constructs. The chi-square difference was calculated as  $1797.406 - 796.715 = 1000.691$ , which, with 374 *df* was statistically significant ( $p < .001$ ). Once again, the model failed to provide an acceptable fit and it needed to be revised.

Revised Model 3. Once again the convergence criterion was not met by this model. Then, a Lagrange multiplier test (Bentler, 1989) supported that it was possible to drop a list of the variables which casually affected another construct rather its own construct. In this model, V9 was removed, and resulting a revised model ( $M_{r3}$ ) was then estimated. The fit indices for this model were shown in Table 4.5. Once again overall goodness-of-fit indices for the model were not met. The NNFI and CFI were .863 and .875 each. Table 4.7 shows that the path coefficients in revised model 3 were statistically significant.

By deleting, the variable would be acceptable if only if it did not result in a significant increase in model chi-square. A significant increase would indicate that  $M_{r3}$  provided a fit that was significantly worse than  $M_{r2}$ . therefore, a chi-square difference test was conducted comparing in between  $M_{r2}$  and  $M_{r3}$ , (refer to Table 4.5 for model chi-square values). The chi-square difference for this comparison was equal to  $1797.406 - 1718.640 = 78.766$  which with  $df = 39$ , was not significant at ( $p < .05$ ).

Having passed the test,  $M_{r3}$  was next compared to  $M_m$  to determine whether it successfully accounted for the relationships between the latent constructs. The chi-square difference was calculated as  $1718.640 - 796.715 = 921.925$ , which,

with 335 *df* was statistically significant ( $p < .001$ ). Once again, the model failed to provide an acceptable fit and needed to be revised.

Revised Model 4. A Lagrange multiplier test (Bentler, 1989) supported that it was possible to drop some of the variables which casually affecting another construct rather than affecting on its own construct. In the previous model, it is suggested that a list of variables will be removed from relative constructs to significantly increase the chi-square. Thus, these variables were deleted, and resulting a revised model ( $M_{r4}$ ) was then estimated. The fit indices for this model were shown in Table 4.5. One of the goodness-of-fit indices for the model was not met. The NNFI and CFI were .890 and .902 each. Table 4.7 shows that the path coefficients in revised model 4 were statistically significant.

It would be acceptable to delete the variables if it did not result in a significant increase in the model chi-square. A significant increase would indicate that  $M_{r4}$  provided a fit that was significantly worse than  $M_{r3}$ , therefore, a chi-square difference test was conducted comparing in between  $M_{r4}$  and  $M_{r3}$ , (refer to Table 4.5 for model chi-square values). The chi-square difference for this comparison was equal to  $1718.640 - 1130.590 = 588.050$ , which, with 213 *df*, was not significant at ( $p < .001$ ).

Having passed this test,  $M_{r4}$  was next compared to  $M_m$  to determine whether it successfully accounted for the relationships between the latent constructs. The chi-square difference was calculated as  $1130.590 - 796.715 = 333.875$ , which, with 122 *df* was statistically significant ( $p < .001$ ). Once again, the model failed to provide an acceptable fit and needed to be revised.

Revised Model 5. A Lagrange multiplier test (Bentler, 1989) supported that it was possible to drop some of the variables which casually affecting another construct rather than affecting on its own construct. In the previous model, it is suggested that a list of variables will be removed from relative constructs to significantly increase the chi-square. Thus, these variables were deleted, and resulting in a revised model ( $M_{r5}$ ) was then estimated. The fit indices for this model were shown in Table 4.5. Both of the goodness-of-fit indices for the model were met. The NNFI and CFI were .910 and .921 each. Table 4.7 shows that the path coefficients in revised model 5 were statistically significant.

By deleting, those variables would be acceptable if only if it did not result in a significant increase in model chi-square. A significant increase would indicate that  $M_{r5}$  provided a fit that was significantly worse than  $M_{r4}$ , therefore, a chi-square difference test was conducted comparing in between  $M_{r5}$  and  $M_{r4}$ , (refer to Table 4.5 for model chi-square values). The chi-square difference for this comparison was equal to  $1130.590 - 913.547 = 217.043$ , which, with 63 *df*, was not significant at ( $p < .001$ ).

Having passed this test,  $M_{r5}$  was next compared to  $M_m$  to determine whether it successfully accounted for the relationships between the latent constructs. The chi-square difference was calculated as  $913.547 - 796.715 = 116.832$ , which, with 59 *df* was statistically significant ( $p < .001$ ). Once again, the model failed to provide an acceptable fit and needed to be revised.

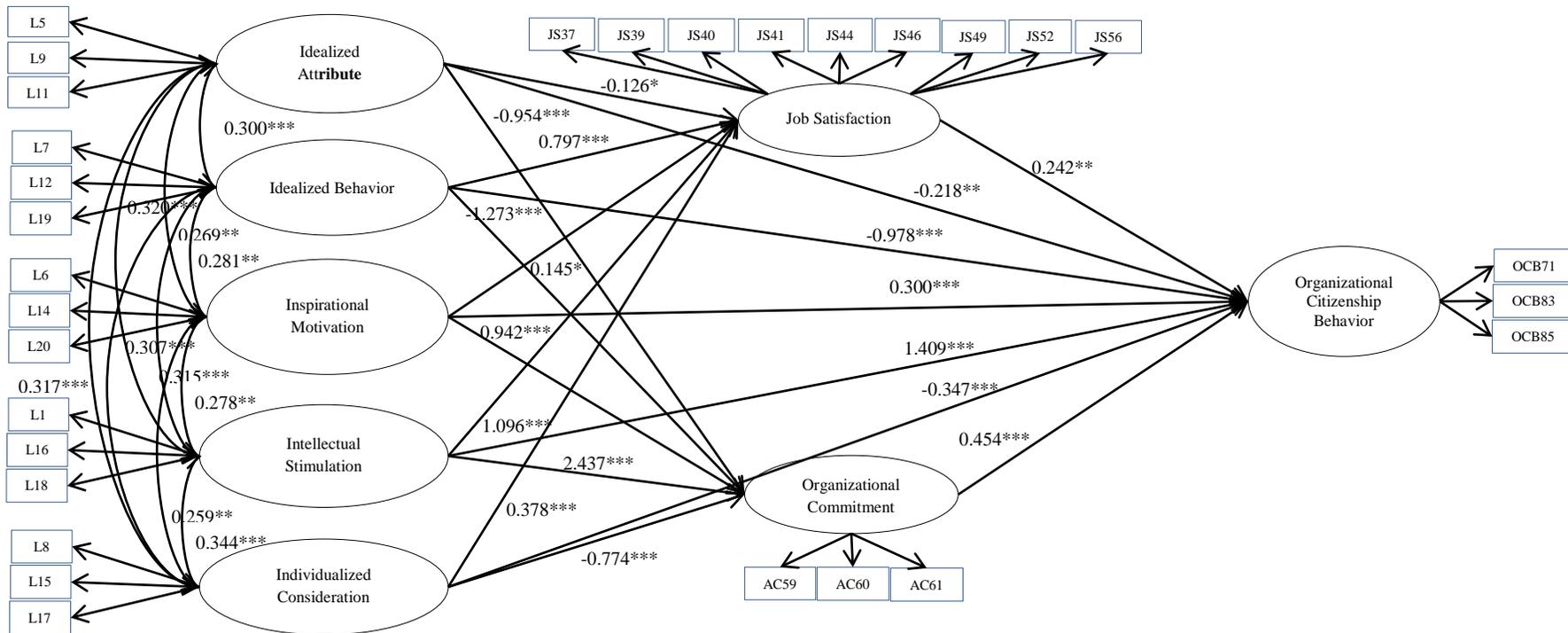
Revised Model 6. After several times of revising the model, the study had reviewed the results on Lagrange multiplier tests (Bentler, 1989) to identify new casual paths that need to be added to the model.

A Lagrange multiplier test estimated that the model chi-square for  $M_{r5}$  could be further reduce by 6.741 if a casual path is added from V35 to intellectual stimulation (F4). However, as discussed earlier, it is inconsistent with the theoretical framework; again the item was dropped from the analysis in the current model. The new  $M_{r6}$  is estimated, the result for the revised model 6 ( $M_{r6}$ ) was then presented.

Fit indices for revised model 6 are presented in Table 4.4. It is stated that the fit indices (i.e., NNFI and CFI) were not only above .9 but were also higher than those displayed revise model indices, this includes the theoretical model. A chi-

square difference test comparing  $M_{r6}$  to  $M_{r5}$  revealed a significant difference value of  $913.547 - 831.840 = 81.797$  ( $df = 30, p < .001$ ). The finding shows that the revised model 6 provided a fit to the data that was significantly better than the fit provided in other previous models, this justified that by dropping those items that does not casually affecting their own construct is one of the proper steps in explaining a better new model.

