EXCELLENT LEADERSHIP IN PUBLIC RELATIONS: AN APPLICATION OF MULTIPLE-GROUP CONFIRMATORY FACTOR ANALYSIS MODELS IN ASSESSING CROSS-NATIONAL MEASUREMENT INVARIANCE

by

JUAN MENG

A DISSERTATION

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DEDICATION

Dedicated to my father, ***Qi-Ren Meng (蒙启仁):***

This is for you.

Thanks for being such an important part of my life.

Your endless love has been and always will be the power for me to move on.

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Perhaps, this page is the only page of this dissertation that is written sincerely. Therefore, I would like to take this opportunity to thank the many people who helped me complete this arduous process. The preparation of this document would not have been possible without the support, hard work, endless efforts of a large number of individuals and institutions.

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LIST OF ABBREVIATIONS AND SYMBOLS

M	Mean
SD	Standard Deviation
α	Cronbach's index of internal consistency
β	Regression coefficient
df	Degree of freedom
CFA	Confirmatory factor analysis
SEM	Structural Equation Model
λ_x	Lambda-X; factor loadings for Latent X
Θ_δ	Theta delta; error variances and covariances for Latent X
Φ	Phi; factor variance and covariances for Latent X
τ_x	Tau-X; indicator intercepts for Latent X
κ	Kappa; latent means for Latent X
λ_y	Lambda-Y; factor loading for Latent Y
Θ_ε	Theta epsilon; error variances and covariances for Latent Y
Ψ	Psi; factor variance and covariances for Latent Y
τ_y	Tau-Y; indicator intercepts for Latent Y
α	Alpha; latent means for Latent Y
Ksi (ξ)	Names of exogenous variables
Eta (η)	Names of endogenous variables

X^2	Chi-square, the classic goodness-of-fit index
ΔX^2	Chi-square difference test
SRMR	Standardized root mean square residual
RMSEA	Root mean square error of approximation
CFI	Comparative fit index
NFI	Normed fit index
NNFI	Non-Normed Fit Index
CR	Composite Reliability
AVE	Average variance extracted
S.E.	Standard error

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

Prior research suggests that the construct of leadership and theory surrounding knowledge in terms of its content, use, and role within the organization are complex. Leadership spans many levels of analysis and can be approached from different perspectives and disciplines. However, to date no research has empirically explored the leadership construct and how it contributes to communication effectiveness from the perspective of public relations practice. Thus, the attempts made here are to define the construct of excellent leadership in public relations, to identify its key dimensions, and, more importantly, to develop measurement scales of the constructs from the perspective of quantitative methodology.

More specifically, this dissertation addresses the following five questions: (1) How is excellent leadership defined in public relations? (2) As a complex, multifaceted phenomenon, what key dimensions does the construct of leadership in public relations encompass? (3) How are organizational structure and culture related to the achievement of excellent leadership in public relations? Given the importance of cultural influence on leadership effectiveness, (4) Are some dimensions of excellent leadership in public relations universally relevant while some are culturally specific? and (5) What core values and qualities of public relations leadership do different cultures emphasize?

In order to answer these questions, both quantitative and qualitative research phases are involved. The first phase involves online surveys to different groups of public relations practitioners in multiple locations. The conceptual measurement model and structural model are tested by using the collected quantitative data. In the second phase, in-depth interviews with senior public relations executives in the U.K. and Singapore are conducted and the results further strengthen the findings revealed at the quantitative phase.

Overall, the research findings present strong evidence regarding the multi-faceted nature of the leadership construct itself and indicate that the key dimensions of leadership are largely complementary and related in a meaningful way. Moreover, the impact of organizational structure and culture on the achievement of excellent leadership in public relations is confirmed and discussed. In sum, findings from this study will help enhance the theoretical development of leadership research in public relations, as well as provide concrete directions and managerial guidelines for public relations industry.

Chapter I

INTRODUCTION

The study of leadership has been an important and central part of the literature on management and organization behavior over the past 40 years. Researchers of leadership have historically developed a number of complex concepts and theories in the attempt to explain and predict leadership effectiveness and organization performance. Major theories, topics, and controversies in this area have encompassed leader traits and skills, leader behavior and activities, leader power and influence, situational determinants of leader behavior, and leadership as an attributional process (e.g., Bass, 1990; Kerr & Jermier, 1978; Northouse, 2007; Yukl, 1989;). Just as Yukl (1989) commented, "The books, articles, and papers on the subject now number in the several thousands, and the publication of new manuscripts continues at a high rate" (p. 251).

Given comprehensive development of leadership research, the increasing connections among countries and the growing globalization of organizations have never been greater. As a result, views of the qualities, importance, and value of leadership may vary across cultures. The rapid growth of industrial organizations provides compelling reasons for considering the role of societal and organizational cultures in influencing leadership effectiveness (House & Javidan, 2004). Substantial empirical evidence has indicated that leader attributes, behavior, and influence vary considerably as a result of cultural influence in the countries or regions in which the leaders function (Chemers, 1997; House et al., 1997; Smith & Peterson, 1988). Leadership practices which are acceptable and considered effective in one country may be ineffective in another country. Researchers have recognized the need for a better understanding of how culture influences leadership and organizational processes.

Moreover, despite the considerable writings and investigations of leadership from the managerial perspective, the nature and the influence of leadership to the profession of public relations has not been fully explored. Given that communication is growing in strategic importance for all types of organizations worldwide, the managerial function of public relations has brought the importance of leadership to the forefront of professional development. However, relatively few studies in the field to date have explored the qualities, values, and dimensions of excellent leadership in public relations. Specifically, leadership in public relations has not been subjected to quantitative measurement and multiple group analysis.

Additionally, the potential influence of some situation factors, such as the structure and culture in which an organization has been formed, may also play a key role in determining the value of communication initiatives to organizational performance. Therefore, there remains a strong need for us to explore the nature and the value of leadership to the success of public relations practice, as well as the influence the organizational structure and culture could have on leadership effectiveness.

Purpose and Contribution of Dissertation

Therefore, this dissertation is a first systematic step toward such an exploration—to discover what leadership means to public relations professionals and educators. Devoted to the examination of excellent leadership in public relations, this dissertation focuses on defining the construct of excellent leadership in public relations and identifying multiple dimensions of this construct. To fulfill the purpose, multiple concepts and variables in leadership research and public relations research are employed and built into a comprehensive theoretical framework.

Since there is no single definition that encompasses all divergent views about leadership, especially in the field of public relations, this dissertation also adopts an integrated approach to explore this complex, multifaceted phenomenon. As a reflection of the integrated approach, the proposed theoretical framework not only encompasses major patterns in leadership research, but also includes unique features associated with the profession of public relations.

Moreover, this dissertation is also a research effort designed to explore the meaning of excellent leadership in public relations in different organizations and societies. To address this issue, organizational structure and culture is embedded in the framework as a situational variable to test the effect organizational structure and culture could have on public relations leadership effectiveness. In addition, the study tests the proposed measurement model of excellent leadership in public relations and the structural model of the causal effect in multiple groups to address the importance of evaluating measurement invariance in validating the reliability of the proposed constructs. More specifically, this dissertation attempts to answer the following five research questions in the context of public relations leadership:

RQ1: How is excellent leadership defined in public relations?

RQ2: As a complex, multifaceted phenomenon, what key dimensions does the construct of excellent leadership in public relations encompass?

RQ3: How are organizational structure and culture related to the achievement of excellent leadership in public relations?

RQ4: Are some dimensions of excellent leadership in public relations universally relevant while some are culturally specific?

RQ5: What core values and qualities of public relations leadership do different cultures (the U.K. and Singapore) emphasize?

By exploring the topic and answering the questions, this dissertation will provide a number of important theoretical and empirical implications to the field. First, the dissertation is the first study developing public relations leadership measurement scales from a quantitatively methodological perspective. Second, the dissertation will provide a comprehensive understanding of leadership construct and its dimensions, as well as their roles in facilitating communication effectiveness. The relationships among the factors will be empirically tested and interpreted. Third, the dissertation will extend the model testing to multiple samples to find out whether the same models hold across different groups. Finally, findings from in-depth interviews will be able to further confirm the meaning of the leadership construct to public relations practitioners and to provide implications for organizations to develop effective communication leadership programs.

In short, the anticipated theoretical and practical contributions of this dissertation are reflected in its efforts in filling a substantial knowledge gap concerning excellent leadership relevant to the success of public relations practice and organizational effectiveness. Moreover, cross-cultural forces have been involved to assess the roles of societal and organizational values to cross-cultural variance and invariance in leader behavior and leadership effectiveness. The discussion of excellent leadership in public relations and its dimensions in different cultures and societies could help researchers specify culturally endorsed behaviors and common practices in the societies and organizations. The information will supply effective and valuable guide and cases for leadership training and education programs in specific cultures. Thus, the research findings will lead to the refinement in important theoretical issues in public relations and the improvement in professional practices.

Overview of Research Methods and Conceptual Models

In order to answer above research questions, this dissertation employs both quantitative and qualitative research methods to investigate public relations practitioners' understanding and interpretation of excellent leadership. The major objectives of the quantitative phase of this dissertation are to answer the first four research questions proposed earlier. It involves online surveys to different groups of public relations practitioners in multiple locations. Since this dissertation adopts an integrated approach to explore the constructs of interest, the data collected through the quantitative research phase are used to empirically test the conceptual measurement model (see Figure 1.1) and the conceptual structural model (see Figure 1.2).

The qualitative research uses in-depth interviews as the approach to identify the cultural influence both at the societal level and the organizational level could have on the effectiveness of public relations leadership. The major goal of conducting in-depth interviews is to answer the last research question. Thematic interpretation is applied to analyze the qualitative data, and essential leadership skills and patterns are reported and evaluated.

Figure 1.1: A Multilevel Measurement Model of Excellent Leadership in Public Relation

(Conceptual Model)

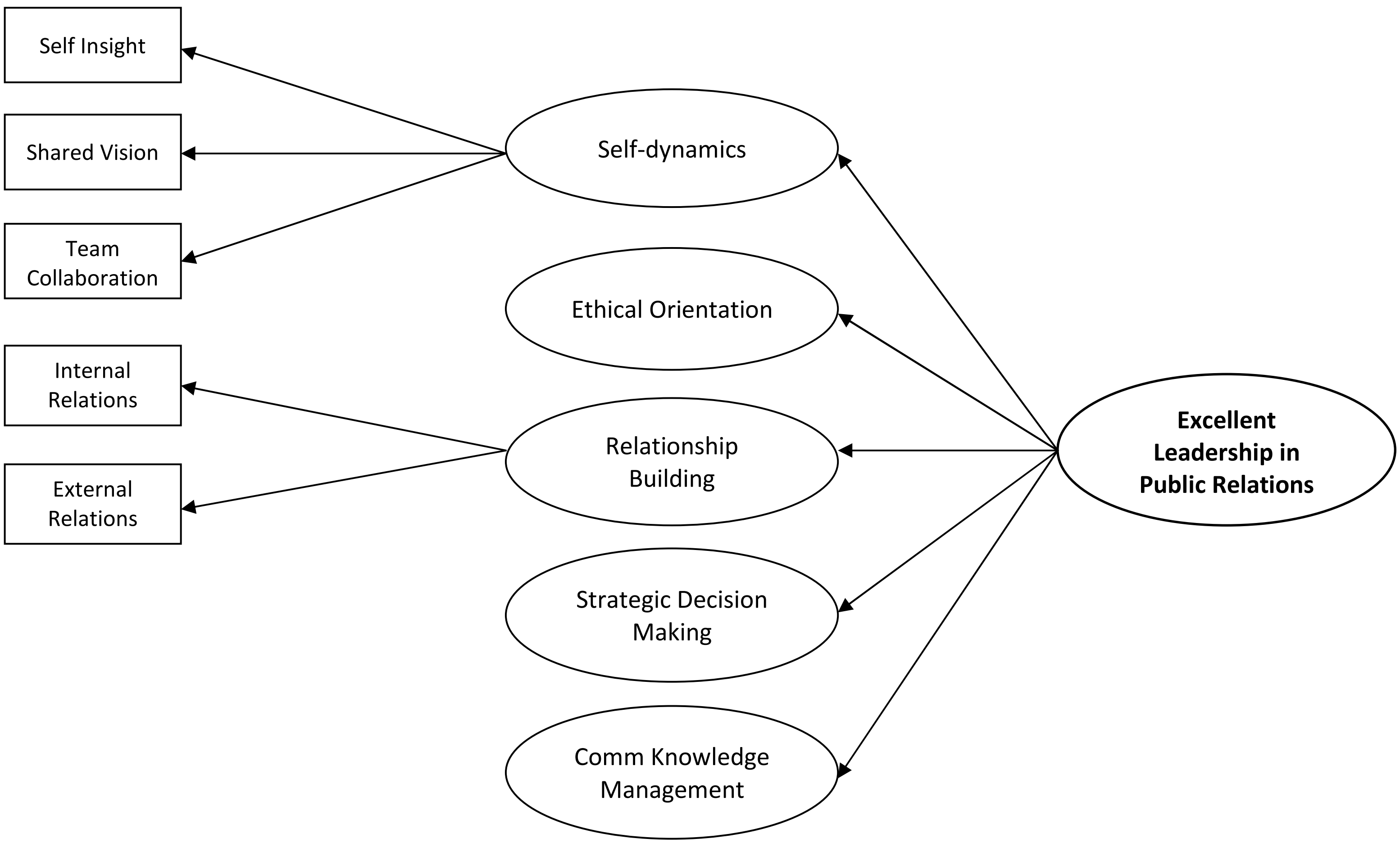
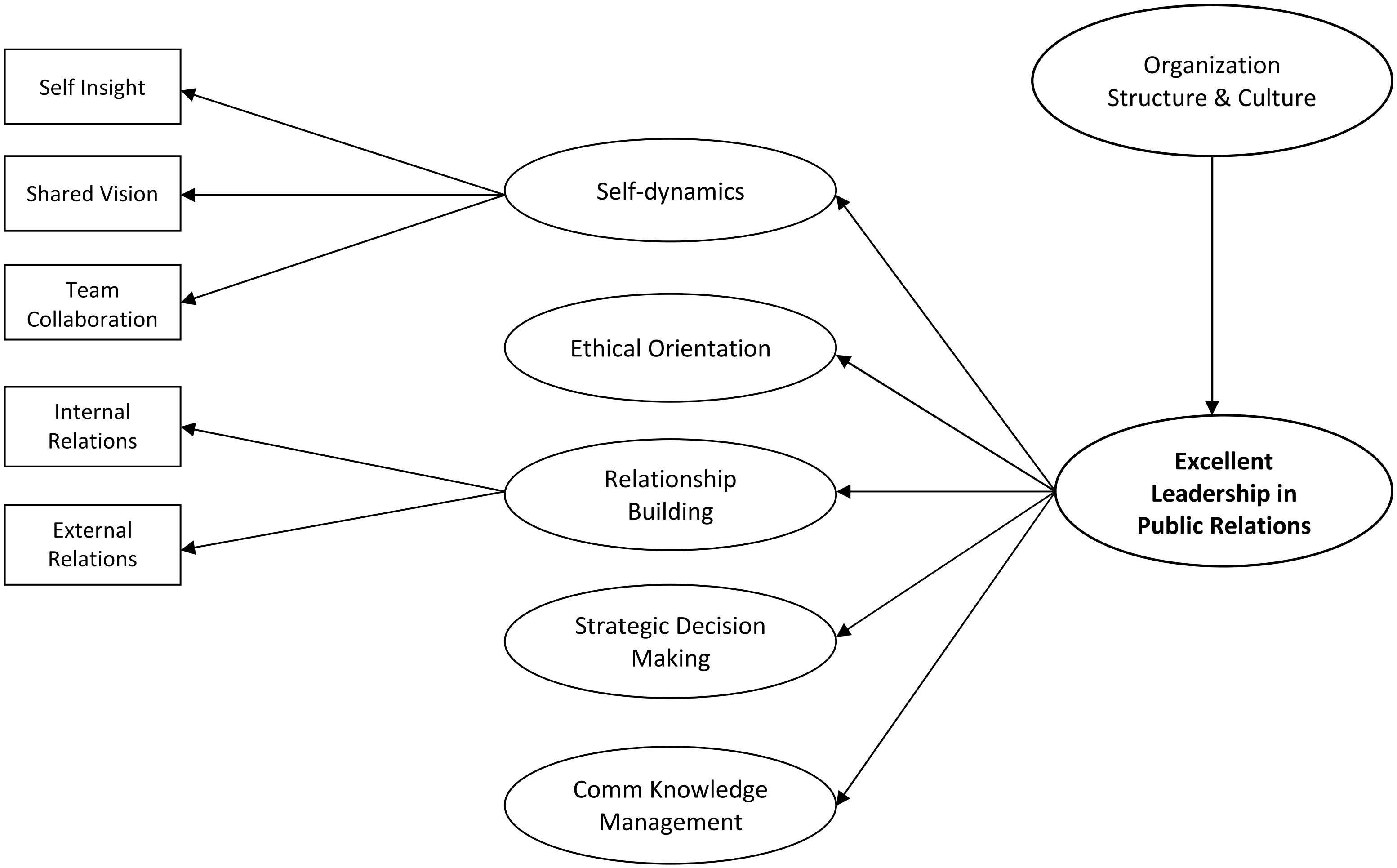


Figure 1.2: A Structural Equation Model of Excellent Leadership in Public Relation

(Conceptual Model)



Organization of the Dissertation

This section provides an overview of the organization of this dissertation. There are eight chapters in this dissertation. Chapter II outlines a comprehensive review of the nature of leadership, previous attempts at defining leadership, and major approaches used to explore leadership. This is accomplished through examining the existing literature on managerial leadership. Furthermore, cross-cultural leadership research is also reviewed, followed by an argument about the necessity of exploring leadership and its dimensions in the field of public relations.

By way of establishing the major trends and dimensions of the leadership construct throughout the history, a comprehensive, integrated conceptual model of excellent leadership in public relations is proposed in Chapter III. The theoretical background and description of each facet in the conceptual model is explained. Key concepts are presented and linked to form the cross cultural integrating framework.

After laying the groundwork, Chapter IV outlines the overall research methods employed in quantitative studies and qualitative studies. Chapter V presents the pre-test of the survey instruments, its final administration, the demographic information of multiple groups, the analytical approach for the data, and the results of the measurement model and the structural model. Chapter VI extends the model testing to a multiple-group confirmatory approach to validate measurement invariance issue at different levels.

Chapter VII discusses the qualitative research—in-depth interviews—the researcher has used to further explore the interpretation of the constructs in different societies. The general discussion and conclusions are addressed in Chapter VIII, along with their limitations and future research directions.

Chapter II

REVIEW OF THE LITERATURE

Managerial Leadership: An Overview

The purpose of this review is to provide an overview of the breadth of literature available on the topic of managerial leadership, with an emphasis on trends and developments after the 1970s. The massive size and scope of the literature precludes detailed descriptions and an exhaustive reading list. Therefore, to compile findings into tight thematic bundles, the author focuses on a selective review of major theories, general findings, and important issues and controversies in the development of leadership research.

The study of managerial leadership has been an important and central part of the literature on management and organizational behavior for several decades. The traditional discussion of leadership has been located in the form of philosophies and narratives since the beginning of recorded civilization (Clemens & Mayer, 1987). Bass (1997) argued that the study of leadership rivals in age the emergence of civilization, which shaped its leaders as much as it was shaped by them (p. 3). Over the centuries, the effort has been focusing on identifying what leaders did and why they did it. The history of leadership research has witnessed early theories of leadership being developed based on the broad discussion of personal opinions and experiences. Theorists were interested in analyzing and discovering the realities of human nature and leadership behaviors for the best methods of organizing societies and political life (Bass, 1991 & 1997). As a tradition, their definitions of leaders, their behaviors, and their expected outcomes were general and broad.

It was not until the 1950s that the theories of leadership became much narrower by focusing on specific dimension(s) of the concept. This tendency has distinguished contemporary leadership studies from the early works (Bass & Stogdill, 1990; Clemens & Mayer, 1987; Stogdill, 1974; Yukl, 1989). However, as different perspectives of leadership keep contributing to the large body of knowledge and research, it is more difficult for the researchers to agree on the universal definition of leadership. Bass (1990), in *Bass and Stogdill's Handbook of Leadership*, devoted the entire opening chapter to discussing numerous definitions of leadership that have been used by various researchers, and his conclusion was:

> "Leadership has been conceived as the focus of group processes, as a matter of personality, as a matter of inducing compliance, as the exercise of influence, as particular behaviors, as a form of persuasion, as a power relation, as an instrument to achieve goals, as an effect of interaction, as a differentiated role, as initiation of structure, and as many combinations of these definitions (Bass, 1997, p. 17)."

Though Bass (1990 & 1997), Yukl (1989) and other researchers noted that there is not an accepted universal theory of leadership, managerial leadership research has witnessed the process and the efforts that different scholars have contributed to the description of this "complex, multifaceted phenomenon" (Yukl, 1989, p. 253). Thus, the literature of managerial leadership research has exhibited a broad range from trait research, to behavioral, to situational, and to transformational components of leadership.

It is fair to say that the current development stage of leadership research has not attempted to formulate a single definition of leadership. Rather, the various conceptions and comprehensive perspectives under these conceptions should be used to gain insights into this dynamic process. To understand the breadth and current thinking about what determines effective leadership in a given situation, a systematic review of the managerial leadership literature is presented in the following pages.

The Trait Approach

The trait research has been a dominant approach in leadership research during the first half of the twentieth century. The focus of trait approach in leadership was concerned with identifying personal attributes, or superior qualities, that are essential to effective leadership by comparing the traits exhibited by leaders with those exhibited by non-leaders (Bratton, Grint, & Nelson, 2005; Yukl, 1989). This tradition has continued over the years, and researchers have looked for a significant correlation between traits of individual leaders and their success.

Two landmark studies of trait research were done by Stogdill (1948, 1974). As a pioneer researcher, Stogdill (1948) reviewed 124 trait studies conducted between 1904 and 1947, and identified no consistent pattern of traits that differentiated leaders from non-leaders across a variety of situations. Instead, Stogdill argued that patterns of leadership traits differ with the situation: “Leadership is a relationship that exists between persons in a social situation and that persons who are leaders in one situation may not necessarily be leaders in other situations" (p. 76). Based on his findings, Stogdill made the strong argument for the situational nature of leadership. Also, his study supplied strong evidence to indicate that leadership patterns were persistent and relatively stable. After that, the research attention has been shifted from individuals' traits to incorporating the effects of situational factors on leadership patterns.

Stogdill's (1974) second study reviewed another 163 trait studies published between 1948 and 1970. By comparing the findings of his second study to those in his first one, Stogdill acknowledged consistent results and identified complex relationships between groupings of individuals' traits and social interactions. Based on the findings, Stogdill made a more moderate argument about the relationship between individuals' traits and situational factors:

> "The trait approach tended to treat personality variables in an atomistic fashion, suggesting that each trait acted singly to determine the effects of leadership; [while] the situational approach, on the other hand, denied the influences of individual differences, attributing all variance among persons to the fortuitous demands of the environment (Stogdill, 1974, p. 78)."

Stogdill suggested researchers should not treat situational factors or personal traits as the sole determined leadership status; instead, personal traits and the requirements of the situation have to be incorporated into leadership effectiveness. Although the researchers have agreed that there are certain traits (e.g. intelligence, persistence, self confidence, sociability, responsibility, etc.) that are significantly related to how individuals perceive leaders, it is clear to see the breadth of traits related to leadership and the difficulty to select certain traits as superior ones or definitive leadership traits (Lord, DeVader, & Alliger, 1986; Mann, 1959). Stogdill's suggestion has provided a more holistic view of leadership research.

In recent years, there has been a resurgence of interest in the role of traits in effective leadership. However, instead of focusing on personality traits and general intelligence, recent studies have explored answers to these three questions: (1) what traits are related to leadership effectiveness; (2) what skills are related to leadership effectiveness; and (3) how do traits interact to influence leadership effectiveness (Yukl, 1989).

As a result, managerial motivation such as the desire for power and the desire to compete with peers (e.g., Berman & Miner, 1985; Miner, 1978), and specific skills such as technical and interpersonal skills (e.g., Bass 1981; Hosking & Morley, 1988; Boyatzis, 1982), have been identified as some of the promising predictors of leadership effectiveness. In addition, keeping the key principle of balance, or the moderate argument made by Stogdill, recent studies are more concerned with the balance between leaders within a management team: different leaders who have complementary attributes should compensate for each other's weaknesses and enhance each other's strengths to improve group performance (Yukl, 1989; Bradford & Cohen, 1984).

Although the trait approach has been an important stream in leadership research, and key findings on leadership traits have given formal organizations some benchmarks for selecting potential leaders, the trait approach has its own inherent weaknesses. First, as revealed by Stogdill (1948, 1974), the massive research effort in trait approach failed to find any traits that would guarantee leadership and succession. It also failed in identifying how leader traits relate to leader behaviors and leadership effectiveness, and has largely neglected the relevance of traits and situations. Therefore, these weaknesses led to a more balanced view to describe leaders and the nature of the situation that determines the relative importance of various traits. Furthermore, the findings led to a widespread acceptance of the assumption that the relationship between traits and leadership is moderated by situational factors (e.g., Bass, 1985; Kirkpatrick & Locke, 1991), which is not grounded in strong and reliable research. This tendency discloses the inherent weaknesses in trait approach: there are no guidelines to indicate which trait to measure in a given situation due to the discrepancies in the theories (Yukl, 1989).

Another major criticism is that the trait approach did not recognize the importance of followers in the leadership process. Factors such as the followers' personality traits, followers' learning processes in the workplace, and followers' behaviors in work groups all affect the leadership process and its outcomes (e.g., Dansereau, Graen, & Haga, 1975; Graen & Cashman, 1975; Graen, 1976). Criticism is also derived from the cultural consideration: some researchers argued that leadership traits are culturally determined. The boundaries of acceptable and unacceptable attitudes and behaviors desired by the majority of members within a particular culture are shaped by that culture (Kakabadse & Kakabadse, 1999). Bass (1990) recognized that in an era of globalization, cross-cultural differences make a considerable contribution in leaders' traits.

Thus, the major questions raised by Stogdill, Bass, Yukl, and other researchers have challenged the trait approach. As a result, attention on leadership research has shifted to incorporating the interaction of traits and situations and the impact of followers' behaviors on leadership. The relationship between leaders' behavior and situational factors led the way for leadership research in the following decade.

The Behavioral Approach

In shifting the study of leadership from traits research to leader behaviors, the scope of leadership research expanded to include the behaviors and actions of leaders toward subordinates in various situations. It emphasizes what leaders actually do on the job and the consequences of behavior to managerial effectiveness (Fleishman, 1953). Although different behavioral leadership theorists used different terms to classify leadership styles, the scope and the breadth of the concepts are quite similar (Bratton, Grint, & Nelson, 2005; Northouse, 2007). The majority of behavioral leadership research is based on two main types of behaviors: task-oriented and relationship-oriented (Bratton, Grint, & Nelson, 2005). The task-oriented behavioral approach has been concerned with discovering what activities are typical of managerial work and the process of managerial decision making and problem solving (e.g., Yukl, 1989; Cohen & Match, 1986; McCall & Kaplan, 1985; Simon, 1987). The relationship-oriented behavioral approach has focused more on the leader-follower relationship during the task accomplishing process, such as showing respect and support for followers (e.g., Mintzberg, 1973, 1979; Luthans, Rosenkrantz, & Hennessey, 1985; Kotter, 1982). The early behavioral approach relies mostly on descriptive methods such as direct observation, diaries, and anecdotes obtained from interviews. Descriptive research revealed that leaders' decision-making processes are highly political, and most planning is adaptive to changing conditions. Leaders need to make decisions based on incomplete or overwhelming information. Moreover, a mental agenda of short- and long-term objectives and strategies should be developed by effective leaders. The network of relationships inside and outside of the leader's unit is used to implement plans and strategies (Yukl, 2002).

Among early behavioral studies of leadership, two studies in the 1950s have provided the foundation for contemporary behavior theories of leadership: The University of Michigan studies and the Ohio State studies. Initially, these researchers were interested in defining the frequency with which the leaders engaged in certain kinds of behaviors. Therefore, they would be able to describe what effective leaders do in various situations and to examine differences in behavior patterns between effective and ineffective leaders.

Researchers at the University of Michigan focused on the effect of the leader's behavior on the performance of small groups and identified two discrete types of leadership behaviors: *production orientation* and *employee orientation*. Leaders are classified into these two clusters based on their behavior patterns (e.g., Katz & Kahn, 1951, 1978; Likert, 1961). Having a *production orientation* means emphasizing the production and technical aspects of work in small groups; on the contrary, leaders having an *employee orientation* will focus more on subordinates' personal needs and their individuality. However, the researchers' conceptualizations of production and employee orientations placed these two concepts at opposite ends of a single leadership continuum. As more research was conducted, the evidence indicated that the leader who emphasized high levels of productivity can also be employee oriented. Moreover, with respect to effectiveness, the Michigan researchers in their later research found that leaders who show high concern for both production and employee simultaneously are associated with higher group performance (Kahn & Katz, 1960).

Meanwhile, the Ohio State researchers investigated how leaders behaved when they were in charge of a work group (Stogdill & Coons, 1957). The research findings suggested two important dimensions underlie leader behaviors: *initiating structure* and *consideration*. *Initiating structure* describes a leader's behavior focusing on establishing clear patterns of communication and ways of completing tasks. *Consideration* gives special attention to working relationships and the mutual respect between the leader and the subordinates. Stogdill and Coons (1957) further argued that an effective leader will be able to increase both initiating structure and consideration and to maintain a balance between the two.

Although the University of Michigan studies and the Ohio State studies were conducted separately, their findings exhibited a high level of similarity.

Employee orientation labeled by the Michigan studies and consideration labeled by the Ohio studies refer to the degree of nurturing working relationships. Michigan's production orientation and Ohio's initiating structure focus on productivity and task completion. Their research efforts have contributed to a leadership research line, which has sought to identify the leader's behavior and its associated effectiveness (Yukl, 1989, 2002).

Later on, in the 1960s, Blake and Mouton developed their highly influential Managerial Grid. The model has been refined and renamed the Leadership Grid. Based on the leadership behaviors similar to those found in Ohio studies and Michigan studies, the leadership model has two major concerns: *a concern for production* and *a concern for people*. The two dimensions of effective leadership are independent of each other. Through different combinations, Blake and Mouton (1991) plotted five major leadership styles in the grid (e.g., authority-compliance, team management, country club management, middle-of-the-road management, and impoverished management). As a more accurate way of identifying the leadership style, the Grid provides incredibly practical value to organizational training and development.

Despite its application to management training and managerial effectiveness, the behavior approach does have its limitations. Like the trait approach, the behavior approach is unable to identify a universal style of leadership that is effective in the vast majority of situations. The so-called high-high style (high task-oriented and high relationship-oriented) indicated by the behavior approach has not been proved to be effective in a universal situation. Instead, findings have been contradictory and inconclusive (Misumi & Peterson, 1985). Another major criticism of the behavioral leadership is that they did not adequately demonstrate how leaders' behaviors are associated with performance outcomes. Yukl (1989) argued that task and relationship behaviors are too abstract to provide a basis for understanding the specific role requirements. In addition, the specific role requirements vary from context to context. Even though the behaviors that have been identified are all relevant for leadership effectiveness, their predictive power varies across situations. Thus, limitations which existed in the trait approach and the behavior approach resulted in the development of leadership research to include the *situation* as a variable in the process.

The Situational Approach

The involvement of situation as an important variable has largely enriched the study of leadership and leadership effectiveness. The situational approach not only emphasizes the importance of the leader's authority and attributes, but, more significantly, highlights contextual factors such as the attributes of subordinates and the nature of the external environment, which help explain leadership effectiveness.

Theories of situational leadership seek to identify key aspects of the situation that create demands and constraints on the leader. The development of this approach is based on the assumption that different behavior patterns will be effective in different situations and that the same behavior pattern cannot be applied to all situations. Therefore, leadership is composed of both "a directive and a supportive dimension, and each has to be applied appropriately in a given situation" (Northouse, 2007, p. 91). The inherent feature of situational approach results in the emergence of a wide variety of theories that try to determine the relevance of behavior pattern and situations.

Overall, these theories can be classified into two major subcategories: one category treats leader behavior as a dependable variable, which means researchers seek to discover how the situation influences behavior and how much variation occurs in managerial behavior across different situations. The other category seeks to discover how the variable of situation moderates the relationship between leader behaviors and leadership effectiveness (Yukl, 1989).

Due to the prominence of the situational theories, the following ones will be briefly reviewed: Path-Goal theory (House, 1971; House & Mitchell, 1974), LPC Contingency theory (Fiedler, 1967, 1978), LMX theory (Dansereau, Graen, & Haga, 1975; Graen & Cashman, 1975; Graen, Novak, & Sommerkamp, 1982) and Substitutes for leadership theory (Kerr & Jermier, 1978).

According to Path-Goal theory (House, 1971; House & Mitchell, 1974), the main task of the leader is to smooth the follower's path to the goal, using the most appropriate leadership behavior styles to help followers clarify their paths to both work and personal goals. House suggested that, generally, there are four types of behavior styles, which are directive, supportive, participative, and achievement oriented. Aspects of the situation such as the nature of the task, the working environment, and subordinate attributes determine the application of a certain type of leadership behavior style for improving subordinate satisfaction and performance. The proposition of Path-Goal theory is in the subordinates' motivation: Leaders use different leadership behavior styles to motivate subordinates' higher performance, and, by adopting certain style, leaders will influence subordinates to believe valued outcomes can be attained by making serious effort (House & Mitchell, 1974).

However, conceptual limitations of this theory pointed out that other explanatory processes such as a leader's influence on task organization, resource levels, and skill levels are missing (Yukl, 1981). The four leadership behavior styles of Path-Goal theory were formulated in terms of broad behavior categories, thereby reducing the likelihood of finding strong relationships to criterion variables. The full path-goal model has not been sufficiently tested and further conceptual refinement is needed (Yukl, 2002).

Fiedler's (1978) LPC Contingency Theory proposes that the fit between the leader's orientation and the favorableness of the situation determine the team's effectiveness in accomplishing a task. The leader effectiveness is assessed in terms of the leader's position power, task structure, and leader-member relationships in Fiedler's contingency theory. Fiedler used a semantic differential scale called the least preferred coworker (LPC) to classify a leader's orientation: *high LPC* (relationship-oriented) or *low LPC* (task-oriented). The model specifies that high LPC leaders are more effective in relationship-oriented situations and low LPC leaders are more effective in task-oriented situations.

There is considerable debate concerning the reliability and validity of the LPC model. After more than 20 years of research, different studies have generated different LPC scores, and the interpretation of LPC scores have changed several times (e.g., Strube & Garcia, 1981; Peters, Hartke, & Pohlmann, 1985). Specifically, the theory has been criticized because of its weaknesses in methodology, such as measurement biases and low measurement reliability. Other conceptual deficiencies, such as the ambiguity about what the LPC scale really measures and failure to include medium LPC leaders, have limited its validation for explaining leadership effectiveness (Vecchino, 1983; Yukl, 1989).

Leader-Member Exchange theory (LMX) is evolved from contingency theories (Dansereau, Graen, & Haga, 1975; Graen & Cashman, 1975; Graen & Uhl-Bien, 1995) and describes how leaders develop different exchange relationships over time with different subordinates. The basic idea behind LMX is that leaders form two groups of followers—in groups and out-groups. In-group members tend to have characteristics similar to those of the leader and are generally given greater responsibilities, more rewards, and more attention. In contrast, out-group members work outside the leader's inner circle and receive less attention and fewer rewards. Research on LMX is supportive in the area of organizational behavior: in-group members are more likely to engage in organizational citizenship behavior, while out-group members are more likely to retaliate against the organization (Townsend, Phillips, & Elkins, 2000).

At the present time, LMX theory is more descriptive than prescriptive. It describes a typical process of role making by leaders, but it does not specify what pattern of downward exchange relationship is better for leadership effectiveness (Yukl, 1989). Although cases have been done in special exchange relationships, e.g. special upward and special downward exchange relationship, the quantified measurement is missing due to the nature of descriptive method (Graen, Novak, & Summerkamp, 1982; Wakabayashi & Graen, 1984). Another conceptual weakness is that research on the basis for selecting in-group members is still very limited, and it is still not clear how this in-group member selection occurs (Duchon, Green, & Taber, 1984; Kim & Organ, 1982).

<u>The substitutes for leadership theory</u> (Kerr & Jermier, 1978) proposes the central idea that a variety of situational variables can substitute for, neutralize or even supplement the effects of any behavior by the leader. These situational variables can diminish or amplify the leader's ability to influence the performance and job attitudes of subordinates. Various characteristics of the subordinates, team cohesiveness, task, and organizational control serve as substitutes for leader behavior or neutralizers of its effects (Kerr & Jermier, 1978; Podsakoff et al., 1984; Podsakoff, MacKenzie, & Bommer, 1996). Researchers have been interested in testing the substitute model in the manner whether the substitutes variable moderates relationships between leader behavior and subordinates, such as employee role perceptions, job attitudes, and performance (Podsakoff, MacKenzie, & Bommer, 1996). Researchers have argued that leader behavior styles have received a considerable amount of

research attention over the past decades, but the substitutes variables have received far less attention. Thus, from this perspective, the theory has provided an alternative view to explain how each substitute variable influences leader effectiveness and subordinates' job perceptions.