Table 4.6 and Figure 4.2 presented the standardized path coefficients for revised model 6. It can be seen that all coefficients were significant and in the predicted direction. From the model result, the  $R^2$  values showed that idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, individualized considerations, JS, and affective commitment accounted for 64% of the variance in OCB, while idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, and individualized considerations accounted for 55% of the variance in JS, on the other side, idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, and individualized considerations accounted for only 22% of the variance in affective commitment.



**Note:** The covariance between endogenous variables is representing by the two-headed arrows meanwhile, the path estimates are representing by the single-headed arrows. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

**Figure 4.2: Revised Model 6**

The distribution of normalized residuals for revised model 6 was symmetrical and centered on zero. No normalized residuals were greater than 1.0 in absolute magnitude.

Table 4.4 also showed that the parsimony of the models that were tested. The parsimony ratio (PR) (James, Mulaik, & Brett, 1982) indicates the parsimony of the overall model, with higher value reflecting greater parsimony. The parsimonious normed-fit index (PNFI) (James et al., 1982) is obtain by multiplying the parsimony ratio by the normed-fit index, resulting in a single index that reflects both the parsimony and the fit of the overall model.

This means that the revised model 6 displayed a parsimony ratio of .931 which is the highest among other revised models. On the other hand, the PNFI for the revised model 6 is also exceeding .900 which is reported at .974. In this case, the  $M_{r6}$  has a better consideration than the previous models.

Table 4.5 also provided indices that represent the fit and parsimony in just the structural position of a model; that a part of a model that describes just the relations between the latent variables (the F variables). For instance, the relative normed-fit index or RNFI (Mulaik et al., 1989) reveals the fit achieved in just the structural position of the model, independent of the fit of the measurement model. Similarly, the relative parsimony ratio (RPR) reveals the parsimony of

the structural portion of the model, regardless of the parsimony of the measurement model. Finally, the relative parsimonious fit index (RPFI) is obtained by multiplying the RNFI by the RPR. The RPFI indicates how well the model explains all possible relations among the F variables, from outside the data (Mulaik et al., 1989).

From the Table 4.5, the RNFI shows that revised model 6 demonstrated a fit to the data that was superior to that of the earlier models reported at 1.033. Due to the removed of the additional item; the path analysis is now satisfied. Next the results from the discriminant validity also supported that even though there are still some of the observed variables (V) which casually affecting other factors but the difference chi-square values  $885.599 - 831.840 = 53.759$ , with 26 *df* was significant at ( $p < .05$ ). In other words, the revised model 6 in which the factors were viewed as distinct but correlated construct provided a fit that was significantly better than the fit provided by the uni-dimensional model. In short, this test supports the discriminant validity of F1, F4, and F8.

As a final test, a chi-square difference test was used to compare the fit of  $M_{r6}$  with that of  $M_m$ . This comparison resulted in a difference value of  $831.840 - 796.715 = 35.125$ , which, with 29 *df* was non-significant ( $p > .05$ ). The non-significant chi-square indicated that  $M_{r6}$  provided a fit that was not significantly worse than that provided by a measurement model in which all F variables were free to co-vary. In short, the finding has shown that the casual relationship

described in revise model 6 were successful in accounting for the observed relationships between the latent constructs.

Combining these findings generally provides support for revised model 6 over the other models tested.  $M_{r6}$  was therefore retained as this study's final model and is displayed in Figure 4.2 Standardized path coefficients appear on the casual path.

#### **4.6 The Mediation Effect of Job Satisfaction and Affective Commitment**

A complex mediation analysis was conducted using the PROCESS SAS Macro command to analyze those paths. It is found that both of the mediators are significant in all the relationships. The summary of the results is shown in Table 4.7 below.

**Table 4.7: Model Coefficient for the Mediators**

Antecedents.	Consequent											
	M1 (JS)			M2 (AC)			Y (OCB)					
	Coeff.	SE	<i>p</i>	Coeff.	SE	<i>p</i>	Coeff.	SE	<i>p</i>			
X1 (IA)	a <sub>1</sub>	0.0217	0.0392	0.5801	b <sub>1</sub>	-0.1124	0.0472	0.0174	c' <sub>1</sub>	-0.0471	0.0269	0.0805
X2 (IB)	a <sub>2</sub>	0.1089	0.0421	0.0100	b <sub>2</sub>	0.0521	0.0509	0.3068	c' <sub>2</sub>	-0.0509	0.0289	0.0794
X3 (IM)	a <sub>3</sub>	0.0203	0.0374	0.5878	b <sub>3</sub>	-0.0872	0.0450	0.0528	c' <sub>3</sub>	0.0310	0.0256	0.2262
X4 (IS)	a <sub>4</sub>	0.134	0.0399	0.0008	b <sub>4</sub>	0.0253	0.0484	0.6021	c' <sub>4</sub>	0.0063	0.0275	0.8186
X5 (IC)	a <sub>5</sub>	0.2321	0.0369	<.0001	b <sub>5</sub>	0.1216	0.0457	0.0081	c' <sub>5</sub>	0.0465	0.0261	0.0759
M1 (JS)	--	--	--	--	d <sub>1</sub>	0.6689	0.0485	<.0001	d <sub>21</sub>	0.1827	0.0316	<.0001
M2 (AC)	--	--	--	--	--	--	--	--	d <sub>22</sub>	0.2935	0.023	<.0001
Constant	i <sub>1</sub>	1.9229	0.1021	<0.0001	i <sub>2</sub>	1.4056	0.1542	<.0001	i <sub>3</sub>	2.0601	0.0933	<.0001
			R <sup>2</sup> = 0.3836			R <sup>2</sup> = 0.3634			R <sup>2</sup> = 0.4492			
			F(5,613) = 76.3059, p = <.001			F(6,612) = 58.2217, p = <.0001			F(7,611) = 71.1955, p = <.0001			

From the complex mediation analysis conducted using ordinary least square path analysis; it is found that IA indirectly influenced OCB through its effect on JS and affective commitment. As can be seen in Figure 4.2 and Table 4.7, employees believe that their leader with an IA behavior will increase their satisfaction towards their job ( $a_1 = 0.0217$ ), meanwhile, participants also have a different level of commitment towards their job when there are satisfied with what they are doing ( $d_1 = 0.6689$ ) and participants who are satisfied and better committed to their job will tend to perform beyond their job scope ( $d_{22} = 0.2935$ ). A bias-corrected bootstrap confidence interval for the indirect effect ( $a_1d_1d_{22} = 0.004$ ) based on 10,000 bootstrap samples was entirely above zero (0.004 to 0.529) (Hayes, 2013). There was insufficient evidence that a leader with IA behavior can influence their employees to practice OCB independent of its effect on JS and AC ( $c'_1 = -0.0471$ ,  $p = 0.0805$ ).

By using the ordinary least square path analysis; it is found that IB indirectly influenced OCB through its effect on JS and AC. As can be seen in Figure 4.2 and Table 4.7, employees believe that their leader with an IB, behavior will increase their satisfaction towards their job ( $a_2 = 0.1089$ ), moreover, participants also have a different level of commitment towards their job when there are satisfied with what they are doing ( $d_1 = 0.6689$ ) and participants who satisfied and better commit to their job will tend to perform beyond their job scope ( $d_{22} = 0.2935$ ). A bias-corrected bootstrap confidence interval for the indirect effect ( $a_2d_1d_{22} = 0.021$ ) based on 10,000 bootstrap samples was greater than zero (0.004 to 0.529) (Hayes, 2013). There was insufficient evidence that a leader

with IB behavior can influence their employees to practice OCB independent of its effect on JS and AC ( $c'_2 = -0.0509, p = 0.0794$ ).

Next from the analysis, it is also found that IM indirectly influenced OCB through its effect on JS and AC. As can be seen in Figure 4.2 and Table 4.7, employees believe that their leader with an IM behavior will increase their satisfaction in their job ( $a_3 = 0.0203$ ), on top of that, participants also have a different level of commitment towards their job when there are satisfied with what they are doing ( $d_1 = 0.6689$ ) and participants who satisfied and better commit to their job will tend to perform beyond their job scope ( $d_{22} = 0.2935$ ). A bias-corrected bootstrap confidence interval for the indirect effect after rounded up ( $a_3d_1d_{22} = 0.004$ ) based on 10,000 bootstrap samples was greater than zero (0.004 to 0.529) (Hayes, 2013). There was insufficient evidence that a leader with IM behavior can influence their employees to practice OCB independent of the effect on JS and AC ( $c'_3 = -0.0310, p = 0.2262$ ).

Despite from the other three TLBs, it is found that IS indirectly influenced OCB through its effect on JS and affective commitment. As can be seen in Figure 4.2 and Table 4.7, employees believe that their leader with an IS behavior will increase their satisfaction towards their job ( $a_4 = 0.134$ ), meanwhile, participants also have a higher level of commitment towards their job when there are satisfied with what they are doing ( $d_1 = 0.6689$ ) and participants who are satisfied and better committed to their job will tend to perform beyond their job scope ( $d_{22} =$

0.2935). A bias-corrected bootstrap confidence interval for the indirect effect ( $a_4d_1d_{22} = 0.0263$ ) based on 10,000 bootstrap samples was entirely above zero (0.004 to 0.529) (Hayes, 2013). There was insufficient evidence that a leader with IS behavior can influence their employees to practice OCB independent of the effect on JS and AC ( $c'_4 = -0.0063$ ,  $p = 0.8186$ ).