In short, situational theories of leadership effectiveness have contributed significantly to managerial workshops and training programs. Some theories and models of situational leadership provide a straightforward approach that is easy to understand and can be applied in a variety of settings (Northouse, 2007). Moreover, the situational approach recognizes the flexibility of leaders (Yukl, 1989). To be an effective leader requires that a person should be able to adapt his or her behavior to cope with different situations. However, despite the practical value of the situational approach, its contribution to the large body of theoretical research is quite limited. Few of the theories have been tested, and the assessment of the validity and utility of the theories/models have not been evaluated by leadership scholars. The major criticism lies in its conceptual weaknesses in the theory, such as ambiguous constructs, lack of measurement of specific substitutes and situations, and lack of intervening explanatory processes (e.g., Yukl, 1989; Blank, Weitzel, & Green, 1986; Vecchio, 1987; Podsakoff et al., 1984). The lack of a strong body of research on situational theories of leadership has raised questions about the theoretical foundation of this approach.

Charismatic and Transformational Leadership

During the late 1970s and the early 1980s, leadership research experienced a paradigm shift from what is now frequently termed "traditional leadership" to the "new leadership" with the advent of charismatic and transformational approaches (Northhouse, 2007). Unlike the "traditional leadership" theories and approaches, which emphasized rational processes, the new approaches give more attention to the charismatic and affective elements of leadership and focus on followers' intrinsic motivation and individual development. As a new perspective to look at leadership, charismatic and transformational leadership is concerned with emotions, values, ethics, and long-term relationships, as well as followers' motives, needs, and satisfaction (e.g., Bass, 1985; Burns, 1978; House, 1977; Conger, 1985; Conger & Kanungo, 1987; Shamir et al., 1993).

In contrast to traditional leadership theories, the theories of charismatic and transformational leadership are broader in scope: they simultaneously involve leader traits, power, behaviors, and situational variables in a dynamic model. Moreover, the charismatic and transformational leaders articulate a realistic vision of the future that can be shared by subordinates. Organizational behaviorists in this area have proved that the benefits of charismatic and transformational leadership include broadening and elevating the interests of followers, generating awareness and acceptance among the followers of the mission of the organization, and motivating followers to go beyond their self-interests for the good of the organization (e.g., Bass, 1985, 1997; Beyer, 1998; Conger, 1999; House, 1976, 1999). As such, this research trend represents an important step toward greater integration in the leadership literature. Scholars have modeled this area in terms of leader characteristics, follower behaviors, the process, and the outcomes. Twenty years have passed since the conception of the theory, and now, charismatic and transformational leadership occupy a central position in leadership research. The field in general is heavily influenced by the "new leadership" school.

Leadership scholars' strong interest in charismatic leadership and the transformation and revitalization of organizations have their roots in Weber's (1947, 1978) original work on power and authority, which explained the rise of modernity, capitalism, and bureaucracy in the West and inspired scholars and managers to acknowledge the need to make major changes in the organization in order to survive. Trice and Beyer (1986), with a heavy sociological and Weberian emphasis, summarized Weber's (1947) original conceptualization of charisma into five elements: (1) an individual with exceptional powers or qualities, (2) a social crisis or situation, (3) a set of ideas providing a radical solution to the crisis, (4) devoted followers who are attracted to the exceptional person; and (5) the validation of the person's extraordinary gifts by repeated successes. By viewing charisma as a sociological phenomenon, Weber (1947) believed that the charismatic leadership is essentially framed by the voluntary acquiescence of followers (Beyer, 1999; Bratton, Grint, & Nelson, 2005; Northouse, 2007).

House's (1977, 1999) theory of charismatic leadership expanded and reinterpreted Weberian charisma by proposing the concept of organizational charisma and suggesting empirically measurable propositions. Specifically, House argued that organizational charisma is the more conventional type of charisma that has been studied by most leadership scholars. As a central issue of organizational charisma, organizational behaviorists are interested in exploring the following propositions: (1) the relationship between leader and followers, (2) the outcomes of the leader-follower relationship, and (3) the attributes of the leader (House, 1999; Hughes, Ginnett, & Curphy, 1999). According to House, organizational charisma de-emphasizes the extrinsic rewards or punishments. Instead, the role of leader is to express high expectations for followers and to help them gain a sense of confidence and self-efficacy; therefore, the followers will view work as an expression of themselves (see Conger, 1999; Conger & Kanungo, 1998). When leadership is examined as a more dynamic interactional phenomenon (e.g., the distribution of power and knowledge based upon the leader's position, leader-follower relationship, etc.), the effectiveness of leadership is dependent on the reactions of followers. Thus, the new approach has treated leadership as a matter of mutually reinforcing exchange relationship (Conger, 1999).

By completing a field-based dissertation, Conger (1985) examined the role of charisma in helping better understand upper-level leadership and competitiveness inside the organizations (see Hunt, 1999). Later, Conger and Kanungo (1987, 1988) teamed up and continued their research interests in charismatic leadership. They suggested that charisma is an attributional phenomenon: followers attribute charismatic qualities to a leader based on their observations of the leader's behavior. They proposed that charisma was more likely to be attributed to leaders who articulate a vision that is highly discrepant from status quo. For instance, leaders who make self-sacrifices, take personal risks, and are willing to incur high costs to achieve a shared vision will more likely be perceived as charismatic by their subordinates. Conger and Kanungo also argued that, as for situational variables, charismatic leaders are more likely to emerge when there is a crisis requiring major change or followers are dissatisfied with the status quo. Based on the theory, Conger and Kanungo developed a questionnaire (the C-K scale) to measure charismatic behavior. Their validation studies established moderately strong support for the scale (Conger & Kanungo, 1994, 1998).

At around the same time, Bernard M. Bass began to develop an interest in transformational leadership (see Hunt, 1999). The early theory of transformational leadership was developed mostly from descriptive research on political leaders (e.g., Burns, 1978). Bass' theory of transformational leadership was expanded and refined based on the works of Burns (1978) and House (1976). With a long history in leadership research, Bass regards the idealization of the leader by his or her followers as the most important feature of charisma (Bass, 1985). To elaborate the dynamics of the transformational process, Bass gives more attention to followers' rather than leaders' needs and to the emotional elements and origins of charisma (Northouse, 2007). Base' transformational model places transformational, transactional, and laissez-faire leadership on an active-passive leadership continuum and describes how these types of leadership are related (e.g., Bass, 1985, 1990; Bass & Avolio, 1993; Yammarino, 1993). In this model, Bass uses four factors to illustrate transformational leadership: idealized influence charisma, inspirational motivation, intellectual stimulation, and individualized consideration. Thus, he argued that charisma is a necessary but not sufficient condition for transformational leadership (Yammarino, 1993). The emphasis of his transformational leadership is to improve the performance of followers and develop followers to their full potential (Bass, 1985). Therefore, transformational leadership is defined in terms of the leader's effect on followers: leaders transform followers by making them more aware of the importance and values of task outcomes and by activating their higher-order needs.

To measure the behaviors involved in transformational leadership, Bass (1985) developed the Multifactor Leadership Questionnaire (MLQ), which became the most well known survey instrument in transformational research. Bass designed the MLQ to capture the essential behaviors of transformational and transactional leadership. Although most factor analyses supported the proposed distinction between transformational and transactional behaviors, a number of discrepancies and weak discriminant validity of the constructs have been identified (Bass, 1996; Yukl, 1999). The high, positive factor loadings and high interfactor correlations indicated weak discriminant validity of the factor structure. Therefore, Bass failed to separate the factors into distinct dimensions, which seriously threatened the validity of the instrument. Yukl (1989) suggested that future research should use a greater variety of methods for measuring leadership behavior and should not be limited to the narrow range of behaviors represented in the MLQ.

However, over the last twenty-five years, the methods used to measure charismatic and transformational leadership have been more elusive than conceptualizing it (Yukl, 1989, 1999). Frequently used qualitative methods include the use of archival data, interviews, and observations. Cases used more frequently were biographies of past presidents and interviews with CEOs or other leaders in the organization. Although it provides some insights into the nature of transformational and charismatic leadership, the descriptive research tends to be too imprecise for reaching firm conclusion about the reliability and validity of the model. It cannot provide a complete and objective examination of the relationships among the variables. As for the quantitative measures, the accuracy of the survey research is also reduced by the low level of measurement accuracy (Yukl, 1999). Thus, Yukl, Hunt, and other scholars suggested next-generation scholars to adopt intensive and longitudinal research that measures not only leader characteristics but also the influence processes, follower characteristics, and situational features (Yukl, 1999; Hunt, 1999).

Despite the methodological imperfection, conceptual weakness is another large area that has been attacked. Yukl (1999) criticized the conceptual weaknesses in charismatic and transformational leadership theories, and he pointed out that "one of the most important conceptual issues for transformational and charismatic leadership is the extent to which they are similar and compatible" (p. 298). Although many scholars and researchers treat the two approaches as equivalent, Yukl challenged the equivalent assumption by giving an accurate description of the two theories "as distinct but partially overlapping processes" (p. 299). Just as Bass (1985) proposed in his model, charisma is a necessary but not sufficient component of transformational leadership: a leader can be charismatic without being transformational. Because of the conceptual overlapping and a lack of consistency in using the two terms, it is difficult to compare transformational leadership to charismatic leadership.

Although most theories of transformational and charismatic leadership have been criticized for weak capacity to explain leadership effectiveness because of the conceptual weaknesses (Yukl, 1999), the new leadership school has sharply accelerated the development of leadership research (Hunt, 1999). For instance, the visionary aspects of the theories have extended the traditional leader's role into a transformational process; the recognition of the emotional reactions of followers in response to a shared vision has increased the importance of followers in the leader-follower relationship (Hunt, 1999). The increasing range of topics brought by the new leadership school has largely enriched the study of leadership.

Summary of Managerial Leadership Research

The past two decades have witnessed some real progress in contemporary managerial leadership research. A significant increase in the scope of conceptualization and a variety of methodology have been identified, which remarkably accelerates our understanding of leadership as a complex and dynamic process in the field in three ways. The first is the involvement of situational determinants, which has direct implications for the study of the important influence of contextual factors on leader behaviors (e.g., House, 1971; Hersey & Blanchard, 1988; Kerr & Jermier, 1978; Vroom & Yetton, 1973; Fiedler, 1978; Graen & Cashman, 1975). The second is the consideration of leader-follower relationship in which the subordinates' motivation and performance are treated as meaningful intervening variables that can influence leader behaviors (e.g., Yukl, 1981, 1989; Dansereau, Graen, & Haga, 1975). The third is the involvement of emotions and values, which makes an important contribution to the leadership transformation processes (e.g., Bass, 1985; Conger & Kanungo, 1998; House, 1977; Shamir et al., 1993).

Although the majority of theories and models have provided valuable practicality, only a few of them have been conducted to test propositions and to assess the validity and reliability. As a complex process, it is not surprising to see various leadership theories and models. However, inherent conceptual limitations reduce their predictive power. A common but sharper reality of leadership research relies on categories of leader attributes and/or behaviors that are defined too broad to be measured. The tradition of descriptive approach and pure theoretical development also reinforce the inherent weakness of leadership research. The lack of reliable and valid measurement of leadership as a complex process brings up the question of integrated theory.

The debates about the importance of leadership and the appropriate methods to use are still going on. One major controversy concerns the advantages of quantitative, hypothesis-testing research vs. descriptive-qualitative research. Researchers argue that questionnaires and rating forms that use fixed-response items are susceptible to a variety of biases, especially when the items do not involve specific, observable behaviors; meanwhile, proponents of quantitative methods argued that the data collection methods in qualitative-descriptive research are also susceptible to biases and distortions, and interpretation based on qualitative methods are sometimes very subjective. Therefore, from the review of these applications of leadership research, it is not difficult to recognize that the lack of empirical support for these theoretical propositions can presumably be traced to a rather simple source: there currently is little agreement as to how one should best define and hence measure the construct of leadership.

Culture Influences and Leadership

Western-Dominated Leadership Research

Although leadership has been a topic of study for social scientists for more than 50 years, Yukl (2002) points out that most of the leadership research was conducted in the United States, Canada, and Western Europe. Similarly, House (1995) notes that almost all prevailing theories of leadership are North American in character: "individualistic rather than collectivistic; emphasizing assumptions of rationality rather than ascetics, religion, or superstition; stated in terms of individual rather than group incentives; stressing following responsibilities rather than rights; assuming hedonistic rather than altruistic motivation and assuming centrality of work and democratic value orientation" (pp. 443-444). Western-dominated leadership research has limited the next-generation scholars' scope to explore new theories in specific cultures. Thus, as a result, many leadership scholars have called for "the need for a better understanding of the way in which leadership is enacted in various cultures and a need for an empirically grounded theory to explain differential leader behavior and effectiveness across cultures" (Dorfman & House, 2004, p. 56; see also Bass, 1990; Dorfman, 2004; Hofstede, 1980, 1993; House, 1995).

A review of the empirical cross-cultural leadership research reveals that many studies were interested in finding the effects of cultural differences on leader behaviors, attitudes, preferences, and motivations (see Bass, 1990). As a common way in cross-cultural research, national boundaries were used to specify the unit of study. An emerging tendency was also identified by Bass, which was the use of cultural boundaries as the criterion in cross-cultural research. Countries tend to cluster by culture in this approach. For example, the larger Anglo-American cluster includes the United States, Canada, the United Kingdom, Australia, New Zealand, and South Africa. Researchers argue that merging comparisons into a set of fewer but larger clusters of nations and cultures can provide more accurate and practical value in terms of leadership qualities and values (see Bass, 1990).

Bass also identified two major trends in cross-cultural research in leadership literature: (1) the application and examination of Western leadership theories in multiple national settings, and (2) the comparison of leadership styles of small groups in different nations. Bass further pointed out that the comparisons are made among the U.S., Western European, Latin Americans, and Far Eastern nations (Bass, 1990, pp. 763-766). Comparisons in other regions such as African, Eastern European, and Southern Asian countries are very limited.

When reviewing the cross-cultural leadership literature, Dorfman and House (2004) summarized several potential leadership topics that have been studied in a cross-cultural framework. The topics range from the origin of leaders (e.g., Shackleton & Ali, 1990; Huo & Randall, 1991), the relationship between societal modernization and specific leader behavior (e.g. Bass et al., 1979), unique role demands of leaders according to national or regional political systems (e.g., Bass, 1990; Dorfman & Howell, 1997; Steers, Shinn, &

Ungson, 1989), the variance of leadership prototypes across cultures (e.g., Gerstner & Day, 1994), followers' preference and acceptance of leadership styles (e.g., Scandura, Von Glinow, & Lowe, 1999; Hui & Tan, 1999), to leadership behavior patterns across countries (e.g., Dorfman, 1998; Dorfman et al., 1997; Smith et al., 1996).

The discussion of cross-cultural leadership research has helped Dorfman and House summarize and suggest three competing propositions of cultural influence on leadership effectiveness. The three propositions are labeled: (1) *the cultural congruence proposition*, which asserts that cultural forces affect the kind of leader behavior that is usually accepted and effective within a society; (2) *the cultural difference proposition*, which asserts that the introduction of selected values, techniques, and behavior patterns that are different from the common values in the society will lead to effective task performance; and (3) *the near universality proposition*, which asserts that there are some leader behaviors that are universally accepted and effective (Dorfman & House, 2004, pp. 64-66). Later on, they tested the three propositions in the GLOBE research program to identify universal as well as culturally contingent leadership attributes and behaviors in 62 countries (House et al., 2004).

As a worldwide and multi-method research project, the GLOBE research program intended to explore the complex effects of culture on leadership, organizational effectiveness, and economic competitiveness of societies. Extensive research efforts, including quantitative and qualitative, have been devoted to 62 cultures to find out the role of societal and organizational culture in influencing leadership and organizational processes. To differentiate the attributes of societal and organizational cultures, researchers in the GLOBE community identified nine core cultural dimensions, which are Uncertainty Avoidance, Power Distance, Institutional Collectivism, In-Group Collectivism, Gender Egalitarianism, Assertiveness, Future Orientation, Performance Orientation, and Humane Orientation. The findings exhibited strong support as hypothesized: there is significant differentiation among cultures and significant respondent agreement within cultures for all nine dimensions.

Another major issue addressed by the GLOBE project is to find out the extent to which specific leader characteristics are universally endorsed as effective leadership, and the extent to which these characteristics and qualities are linked to specific cultural dimensions. Findings suggested six leader behaviors, including Charismatic/Value-Based, Team-Oriented, Participative, Humane-Oriented, Autonomous, and Self-Protective, are globally endorsed as contributing to outstanding leadership. Furthermore, 35 specific leader attributes and behaviors are culturally contingent: they are considered to be contributors in some cultures and impediments in other cultures (Dorfman, Hanges, & Brodbeck, 2004).

Overall, findings of the GLOBE research are consistent with the hypotheses, which indicate that cultural differences strongly influence important ways in which people think about leaders, as well as the social norms concerning the status, influence, and privileges granted to leaders (Dorfman, Hanges, & Brodbeck, 2004, pp. 697-702). Leaders who are aware of a culture's values and practices can make conscious decisions regarding their leadership practices and crisis management within an organization.

Culturally Specific or Universally Endorsed

The above brief review of empirical research clearly shows that leadership exists in all societies and is essential to the functioning of organizations worldwide. It is also quite obvious that cultural forces influence many aspects of the leadership phenomena. Though scholars have learned a great deal during the phases of exploring the cultural influence on leadership processes, there is still a controversial question calling for our attention: Is leadership culturally specific or universally endorsed? The former is thought to be found from the process of maintaining cultural divergence whereas the latter growing out of increasing cultural convergence. Not surprisingly, the literature contains substantial empirical evidence supporting both views.

Researchers have argued that cultural groups may vary in their perceptions of the most important characteristics of effective leadership; therefore, societies having different cultural profiles will expect different leadership prototypes (Bass, 1990; Hofstede, 1993). With different conceptions, the evaluation and meaning of many leader behaviors may also strongly vary in different cultures: We have research constantly reports leader behaviors and attributes to be effective in some cultures but ineffective in other cultures (Den Hartog et al., 1999). For example, House, Wright, and Aditya's research (1997) indicates that leader attributes, behaviors, status, and influence vary considerably as a result of culture influence in the countries or regions in which the leaders function. Meanwhile, Bass, Burger, Doktor, and Barrett (1979) concluded from their study that national boundaries did make a considerable difference in leaders' goals, interpersonal competence, emotional stability, and leadership style. Consistent with these findings, based on a survey of managers in a single multinational corporation, Griffeth, Home, DeNisi, and Kirchner (1980) also found the variance in managers' attitudes, behaviors, and styles could be accounted for by their nationality.

However, during the process of exploring cultural differences and unique attributions of leadership, we cannot necessarily preclude the discovery of universal tendencies that are common to a wide variety of cultures and societies (Bass, 1990). Despite wide-ranging differences in cultural norms across countries studied, Smith and Peterson (1988, 1995) found commonalities in the manner by which managers handled relatively routine events in their work. As another example, Bass, et al. (1979) used standard survey procedures in 12 countries and found similar attributes associated with managers: factors such as being proactive, using less authority to get work done, and having a higher effective intelligence were universally established.

As multinational corporations increased rapidly in number, they also automatically increased the speed of washing out the cross-cultural differences in transcending organizational functions and the effects to subordinates in local offices. The same traits and measurements of managers' abilities in other countries who are working in the same multinational corporations exhibit the predictive power of North American leadership style (Bass, 1990). A more frequent intercultural mix of foreign ownership and local management style continues to grow, and more converging values in leadership are identified in terms of leaders' rewarding and disciplinary behaviors and their effects on group performance (Podsakoff et al., 1986). Researchers argued that, to complete relatively uniform tasks, universal traits would make the procedure easier and faster. Specifically, the socialization processes that occur after one enters an organization may result in uniform requirements that transcend cultures (Bass, 1990). As a result, more support is found in transformational and charismatic leadership research in diverse countries (e.g., Bass, 1997; Bass & Avolio, 1993; Howell & Avolio, 1993; Koh, Terborg, & Steers, 1991).

However, the difficulty of clarifying the diverse cultural specifics and cultural universals has led the researchers to subscribe to a moderate statement, which agrees that the basic functions of leadership do have universal importance and applicability, but the specific ways in which leadership functions are enacted are strongly affected by unique cultural forces. Synthesizing from existing research, it is easy and logical to identify the idea that a balance should be maintained between universal and specific cultures (see Chemers, 1997; Dorfman & House, 2004; House et al., 1997; Smith & Peterson, 1988). Thus, in this dissertation, the author decides to adopt the moderate statement about cultural influence on leadership effectiveness: Some aspects of excellent leadership in public relations could be universally endorsed but others could be culturally specific. Although public relations is a field that has not been studied in terms of leadership processes, the author believes that the basic functions of leadership in public relations could be universally applicable and be culturally specific when enacted in a unique culture.

Public Relations Research and Leadership

Although leadership has been little explored by public relations scholars as an essential component of excellence in communication management over the past decades, we cannot ignore the fact that the assumption of excellence in public relations has its roots in leadership and organizational studies. More valid evidence of how public relations management contributes to organizational effectiveness has been identified. At the same time, more public relations scholars have recognized the importance of applying leadership skills to develop successful communication professionals, the importance of applying appropriate leadership style in public relations practice, and the importance of leadership effectiveness in helping public relations professionals successfully influence organizational decisions, actions, and values and, eventually, in gaining stature and respect inside organizations (e.g., Aldoory & Toth, 2004; Berger & Reber, 2006; Berger, Reber, & Heyman, 2007; Bowen, 2008; Choi & Choi, 2007; Grunig, Grunig, & Dozier, 2002; Holtzhausen & Werder, 2008).

As one of the most comprehensive research projects that has been done in the field of public relations, the IABC Excellence Study provides not only a conceptual framework for understanding the functions of public relations; but more importantly, the theoretical advances revealed by research findings have indicated the necessity of discussing leadership and its application in the scope of excellent public relations (Grunig, 1992; Grunig, Grunig, & Dozier, 2002). The Excellence Theory investigates the characteristics and values of a public relations unit could have at the program level, the departmental level, the organizational level, and the economic level. The researchers suggested that, to achieve excellence in public relations and communication management, public relations managers (leaders) should be able to explain "*why* public relations contributes to organizational effectiveness and *to what extent* by asserting that public relations has monetary value to the organization" (Grunig, Grunig, & Dozier, 2002, p. 10).

Specifically, the researchers suggested the necessity for the organization to empower public relations as a critical management function: the senior public relations executives (leaders) should be members of the dominant coalition of the organization and be involved with the strategic management processes of the organization, in order to bring publics' voices up and eventually affect key organizational decisions. To be able to carry out the communication and managerial function of the public relations unit, public relations leaders should have the knowledge needed for the managerial role. Moreover, at the organizational level, the organizational context in which the public relations unit functions could nurture or impede excellence in communication management. Thus, the researchers argued that a participative organizational culture, a symmetrical system of internal communication, equal opportunities and high job satisfaction among employees are indispensable to help shape excellent communication management (Grunig, Grunig, & Dozier, 2002, pp. 12-18).

In the discussion of empowerment in the profession, public relations researchers found that most public relations professionals failed to gain power and influence inside organizations not just due to the devaluation of organizational executives, but also because of the lack of empowerment capabilities by themselves. The lack of professional expertise, leadership skills, organizational knowledge, and inexperience with organizational politics and power relations impeded the empowerment process (e.g., Berger, 2005; Berger & Reber, 2006; L. Grunig, 1992; Grunig, Grunig, & Dozier, 2002).

For instance, Berger and Reber's (2006) power relations theory discusses the use of power to make public relations units more active, effective, and ethical in organizational decision making. The researchers made the assumption that public relations is inherently political; therefore, they suggested that "individual professionals can increase their influence if they become more politically astute, employ more diverse influence resources and tactics, and exert greater political will in organizational arenas where decisions are shaped through power relations" (Berger & Reber, 2006, p. 2). The researchers identified five categories of influence resources and tactics, which are individual, structural, relational, informational, and systemic, that public relations professionals can use to exert their influence and get things done in organizations. By using diverse influence resources and tactics, public relations professionals will be able to increase their influence and engage in ongoing power relations inside organizations and successfully influence organizational decisions.

Based on the propositions that the power relations theory has made, Berger, Reber, & Heyman (2007) further explored factors which influenced public relations executives to achieve professional success and maintain their leadership positions inside organizations. Generated from interviews with 97 senior public relations executives in the field, the researchers identified diverse factors and patterns, such as communication skills, proactive nature, relationships and networking, and interpersonal skills, which would contribute to success in public relations.

Another seminal study in public relations leadership, Choi and Choi (2007) adopted a behavioral approach to explore what leadership means in public relations. By defining PR leadership as "the process of influence which leads to organization-wide collaborative endeavors to achieve public relations goals" (p. 2), Choi and Choi identified six distinct public relations leadership behaviors that would influence the value of public relations in an organization. Behaviors such as providing organization members with a clear vision about the organization's public relations policies and strategies, exerting upward influence in the organization, acting as a changing agent, and creating alliances inside and outside of the organization have been proved to be effective in achieving public relations leadership. Although their quantitative investigation was focused on the behavioral dimension of leadership in public relations, qualitative results have indicated the importance of individual traits and competencies in defining public relations leadership, which provides valuable insights for future research in public relations leadership.

The relationship between leadership styles and the application of public relations practice has been another area that public relations scholars are interested in. Based on a national survey of PR professionals, Holtzhausen and Werder (2008a) investigated how leadership styles have been presented in public relations practice. The research findings indicated the prevalence of transformational leadership style and inclusive leadership style in public relations environments. More importantly, the researchers argued that, although the two prevalent leadership styles have different focuses in application (e.g., transformational leaders focus on inspiring followers through communication, while inclusive leaders engage in participative practices), they are strongly related. The application of inclusive leadership style would make a great contribution to the transformational leadership behaviors, which eventually will affect the effectiveness of public relations strategies.

The contingency theory in public relations is another theoretical perspective to view public relations leaders' functions in achieving excellence in communication management. The contingency theory addresses the conflictual and strategic relationships between an organization and its publics and focuses on how public relations leaders of the organization lead to the strategic management of the relationships. Thus, it proposes an organization-public relationship continuum from pure advocacy to pure accommodation (e.g., Cameron, Cropp, & Reber, 2001; Reber & Cameron, 2003; Shin, Cameron, & Cropp, 2006). Numerous scholars have advanced the contingency theory in public relations by conducting empirical research. Evidence has indicated that the organization-public relationship is a dynamic process at any given time, and public relations practice may be accommodative of a public in one situation but adversarial in another situation. The changing circumstances have determined the key role for public relations leaders in assessing internal and external opportunities and threats and then choosing the right position along the continuum.

SUMMARY OF REVIEW AND RESEARCH QUESTIONS

The review of the literature on leadership research and public relations research is suggestive with regard to why leadership may prove to be critical in increasing the value of public relations and in achieving public relations effectiveness. Research projects reviewed have been an initial effort in helping PR professionals and scholars understand what leadership means to public relations profession. Taking different approaches and paths, the researchers' efforts have proved the growing importance of leadership in influencing the value of public relations. Now, it has been widely recognized that excellence in public relations is associated with the attributions of excellent leadership. With the advocacy of Public Relations Society of America (PRSA), the Arthur W. Page Society, and the Plank Center for Leadership in Public Relations, public relations leadership has become an area that is receiving attention both in the profession and the academia.

However, existing studies explored leadership in public relations is only one aspect or another, no matter qualitative or quantitative. For instance, the behavioral approach has investigated important behaviors related to public relations leadership; the style approach has recognized the most common types of leadership styles applied in public relations; and the success study has examined key factors that would contribute to professional success. Although each study has provided great insights into the understanding of the nature of public relations leadership, none of them could finish the task of interpreting public relations leadership comprehensively.

As a new area, public relations leadership is experiencing a process of theory construction segment by segment until we could obtain a whole view of this construct. Despite the prevailing pattern of segmentation in current research on public relations leadership, the author follows the argument about leadership research Yukl (1989) has made: "…the number of studies that straddle more than one approach is slowly increasing, and the different lines of research are gradually converging. When the sets of variables from different approaches are viewed as part of a larger network of interacting variables, they appear to be inter-related in a meaningful way…" (p. 274).

Thus, to better conceptualize excellent leadership in public relations, the author adopts a comprehensive and integrated approach, which will encompass the major approaches in leadership research (e.g., the traits approach, the behavioral approach, the situational approach, etc.). With the major focus of defining the construct of excellent leadership in public relations, this dissertation will explore and identify the construct's dimensions.

Given the increasing globalization of industrial organizations and in responding to a call for cross-cultural leadership theory and research, the proposed project extends the framework of excellent leadership in public relations to an international scope. More importantly, the researcher applies the proposition that the generic principles of public relations can be found in all nations and societies to this study (e.g., Hung, 2007; Chen, 2007; Sriramesh, 2007; Wakefield, 2007). Although dimensions of excellent leadership in public relations might be universally endorsed, cultural specified differences are also expected. Conducting a more comprehensive study of an already complex area will not only offer insight into what research has produced, but also provide suggestions on what remains to be done to build greater understanding of excellent leadership in public relations. Thus, the specific objectives of the proposed study include answering the following five fundamental research questions. The approach used to explore and assess the answers is briefly explained after each research question.

RQ1: How is excellent leadership defined in public relations?

The review of literature has reflected diverse but fragmented approaches being used to define and explore the construct of leadership. Stogdill's (1974) comment on the research efforts people have put on the discipline truly reflected the controversy over the appropriate definition of leadership: "There are almost as many definitions of leadership as there are persons who have attempted to define the concept" (p. 259). Although, the discussion of leadership in the discipline of public relations is a relatively new topic, the researcher believes that, as a complex phenomenon, the construct itself shares a lot of common features across disciplines. Therefore, the researcher would like to use the grounded theory perspective to integrate various concepts of leadership as a source of different perspectives to enrich the conceptualization process. In addition, in-depth interviews with senior public relations practitioners would be used as a paired approach to provide information relevant to the entire range of definition.

RQ2: As a complex, multifaceted phenomenon, what key dimensions does the construct of excellent leadership in public relations encompass?

As the researcher has argued, just like the discussion of leadership in other disciplines, the construct of leadership in public relations also represents a complex, multifaceted phenomenon in terms of its value to facilitating communication effectiveness. Therefore, it is realistic and practical to explore those key dimensions which predict the phenomenon in a meaningful way and by an empirical approach. Prior research in leadership and communication management provides a steady stream of theory suggesting essential features an individual should possess in order to be successfully involved in the organizational decision-making process. Thus, to explore this research question, the researcher would like to use the grounded theory approach again to identify research of domain first, followed by the measurement theory approach suggested by Churchill (1979) and Gerbing and Anderson (1988). Empirical tests of higher-order measurement model are conducted to valid and refine the model and to confirm the key dimensions.

RQ3: How are organizational structure and culture related to the achievement of excellent leadership in public relations?

To specify the relationship between the external environment factors, such as the organizational structure and culture, and the leadership construct, the researcher further develops the measurement model into a structural equation model. Therefore, data collected through an online survey would be used to assess if there was a causal relationship between the two constructs. And if so, how would the causality be relevant for leadership effectiveness.

RQ4: Are some dimensions of excellent leadership in public relations universally relevant while some are culturally specific?

RQ5: What core values and qualities of public relations leadership do different cultures emphasize?

These two research questions are proposed based on the debate over the cross-cultural research in leadership. As the researcher reviewed, scholars have expressed that cultural similarities and differences in the area of leadership are of particular concern. The universality of commonly accepted leadership behavior and principles is emerging as an area of interest for both researchers and practitioners, even though the diverse cultural specifics cannot be ignored. Since the researcher has subscribed to a moderate statement as the theoretical foundation, which agrees that the essential dimensions of leadership share universal applicability, but unique cultural forces may generate specific responses, the empirical approach used to explore the two cultural-relevant questions should also reflect the balanced view.

Specifically, to explore the answers for RQ4, multiple-sample analysis is conducted to assess measurement invariance of those essential dimensions across three groups (demographic features of three groups are explained in the section of data collection). The universality of the dimensions is expected to achieve in the analysis at different levels. To test the influence of specific cultural forces addressed in RQ5, in-depth interviews with experienced practitioners in multiple locations (e.g., U.K. and Singapore) would be used as a resource to substantiate the notion of distinctive prototypes, if there is any.

In short, the five fundamental research questions are proposed to guide the empirically testing process of this dissertation. Although some issues reflected in the research questions (e.g., the definition, the multi-faceted nature, the cross-cultural concerns, etc) have already generated debate and controversy in leadership research, the researcher would like to argue that it is quite necessary to investigate these issues in an understudied discipline, public relations, and use the findings as the basis to raise more research interests in the public relations area. In the following chapter, the researcher explains the use of grounded theory approach to propose the definition of excellent leadership in public relation and an integrating conceptual framework that encompasses each of the important dimensions relevant for excellence in public relations leadership.

Chapter III

THE INTEGRATED CONCEPTUAL MODELS

A Brief Overview

From the review of leadership research and public relations research, an integrative conceptual model, A Multilevel Measurement Model of Excellent Leadership in Public Relations, is proposed (see Figure 1.1). This model is an integration of five key dimensions and five sub-dimensions of excellent leadership in public relations. It is important to note that the purpose of this proposed measurement model is to identify what constitutes excellent leadership in public relations since previous research has agreed that leadership is a dynamic and reciprocal influence process encompassing many determinants and elements. Moreover, the organizational structure and culture is embedded in the model as a situational variable to test its impact on excellence in public relations leadership. Thus, a structural equation model is proposed to specify the causal relationship between the constructs of organizational structure and culture and leadership (see Figure 1.2 for the conceptual path diagram).

The integrating conceptual models consist of the following propositions:

1. *The attributes and entities associated with a specific culture not only predict organizational structure and culture, but also influence public*

relations leaders' behaviors that are most frequently enacted to achieve excellence in leadership in that particular culture.

2. *Within the concept of excellent leadership itself, PR leaders can apply traits and explicit knowledge and take actions to reduce constraints, strengthen internal and external relations, and favorably influence strategic decision-making.*
3. *At the same time, the achievement of excellence in leadership may be overwhelmed by strong situational influences such as the organization structure and culture, as well as the belief and values associated with the society.*

Figure 1.1: A Multilevel Measurement Model of Excellent Leadership in Public Relation

(Conceptual Model)