Finally, from the complex mediation analysis, it is found that IC indirectly influenced OCB through its effect on JS and affective commitment. As can be seen in Figure 4.2 and Table 4.7, employees believe that their leader with an IC behavior will increase their satisfaction towards their job ( $a_5 = 0.2321$ ), besides, it is also one of the factors that has the most significant ( $p = <.0001$ ), meanwhile, participants also have a higher level of commitment towards their jobs when there are satisfied with what they are doing ( $d_1 = 0.6689$ ) and participants who satisfied and better commit to their jobs will tend to perform beyond their job scope ( $d_{22} = 0.2935$ ). A bias-corrected bootstrap confidence interval for the indirect effect ( $a_5d_1d_{22} = 0.0456$ ) based on 10,000 bootstrap samples was entirely above zero (0.004 to 0.529) (Hayes, 2013). There was insufficient evidence that a leader with IC behavior can influence their employees to practice OCB independent of the effect on JS and AC ( $c'_5 = 0.0465$ ,  $p = 0.0759$ ).

#### **4.7 Chapter Summary**

The current research study proposed two research objectives linking up with the ten hypotheses. Specific findings related to the hypotheses and research objectives were presented in this chapter. Briefly, this study validated that TLBs directly and indirectly impact OCB.

Overall, there was 682 companies' employees that took part in this study. In order to run the analysis, a pretest of the data was being carried out and the final total number of usable and validated survey forms came to 619 (after removing the missing cases, outliers, and normality test). Demographics data were gathered from each respondent, such as, gender, race, education level, position, and others. The results showed that it is closely similar to the Malaysian statistics of population distribution for gender, and races. Most of the followers completed their diploma and tertiary degree studies.

As shown in this chapter, inspirational motivation, and intellectual stimulation had a direct positive impact on OCB. On the other hand, it's found that idealized attributes, idealized behavior, and individualized consideration had a direct negative relationship with OCB. The indirect effects of all the TLBs on OCB were significantly mediated by both JS, and OC. All coefficients for the TLBs were within the significant range.

This chapter presented the collated data characteristics and the findings of the study. In the next chapter, the research will continue with the hypothesis testing summary, implications, limitations and future studies, and a dissertation summary.

## **CHAPTER 5**

### **DISCUSSION AND CONCLUSION**

To address critical research gaps regarding the mechanism through which leadership achieves effects (e.g., Bass, 1990b; Lowe, Kroeck, & Sivasubramaniam, 1996), the current study advances transformational leadership theory in detail beyond the direct examination of the direct relationship. The current study integrated the five dimensions of the transformational leadership, employees' attitudes (e.g., JS and AC), and OCB (see Figure 1.1). The present study proposed that a dynamic transformational leadership will have a different impact on OCB with a present of JS and AC of the employees. The introduction of the research, the review of related and relevant literature and theoretical framework, the research methodology, the data analysis and the research findings with hypothesis testing were presented from chapters 1 to 4. In the latter section, the chapter will present a discussion of the finding results, limitations of the research, Contributions of the study, recommendation for the future research, implication of the study, and chapter summary.

## 5.1 Key Findings

In most of the empirical studies related to this field of study does not investigate the intervening variables that comprise the mechanism which link the influence of each TLBs with the OCB. The current study offers a theoretical framework for dealing with this conceptual limitation of research on the relationship between TLBs and OCB. The model in the present study intends to investigate each TLBs, JS, AC, and OCB. Besides that, the study also addressed the theoretical limitations of leadership and practice of OCB by mediating (JS and AC) and the inter-relationship between the mediators.

This study aims to answer two research questions:

The first research question: Is there a significant direct relationship between the transformational leadership behaviors and OCB in PLCs in Malaysian setting?

The second research question: Is there a significant indirect relationship between TLBs and OCB by mediating followers' attitudes (JS, and OC)?

Table 5.1 presents the summary among the research gaps, research objectives, hypothesis statements for the study and its results;

**Table 5.1: Research Gaps, Research Objectives, Hypothesis Statements, and Testing Results**

Research Gap(s)	Research Objective(s)	Hypothesis	Result
To study each specific TLBs which influence the OCB of the followers systematically	To determine whether or not each TLBs have a direct impact on OCB in Malaysia	1a: Idealized attributes is positively related to OCB.	Not Supported
		1b: Idealized behavior is positively related to OCB.	Not Supported
		1c: Inspirational motivation is positively related to OCB.	Supported
		1d: Intellectual stimulation is positively related to OCB.	Supported
		1e: Individualized consideration is positively related to OCB.	Not Supported
To study the mediating factors simultaneously in between TLBs and OCB	To evaluate each TLBs that affect two specific followers' attitudes (JS, and OC), thereby, impacting the practice of OCB in Malaysia	2a: Idealized attributes and OCB is fully mediated by JS and OC.	Supported
		2b: Idealized behavior and OCB is fully mediated by JS and OC.	Supported
		2c: Inspirational motivation and OCB is fully mediated by JS and OC.	Supported
		2d: Intellectual stimulation and OCB is fully mediated by JS and OC.	Supported
		2e: Individualized consideration and OCB is fully mediated by JS and OC.	Supported

### **5.1.1 Direct Effects of Transformational Leadership to Organizational Citizenship Behavior**

In order to answer the first research question, five proposed hypotheses needed to be tested against the collected data. They are:

The first hypothesis: Idealized attributes is positively related to OCB.

The second hypothesis was; Idealized behavior is positively related to OCB.

The third hypothesis to be examined; Inspirational motivation is positively related to OCB.

The fourth hypothesis stated that: Intellectual stimulation is positively related to OCB.

The fifth hypothesis stated that: Individualized consideration is positively related to OCB.

These hypotheses were analyzed using the structural equation modeling.

The first hypothesis (idealized attributes is positively related to OCB) was not supported. There is insufficient evidence collected from the current study to indicate that there is a significant direct negative relationship between idealized attributes influence with the public listed companies in Malaysia and practice of OCB.

The second hypothesis (idealized behavior is positively related to OCB) was also not supported. There is insufficient evidence collected from the current

study to indicate that there is a significant direct negative relationship between idealized behavior influence with the PLCs in Malaysia and practice of OCB.

The third hypothesis was supported. That is: Inspirational motivation is positively related to OCB. Evidence collected from the current study showed that there is a significant direct positive relationship between Inspirational motivations is positively related to OCB.

The fourth hypothesis (Intellectual stimulation is positively related to OCB) was supported. Evidence collected from the current study showed that there is a significant direct positive relationship between Intellectual stimulation is positively related to OCB.

The fifth hypothesis (individualized consideration is positively related to OCB) was not supported. There is insufficient evidence collected from the current study to indicate that there is a significant direct negative relationship between individualized consideration behavior influence with the PLCs in Malaysia and practice of OCB.

From the previous empirical research, the direct effect of transformational leadership on OCB (e.g., Koh et al., 1995; Mackenzie, Podsakoff, & Rich, 2001;

Pillai, Schriesheim, & Williams, 1999; Podsakoff et al., 1996; Podsakoff et al., 1990), the current study found that there is a direct positive relationship between inspirational motivation, and intellectual stimulation on OCB. However, it is found that a direct negative relationship between idealized attributes, idealized behavior, and individualized consideration on OCB.

### **5.1.2 Indirect Effects of TLBs and OCB**

In order to answer second research question, another five hypotheses needed to be tested. They are:

The first stated hypothesis: idealized attributes and OCB is fully mediated by JS and OC in the PLCs in Malaysia.

The second hypothesis stated that the idealized behavior and OCB is fully mediated by JS and OC in the PLCs in Malaysia.

The third hypothesis stated that the inspirational motivation and OCB is fully mediated by JS and OC in the PLCs in Malaysia.

The fourth hypothesis stated that an intellectual stimulation and OCB is fully mediated by JS and OC in the PLCs in Malaysia.

The final hypothesis stated that an individualized consideration and OCB is fully mediated by JS and OC in the PLCs in Malaysia. These hypotheses were tested by PROCESS (Hayes, 2013) macro programme by using SAS.

The first hypothesis (idealized attributes and OCB is fully mediated by JS and OC in the PLCs in Malaysia) was supported. There was sufficient evidence from the current study to determine that idealized attributes and OCB were simultaneously mediated by the tested employees' attitudes.

The second hypothesis (idealized behavior and OCB is fully mediated by JS and OC in the PLCs in Malaysia) was also supported. There was sufficient evidence from the current study to determine that idealized behavior and OCB were simultaneously mediated by the tested employees' attitudes.