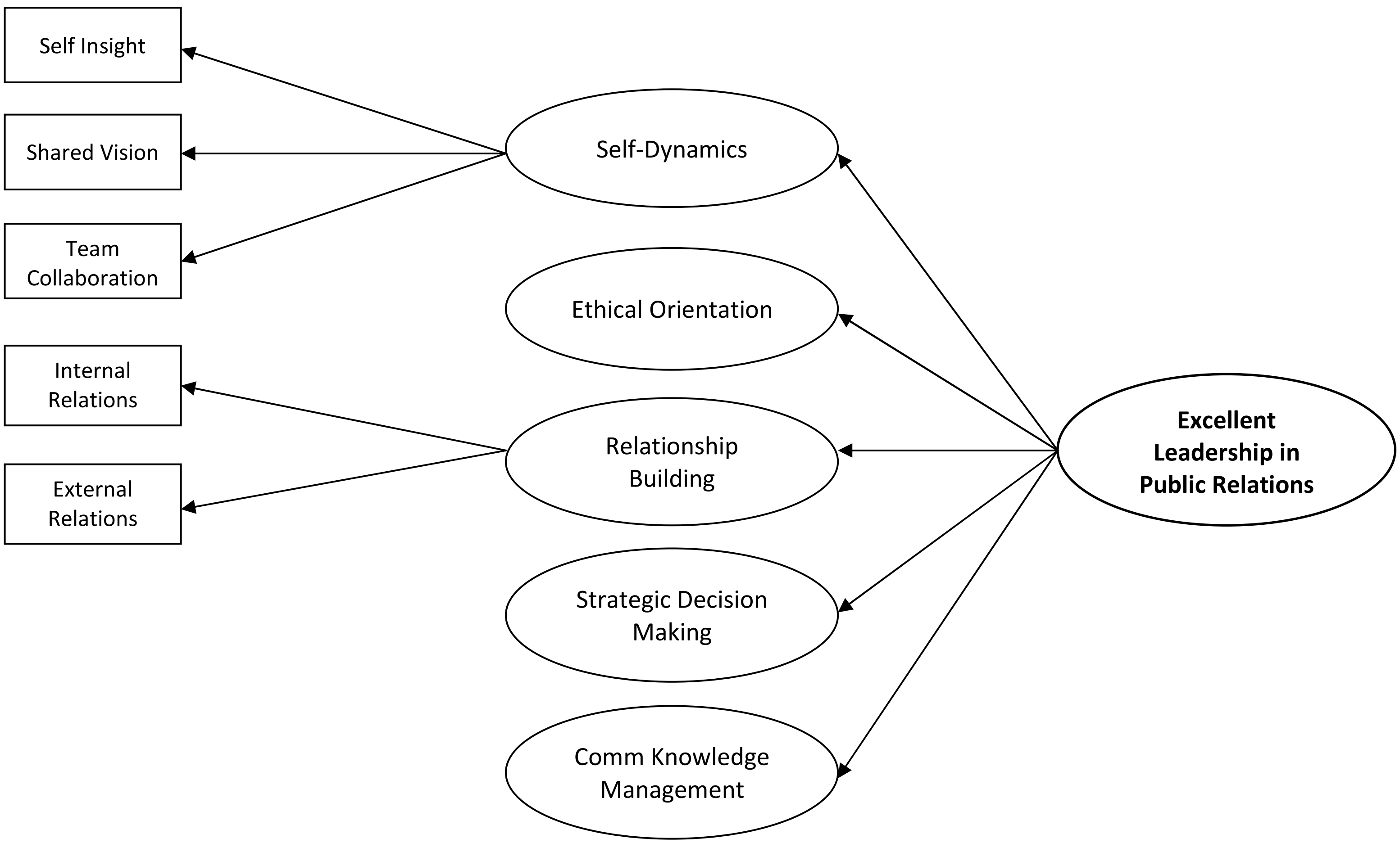
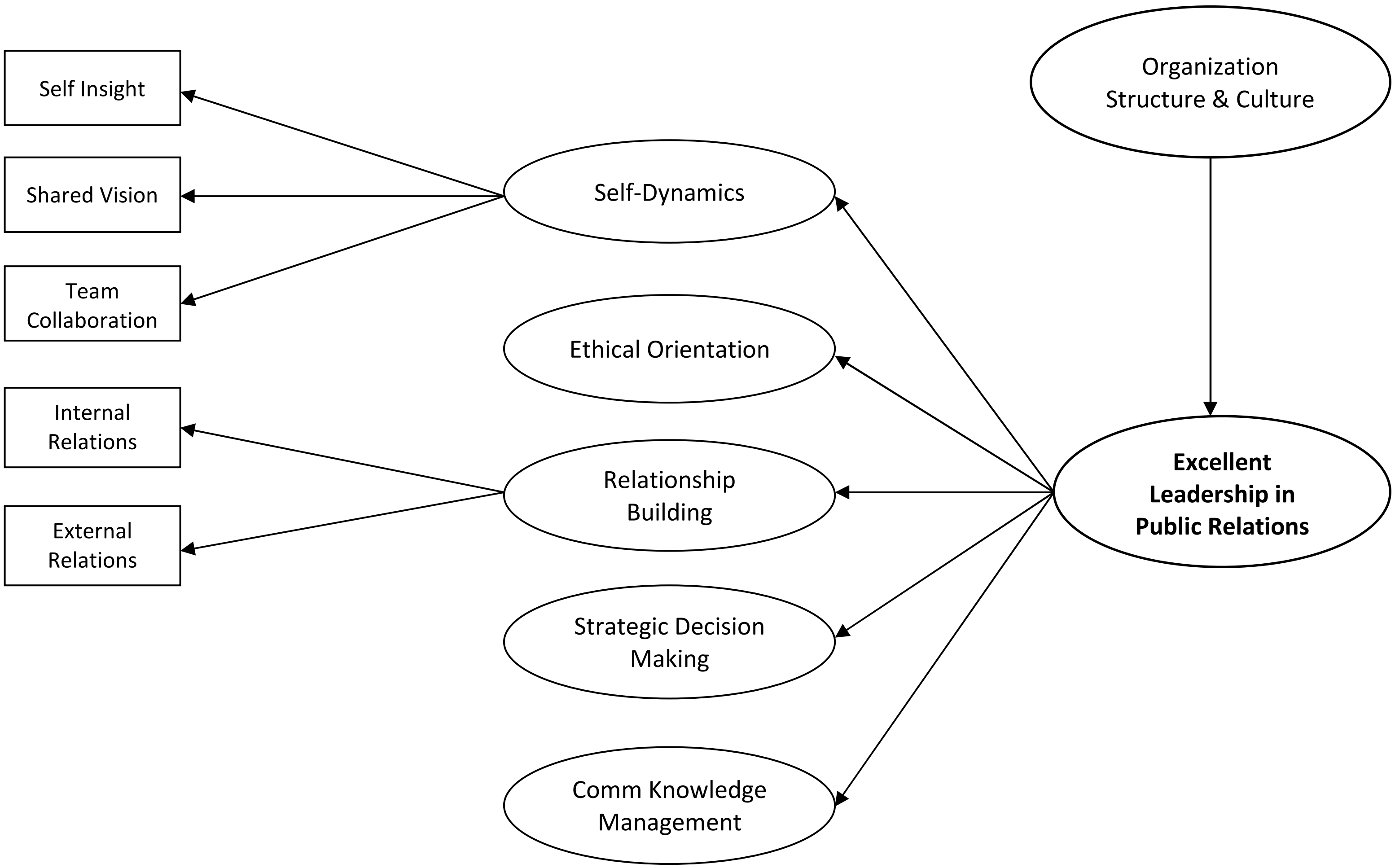


Figure 1.2: A Structural Equation Model of Excellent Leadership in Public Relation

(Conceptual Model)



Conceptualization of Constructs

After reviewing numerous definitions of leadership that have been proposed, the author offers a comprehensive conceptualization which synthesizes a source of different perspectives on this complex, multifaceted phenomenon. This integrated approach covers major controversies and issues in leadership research literature, including influencing team maintenance and identification, influencing task objectives and strategies, influencing strategic decision-making processes in organizations, and influencing the culture and value of an organization. As a matter of fact, the deep agreement about identification of leaders and leadership processes will make the application of leadership construct greatly vary across cases, situations, or people. Thus, to ensure the conceptualization and measurement of this construct to be sensitive to different factors, the author decides to define excellent leadership in public relations broadly in this study to include individuals' personal attributes, leaders' behavior, role relationships, influence over followers, and influence on task goals. The conceptualization is presented as:

> Excellent leadership in public relations is a dynamic process that encompasses public relations executives' personal attributes and efforts in leading the team to facilitate mutual relationships inside and outside of organizations, to participate in the organization's strategic decision making processes, to contribute toward the communication effectiveness, and to leverage the performance of the organizations of which they are members.

Based on the assumption that excellent leadership in public relations is a multifaceted phenomenon, the author proposes five major dimensions that the construct of excellent leadership in public relations comprises, which are

Self-Dynamics, Ethical Orientation, Relationship Building, Strategic Decision-Making Capability, and Communication Knowledge and Expertise Capability. The following sections further develop the content and theoretical grounding of each dimension and its sub-dimensions.

Dimensions 1: *Self-Dynamics*

Self-dynamics refers to the extent to which excellent leadership is perceived to be an inherent part of the leaders' personal attributes, which include the leader's personality, skills, styles, and envisioning ability. Three sub-dimensions, *self insight, shared vision, and team collaboration*, enable maximization of leaders' self-dynamics (Bass, 1990; Northouse, 2007; Stogdill, 1974; Yukl, 1989).

This dimension of leadership in PR has been incorporated into many definitions and research trends in leadership literature. Since it emerges as one of the most important facets of leadership throughout the history of leadership research, it is necessary to keep the dimension when discussing excellent leadership in public relations. The traditional trait approach, skills approach, and style approach of leadership research have identified certain qualities, personalities, and attributes associated with successful leaders (e.g., Bass, 1990; Stogdill, 1948, 1972; Yukl, 1989). Consistent findings are also identified in limited research on public relations leadership. For instance, Choi and Choi (2007) identified a number of personality and skills, such as assertiveness, commitment, confidence, and responsibility, as important features in defining leadership in public relations. Berger, Reber, and

Heyman's (2007) study also acknowledged the importance of positive personal traits to professional success in public relations. Some of the most desired characteristics in hiring PR professionals include enthusiasm, energy, confidence, and flexibility. The consistent findings across the literature support the conclusion that the personal attributes cannot be ignored when we define dimensions of leadership in PR. The qualities and attributes associated with PR leaders are a diversity of dynamic forces in defining excellent leadership in PR.

Sub-Dimension 1: Self Insight

Self insight refers to the extent to which leaders know their strengths and weaknesses and understand public relations environments in order to adapt strategies and achieve organizational goals (London, 2002). To communicate effectively, public relations leaders must leverage their existing capabilities that favorably position themselves within organizations. Self insight comprises a crucial element of the self-dynamic dimension needed to transform and transport communication initiatives throughout the organization. Through the linkage of self insight and communication systems in an organization, fragmented flows of information and strategies can be integrated. These linkages can also eliminate barriers to communication that naturally occur between different parts of the organization, even inside the communication team. Leaders who do not understand themselves are unlikely to have an accurate view of the situations or to be sensitive to the environments. Self insight is derived from leaders' personality traits and general intelligence, but it focuses more on the managerial motivation and specific skills and role requirements for public relations managers.

Sub-dimension 2: Shared Vision

Shared vision refers to the extent to which organizational members are inspired by a shared vision which specifies organizational values and personal beliefs in making things happen and personal desires to change things (Leonard, 1995; Kouzes & Posner, 2002). As an important feature of being a leader across different professions, a vision can incorporate not only a vision statement that conveys a clear view of the future and desired direction of the organization, but it can also incorporate a system of organizational values (Gold, Malhotra, & Segars, 2001). More importantly, only creating a compelling vision is insufficient to significant changes: leaders should have the ability to visualize positive outcomes in the future and communicate them to followers, which is to enlist followers into that shared vision in order to reach the shared values (Kouzes & Posner, 2002).

The importance of providing vision was identified in Choi and Choi's (2007) study of PR leadership. They argued that PR leaders should be able to provide organizational members with a clear vision about the organization's public relations policies and strategies. As a single unit within an organization being aligned with other divisions, PR leaders can express their distinctive functions by envisioning the corporate values, which permeate the organization and provide people with a needed sense of purpose that transcends their daily activities. Without common representation of compelling visions, it would be difficult to prompt the necessary changes for the organization to achieve its desired future objectives. Therefore, it is necessary for public relations leaders to engender a sense of involvement and contribution among employees and dominant coalitions through an articulated and communicated vision.

Sub-dimension 3: Team Collaboration

Team collaboration refers to the leaders' abilities to support the PR team and the organization to execute public relations strategies and to achieve excellence in communication management. It is important in leveraging the compelling visions and communication efforts. Working together as an intellectual effort describes the feature of team collaboration for PR leaders. By recognizing leadership as a team effort, PR leaders have the responsibility to foster collaboration. Kouzes and Posner (2002) interpreted collaboration as "the ability to lovingly cooperate that will determine success" (p. 242). Thus, it is the PR leaders' role requirement to create a climate of trust and flexibility within the team, to facilitate positive interdependence among team members, and to support face-to-face interaction between team members and leaders. Thus, team collaboration works as an essential part to support self-dynamics of PR leaders.

Dimension 2: *Ethical Orientation*

Ethical orientation refers to the extent to which public relations leaders believe in and enact professional values and standards when ethical and legal dilemmas arise and responsibilities and loyalties conflict (Bowen, 2004; J. Grunig & L. Grunig, 1992; Heath & Ryan, 1989).

The measurement of ethical leadership can be located in a great amount of management literature, which has been generally defined as "ethical leadership theory" (Northouse, 2007). Ethical leadership emphasizes an organization's actions to achieve goals of maximizing profits while creating the greatest good for the greatest amount of people (Craig & Gustafson, 1998). Related discussion about communication ethics, media ethics, and business ethics has contributed to the development of ethical knowledge in public relations. As a major concern in the field of public relations, ethical performance cannot be ignored when we try to define the dimensions of excellent leadership in PR. Most public relations researchers endorsed the idea that public relations professionals acting as the ethical conscience of their organization (Heath & Ryan, 1989). Public relations professionals' expertise in relationship building, crisis management, and reputation management has made ethical concern a natural response.

Many studies in public relations have yielded consistent results about ethical consideration from the perspective of practitioners: "Many public relations practitioners are placing ethics at the heart of their leadership practices," and public relations practitioners feel they should "serve as ethics counselors to the dominant coalition" (Choi & Choi, 2007; p. 25). Thus, ethical orientation is an inherent dimension of public relations leadership if the goal of communication management is to achieve excellence.

Dimension 3: *Relationship Building*

Relationship building refers to the extent to which network resource sharing and relationship building are perceived to be crucial for public relations leaders to facilitate mutual benefits for the organization and their publics. The relationship building infrastructure also has multiple dimensions: internal relations and external relations.

This dimension of excellent leadership in public relations explains the importance of relationship and networking in achieving excellence in communication management, since the nature of public relations is about developing and nurturing relationships (e.g., Broom, Casey, & Ritchey, 2000; Bruning, 2000, 2002; J. Grunig & Huang, 2000; Hon & J. Grunig, 1999; Ledingham, 2001, 2003). Relational theory in public relations has acknowledged the unique and potential value of relationship building in PR: To be viewed as idealistic, critical, and managerial, public relations leaders strive to maintain high quality of relationships with key publics (e.g., Bruning, 2002; Ledingham, 2001).

Empirical research also identified the importance of relationship building to succeed in communication management for PR executives (e.g., Berger, Reber, & Heyman, 2007; Hon & J. Grunig, 1999). Researchers found that most PR professionals emphasize the importance of both relationships with external audiences and internal/personal relationships inside the organization to gain influence and achieve goals. Thus, relationship building is another inherent role requirement for PR leaders. The involvement of interaction, transaction, exchange, and linkage between an organization and its publics makes excellence in communication management more pronounced.

To be more specific, the researcher would like to argue that two sub-dimensions: internal relations and external relations, enable maximization of public relations leaders' relationship building capabilities.

Sub-dimension 1: Internal Relations, which specifies the responsibilities for public relations leaders to facilitate a productive environment among employees, as well as an open, participative, and less authoritarian relationship between employees and senior managers.

Sub-dimension 2: External Relations, which refers to a wide variety of public relations functions to balance the interests of the organization and its key publics, which include public affairs, community relations, investor relations, and media relations.

Dimension 4: *Strategic Decision-Making Capability*

Strategic decision-making capability refers to the extent to which public relations leaders understand external sociopolitical environments and internal organizational structures, processes and practices, and are able to translate that knowledge into effective advocacy and to get involved with strategic decision-making processes in the organization.

As a unique dimension, strategic decision-making capability refers to public relations leaders' astuteness about an organization's external sociopolitical environments, as well as the organization's internal power relations. The concern for organization's external sociopolitical environments will be reflected in public relations leaders' behaviors of taking responsibilities for interpreting the organization's non-commercial functions and managing what happens in the public affairs arena. The concern for organization's internal environments will be a challenge for public relations leaders to balance internal power relations and exert upward influence in the organization. The ability to identify power relations structures, to use a variety of resources and tactics, and to engage in various forms of communications with both internal and external groups becomes an indispensable feature for public relations leaders (e.g., Berger, 2005; Berger & Reber, 2006).

Choi and Choi (2007) argued that it is public relations leaders' job to exert upward influence of public relations in the organization and to persuasively sell new ideas to higher-ups. More critically, public relations leaders should have the ability to get involved with the decision-making processes in their organization. As a PR leader, the individualization of career is not only the ultimate goal of personal achievement, but more importantly, it is a process of stimulating leadership development and expanding the influence and value of PR within the organization. Thus, the ultimate outcome of influence expansion will be public relations leaders' intervention in the strategic decision-making processes in the organization.

Dimension 5: *Communication Knowledge Management Capability*

Communication knowledge management capability refers to the extent to which public relations leaders possess, apply and convert public relation knowledge and communication expertise to enhance the effective conveyance of PR messages to other members in the organization and to the publics. Sharing knowledge and expertise with dominant coalitions and outsiders is seen as an effective way to improve the value of public relations to organizations. The application of communication knowledge and expertise can be used to adjust strategic decision-making, solve new problems, and improve organization effectiveness.

The dimension of communication knowledge management covers the multiple functions a public relations leader ought to acquire to succeed in communication management. This concept has its roots generally in the literature of management and human resources (e.g., Gold, Malhotra, & Segars, 2001; Grant, 1996; Ofter & Polterovich, 2000; Sanchez & Mahnoey, 1996); however, it is more specific in this study than from the perspective of organizational studies. Specifically it focuses on the intellectual ability and behavior power of public relations leaders in supporting individual success and organization performance.

As a major part of training and/or education programs for public relation professionals, accumulating relevant professional knowledge, making the knowledge applicable, and converting the knowledge into plausible action plans become one sign of good leaders. For public relations professionals, the scope of communication knowledge is far beyond the level of technical skills such as writing. Instead, this dimension encompasses all vital communication skills, such as using the power of research, converting knowledge into plans of action and strategies, applying knowledge to diverse media channels, and evaluating communication programs, that will eventually support the organization performance and manifest the value of public relations to the organization.

The complex functions of communication expertise will specify the distinctive features of public relations leaders from other types of leaders.

Situational Variable: *Organizational Structure and Culture*

Perhaps the most significant hurdle to excellent leadership in public relations is organizational structure and culture. Existing research argues that leaders use different leadership styles depending on the demands of the situations (Eisenberg, Goodall, & Tretheway, 2007), which manifests a theoretical link between organizational structure and the effectiveness of leadership style. The literature of leadership and organizational studies has indicated that a wealth of research has examined the interrelationships among various forms of organizational structure and culture, various leadership behaviors, and knowledge management behaviors. Trust and openness are commonly cited as two of the explicitly stated values that would promote leadership effectiveness inside the organization (e.g., Van Krogh, 1998; Yukl, 1989). An organization that encourages open and effective communication processes to occur will develop towards the desired direction.

Because organizational structure and culture are integral parts of the environment in which public relations professionals function, the administration of public relations strategies should be strongly influenced by the organization in which they function. Previous research in public relations has considered the culture of organizations as a significant indicator of achievement of excellence in communication management: "although expertise in public relations may seem essential for organizations, organizations and their managers vary greatly in the extent to which they recognize and empower the function" (Grunig, Grunig, & Dozier, 2002, p. 3).

Drawing on previous research, this study posits that organizational structure and culture in which public relations is practiced will influence field leaders' behaviors and styles. The management philosophy and leadership style embedded in organizational structure and culture will impact public relations in terms of how public relations leaders can transform the current resources and organizational goals into communication strategies that propose appropriate and effective actions for goal achievement (Hazleton & Long, 1988).

Concluding Remarks

Despite the recognized importance of leadership and communication effectiveness in organizational contexts, this chapter presents the theoretical foundation the researcher has utilized to develop a formal measurement model of excellent leadership in public relations and a structural equation model addressing the function of organizational structure and culture in achieving excellence in leadership. The purpose of presenting the conceptual models is:

1) to further integrate the literature reviewed in previous chapters;

2) to conceptualize the leadership process and its essential dimensions;

3) to conceptualize the construct of organizational structure and culture with respect to excellent leadership in public relations; and

4) to provide the theoretical foundation for broad measures of the constructs of interest.