The third hypothesis (inspirational motivation and OCB is fully mediated by JS and OC in the PLCs in Malaysia) was supported. There was sufficient evidence from the current study to determine that inspirational motivation and OCB were simultaneously mediated by the tested employees' attitudes.

The fourth hypothesis (intellectual stimulation and OCB is fully mediated by JS and OC in the PLCs in Malaysia) was supported. There was sufficient evidence from the current study to determine that intellectual stimulation and OCB were simultaneously mediated by the tested employees' attitudes.

The fifth hypothesis (individualized consideration and OCB is fully mediated by JS and OC in the PLCs in Malaysia) was supported. There was sufficient

evidence from the current study to determine that individualized consideration and OCB were simultaneously mediated by the tested employees' attitudes.

In general, all the indirect effect hypotheses tested were supported. From the past research, most of the researchers only incorporate a single mediator in their framework or analyze them separately with just two hypotheses. However, due to the inter-correlation between those mediators, this research serves as one of the foundations for the behavioral studies in the social sciences. The current study found that JS, and OC simultaneously mediates the relationship between TLBs and OCB. To the best of researcher's knowledge, this may be the first study that had integrated all the independent variable(s) X, an outcome variable(s) Y, and also Mediator(s) M as a single model and analyzed.

## **5.2 Implications for Theory and Practice**

The findings of this study show that the five dimensions of transformational leadership (idealized attributes, idealized behaviors, inspirational motivation, intellectual stimulation, and individualized considerations) are directly related to the OCB. It is also found that a significant fully mediated relationship with the employees' attitudes (JS, and OC) exists among the five core TLBs and OCB. Several implications can be drawn from the findings of the research. The researcher considers these helpful points for practitioners can be discussed from two perspectives:

(1) It is important for TLBs in promoting their subordinates who practice more OCB.

(2) The employees' attitudes toward their current job will impact on their willingness to perform extra in their work.

The results of this study showed that all of the TLBs have a positive influence on employees' citizenship behavior except for the idealized attributes, idealized behavior, and individualized consideration. These leadership factors will bring a negative impact to employees, thus limit them in performing citizenship behavior during their work. The company should identify leaders who have higher in these behaviors and during the company leader training programme, the top management should be more careful in selecting suitable leaders for placement. However, if a suitable leader can't be found, the existing leaders may go through some leader's motivation programmes or workshop in order to ensure they behave positively in the workplace and delegate more power and controls to their subordinates.

On the other hand, those employees willing to stay (JS and OC) will have an impact on their citizenship behavior towards the company. As a top manager, employees are one of the important assets in every company. From time to time or annually, leaders should collect the opinion of their subordinates to let them perform better and stay competitive among themselves and within the industry. One of the ways is to evaluate their employees by giving them a '360 feedback'

or 'multi-rater performance appraisal'. Sashkin (1982) argued that performance feedback increases JS, and motivation. Thus, performance feedback plays an important role in measuring organization activities such as career development, motivation, JS, and performance management (McCarthy & Garavan, 2001).

When each of the TLBs is considered as antecedents, these factors indirectly influence the employee OCB simultaneously through JS and OC (affective commitment). It is surprising that inspirational motivation and intellectual stimulation have a positive relationship with OCB. This means that employees prefer to work with a leader who is innovative and full of new ideas. A leader must be able to listen to the current ideas and rethink of past ideas in solving problems in a variety of ways. Employees are willing to work extra miles, if they work with a leader who is able to motivate them and able to hands-on show them if they need help. Employees also felt happier if they received more challenging task and get their feedback upon completing their task.

### **5.3 Contribution of the Study**

The current study intends to make two major contributions. They are:

- (1) Extent of the prior transformational literature in the relevant field of study.
- (2) Research methodology contribution in analyzing multiple mediators.

In most traditional transformational leadership studies, the researchers study transformational leadership theory as a whole and built the relationship among other antecedents. This study had made one-step in-depth study of each TLBs and provides a clearer guide to the future researchers in the field of study more specific in Malaysian context.

In addition, the research also provides a fundamental background in analyzing mediators simultaneously either from research method until analysis findings reporting. It may serve as the first few research adopting the concept of analyzing intervening variables simultaneously by using the SAS PROCESS.

#### **5.4 Limitations and recommendations for future Research**

The findings of the study demonstrated the relationship between TLBs and OCB mediated by JS and OC. This research has several limitations.

Firstly, the current research data was collected based on the cross-sectional or one-point of time cannot fully represent the current situation. Since the population characteristics constantly change over the time, cross-sectional survey for such situation does not reflect the actual situation. Due to this reason, a longitudinal study or tracking study is to take place to better study of the changes and a trend of the population changes over the time period. Although,

this method of data collection will consume more resources, and time, it will provide a clearer and more accurate analysis to the researchers especially in the social behavior or psychology studies.

Secondly, one of the important elements to better generalize the research findings is by selecting a suitable sample size to be analyzed. This research is only able to collect a sample size of  $N = 619$  analyzable cases. It is suggested that future researchers should collect a larger sample size. This will help the researcher better when doing the model modification in the final measurement model (MacCallum et al., 1992). It is strongly suggested that a larger sample size is mandatory when doing a more complex analysis.

Thirdly, from the current study, Table 4.6, all the MLQ-transformational leadership instrument AVE were lower than 0.7 (Anderson & Gerbing, 1988). In the future, the researcher should try to adopt any other leadership measurement instrument (e.g. Transformational Leadership Behavior Inventory TLI) which developed by Podsakoff et al. (1990). It is important to obtain an AVE above 0.7 before proceeding to the structural model and followed by analyzing each of the model fit indices and path estimates.

Fourthly, this study supported the existence of the two mediating variables (e.g., JS and OC) in the relationship between TLBs and OCB. There are definitely

more followers' attitudes or behaviors that can innervate the relationship between TLBs and OCB. Research should explore on the other variables, such as; role ambiguity and others (Organ et al., 2005).

Fifthly, since the current research did not investigate on the specific dimension on the OCB, and also some other types of leadership, there is a need for the future researcher to re-examine the theories in each dimension to provide a detailed findings to the future researchers. In short, each specific of leadership behavior, dimensions will relate with each specific of the dimensions of OCB with the mediated by the employees' attitudes.

Sixthly, in most of the social science studies, many researchers only look at the leadership and the followers' perceptions on a single perspective. This may be biased to the other group of leader or all the scores were averaged and use the general average to analyze and predict for estimation. A dyadic model within and between should be considered when studying these theories in order to underestimate the inter-correlation and intra-correlation between these two different groups of people (Kenny, Kashy, & Cook, 2006).

Seventhly, although providing important insight into the demographic characteristics of the participants, the study did not shed match if any, light on the relationship between this demographic data and the variables examine herein.

In this study, it is important to conduct an in-depth study on how demographic data such as gender, education level, level of income, and tenure in a current position or company may relate to the variables studied in the current research. For instance, the future studies may examine the influence of leadership behavior differences between gender groups. As Rosener (2011) argued that women lead in ways that differ from the traditional men leading approach. In the other research done by (Eagly, Makhijani, & Klonsky, 1992) argued that women will lead in a feminine way. Future research should focus on this area to determine there is a significant difference between gender role in leadership style practice.

Eighthly, one of the major downside of mail paper survey forms is the respondents are freely to have their option whether not to answer certain question either with an intention or unintentionally. This may cause a missing value or a series of missing data in the process of data entry and the researcher sometimes may need to let go the remaining of the useful information on the same questionnaire just for the small portion of the incomplete item(s). It is generally suggested that in the future research that the electronic survey engine to be used to reduce the missing values in the survey items, as well as this, may reduce the research resources, such as; budget, time for data entry until data screening, and maximize the usable data.

Finally, the findings of this study are only applicable to the whole of Malaysia and not to any other specific region in Malaysia. A future research should be considered in planning to collect data or samples from each specific region (e.g. northern, central, south, and east) in providing a clearer understanding of how each specific leadership behavior in promoting OCB. There may be a different region employees may behave differently in the level of their satisfaction and/or OC towards their job due to geographical difference, and so forth.

## **5.5 Conclusion**

This dissertation is organized into five chapters. The first chapter contained an introduction to the current study, including of its statement of problem, background, research purpose(s) and question(s), significant of research, assumptions and limitations, and basic terms definition. Chapter 2 presented the relevant literature to all the concepts in the current study, research framework, and development of research hypotheses. Chapter 3 provided the research methodology and data collection with the population and sample selection steps, and data analysis methods. In chapter 4, the respondents rate, demographics statistic, inferences statistics and hypothesis testing results. Finally, chapter 5 gave the reader the findings of the research, implication of the study, limitations, direction for future research, contribution of the current study and the overall conclusion.