Following Chapter III, Chapter IV outlines the research design and the methods used in this dissertation.

Chapter IV

RESEARCH DESIGN AND METHODOLOGY

In previous chapters, the research project and its background as well as the research process which drives the conceptualization of the constructs and the conceptual models have been described. This chapter builds on the theoretical framework and presents the research design with which the theoretical ideas can be translated into empirically testable measures across different groups in different societies. Research methods used to conduct empirical tests are also presented in this chapter.

This chapter is organized as follows. It begins with a discussion of the research design, including rationales and considerations of the conceptual model building. The description of the research is followed by a brief overview of the measurement model and the structural model since previous chapters have discussed the conceptualizing process of the constructs. Special attention will be given to the measurement items and the validity of the constructs. A detailed description of the measures used to operationalize the constructs is introduced.

The description of the model and its measures is followed by a discussion of the empirical research methods selected to collect data from actual respondents, which will help the researcher move from the conceptualizing process to the statistical procedures in order to confirm the dimensions of the proposed constructs. Sample requirements are discussed to validate the research design. Moreover, a detailed description of the data collection procedure is also provided.

Research Design

The design of this study is based on the philosophy of developing and testing reliable and valid measures of the theoretical constructs suggested by scholars (e.g., Churchill, 1979; Anderson & Gerbing, 1988). To make one or more particular contributions to the study of leadership in the field of public relations and communication management, the design emphasizes a balance of quantitative and qualitative considerations, as well as the balance of theoretical and practical relevance for both scholars and professionals. Since leadership is an under-developed area in public relations, some new measures especially are developed to assess the exact nature of the leadership phenomenon. Although a literature search was used to serve the role of verifying empirically foundations the model is built on, the new developed measures serve to specify and establish the unique nature of leadership in public relations.

To ensure construct validity, that is what is measured is indeed what is intended to be measured, recommended procedures were taken to ensure the quality of appropriate measurement (e.g., Churchill, 1979; Jacoby, 1978; Pedhazur & Schmelkin, 1991). First of all, a search of existing literature was conducted to specify the theoretical domain of interest and the necessity for the exploration of new measures and models. Secondly, a sample of items was generated from the literature search and pretested on a small set of representative subjects. And third, the cleaned measures were used in the actual field setting. Several statistical analyses such as internal consistency measures, confirmatory factor analysis, model specification and refinement, and multiple-sample analysis were applied to the field data. Finally, these analyses along with qualitative assessments were used to validate the measures as well as to suggest re-specification of the findings in the future.

Special attention is given to construct validity and associated measurement issues in this study. Through the research efforts, the researcher would like to increase the attention in public relations research to construct validity in general and more rigorous assessments of the measurement properties of constructs. Therefore, the latent variable structural equation modeling (SEM) procedures is used as the major analytic tool in this study to provide much more rigorous tests of construct validity, convergent validity, and discriminant validity (e.g., Bagozzi, 1980; Fornell and Larcker, 1981; Gerbing and Anderson, 1988).

The Conceptual Models

As discussed in Chapter III, the measurement model which guides the empirical investigation consists of five major dimensions: *Self-Dynamics and its three sub-dimensions (Self-Insight, Shared Vision, and Team Collaboration); Ethical Orientation; Relationship Building and its two sub-dimensions (Internal Relations and External Relations); Strategic Decision-Making Capability; and Communication Knowledge Management Capability*. All the five dimensions are assumed here to constitute the construct of excellent leadership in public relations assessed at the individual level of analysis. Figure 1.1 exhibits the relationships among the constructs themselves in the measurement model.

It is also assumed that the structure and culture of an organization including its information flow chains and dominant coalition access relate to the achievement of effective leadership as well as the excellence in communication management. Therefore, in order for those leadership-related constructs to become a meaningful part of the communication management net inside the organization, the model has to be approached by taking the organizational structure and culture into consideration. Thus, structure and culture as an organizational phenomenon has been treated as a construct which will have direct impact on leadership effectiveness. (Please refer to Figure 1.2 for the graphical representation of the relationships between leadership construct and organizational structure and culture.)

A Short Note on Reflective vs. Formative Indicators

Based on classical test theory and its assumptions about the relationships between a construct and its indicators, the underlying latent constructs (unobservable constructs) cause the observed variation in the measures. This assumption points out that, conceptually, the causality flows from the construct to the measures, and the observed indicators (measures) can be treated as reflective or formative (Fornell & Bookstein, 1982, p. 441). However, based on classical test theory and factor analysis models, reflective indicators are more commonly used and are invoked in an attempt to account for observed variances or covariances. Formative indicators, in contrast, are not designed to account for observed variables. Fornell and Bookstein (1982) further argued that "the choice between formative and reflective models would substantially affect estimation procedures" (p. 441). As most commonly used measurement model using multiple indicators of latent constructs, the principal factor model, where covariation among the measures is caused by variation in the underlying latent factor, indicates the direction of causality is from the construct to the indicators, and changes in the underlying constructs are hypothesized to cause changes in the indicators. Thus, the measures are referred to as reflective (Fornell & Bookstein, 1982).

The decision to treat indicators as reflective or formative largely depends on the theoretical understanding of the underlying latent factors. In this study, excellent leadership in public relations is defined as comprising five different facets, including self-dynamics, ethical orientation, relationship building, strategic decision-making capability, and communication knowledge management capability. Conceptually, the five facets account for significant amounts of construct variance, and they should correlate among themselves. Thus, the researcher confirms that the indicators are reflective.

As indicated in the conceptual process, the five major dimensions can be treated as a separate construct itself; however, at a more abstract level, the five dimensions are all integral part of excellent leadership in public relations. Based on the assumption from classical test theory, the measurement model proposed in this study posits a series of first-order latent factors with reflective indicators (e.g., self-dynamics, ethical orientation, etc.) and also that these first-order factors are themselves reflective indicators of an underlying second-order construct (e.g., excellent leadership in public relations). Thus, measurement validation and reliability can continue once the use of reflective indicators has been established for the constructs.

Item Generation

Two major sources were consulted for the development of the measurement items, a guide for confirmatory factor analysis for applied research (Brown, 2006) and a handbook on psychometric theory (Nunnally, 1978). Since single item measures generally frame concepts narrowly, multiple-item measures are generally thought to enhance confidence that the constructs of interest are being accurately assessed and the measurement of the variable will be more consistent (Churchill, 1979; Nunnally, 1978). Thus, the measurement of complex leadership process in public relations is done through multiple-item measures.

To develop multiple-item measures of dimensions of excellent leadership in PR, an item pool was initially generated. Due to the lack of empirical investigation into the subject of excellent leadership in public relation, the measures are largely derived from theoretical statements made in the literature of leadership, excellence theory of public relations, and organizational studies or from assessments within public relations professionals' experience on leadership.

An original list of 85 statements thought to represent this study's definition of excellent leadership in public relations and its dimensions were first generated by the researcher. These statements are directly related to the construct as it is defined throughout the leadership and public relations literature. The first step is to have the generated statements judged for content validity, which focuses on finding out how well the chosen statements represent the defined construct. To initially delete poor statements is the major purpose of this step.

Content validity of the 85 statements was reached by the judgment of two experts (two professors in public relations). Ten statements were dropped based on two reviewers' evaluation of the relevance of the statements to public relations practice. After the assessment, 75 statements were classified into five dimensions of excellent leadership in public relations: self-dynamics, ethical orientation, relationship building, strategic decision-making capability, and communication knowledge and expertise, based on their relevance to each dimension.

Pilot Testing and Item Reduction

After generating the item pool of multiple-item measures, a panel of 35 senior PR executives and PR professors were invited to further judge the representativeness of the 75 statements regarding the construct of PR leadership and its dimensions. Initial item reduction was carried out by giving the panel the definition of excellent leadership in public relations and the purpose of their rating. All statements were measured with Likert-type scales, which could provide the advantage of standardizing and quantifying relative effects (Nunnally, 1978). The judges were asked to rate the 75 statements based on a five-point scale:

1. not at all representative of excellent leadership in public relations;
2. little representative of excellent leadership in public relations;
3. somewhat representative of excellent leadership in public relations;
4. well representative of excellent leadership in public relations; and
5. highly representative of excellent leadership in public relations.

The invitation for this pilot test was sent out through emails, and 29 experts eventually finished the rating. Statements which were not rated as being "highly representative of excellent leadership in public relations" were dropped from the item pool. A total of 24 items were dropped from the item pool based on the judgers' evaluation. After the pilot testing, 51 retained statements were formatted into seven-point rating scales for final use, and the wording of the statements was adapted for the final survey instruments. Therefore, the final survey instrument included 51 statements representing the measures of the constructs of interest.

Measures

To make the reading more clearly, the following section contains a list and descriptions of the measures which operationalize the constructs in the model. The instruments are developed specifically for this study. For an overview of the actual scales used for each construct please refer to Appendix A. The final survey instrument is contained in Appendix B.

Demographic information is also contained in the survey as some control variables to identify basic individual differences. Six single-item variables are contained: age, gender, years of professional experience in public relations, organization type, organization size, and the size of public relations division in the organization. Respondents are also asked to indicate their current job title. All constructs are measured using self-report measures of respondents' perceptions.

The first measure developed for this study is the self-dynamics scale. This latent construct, *Self-dynamics*, is measured with an 18-item scale assessing various aspects of the superior personal qualities an effective public relations leader should exhibited, such as being trustworthy, having a vision of public relations as a managerial function, and having the ability to collaborate with members to define public relations strategies. As discussed in pervious chapters, the trait approach in leadership research has tended to treat personality variables, namely personal attributes or superior qualities, as essential factors to determine the effects of leadership (e.g., Stogdill, 1948, 1974; Yukl, 1989). Although numerous personal attributes exhibited by leaders have been identified, no consistent pattern or reliable measure have been confirmed or established. Therefore, based on prior research in trait approach and organizational behavior studies, the 18 items are specifically developed to empirically reflect the content in this study. The item measures for the Self-Dynamics dimension and its three subsets (Self-Insight, Shared Vision, and Team Collaboration) are listed in Table 1.1.

Table 1.1. Item Measures of Self-Dynamics Construct and Its Subsets

Self-Dynamics	An excellent public relations leader should exhibit...
Sub-Dimension 1: Self Insight	
SI1	The nature of being dependable.
SI2	The nature of being trustworthy.
SI3	The nature of being proactive.
SI4	The capacity for engaging in strategic decision-making.
SI5	The capacity for acting as a changing agent.
SI6	The awareness of applying diverse strategies.
Sub-Dimension 2: Shared Vision	
SV1	The nature of being forward looking.
SV2	The nature of having a vision of PR as a managerial function.
SV3	The capacity for enlisting others in a shared vision.
SV4	The capacity for providing a vision of potential changes in areas affecting the organization.
SV5	The ability to provide organizational leaders with a clear vision about PR values and role.
SV6	The ability to provide organizational leaders with a clear vision of how PR goals are congruent with organizational goals.
Sub-Dimension 3: Team Collaboration	
TC1	The ability to collaborate with members to define PR strategies.
TC2	The ability to actively cope with crisis situations.
TC3	The ability to develop a proactive and professional communication team.
TC4	The ability to facilitate positive interdependence among team members.
TC5	The ability to bring diverse groups together to collaboratively solve problems.
TC6	The ability to inspire and motivate other members.

Note, the items are measured on a 7-point Likert-type scale with "1=a little bit" and "7= a great deal."

The second measure developed specifically for this study is the ethical orientation scale consisting of six items assessing public relations leader's ability to engage in ethical-oriented behaviors. Since *ethical orientation* is defined as the degree to which public relations leaders believe in and enact professional values and standards when ethical and legal dilemmas arise and responsibilities and loyalties conflict, the focus of this construct has been considered at the behavioral level, with an emphasis on group/organization reputation. Thus, ethical orientation is considered as a unidimensional latent construct. Table 1.2 listed the item measures for the ethical orientation dimension.

Table 1.2. Item Measures of Ethical Orientation Construct

Ethical Orientation	An excellent public relations leader should have…
EO1	The ability to maintain the core values of PR as professional standards.
EO2	The ability to integrate these core values into actions.
EO3	The ability to represent the organization without engaging in deceptive practices or communications.
EO4	The ability to act promptly to correct erroneous communications of team members and other coworkers.
EO5	Understanding the process of representing consistent behaviors that can be trusted by others inside and outside of the organization.
EO6	Understanding ethical differences which grow out of diverse cultures.

Note, the items are measured on a 7-point Likert-type scale with "1=a little bit" and "7= a great deal."

The third measure developed for this study is the public relations leader's *relationship building ability*, which refers to the leader's ability to build and cultivate both internal and external relationships. An eight-item scale is developed to assess leader's ability to develop coalitions to support proposed ideas or actions, ability to foster trust and credibility with media representatives, and the ability to understand the needs for key publics. The item measures for the construct of Relationship Building and its two subsets (Internal Relations and External Relations) are listed in Table 1.3.

Table 1.3. Item Measures of Relationship Building Construct

Relationship Building	An excellent public relations leader should have…
Internal Relations	
IR1	The ability to foster trust and credibility with organizational decision makers.
IR2	The ability to develop coalitions to support proposed ideas or actions.
IR3	The ability to mentor and help young professionals achieve success on the job.
IR4	Being sought out for advice and counsel by executives in the organization.
IR5	Understanding the process of regularly briefing members of the organization about public relations programs and results.
External Relations	
ER1	The ability to cultivate relationships with key external publics.
ER2	The ability to foster trust and credibility with media representatives.
ER3	The ability to understand the needs for key publics.

Note, the items are measured on a 7-point Likert-type scale with "1=a little bit" and "7= a great deal."

The fourth measure developed for this study is a five-item scale assessing *the strategic decision-making capability* exhibited by public relations leaders. This measure focuses on how public relations leaders could transform both internal and external knowledge into effective advocacy and to get involved in the decision-making processes in the organization. Table 1.4 has listed the item measures for the construct of Strategic Decision-Making Capability.

Table 1.4. Item Measures of Strategic Decision-Making Capability Construct

Strategic Decision-Making	An excellent public relations leader should have…
DM1	The ability to be proactive in the organization's internal decision-making processes.
DM2	The ability to span internal/external boundaries and interpret information from publics for organizational decision makers.
DM3	The knowledge of the organization's business and its environment.
DM4	The knowledge of the organization's decision-making processes, practices, and structures.
DM5	Been included in strategic decision-making groups in the organization.

Note, the items are measured on a 7-point Likert-type scale with "1=a little bit" and "7= a great deal."

The final construct developed to measure excellent leadership in public relations is the ability to manage *communication knowledge and expertise*. It is an eight-item scale assessing various aspects of knowledge management in public relations, such as the application of crisis communication strategies, the usage of mass and specialized media to communicate with publics, and so forth. Table 1.5 has listed the item measures for the dimension of Communication Knowledge Management Capability.

Table 1.5. Item Measures of Communication Knowledge Management Capability Construct

Communication Knowledge Management	An excellent public relations leader should have…
CK1	The ability to apply public relations knowledge to crisis situations.
CK2	The ability to systematically evaluate communication programs and results to increase quality and effectiveness.
CK3	The ability to obtain sufficient resources to support needed strategies and projects.
CK4	The ability to use knowledge of mass and specialized media to help the organization communicate effectively with publics.
CK5	The ability to strategically use new technologies to help the organization communicate and interact with publics.
CK6	Known the process of using research to develop appropriate strategies, messages, and activities.
CK7	Known the process of using research to help solve communication problems.
CK8	Known the process of converting knowledge about publics and policies into effective and representative advocacy of these publics with decision makers.

Note, the items are measured on a 7-point Likert-type scale with “1=not at all” and “7= a great deal.”

Organizational structure and culture is measured by a six-item scale assessing the management style of the organization's top leaders toward public relations functions and values. The ratings on the six items are averaged to derive a single composite indicator for the organization. The higher the index, the more organic the organization's structure and culture to the public relations practice. Since organizational structure and culture will be tested as a moderating variable using the multiple-sample analysis technique in the structural equation modeling approach, it will be able to provide the reliability test of this construct in terms of whether specified parameters or parameter matrices are equivalent across the groups (Brown, 2006; Landis, Beal, & Tesluk, 2000). Table 1.6 has listed the item measures for organizational structure and culture.

Table 1.6. Item Measures of Organizational Structure & Culture

Organizational Structure & Culture	In general, it is important for a public relations leader to…
OS1	Work in an organization where all of the public relations functions share a common reporting relationship.
OS2	Work in an organization that supports and encourages open communication among members.
OS3	Work in an organization that values and practices diversity.
OS4	Have an organizational leader who champions and values public relations.
OS5	Have access to organizational leaders in order to discuss important issues.
OS6	Report directly to the organization's leader

Note, the items are measured on a 7-point Likert-type scale with "1=not at all" and "7= a great deal."

Research Methods

Since this dissertation used a balanced approach to explore the constructs of interest, research methods addressing quantitative and qualitative strengths are used. Specifically, web-based surveys are used to collect data for quantitative analysis and model testing; while in-depth interviews are used as a supplementary method to collect qualitative data. The use of triangulation is to facilitate the understanding of constructs comprehensively and profoundly. In the following sections, a detailed description of the online survey and sample requirements is presented, followed by a description of the in-depth interviews and sampling strategy.

Primary Method for Data Collection

To answer the research questions and to assess the validity of proposed research model, the researcher used survey as the primary method in this study to collect data from diverse organizations and different geographic locations. To be more specific, an online survey was employed. The final survey instruments were uploaded to the online survey software through Zoomerang.com, which allows the researcher to generate a web link directing participants to the questionnaire part and to click through the survey.

The rationale of using online survey as the primary research method relies on the inherent advantages of the method. Research by using online data collection methods has increased significantly since late 1990s. The tendency was preceded by (1) a growing number of Internet users, which started to mirror the general population in some countries, esp. in the U.S. and

Western European countries, and (2) the development of various computer-assisted data collection techniques, such as Computer-Assisted Personal Interviews and Computer-Assisted Telephone Interviews (Ilieva, Baron, & Healey, 2002).

The development of computerized and online interviewing offers several attractive questionnaire features that can not be achieved through traditional survey processes (Couper, 2000; Ilieva, Baron, & Healey, 2002; Schaefer & Dillman, 1998). For instance, one of the most prominent advantages of using online survey is its ability to conduct large-scale data collection. By reducing response time and cost, online surveys greatly increase respondents' freedom and flexibility in survey-taking process. Other advantages associated with online surveys include randomizing response choices, checking for response consistency, incorporating complex skip patterns, and so on. The technological support of online surveys has largely reduced the response bias stemming from the way response categories are ordered, and improved the accuracy of the data collected.