In general, this study was designed to address significant limitations of the research in the field of transformational leadership behaviors and OCB within the public listed companies in Malaysian context. The study was designed to provide a technical framework to address the lack of knowledge and theory within the public listed companies context that reveals how each transformational leadership factors affect employees' OCB and how together with the employees' attitudes (JS and OC), the sum impact the OCB. The major findings in this study are that employees' attitudes play an important role in the relationship in between each TLBs and OCB. All the alternate hypotheses were fully supported. However, it is found that there are some leadership factors that have a negative impact on OCB. Even though the AVE indices for the leadership instrument were all lower than 0.5, the process of analyzing using the SEM, and PROCESS for testing the simultaneous indirect effect were brought to completion. From the findings of the research, it is able to generalize that practice of OCB by the employees in the listed companies is the impact by different of TLBs and it causes a change in the level with existing a change in their own attitudes on the job.

In summary, different transformational leadership behaviors may have a difference in the direct and indirect relationship to the practice of OCB by the employees. One of the ways is that leaders may influence their followers levels of JS, and OC which in turn, influences the OCB.

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## APPENDICES

APPENDIX A:  
Questionnaire Cover Letter

To whom it may concern,

Re: Invitation to Participate in a Study on the “The Mediating Effects of Employees’ Attitudes in the Relationship between Transformational Leadership and Organizational Citizenship Behavior in Malaysia”

Together with this letter you will find a **FIVE** part survey questionnaire. Each part of the questionnaire includes instructions and a list of short questions. Specifically, it contains questions designed to collect information about (1) your leader’s leadership style, (2) your job satisfaction, (3) your commitment to your organization, (4) your organization citizenship behavior and (5) your demographics. This questionnaire should take less than 15 minutes to complete. Please complete the enclosed questionnaire as best as you can before returning it in the enclosed self-addressed stamped envelope. Please return the completed questionnaire by 31<sup>st</sup>-May-2012.

This survey will be used for academic purpose only. Your participation in this study is purely on a voluntary basis. The researcher will be combining the information from all participants in this study such that all analyses and findings will be reported in aggregate form. Your responses to this survey study will never be identified and will be kept private and confidential.

Thank you in advance for your help in this important study. Your participation is much needed to complete my master’s at Universiti Tunku Abdul Rahman (UTAR).

If you have any questions or comments about this study, Please contact me at yifeng.wan@gmail.com or call me at +6012-xxxxxxx.

Regards,

WAN YI FENG  
Universiti Tunku Abdul Rahman  
Master of Philosophy Candidate

APPENDIX B:  
Research Questionnaire

**PART I: LEADERSHIP BEHAVIOR**

The purpose of this section is to gather information about your immediate supervisor behaviors. Below are 20 descriptive statements. Please judge how frequently each statement fits your immediate supervisor by circling the most appropriate number according to the scale given below:

Not At All      Once In A While      Sometimes      Fairly Often      Frequently, If Not Always  
 1                      2                      3                      4                      5

My immediate supervisor:						
1	Reexamines critical assumptions to question whether they are appropriate.	1	2	3	4	5
2	Talks about his/ her most important values and beliefs.	1	2	3	4	5
3	Seeks different perspectives when solving problems.	1	2	3	4	5
4	Talks optimistically about the future.	1	2	3	4	5
5	Instils pride in others for being associated with him/ her.	1	2	3	4	5
6	Talks enthusiastically about what needs to be accomplished.	1	2	3	4	5
7	Specify the importance of having a strong sense of purpose.	1	2	3	4	5
8	Spends time teaching and coaching.	1	2	3	4	5
9	Goes beyond self-interest for the good of the group.	1	2	3	4	5
10	Treats me as an individual rather than just as a member of a group.	1	2	3	4	5
11	Acts in ways that build my respect.	1	2	3	4	5
12	Considers the moral and ethical consequences of decisions.	1	2	3	4	5
13	Displays a sense of power and confidence.	1	2	3	4	5
14	Articulates a compelling vision of the future.	1	2	3	4	5
15	Considers me as having different needs, abilities, and aspirations from others.	1	2	3	4	5
16	Gets me look at problems from many different angles.	1	2	3	4	5
17	Helps me to develop my strengths.	1	2	3	4	5
18	Suggests new ways of looking at how to complete assignments.	1	2	3	4	5
19	Emphasizes the importance of having a collective sense of mission.	1	2	3	4	5
20	Expresses confidence that goals will be achieved.	1	2	3	4	5

**PART II: JOB SATISFACTION**

The purpose of this section is to evaluate your satisfaction with your current job. There are a total of 20 statements. Please circle the most appropriate number that best represents how you feel about your job according to the scale given below:

Very Dissatisfied                  Dissatisfied                  Neutral                  Satisfied                  Very Satisfied  
 1    2    3    4    5

	On my present job, this is how I feel about...					
<b>1</b>	Being able to keep busy all the time.	1	2	3	4	5
<b>2</b>	The chance to work alone on the job.	1	2	3	4	5
<b>3</b>	The chance to do different things from time to time.	1	2	3	4	5
<b>4</b>	The chance to be 'somebody' in the community.	1	2	3	4	5
<b>5</b>	The way my boss handles his/her workers.	1	2	3	4	5
<b>6</b>	The competence of my supervisor in making decisions.	1	2	3	4	5
<b>7</b>	Being able to do things that don't go against my consciences.	1	2	3	4	5
<b>8</b>	The way my job provides for steady employment.	1	2	3	4	5
<b>9</b>	The chance to do things for other people.	1	2	3	4	5
<b>10</b>	The chance to tell people what to do.	1	2	3	4	5
<b>11</b>	The chance to do something that makes use of my abilities.	1	2	3	4	5
<b>12</b>	The way company's policies are put into practice.	1	2	3	4	5
<b>13</b>	My pay and the amount of work to do.	1	2	3	4	5
<b>14</b>	The chances for advancement on this job.	1	2	3	4	5
<b>15</b>	The freedom to use my own judgment.	1	2	3	4	5
<b>16</b>	The chance to try my own methods of doing the job.	1	2	3	4	5
<b>17</b>	The working conditions.	1	2	3	4	5
<b>18</b>	The way my co-workers get along with each other.	1	2	3	4	5
<b>19</b>	The praise I get for doing a good job.	1	2	3	4	5
<b>20</b>	The feeling of accomplishment I get from the job.	1	2	3	4	5

**PART III: ORGANIZATIONAL COMMITMENT**

The purpose of this section is to evaluate the level of your commitment to your organization. There are a total of six statements. Please indicate the extent to which you agree or disagree with the following statements about your organization by circling the most appropriate number based on the scale given below:

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

<b>1</b>	I would be very happy to spend the rest of my career in this organization.	1	2	3	4	5
<b>2</b>	I really feel as if this organization's problems are my own.	1	2	3	4	5
<b>3</b>	I do not feel a strong sense of "belonging" to my organization.	1	2	3	4	5
<b>4</b>	I do not feel "emotionally attached" to this organization.	1	2	3	4	5
<b>5</b>	I do not feel like "part of the family" at my organization.	1	2	3	4	5
<b>6</b>	This organization has a great deal of personal meaning for me.	1	2	3	4	5

PART IV: ORGANIZATION CITIZENSHIP BEHAVIOR

The purpose of this part is to evaluate your organizational citizenship behavior towards your company. There are a total of 24 statements. For each statement please circles the number that most accurately reflects your true opinion using the scale given below:

Not At All                  Once In A While                  Sometimes                  Fairly Often                  Frequently, If Not Always  
 1                                  2                                  3                                  4                                  5

<b>1</b>	I help others who have heavy workloads.	1	2	3	4	5
<b>2</b>	I am the classic “squeaky wheel” that always needs greasing. ( <i>I am the one who complain the most to get attention</i> )	1	2	3	4	5
<b>3</b>	I believe in giving an honest day’s work for an honest day’s pay.	1	2	3	4	5
<b>4</b>	I consume a lot of time complaining about trivial matters.	1	2	3	4	5
<b>5</b>	I try to avoid creating problems for co-workers.	1	2	3	4	5
<b>6</b>	I keep abreast of changes in the organization.	1	2	3	4	5
<b>7</b>	I tend to make “mountains out of molehills” ( <i>to exaggerate an unimportant matter out of proportion</i> ).	1	2	3	4	5
<b>8</b>	I consider the impact of my actions on my co-workers.	1	2	3	4	5
<b>9</b>	I attend meetings that are not mandatory, but are considered important.	1	2	3	4	5
<b>10</b>	I am always ready to lend a helping hand to those around me.	1	2	3	4	5
<b>11</b>	I attend functions that are not required, but help the company image.	1	2	3	4	5
<b>12</b>	I read and keep up with organization announcements, memos, and so on.	1	2	3	4	5
<b>13</b>	I help others who have been absent.	1	2	3	4	5
<b>14</b>	I do not abuse the rights of others.	1	2	3	4	5
<b>15</b>	I willingly help others who have work related problems.	1	2	3	4	5
<b>16</b>	I always focus on what’s wrong, rather than the positive side.	1	2	3	4	5
<b>17</b>	I take steps to try to prevent problems with other workers.	1	2	3	4	5
<b>18</b>	My attendance at work is above the norm.	1	2	3	4	5
<b>19</b>	I always find fault with what the organization is doing.	1	2	3	4	5
<b>20</b>	I am mindful of how my behavior affects other people’s jobs.	1	2	3	4	5
<b>21</b>	I do not take extra breaks.	1	2	3	4	5
<b>22</b>	I obey company rules and regulations even when no one is watching.	1	2	3	4	5
<b>23</b>	I help orient new people even though it is not required.	1	2	3	4	5
<b>24</b>	I am one of the most conscientious ( <i>taking care to do things carefully and correctly</i> ) employees.	1	2	3	4	5

PART V: DEMOGRAPHIC INFORMATION

Please tick or fill in the blank for each of the items given below:

1. Sex:  
 Female  Male
2. Age: \_\_\_\_\_ years old.
3. Race:  
 Chinese  Indian  
 Malay  Others
4. Marital status:  
 Single  Married  
 Others
5. Years in the present company: \_\_\_\_\_ month(s) \_\_\_\_\_ year(s).
6. Years in the present job: \_\_\_\_\_ month(s) \_\_\_\_\_ year(s).
7. Please state your monthly gross income. RM \_\_\_\_\_ per month.
8. Indicate your highest level of education:  
 Primary School  Degree  
 Secondary School  Master's  
 Diploma  Doctorate
9. Which department do you belong to?  
Name of your department \_\_\_\_\_

**THE END**

**THANK YOU FOR YOUR PARTICIPATION**

**ALL RESPONSES WILL BE KEPT PRIVATE AND CONFIDENTIAL**

APPENDIX C:

Means, Standard Deviations, and Inter-correlations for Manifest Variables

Means, Standard Deviations, and Inter-correlations for Manifest Variables.

		Intercorrelations																									
		M	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
1	L5	3.522	.969	1.000																							
2	L9	3.486	.927	.380	1.000																						
3	L11	3.538	.887	.290	.284	1.000																					
4	L13	3.695	.882	.277	.310	.322	1.000																				
5	L2	3.601	.846	.404	.339	.317	.255	1.000																			
6	L7	3.632	.878	.287	.360	.292	.287	.283	1.000																		
7	L12	3.590	.919	.234	.328	.440	.356	.193	.282	1.000																	
8	L19	3.561	.919	.347	.340	.342	.369	.336	.353	.376	1.000																
9	L4	3.565	.945	.386	.391	.349	.318	.376	.273	.296	.303	1.000															
10	L6	3.727	.902	.295	.273	.358	.239	.292	.443	.263	.282	.312	1.000														
11	L14	3.525	.883	.324	.362	.285	.403	.348	.356	.304	.422	.324	.345	1.000													
12	L20	3.669	.975	.351	.424	.343	.435	.293	.340	.363	.534	.356	.260	.448	1.000												
13	L1	3.670	.738	.317	.332	.320	.304	.512	.308	.287	.395	.261	.210	.320	.395	1.000											
14	L3	3.601	.838	.259	.304	.278	.288	.371	.277	.352	.249	.367	.247	.327	.291	.294	1.000										
15	L16	3.553	.958	.397	.353	.333	.284	.344	.277	.341	.403	.351	.270	.320	.449	.346	.331	1.000									
16	L18	3.519	.973	.341	.267	.363	.354	.378	.281	.300	.485	.297	.263	.368	.475	.380	.209	.427	1.000								
17	L8	3.426	.968	.338	.369	.228	.266	.291	.372	.292	.347	.344	.265	.288	.402	.303	.290	.400	.359	1.000							
18	L10	3.511	.969	.360	.383	.399	.245	.338	.221	.332	.323	.317	.211	.331	.330	.310	.241	.321	.342	.190	1.000						
19	L15	3.515	.971	.357	.394	.382	.358	.349	.307	.361	.444	.341	.307	.459	.410	.418	.305	.426	.339	.349	.418	1.000					
20	L17	3.454	.983	.362	.359	.363	.335	.432	.374	.321	.432	.321	.271	.327	.400	.382	.342	.427	.476	.372	.322	.400	1.000				
21	JS37	3.937	.727	.189	.250	.211	.194	.285	.172	.213	.201	.210	.139	.157	.167	.374	.184	.196	.193	.241	.252	.262	.214	1.000			
22	JS38	3.900	.853	.185	.150	.215	.084	.249	.108	.168	.099	.171	.099	.156	.166	.334	.087	.179	.195	.177	.217	.250	.130	.517	1.000		
23	JS39	3.756	.917	.203	.225	.249	.100	.339	.242	.221	.276	.238	.211	.190	.241	.352	.178	.268	.331	.248	.302	.321	.329	.397	.362	1.000	
24	JS40	3.682	.871	.255	.204	.243	.179	.306	.200	.205	.282	.223	.091	.239	.226	.332	.209	.256	.319	.192	.300	.265	.286	.375	.343	1.000	
25	JS41	3.675	.842	.257	.248	.240	.190	.285	.216	.176	.281	.241	.185	.210	.276	.293	.228	.246	.269	.285	.247	.286	.254	.275	.297	1.000	

Means, Standard Deviations, and Inter-correlations for Manifest Variables. (Continued)

		Intercorrelations																									
		23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46		
1	L5																										
2	L9																										
3	L11																										
4	L13																										
5	L2																										
6	L7																										
7	L12																										
8	L19																										
9	L4																										
10	L6																										
11	L14																										
12	L20																										
13	L1																										
14	L3																										
15	L16																										
16	L18																										
17	L8																										
18	L10																										
19	L15																										
20	L17																										
21	JS37																										
22	JS38																										
23	JS39	1.000																									
24	JS40	.502	1.000																								
25	JS41	.278	.377	1.000																							

Means, Standard Deviations, and Inter-correlations for Manifest Variables. (Continued)

		Intercorrelations																								
		47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	
1	L5																									
2	L9																									
3	L11																									
4	L13																									
5	L2																									
6	L7																									
7	L12																									
8	L19																									
9	L4																									
10	L6																									
11	L14																									
12	L20																									
13	L1																									
14	L3																									
15	L16																									
16	L18																									
17	L8																									
18	L10																									
19	L15																									
20	L17																									
21	JS37																									
22	JS38																									
23	JS39																									
24	JS40																									
25	JS41																									

Means, Standard Deviations, and Inter-correlations for Manifest Variables. (Continued)

		Intercorrelations																							
		M	SD.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
26	JS42	3.809	.830	.220	.230	.186	.150	.235	.223	.105	.318	.181	.144	.196	.282	.268	.211	.271	.223	.309	.135	.275	.301	.272	.138
27	JS43	3.745	.829	.176	.279	.185	.136	.152	.186	.153	.205	.176	.162	.176	.259	.235	.195	.186	.146	.224	.243	.274	.196	.330	.213
28	JS44	3.775	.861	.187	.202	.201	.167	.212	.240	.176	.20	.204	.192	.223	.214	.237	.187	.221	.234	.224	.192	.228	.174	.332	.245
29	JS45	3.782	.830	.182	.147	.248	.229	.192	.212	.160	.260	.180	.154	.236	.291	.257	.100	.270	.193	.158	.249	.206	.206	.259	.207
30	JS46	3.711	.856	.246	.204	.180	.093	.271	.192	.129	.260	.136	.082	.182	.242	.285	.134	.280	.270	.254	.279	.244	.231	.314	.288
31	JS47	3.840	.816	.235	.249	.224	.188	.226	.234	.210	.318	.233	.224	.242	.285	.254	.153	.233	.237	.203	.292	.302	.278	.332	.289
32	JS48	3.632	.885	.238	.193	.131	.053	.173	.048	.140	.157	.193	.074	.082	.140	.219	.092	.181	.173	.189	.220	.195	.183	.303	.275
33	JS49	3.549	.906	.174	.204	.206	.133	.244	.194	.160	.257	.224	.148	.149	.192	.226	.144	.248	.211	.218	.215	.294	.265	.291	.281
34	JS50	3.667	.919	.283	.259	.218	.216	.276	.293	.187	.275	.292	.171	.258	.244	.265	.176	.215	.235	.269	.271	.329	.295	.325	.280
35	JS51	3.761	.873	.165	.232	.263	.145	.182	.290	.178	.337	.201	.190	.253	.270	.279	.168	.265	.234	.282	.269	.310	.244	.331	.231
36	JS52	3.687	.948	.180	.146	.218	.176	.179	.159	.213	.202	.227	.197	.216	.196	.150	.199	.266	.201	.220	.153	.178	.195	.267	.257
37	JS53	3.712	.889	.116	.125	.145	.047	.159	.125	.107	.130	.101	.049	.131	.121	.150	.093	.187	.156	.152	.135	.140	.175	.175	.261
38	JS54	3.840	.845	.215	.087	.167	.130	.153	.093	.101	.130	.186	.100	.071	.167	.123	.065	.185	.225	.218	.205	.128	.125	.276	.267
39	JS55	3.748	.829	.148	.168	.222	.127	.189	.199	.208	.243	.188	.172	.174	.147	.213	.134	.123	.178	.219	.255	.288	.196	.282	.230
40	JS56	3.858	.834	.224	.270	.207	.198	.257	.309	.194	.330	.195	.168	.247	.338	.336	.183	.255	.319	.304	.290	.341	.245	.356	.321
41	AC57	3.845	.779	.185	.201	.137	.077	.247	.144	.137	.268	.086	.071	.090	.186	.369	.076	.200	.292	.244	.259	.271	.257	.363	.347
42	AC58	3.769	.872	.105	.151	.199	.036	.140	.170	.132	.071	.198	.150	.074	.041	.107	.144	.068	.065	.100	.222	.131	.155	.268	.243
43	AC59	4.115	.882	.136	.102	.146	.008	.168	.101	.058	.236	.103	.090	.132	.074	.167	.047	.185	.157	.229	.170	.175	.195	.196	.224
44	AC60	3.947	.826	.087	.138	.128	.004	.210	.120	.063	.244	.126	.104	.147	.133	.284	.112	.164	.202	.172	.121	.228	.191	.253	.280
45	AC61	3.927	.822	.098	.076	.091	.003	.165	.113	.121	.180	.097	.084	.113	.087	.171	.167	.113	.163	.133	.128	.126	.155	.152	.167
46	AC62	3.801	.783	.214	.227	.136	.060	.237	.096	.080	.254	.176	.118	.107	.191	.291	.064	.194	.180	.251	.215	.261	.208	.305	.273
47	OCB65	4.074	.772	.086	.092	.090	.059	.088	.129	.184	.151	.177	.138	.068	.153	.143	.093	.194	.140	.118	.161	.089	.139	.248	.245
48	OCB80	3.982	.902	.103	.097	.067	.003	.131	.078	.017	.088	.162	.046	-.023	.074	.176	.089	.133	.082	.138	.077	.084	.126	.262	.271
49	OCB83	3.732	.913	.102	.040	.021	.051	.081	.016	.031	.093	.078	-.014	.004	.047	.155	.050	.155	.055	.108	.193	.165	.084	.177	.125
50	OCB84	3.929	.902	.057	.080	-.045	.082	.020	.090	.135	.134	.121	.044	.033	.093	.103	.031	.132	.096	.122	.147	.142	.093	.131	.081