On the other hand, the potential risk of online surveys should also be considered. Coverage error and sampling error are presently the biggest threats to inference from online surveys. Although the Internet use is growing fast worldwide, access to the Internet remains unequally distributed throughout the world population. There are significant differences in access by age, rural/urban area, region of the country, and region of the world (Couper, 2000), and the proportion of the population that can be reached via the web is limited. So, the discrepancy between people having access to the Internet and those don't should be carefully considered in terms of sampling. Solutions to the coverage and sampling problems include limiting the study to those with access to or use of the Internet and, deliberately, defining a sample from the frame population and repeating the selection process.

Low response rate and nonresponse error are other issues associated with online surveys. Researchers have pointed out that the proliferation of online surveys has increased the difficulty to recruit sufficient respondents (e.g., Schaefer & Dillman, 1998). The problems of nonresponse may threaten the utility of online surveys. Researchers have suggested some solutions to increase the amount of people who are willing to complete the survey (e.g., Couper, 2000; Schaefer & Dillman, 1998). For instance, researchers can increase the level of personalization and motivation in online surveys (e.g., personalized signature, letterhead, etc.). Reducing the experiences related to technical difficulties and the concerns about confidentiality issue when interacting with an Internet survey is another solution researchers could use to increase the response rate of online surveys.

In short, the advantages and disadvantages associated with online surveys are mainly technology-driven. As the technology improves, the data quality will be improved as well. Although some sensitive issues may prevent respondents from completing the surveys, the advantages of online surveys still make the data collection mode precisely attractive, especially in a cross-national research setting. Therefore, the researcher would like to argue the online survey is the most appropriate method that should be used in the study due to the major purpose of the study is to develop measurement scales and validate measurement model by using multiple-group analysis.

Overview of Sample

Overall, two major data sets were used for the testing of the scales, the measurement model, and the structural model: the U.S. data set and the international data set. The U.S. data set consisted of two groups of respondents: one group of senior public relations professionals nationwide and the other group of public relations practitioners holding an entry- or medium-level position in organizations of Southeastern region. Respondents practicing public relations in the United Kingdom, Singapore and other European countries comprised what the researcher defined as the "international data set." The researcher has purposefully assigned the group of senior public relations professionals nationwide as the primary group for the quantitative data analysis, while the other two groups as the basis for multiple-sample analysis at a later stage.

Sample Requirements for Primary Group

To be consistent with the major research purpose of the study, data collected with the group of senior public relations professionals in the U.S. was used as the primary group to validate the measurement model due to respondents' significant latitude and leadership-relevant experience in the field. To ensure the self-reporting results from this group of participants can be generalized at a national level, a stratified sampling strategy in which three different strata (i.e., gender, job position, and organizational type) was used in this study. To ensure the representativeness and generalizability of the study, the sample was deliberately selected to more or less match the current features of the public relations industry in the U.S. The sampling strategy required respondents participating in the study meet several criteria.

Firstly, respondents must be key organizational informants, namely holding senior positions in the organization, residing as vice president of communication or above, and having been working in the public relations/communication industry for more than 15 years. The support for using key informants stems from their knowledge and power positions in the organization. They have access to and are able to use diverse resources both inside and outside of the organization. By residing at a senior position, their daily activities involve more leadership-oriented actions. Thus, their perceptions and opinions are able to reflect their understanding of the leadership process.

Secondly, the distribution of organization type has to be considered to match public relations industry itself, and multiple respondents can be obtained from the same organization. To satisfy this criterion, the researcher has deliberately considered an exclusive collection and appropriate percentage of organization types in which professionals practice public relations functions. Therefore, organizations such as private, public, self-employed, agency, and other types have been included in the questionnaire. The third requirement is that the gender distribution of the sample is reliable to draw generalizable conclusions.

Another requirement is that the sample size is adequate enough to obtain meaningful parameter estimates. As Joreskog (1978) suggested, the use of structural equation modeling for theory testing and development would select the maximum likelihood (ML) estimation method since ML is theory-oriented, and emphasizes the transition from exploratory to confirmatory analysis. One of the features of this estimation method reflects its requirement on large-sample properties. Anderson and Gerbing (1984) and Gerbing and Anderson (1985) have investigated ML estimation for a number of sample sizes and a variety of confirmatory factor models, and have identified that the deviations of the parameter estimates of the models from their respective population values can be very large. Problems like nonconvergence and improper solutions are more likely to occur with small sample size (Anderson & Gerbing, 1988). Therefore, a sample size of 150 or more typically will be needed to obtain meaningful parameter estimates (e.g., Anderson & Gerbing, 1988; Bentler, 1983; Joreskog, 1966, 1976).

Heyman Associates, a PR executive search firm in New York City, helped to deliberately draw participants from its database of more than 50,000 senior public relations professionals. To ensure the representativeness and generalizability of this study, the sample was deliberately selected to more or less match the current characteristics of the public relations industry in the United States. The distribution of gender, organizational type, and organizational size was carefully taken into consideration as the researcher has explained. Table 2.1 showed the strata the researcher used to draw the sample from the sampling pool of senior public relations professionals in the U.S.

Table 2.1. Sampling Strategy for the Primary Group

Public Relations Industry (U.S.)	Individuals holding a senior position		Total
Organization Type (in percentage)	Female (65%)	Male (35%)	
Corporate (35%)	228	122	350
PR agency (20%)	130	70	200
Nonprofit organization (15%)	98	52	150
Government organization (15%)	98	52	150
Education institution (10%)	65	35	100
Other (5%)	33	17	50
Total	652	348	1,000

Sample Requirements for Multiple-Group Analysis

To ensure the reliability and validity of the multiple-item measures and to assess measurement invariance of proposed measurement models, the author also collected the data from other groups representing completely different demographic features: (1) members of The Southern Public Relations Federation (SPRF); and (2) an international group of public relations professionals consisting of senior public relations professionals practicing in London, UK, members of the Institute of Public Relations in Singapore (IPRS), and members of the European Public Relations Education and Research Association (EUPRERA). The two groups were used to determine how well measurement models generalize across groups of individuals. As Brown (2005) suggested, measurement invariance evaluation is an important aspect of theoretical and scale development. Researchers need to establish that the measurement properties are equivalent in subgroups of a heterogeneous population.

The Southern Public Relations Federation (SPRF) is a network of more than 1,200 public relations professionals from Alabama, North Florida, Louisiana, and Mississippi. As a premiere networking and professional development organization for public relations professionals in the Gulf South, SPRF provides members holding an entry- or medium-level public relations position in organizations (www.sprf.org). Thus, the researcher believed it is appropriate to have members of SPRF participating in this study; and it is also appropriate to investigate entry- to medium-level public relations professionals' perceptions about leadership in public relations. A convenient sampling strategy was applied to the SPRF group to make an effort to increasing the response rate.

The convenient sampling strategy was also applied to the international group. There were three major resources that the researcher used to recruit international respondents: (1) Heyman Associates, (2) The Institute of Public Relations Singapore, and (3) the European Public Relations Education and Research Association.

The first resource was through Heyman Associates' partner in London, UK. The company indicates that they have a database of 381 active public relations professionals practicing in the U.K. Thus, the survey invitation email was sent to all 381 PR professionals in the database through Heyman Associates.

The second resource was the Institute for Public Relations Singapore (IPRS). IPRS has been established in 1970 as the only accrediting organization for public relations practitioners in Singapore. Its objective is to establish the growth for Singapore's PR industry through knowledge acquisition, networking, and exchanging of new ideas. The Institute continually strives to be the leading regional PR organization that will not only project the profession but also set industry standards and increase public recognition of this profession (www.iprs.org.sg). By 2008, IPRS has about 500 members and 70 accredited members out of the membership body. The rationale for the researcher to contact IPRS is trying to get a comprehensive view of leadership in public relations from diverse geographical locations. Singapore has been a leading country in Asian culture in terms of the development of public relations. It would be quite interesting and important to obtain Asian public relations professionals' perceptions on leadership. The survey invitation email was sent to all members through IPRS' mailing list.

The third source the researcher has contacted was the European Public Relations Education and Research Association (Euprera). Founded in 2000, Euprera is an organization aims at stimulating and promoting the practices of public relations education and research in Europe, and it also has direct and intensive contacts with public relations practitioners of each country of Europe. The association has agreed to send its members the survey link through Euprera's email listing, as well as to post the survey description and web link on Euprera's website.

Quantitative Data Collection Procedure

As the researcher discussed in previous section, the sample of this study consisted of five different groups: (1) senior public relations executives in the U.S. as the primary group, (2) entry- to middle-level public relations professionals in the Southeastern region of U.S., (3) senior public relations professionals in the U.K., (4) members of the Institute for Public Relations Singapore, and (5) members of the European Public Relations Education and Research Association. The same data collection approach—an online survey through zoomerang.com—was used to collect data.

Data collection consisted of three phases. The first phase focused on the collection of the primary group for this study, which involved providing a description and a survey web link to Heyman Associates. Through deliberate selection of potential respondents based on the sample requirements described above, 1,000 senior public relations executives nationwide were selected and invited to take part in the study. The invitation was sent out through Heyman Associates with the survey link embedded in the message in early February 2008. Two weeks later, a reminding message was sent out to the pool. Eventually, of the 1,000 invitations, 338 visited the survey link and 257 public relations executives subsequently participated in the online survey. 222 completed questionnaires were deemed usable (35 questionnaires with partial answers were dropped). In sum, the first stage of data collection process yielded assessments of 222 senior public relations executives' knowledge and perceptions of excellent leadership in public relations.

The second phase involved the collection of the data from SPRF. Similarly, the online survey invitation was sent to all SPRF members through the organization's email listing in early March 2008. The organization also sent out a reminding message in late March 2008 to encourage members to participate in the study. Finally, a total of 305 members visited the survey link. Out of 305, 202 participated in the study and 162 surveys were deemed usable (40 questionnaires with partial answers were dropped from the data). Therefore, for the SPRF group, a total of 162 public relations professionals' assessments were collected.

The last phase involved actual collection of the international data. The researcher contacted Heyman Associates, IPRS, and Euprera and inquired about their support in data collection. All three organizations agreed to invite public relations professionals in its database or members of the organization to participate in the study. Thus, the researcher sent the project description and the online survey link to the three organizations. Since the researcher purposefully used English in the survey across three groups, no translation problem has arisen, which to some extent reduced the response bias stemmed from the language differences. The questionnaire used for the international sample remained almost the same as the one used for the primary group and the SPRF group except for adding two additional questions about the respondents' geographical location and nationality. The first round invitation was sent out in middle October 2008, and the second round invitation was sent out in early November 2008. However, due to the low response rate, the researcher and the organizations decided to send out another reminding message in middle November 2008. Therefore, the data collection of the international group was closed in early December 2008. Table 2.2 exhibited more detailed information about the size of each sample group for this study.

Table 2.2. Data Collection for Five Sample Groups

Sample Groups	Sampling Pool	Number of people visited the website	Number of people filled the survey	Number of partial surveys	Final sample	Retention rate	Response rate
U.S.							
Primary Group	1,000	338	257	35	222	76.04%	22.20%
SPRF	1,200	305	202	40	162	66.23%	13.67%
International							
Heyman	381	77	36	4	32	46.75%	8.4%
IPRS	500	67	47	14	33	70.15%	6.6%
Euprera	400	129	47	13	34	36.43%	8.5%
Total Sample Size					N=483		

Qualitative Research Method

Having said that the design of this study seeks a balance of quantitative and qualitative considerations, as well as a balance of theoretical and practical concerns, the researcher expects the study reflects not only the goal to provide contributions to the scientific community, but also the objective to provide actionable insights from the standpoint of organizational members. Meanwhile, the study also follows a grounded theory perspective, which concerns about inductive qualitative research (Glaser & Strauss, 1967). This perspective of qualitative research could capture complexity and support theory construction in new areas, which is excellent leadership in public relations in this study. While leadership research increases into diverse aspects within the managerial sector, the objective of this work is to gain a new perspective of leadership by emphasizing its functions in public relations field. Although the procedures of measurement model development and testing has been followed to ensure the rigorousness of methodology, the researcher still would like to explore this topic through direct contact with the phenomenon itself, which could further strengthen the *a priori* theoretical framework developed.

Given that organizational members and public relations professionals can approach the topic of leadership from logically empirical views, the researcher would like to gather deep insights by discussing the topic with senior public relations professionals/leaders in the field. Therefore, in-depth interviews were used as a supplementary research method in this study to support the balanced approach. More specific, the design of the in-depth interviews does not focus on assessing the exact nature of the phenomenon itself. Instead, attention is given to verify and assess differences in the perceptions and the quality of leadership in different societies.

As reviewed in the literature, the cultural perspective of leadership suggests a broad as well as an in-depth look into the complex process. In addition, since it is difficult to reach an agreement on the leadership process itself from single cases (Yukl, 1999), the research focuses on cross-site analyses that validate the measurement model as well as identifies major patterns due to the cultural differences. The advantages of the in-depth interviews allow local public relations practitioners reflect on their recent behavior and allow the researcher to discuss in different cultural settings. Therefore, it is hoped that by taking this supplementary research method a deep understanding of leadership qualities relative to each society can be detected.

Sample Requirements and Interview Instrument

Two countries (the U.K. and Singapore) were selected by the researcher as the destinations to conduct in-depth interviews. The reasons of choosing these two countries stems not only from its leading position in public relations industry of its region, but also the cultural distinction in each region. In addition, since public relations professionals practicing in the U.K. and Singapore have already been invited to participate in the online survey, the researcher believed it is necessary to gather deep insights about the complex process of leadership by having thorough discussion with practitioners in the two countries.

The sample used for the in-depth interviews shared some similar features with those used for the online survey. Respondents selected to participate in the in-depth interviews needed to satisfy the following criteria: (1) They must be key organizational informants by residing at a senior- or managerial position in the organization; (2) The status of accreditation in public relations could be added as an extra indication of qualification in the field; and (3) Respondents who have already taken the online survey can also be invited to the qualitative study.

The interview instrument was generated from the leadership and public relations literature. Specifically, more interests regarding the achievement of excellent leadership in public relations in a specific culture have been explored and developed into some open-ended questions and directed questions in the interview guide. Appendix C showed the specific questions used in the interview instrument.

Qualitative Data Collection Procedure

Heyman Associates helped to deliberately draw respondents from their database. Based on the sample requirements, 40 senior public relations professionals practicing public relations/communication functions in London, U.K. were selected as the pool. The researcher constructed a message explaining the purpose and the format of the in-depth interviews, and the message was sent out to the 40 potential respondents through Heyman Associates in early October 2008. Twelve practitioners emailed back and indicated their interest and availability of participating in the study two weeks after receiving the initial message. Therefore, a tentative interview schedule was set up with each individual by the researcher. However, due to unpremeditated business schedule, one respondent dropped from the study. The actual in-depth interviews were conducted with eleven senior public relations professionals in London in the middle of November 2008.

For respondents in Singapore, the researcher used the online membership directory from IPRS. Since the online membership directory does not include the information such as years of experiences in the organization, the researcher has to examine each individual's job title as well as their accreditation status. After consulting the Manager and Communication Executives at IPRS, the researcher confirmed that the use of accreditation as a filtering rule would be quite appropriate in Singapore. By 2008, the amount of accredited members in IPRS has reached 70, and all the accredited members reside at the position of Director of Communication or above in their organization. Therefore, the researcher constructed a message explaining the purpose of the in-depth interview and all 70 accredited members were invited. The invitation was sent out in early December of 2008, and ten practitioners replied with agreement to participate in the interview. The actual interviews were conducted in early January 2009 in Singapore, and eight PR professionals finished the interviews.

The researcher used the developed interview guide for each interview, and the conversations were recorded to a digital recorder. Overall, the in-depth interview lasted from 60 minutes to 90 minutes. The recorded interviews yielded 196 pages of transcripts that were coded by the researcher. An approach of thematic analysis was applied to the qualitative data analysis. By coding the transcripts, the researcher was trying to identify some patterns of leadership styles, qualities, and behaviors that are most appropriate and effective in local culture. The themes and findings of the qualitative interviews are presented in Chapter VII.

In next chapter, the analysis of the quantitative data collected from the primary group is presented. The measurement model and the structural model are tested and refined.

Chapter V

QUANTITATIVE DATA ANALYSIS

Since three sample groups are involved in this study to test the complex construct, to make the reading easier, the researcher would like to break a long section of data analysis into three separate chapters (Chapter V, VI, and VII). In Chapter V, the researcher focuses on the assessment and validation of the measurement model and the structural model by using the primary group as the major data set. Specifically, the model testing procedure addresses the answers for RQ2: As a complex, multifaceted phenomenon, what key dimensions does the construct of excellent leadership in public relations encompass? and RQ3: How are organizational structure and culture relate to the achievement of excellent leadership in public relations. Meanwhile, the answers obtained from model validation also reflects the comprehensive conceptual definition of the construct the researcher has proposed in Chapter IV, which would further address the answers for RQ1: How is excellent leadership defined in public relations?

Results reported in Chapter VI mainly address the findings from multiple-sample analysis by using the primary group as the reference group. As the researcher has explained, the purpose of conducting multiple-sample analysis is to further confirm the universality of those essential dimensions of excellent leadership in public relations. Thus, the research efforts are going to explain the issue raised by RQ4: Are some dimensions of excellent leadership in public relations universally relevant while others are culturally specific?

In Chapter VII, findings from in-depth interviews with senior public relations professionals in the U.K. and Singapore are reported. The application of qualitative research methodology allows the researcher investigate the theoretical domain by examining individuals' experiences from a cultural perspective. Thus, RQ5 (What core values and qualities of public relations leadership do different cultures emphasize?) has been taken care.

Therefore, Chapter V presents the sample profiles and the model validation procedure by using the data collected from the primary group. Specifically, results are presented in the following sections:

1. Sample profile for three groups;
2. Overview of analytic approach and data screening
3. The test of the measurement model using primary group;
4. The test of the structural model using primary group.

Sample Profile for Three Groups

As explained in the method section, three groups of respondents were investigated in this study: the primary group, the SPRF group, and the international group. The primary group, including 222 senior public relations executives nationwide, was used to examine factor structure and patterns of the construct excellent leadership in public relations. The second sample, the SPRF group, consisted of 164 men and women public relations professionals at an entry- or medium-level followed over time. This panel data provided the opportunity for the researcher to investigate the stability and reliability of measures of the leadership construct over a 1-month period. Finally, the third sample of 100 public relations professionals selected from different regions was obtained for further investigation of stability of measures of the leadership construct over cultures.