Means, Standard Deviations, and Inter-correlations for Manifest Variables. (Continued)

		Intercorrelations																								
		23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	
26	JS42	.345	.294	.323	1.000																					
27	JS43	.286	.226	.247	.324	1.000																				
28	JS44	.353	.343	.236	.250	.318	1.000																			
29	JS45	.257	.341	.271	.184	.147	.235	1.000																		
30	JS46	.408	.410	.304	.243	.187	.285	.346	1.000																	
31	JS47	.356	.322	.315	.254	.274	.283	.226	.362	1.000																
32	JS48	.220	.249	.195	.274	.299	.221	.120	.216	.385	1.000															
33	JS49	.350	.294	.357	.271	.262	.248	.198	.339	.358	.352	1.000														
34	JS50	.391	.331	.303	.284	.330	.380	.316	.361	.348	.237	.438	1.000													
35	JS51	.384	.351	.275	.328	.383	.405	.326	.410	.367	.208	.375	.391	1.000												
36	JS52	.290	.348	.225	.247	.250	.350	.217	.241	.274	.215	.323	.283	.424	1.000											
37	JS53	.192	.151	.186	.110	.183	.252	.134	.186	.195	.221	.261	.223	.161	.160	1.000										
38	JS54	.188	.214	.295	.123	.258	.238	.234	.242	.205	.308	.303	.221	.253	.234	.283	1.000									
39	JS55	.321	.234	.278	.243	.257	.274	.202	.360	.280	.184	.290	.327	.335	.177	.224	.374	1.000								
40	JS56	.371	.339	.360	.227	.252	.334	.313	.378	.345	.280	.341	.357	.434	.271	.285	.475	.428	1.000							
41	AC57	.291	.311	.298	.235	.219	.223	.203	.379	.203	.274	.320	.357	.362	.162	.181	.215	.285	.412	1.000						
42	AC58	.253	.278	.193	.167	.189	.187	.107	.229	.269	.187	.265	.286	.208	.231	.217	.112	.242	.168	.350	1.000					
43	AC59	.185	.201	.176	.278	.224	.194	.103	.247	.223	.332	.296	.297	.271	.155	.257	.198	.232	.200	.398	.308	1.000				
44	AC60	.243	.287	.203	.219	.249	.209	.141	.326	.201	.234	.284	.318	.301	.216	.162	.111	.177	.198	.415	.309	.533	1.000			
45	AC61	.187	.219	.178	.115	.172	.226	.091	.211	.190	.221	.258	.291	.215	.232	.120	.165	.130	.252	.359	.279	.409	.581	1.000		
46	AC62	.318	.297	.255	.246	.281	.236	.200	.329	.323	.301	.314	.340	.326	.184	.153	.099	.214	.234	.448	.286	.357	.424	.299	1.000	
47	OCB65	.204	.223	.141	.103	.060	.183	.104	.118	.150	.057	.212	.197	.180	.268	.083	.108	.178	.140	.213	.254	.166	.166	.202	.198	
48	OCB80	.257	.184	.182	.136	.154	.193	.081	.169	.231	.219	.155	.237	.163	.179	.145	.175	.158	.203	.259	.301	.261	.236	.223	.259	
49	OCB83	.138	.202	.141	.167	.087	.059	.100	.128	.175	.140	.082	.133	.112	.073	.007	.079	.111	.092	.212	.129	.113	.090	.077	.224	
50	OCB84	.218	.082	.072	.116	.123	.117	.111	.128	.200	.105	.074	.120	.184	.106	.116	.061	.112	.090	.238	.065	.102	.160	.080	.211	

Means, Standard Deviations, and Inter-correlations for Manifest Variables. (Continued)

		Intercorrelations																								
		47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	
26	JS42																									
27	JS43																									
28	JS44																									
29	JS45																									
30	JS46																									
31	JS47																									
32	JS48																									
33	JS49																									
34	JS50																									
35	JS51																									
36	JS52																									
37	JS53																									
38	JS54																									
39	JS55																									
40	JS56																									
41	AC57																									
42	AC58																									
43	AC59																									
44	AC60																									
45	AC61																									
46	AC62																									
47	OCB65	1.000																								
48	OCB80	.199	1.000																							
49	OCB83	.164	.175	1.000																						
50	OCB84	.147	.197	.313	1.000																					

Means, Standard Deviations, and Inter-correlations for Manifest Variables. (Continued)

		Intercorrelations																							
		M	S.D.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
51	OCB88	3.934	.778	.063	.078	.014	-.022	.080	.007	.034	.081	.016	-.010	.029	.161	.164	-.053	.043	.080	.087	.088	.116	.069	.216	.214
52	OCB64	4.370	.791	.081	.092	.136	.053	.129	-.009	.111	.128	.116	.037	.048	.075	.230	.060	.037	.116	.132	.068	.188	.110	.274	.197
53	OCB66	4.297	.804	.031	.023	.123	-.002	.068	.018	.071	.074	.013	.036	.028	-.037	.150	.025	.057	.065	.026	.058	.137	.042	.201	.161
54	OCB69	4.149	.883	.008	.044	.063	.048	.004	.004	.037	.011	.064	.037	.047	-.046	.133	.017	.012	.021	-.048	.110	.154	.027	.188	.136
55	OCB78	3.359	1.165	-.034	.056	-.099	.034	.045	.009	-.006	.069	.043	-.030	.029	-.006	.039	.148	.006	-.029	.065	.058	.080	-.038	.118	.113
56	OCB81	4.079	.920	.033	-.040	-.015	-.010	.061	.010	.006	-.033	.071	.086	.024	-.039	.060	.026	-.026	.032	-.062	-.047	-.024	.042	.114	.121
57	OCB68	3.847	.880	.039	.072	.058	.010	.024	.090	.014	.055	.105	.086	-.036	.092	.101	-.020	.055	.008	.058	.138	.072	.025	.132	.182
58	OCB71	3.578	.994	.041	.163	.089	-.014	.144	.046	.003	.123	.156	.041	.072	.101	.066	.060	.124	.116	.110	.180	.111	.148	.086	.112
59	OCB73	3.480	1.043	.141	.163	.093	-.050	.208	.047	.035	.144	.184	.052	.111	.110	.120	.031	.095	.112	.164	.245	.260	.138	.130	.190
60	OCB74	3.824	.744	.031	.092	.078	-.001	.076	.064	.147	.142	.098	.020	.092	.125	.139	.074	.105	.111	.055	.154	.090	.081	.204	.146
61	OCB67	3.793	.950	-.048	-.038	.050	.075	-.081	.019	.006	-.065	.004	-.023	-.007	.040	-.020	-.008	-.020	-.020	.024	.090	-.019	-.026	-.005	.006
62	OCB70	3.796	.746	.060	.132	.095	.107	.002	.061	.095	.110	.118	.114	.064	.132	.035	-.040	.130	.132	.096	.137	.094	.139	.099	.082
63	OCB76	3.889	.946	.058	.152	.002	.025	.007	.058	.070	.020	.080	.023	.008	.048	.133	.054	.066	.042	.089	.168	.142	.107	.234	.108
64	OCB79	3.222	1.284	-.045	.036	-.037	.103	-.041	.041	.074	.035	.045	.038	.037	.060	-.021	.145	.044	-.012	.066	-.074	-.038	-.019	-.025	-.020
65	OCB82	3.766	.873	.106	.119	.086	.054	.092	.069	.074	.091	.112	.116	.038	.051	.181	.007	.078	.130	.122	.098	.152	.092	.104	.110
66	OCB63	3.885	.837	.146	.147	.118	.066	.301	.156	.118	.279	.174	.081	.125	.209	.304	.112	.188	.224	.126	.20	.230	.242	.206	.265
67	OCB72	3.960	.748	-.007	.024	.050	.101	.013	-.030	.032	.033	.128	.058	.027	.088	.080	.057	.119	.102	.089	.044	.042	-.048	.055	.133
68	OCB75	3.701	.855	.140	.006	.168	.078	.177	.112	.004	.137	.161	.047	.092	.097	.197	.086	.091	.179	.068	.116	.118	.154	.128	.112
69	OCB77	3.892	.765	.065	.063	.098	.023	.026	.061	.146	.059	.094	.034	.055	.086	.092	.023	.004	.104	.056	.092	.060	.108	.124	.189
70	OCB85	3.690	.925	.138	.116	.076	-.047	.230	.062	.052	.203	.107	.026	.075	.083	.186	-.010	.176	.179	.148	.273	.211	.198	.171	.203

Means, Standard Deviations, and Inter-correlations for Manifest Variables. (Continued)

		Intercorrelations																							
		23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
51	OCB88	.168	.167	.162	.068	.077	.048	.088	.195	.113	.016	.095	.069	.167	.038	-.007	.045	.082	.140	.247	.080	.112	.201	.078	.194
52	OCB64	.174	.153	.105	.226	.189	.075	.066	.170	.155	.227	.244	.172	.225	.101	.108	.052	.105	.109	.319	.237	.375	.328	.290	.328
53	OCB66	.138	.110	.040	.153	.121	.015	.008	.045	.107	.104	.155	.040	.115	.095	-.025	-.032	-.002	.032	.231	.200	.271	.275	.209	.223
54	OCB69	.107	.026	.013	.107	.129	.087	.071	.065	.094	.118	.136	.107	.097	.054	.067	.002	.038	.108	.243	.158	.184	.199	.129	.244
55	OCB78	.073	.038	.043	.062	.090	.101	.108	.085	.076	.029	.019	.074	.072	.071	.079	.024	.127	.043	.113	.107	.078	.032	.007	.121
56	OCB81	.071	.169	.054	.066	-.003	.053	.027	.072	.103	.097	.103	.033	.030	.071	-.037	-.032	-.033	.057	.096	.245	.166	.197	.258	.150
57	OCB68	.184	.211	.083	.133	.148	.196	.087	.132	.288	.243	.226	.179	.176	.183	.138	.113	.131	.114	.189	.281	.252	.220	.264	.256
58	OCB71	.212	.232	.174	.097	.132	.144	.130	.254	.128	.128	.220	.277	.208	.155	.119	.108	.191	.158	.239	.266	.205	.274	.234	.306
59	OCB73	.185	.243	.199	.117	.168	.113	-.012	.271	.199	.216	.185	.305	.210	.113	.163	.093	.207	.186	.309	.305	.348	.355	.282	.381
60	OCB74	.131	.166	.102	.108	.137	.186	.100	.116	.140	.115	.149	.137	.217	.156	.112	.166	.167	.168	.193	.142	.127	.172	.175	.104
61	OCB67	-.034	.061	.037	.057	.034	.038	-.014	.044	.024	.021	.014	.004	.065	.149	.021	.114	.069	.075	.116	.114	.079	.097	.091	.058
62	OCB70	.123	.099	.103	.078	.073	.176	.148	.171	.071	.016	.106	.139	.198	.166	.077	.128	.160	.172	.182	.134	.082	.145	.142	.158
63	OCB76	.151	.100	.054	.130	.242	.160	.070	.074	.117	.192	.179	.223	.154	.154	.062	.091	.094	.089	.189	.126	.213	.183	.150	.226
64	OCB79	-.035	-.011	.001	.003	.052	.172	.085	-.008	.059	-.075	-.053	-.013	.033	.100	.084	.055	.068	.032	-.113	-.145	-.177	-.215	-.140	-.190
65	OCB82	.038	.070	.072	.052	.076	.061	.054	.080	.077	.060	.050	.060	.118	-.015	.030	.039	.030	.094	.115	-.063	.085	.115	.033	.214
66	OCB63	.246	.241	.227	.167	.177	.169	.146	.182	.203	.251	.286	.279	.304	.191	.097	.088	.194	.260	.350	.210	.285	.356	.258	.316
67	OCB72	.012	.209	.102	.008	.098	.089	.098	.131	.117	.043	.085	.086	.131	.165	.065	.056	.064	.097	.114	.159	.044	.169	.121	.149
68	OCB75	.148	.137	.184	.225	.116	.027	.086	.136	.087	.111	.202	.182	.221	.192	.053	.070	.179	.151	.234	.20	.237	.211	.160	.223
69	OCB77	.091	.126	-.014	.10	.010	.074	.080	.036	.125	.094	.095	.103	.063	.163	.097	.023	.105	.029	.083	.239	.107	.057	.152	.113
70	OCB85	.254	.175	.174	.123	.160	.150	.148	.254	.196	.167	.169	.231	.297	.112	.104	.173	.208	.253	.425	.180	.262	.288	.209	.389

Means, Standard Deviations, and Inter-correlations for Manifest Variables. (Continued)

		Intercorrelations																									
		47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70		
51	OCB88	.129	.141	.102	.192	1.000																					
52	OCB64	.138	.175	.061	.123	.200	1.000																				
53	OCB66	.116	.030	.157	.107	.158	.532	1.000																			
54	OCB69	.100	.152	.078	.157	.116	.466	.407	1.000																		
55	OCB78	.143	.172	.081	.212	.082	.165	.050	.098	1.000																	
56	OCB81	.183	.089	.018	-.042	.021	.327	.340	.250	.007	1.000																
57	OCB68	.248	.268	.227	.129	.120	.154	.074	.036	.049	.127	1.000															
58	OCB71	.273	.248	.171	.096	.169	.055	.001	-.002	.090	.060	.181	1.000														
59	OCB73	.058	.226	.268	.057	.205	.124	.019	-.016	-.013	.001	.281	.473	1.000													
60	OCB74	.152	.232	.192	.177	.287	.108	.036	.087	.064	.042	.213	.127	.243	1.000												
61	OCB67	.133	.079	.096	.002	.078	.048	.123	.073	-.070	.078	.212	.089	.128	.102	1.000											
62	OCB70	.245	.062	.069	.168	.085	-.026	.031	.021	-.106	.059	-.006	.288	.063	.072	.048	1.000										
63	OCB76	.155	.221	.209	.283	.084	.241	.146	.190	.105	.032	.220	.177	.154	.165	.111	.174	1.000									
64	OCB79	.107	.033	-.046	.065	.026	-.117	-.210	-.152	.454	-.166	-.020	-.013	-.165	.146	-.014	.027	-.009	1.000								
65	OCB82	.047	-.001	.157	.147	.156	.126	.210	.144	-.070	.061	.061	.065	.104	.091	.074	.088	.201	-.097	1.000							
66	OCB63	.133	.257	.070	.043	.212	.101	.027	.056	.017	.039	.115	.270	.317	.152	-.056	.082	.115	-.092	.067	1.000						
67	OCB72	.193	.104	.126	.077	.109	.137	.171	.068	.013	.176	.172	.279	.182	.112	.136	.090	.112	.082	.164	.130	1.000					
68	OCB75	.139	.205	.063	.054	.109	.135	.094	.052	.027	.098	.066	.147	.210	.192	.105	.100	.183	-.146	-.003	.373	.113	1.000				
69	OCB77	.222	.180	.148	.017	.053	.117	.071	.033	-.024	.171	.206	.136	.126	.111	.107	.157	.171	-.043	.006	.193	.148	.218	1.000			
70	OCB85	.080	.248	.283	.383	.363	.104	.055	.118	.066	-.030	.192	.252	.359	.276	-.007	.145	.203	-.069	.112	.309	.085	.175	.067	1.000		

Note: N = 61