The following section presented the demographic information for the three groups respectively. Firstly, the researcher checked the demographics of the primary group, which consisted of 222 senior public relations executives in the U.S. The descriptive data indicated that 40.1% of the primary sample were male (n=89), and 59.9% were female (n=133). The majority of them has been working in the field of public relations/communication for more than 15 years (n=170, 76.60%). The most frequently selected organization(s) they are working for were public corporation (n=83, 37.40%), private corporation (n=43, 19.40%), and public relations agency (n=39, 17.60%). The majority of the sample was Caucasian (89.2%), with African Americans and Hispanics comprising the next two largest groups (3.6% respectively). Table 3.1 exhibited more detailed demographic information.

Table 3.1. Categorical Demographic Profiles of the Primary Group

Categorical Variables	Total Sample Size (N=222)	
	Freq. (n)	*Percentage (%)*
Age		
18-30	2	.9
31-40	42	18.9
41-50*	95	42.8
51-60	76	34.2
Over 60	7	3.2
Years of experiences in PR		
3 to 5 years	2	.9
5 to 10 years	11	5.0
10 to 15 years	39	17.6
More than 15 years*	170	76.6
Type of organization working for		
Public corporation*	83	37.4
Private corporation	43	19.4
Public relations agency	39	17.6
Nonprofit organization	27	12.2
Government organization	15	6.8
Educational institution	14	6.3
Organization size		
Fewer than 100*	49	22.1
100-499	19	8.6
500-999	13	5.9
1,000-2,499	18	8.1
2,500-4,999	22	9.9
5,000-9,999	22	9.9
10,000-24,999	20	9.0
25,000-49,999	17	7.7
50,000 or more	39	17.6
Size of PR employees inside the organization		
Fewer than 10*	62	27.9
10-19	30	13.5
20-49	42	18.9
50-99	25	11.3
100 or more	57	25.7
Don't know	6	2.7

Note, * top category.

For the second group, the SPRF group, the descriptive analysis indicated that the final sample size for the SPRF group was 164. Females (n=129, 78.7%) heavily outnumbered males (n=35, 21.3%). Caucasians (n=149, 91%) and African Americans (n=10, 6%) were the main ethnic groups participated in the study. The majority of the respondents obtained a Bachelor's degree (n=100, 61%) or a Master's degree (n=51, 31%) in their formal education. The years in which they have been working in the public relations profession were varied: people working for more than 15 years (n=57, 35%) and people in the category of five to ten years (n=44, 27%) have dominated the sample. The respondents themselves indicated a medium-level representation in the profession, with the majority assuming the position of public relations assistant, regional director, public relations account coordinator, and so on. More detailed summary of the SPRF group's demographic information is exhibited in Table 3.2.

One interesting fact about the SPRF group is the size of the organization and the size of the public relations division in the organization. As showed in Table 3.2, the majority of the respondents indicated that they are working in an organization with a smaller size ("fewer than 100" or "between 100 and 499"). Consequently, the size of the PR division is also smaller: organization with fewer than 10 PR employees (78.7%) and organization with 10-19 PR employees (6.1%) have dominated the SPRF sample.

Table 3.2. Categorical Demographic Profiles of the SPRF Group

Categorical Variables	Total Sample Size (N=164)	
	Freq. (n)	*Percentage (%)*
Age		
18-30	37	22.6
31-40*	56	34.1
41-50	35	21.3
51-60	27	16.5
Over 60	9	5.5
Years of experiences in PR		
Less than 3 years	13	7.9
3 to 5 years	19	11.6
5 to 10 years	44	26.8
10 to 15 years	31	18.9
More than 15 years*	57	34.8
Type of organization working for		
Public corporation	23	14.0
Private corporation	18	11.0
Public relations agency*	55	33.5
Nonprofit organization	10	6.1
Government organization	22	13.4
Educational institution	31	18.9
Organization size		
Fewer than 100*	65	39.6
100-499	33	20.1
500-999	15	9.1
1,000-2,499	18	11.0
2,500-4,999	12	7.3
5,000-9,999	10	6.1
10,000-24,999	3	1.8
25,000-49,999	3	1.8
50,000 or more	2	1.2
Size of PR employees inside the organization		
Fewer than 10*	129	78.7
10-19	10	6.1
20-49	9	5.5
50-99	6	3.7
100 or more	6	3.7
Don't know	4	2.4

Note, * top category.

The data of the international group indicated that the final sample size is 101 with 11 missing data for the demographic section. Since the participation in the online survey was completely voluntary and the respondents had the freedom to drop out the study anytime they want, therefore, the researcher would like to assume that the eleven cases with missing data on demographic questions are respondents who would prefer not to answer those questions. However, since they have already reported their self-evaluations of the rating scales in the questionnaire, the author still would like to keep the eleven cases in the international group to increase the sample size and to satisfy the sample size requirement for the confirmatory factor approach.

For the 90 respondents who reported the demographic information, the descriptive data analysis indicated that females (n=51, 51%) slightly outnumbered males (n=39, 39%). All age groups were well presented, with those age 31-40 (n=33, 33%) as the largest group, followed by age 41-50 and 51-60 (n=21, 21% respectively). Roughly half of the respondents have been working in the public relations profession for more than 15 years (n=48, 48%). The organization type was varied, and the top two categories presented were "private corporation, including self-employed" (n=26, 26%) and "educational institution" (n=21, 21%). The size of organization was also varied, with those fewer than 100 as the largest group (n=26, 26%), and those sized between 100 and 499 as the second largest group (n=15, 15%). Consequently, the size of organization also reflected the size of public relations division in the organization. Nearly half of the respondents reported the size of PR division in their organization is less than ten people (n=42, 42%).

In addition, approximately 90 percent of respondents had formal college education (n=81): 30 percent having a Bachelor's degree (n=30), 35 percent with a Master's degree (n=35), and 16 percent with a Doctoral degree (n=16). Since the international group including three sub-groups: Heyman London, IPRS, and Euprera, the author also presented the demographic information by region. Table 3.3 exhibited the detailed information for the three sub-groups.

Overall, the sample profile analysis of the three groups indicated the variance existed among the respondents in terms of different categorical demographic variables, such as the years of experience, the organization size, the size of public relation division, and so on. However, the variance also indicated a relatively higher level of representativeness and generalizability of the sample itself, which could truly reflect the characteristics of practitioners working in the public relations profession in different regions.

Table 3.3. Categorical Demographic Profiles of the International Group by Region

Categorical Variables	**Three Sub-Groups** Number (Percentage) **Heyman UK** (N=33 with 1 missing data)	**IPRS** (N=32 with 8 missing data)	**Euprera** (N=34 with 2 missing data)
Gender			
Female	19 (57.6) *	18 (54.5) *	13 (38.2)
Male	13 (39.4)	7 (21.2)	19 (55.9) *
Age			
18-30	1 (3.0)	4 (12.1)	2 (5.9)
31-40*	9 (27.3)	11 (33.3) *	13 (38.2) *
41-50	12 (36.4) *	5 (15.2)	4 (11.8)
51-60	9 (27.3)	4 (12.1)	8 (23.5)
Over 60	1 (3.0)	1 (3.0)	5 (14.7)
Years of experiences in PR			
Less than 3 years	-	5 (15.2)	2 (5.9)
3 to 5 years	-	1 (3.0)	4 (11.8)
5 to 10 years	3 (9.1)	2 (6.1)	3 (8.8)
10 to 15 years	8 (24.2)	9 (27.3) *	5 (14.7)
More than 15 years*	22 (66.7) *	8 (24.2) *	18 (52.9) *
Type of organization working for			
Public corporation	14 (42.4) *	6 (18.2)	1 (2.9)
Private corporation	7 (21.2)	7 (21.2) *	5 (14.7)
Public relations agency*	1 (3.0)	5 (15.2)	5 (14.7)
Nonprofit organization	9 (27.3)	2 (6.1)	-
Government organization	1 (3.0)	3 (9.1)	1 (2.9)
Educational institution	-	1 (3.0)	20 (58.8) *
Organization size			
Fewer than 100*	6 (18.2) *	8 (24.2) *	12 (35.3) *
100-499	7 (21.2) *	3 (9.1)	5 (14.7)
500-999	2 (6.1)	-	2 (5.9)
1,000-2,499	2 (6.1)	2 (6.1)	4 (11.8)
2,500-4,999	2 (6.1)	4 (12.1)	4 (11.8)
5,000-9,999	3 (9.1)	4 (12.1)	2 (5.9)
10,000-24,999	2 (6.1)	-	1 (2.9)
25,000-49,999	-	1 (3.0)	1 (2.9)
50,000 or more	8 (24.2)	2 (6.1)	1 (2.9)
Size of PR employees inside the organization			
Fewer than 10	11 (32.3)*	12 (36.4) *	19 (55.9) *
10-19	1 (3.0)	2 (6.1)	6 (17.6)
20-49	4 (12.1)	5 (15.2)	1 (2.9)
50-99	5 (15.2)	2 (6.1)	-
100 or more	9 (27.3)	3 (9.1)	4 (11.8)
Don't know	2 (6.1)	1 (3.0)	2 (5.9)

Note, * indicating the top category in each sub-group.

Analytic Approach and Statistical Criteria

As discussed in previous sections, the major purpose of this study is to identify and test the complex process of excellent leadership in public relations. The measurement items developed represent the *a priori* measurement model of the theoretical construct, excellent leadership in public relations. Given this theory driven approach to construct development, the analytical process of confirmatory factor analysis provides an appropriate means of assessing the efficacy of measurement items and the consistency of the pre-specified hierarchical measurement model. In essence, the expectation is that each of the developed scales will uniquely measure its associated factor that that this system of factors will represent the factor relationships illustrated in Figure 1.1.

More specifically, the researcher first used the data collected from the primary group to conduct a psychometric evaluation of the test instruments and to validate the constructs. All models were tested by use of structural equation models (Bollen, 1989; Jöreskog & Sörbom, 1989). The LISREL 8.8 program was used for the data analysis (Jöreskog & Sörbom, 2007).

Statistical Criteria

As suggested by scholars (i.e., Anderson & Gerbing, 1988; Bollen, 1989; Bentler, 1989; Bagozzi & Edwards, 1998), one measure of the model fit that was employed is the likelihood ratio Chi-square statistic. However, reliance on Chi-square test as the sole measure of fit is not recommended anymore because it is sensitive to sample size. For large samples, even trivial deviations of a hypothesized model from a true model can lead to rejection of the hypothesized model. Therefore, other measures of fit not as sensitive to sample size should also be examined (e.g., Brown, 2006; Gerbing & Anderson, 1992). To evaluate the model, several goodness-of-fit indices should be checked (e.g., SRMR, RMSEA, CFI, NFI, NNFI). If these indices are consistent with good model fit, it provides initial support for the notion that the model was properly specified (Brown, 2006). Moreover, Chi-square difference tests are carried out to test the equivalence of models and parameters across groups (e.g., Anderson & Gerbing, 1988). The reliability and validity of the measurement model using the primary group were assessed in terms of individual item reliability, internal consistency reliabilities, construct validity, convergent validity, and discriminant validity.

To further validate the measurement model, the researcher used the data collected from the other two groups, the SPRF data and the international data, to conduct a multiple-group analysis to specify method effects if there is any and to evaluate the measurement invariance, which is about how well the *a priori* measurement models generalize across groups of individuals. A satisfactory fit obtained from the multiple group analysis on the models would imply that the identical factors and factor patterns are reasonable representations of the data across groups (Bagozzi & Edwards, 1998). Therefore, in the following sections, the researcher presented the results obtained from the primary group.

Data Screening

Check for Statistical Assumptions

An initial analysis for the data was done to evaluate the normal distribution of the variables. To test the univariate normality of each item, the researcher inspected frequency distributions to spot skewness and kurtosis values of each variable. According to Kline's (2005) guidelines, the interpretation of the absolute values of standardized skew or kurtosis indexes will be useful in large samples. As a conservative rule of thumb, variables with absolute values of the skew index greater than 3.0 seem to be extremely skewed, and the absolute values of the kurtosis index greater than 8.0 may suggest a serious problem (Kline, 2005, pp. 49-50). Therefore, the researcher observed that most variables were distributed normally except for several variables such as S2 (the nature of being trustworthy), T2 (the ability to actively cope with crisis situations), E3 (the ability to represent the organization without engaging in deceptive practices or communications), R3 (being sought out for advice and counsel by executives in the organization), and G4 (having access to organizational leaders in order to discuss important issues). Therefore, the five variables were removed from the pool of item measures. Item characteristics of the six proposed constructs (e.g., mean, standard deviation, skewness and kurtosis) for the original data are provided in Table 4.1.

Table 4.1. Descriptive statistics for items used to form composites (N=222)

Item	Mean	S.D.	Skewness	Kurtosis
S1	6.35	.967	-1.876	4.682
S2	*6.79*	*.613*	*-5.077*	*37.959*
S3	6.47	.747	-1.272	.911
S4	6.27	.812	-.840	-.097
S5	6.16	.945	-1.001	.815
S6	5.69	1.075	-.556	-.219
V1	6.23	.818	-.908	.539
V2	5.85	1.060	-.943	1.039
V3	5.95	.916	-.606	-.234
V4	6.40	.864	-1.670	3.500
V5	6.42	.840	-1.473	1.740
V6	6.35	.899	-1.432	1.619
T1	6.13	.883	-.766	-.187
T2	*6.63*	*.673*	*-2.090*	*5.197*
T3	6.35	.725	-.781	-.180
T4	5.79	.971	-.351	-.734
T5	5.82	1.014	-.488	-.417
T6	6.18	.899	-.853	.006
E1	6.50	.789	-1.464	1.283
E2	6.41	.818	-1.336	1.373
E3	*6.74*	*.639*	*-3.486*	*16.516*
E4	6.55	.682	-1.492	1.821
E5	6.46	.715	-1.390	1.992
E6	6.00	1.027	-1.072	.964
R1	5.94	.900	-.589	-.012
R2	6.61	.641	-1.502	1.465
R3	*6.59*	*.724*	*-2.070*	*5.190*
R4	5.59	1.129	-.657	.601
R5	5.58	1.085	-.372	-.300
R6	6.24	.888	-1.035	.473
R7	6.45	.804	-1.562	2.311
R8	6.43	.792	-1.377	1.643
D1	6.69	.559	-1.670	1.829
D2	6.17	.881	-.943	.606
D3	6.27	.871	-1.218	1.508
D4	6.25	.865	-.926	.009
D5	6.46	.799	-1.396	1.179
C1	5.78	1.033	-.651	.083
C2	6.02	.905	-.895	.717
C3	6.42	.796	-1.442	2.004
C4	5.95	1.001	-.957	.929
C5	5.58	1.142	-.899	1.439

Continues

Table 4.1 *(continued)*

C6	6.00	.991	-.892	.651
C7	6.04	.892	-.651	-.149
C8	5.86	1.065	-.988	1.496
G1	5.69	1.243	-.846	.666
G2	6.26	.819	-1.005	.793
G3	6.55	.715	-1.620	2.731
G4	*6.54*	*.676*	*-2.051*	*8.291*
G5	5.98	1.125	-1.463	3.098
G6	5.48	1.334	-.811	.521

Note. S1-S6=self insight. V1-V6=shared vision. T1-T6=team collaboration. E1-E6=ethical orientation. R1-R8=relationship building. D1-D5=strategic decision making. C1-C8=communication knowledge management. G1-G6=organizational structure and culture. All items were measured on 7-point scales. Italicized items are those that were dropped during the data screening and after performing the Anderson and Gerbing's (1988) trimming procedure.

Moreover, multivariate normality is an important assumption of confirmatory factor analysis as well. Although it is hard to test multivariate normality directly, the achievement of univariate normality among variables is recommended (Hair et al., 1992). Therefore, the tests of skewness and kurtosis helped the researcher to establish multivariate normality for the analytic approach.

A further check was also conducted to detect univariate outliers in the sample. Cases with extreme scores on a single variable should be detected as univariate outliers (Kline, 2005). As Kline suggests, scores more than three standard deviations beyond the mean may be outliers. By following this common rule, case 17 was removed from the sample as an outlier because the extreme low scores it had on the construct of organization structure and culture. All other cases were normally distributed based on the frequency distributions of *z* scores. Since SEM is also known to be very sensitive to outliers, the researcher verified the presence of outliers by analyzing standardized residuals (SR). The results indicated that there is no extreme value. Therefore, the final usable sample size for all three groups was 483. Establishing univariate normality among a collection of variables can help gain multivariate normality (e.g., Bollen, 1989; Gold, Malhotra, & Segars, 2001). Given the strong underlying assumption of multivariate normality associated with confirmatory factor modeling, the sample statistics bear significantly on the interpretability of the findings.

Individual item and scale reliability

Before testing the measurement model, a series of tests were run on the individual item and the scales to improve the reliability of the proposed constructs. The values of coefficient reliability and item-total correlations were analyzed. The results indicated reasonably high item-total correlations for all constructs (e.g., range of item-total correlations = .757 to .813 for the construct of strategic decision-making). Similarly, all the Cronbach's alphas were greater than .70 (e.g., ranging from .705 to .864) except for the construct of organizational structure and culture, satisfying Nunally's (1978) minimum criterion for internal consistency. The reliability coefficient for the construct of organizational structure and culture was .687, which marginally satisfied the minimum criterion. In addition, the reliability tests indicated that an individual measure item D1 (having knowledge of the organization's business and its environment) should be removed from the construct of strategic decision-making to enhance Cronbach's coefficient. A secondary analysis was conducted by dropping D1, and it was found that the reliability estimate increased from .782 to .792. Table 4.2 exhibited the reliability estimates and item-total correlations for each scale and its indicators.

Table 4.2. Summary of reliability estimates and item-total correlations (N=222)

Scale/Items	Mean	Coefficient Alpha Reliability (Standardized)	Item-Total Correlations
Self Insight		.705	
S1	6.35		.607**
S3	6.47		.649**
S4	6.27		.641**
S5	6.16		.783**
S6	5.69		.699**
Shared Vision		*.735*	
V1	6.23		.585**
V2	5.85		.684**
V3	5.95		.663**
V4	6.40		.604**
V5	6.42		.755**
V6	6.35		.640**
Team Collaboration		.801	
T1	6.13		.652**
T3	6.35		.689**
T4	5.79		.824**
T5	5.82		.831**
T6	6.18		.731**
Ethical Orientation		.776	
E1	6.50		.761**
E2	6.41		.801**
E4	6.55		.693**
E5	6.46		.654**
E6	6.00		.715**
Relationship Building		.791	
R1	5.94		.570**
R2	6.61		.575**
R4	5.59		.751**
R5	5.58		.741**
R6	6.24		.698**
R7	6.45		.598**
R8	6.43		.711**

Table 4.2 *(continued)*

Strategic Decision-Making		.792	
D2	6.17		.813**
D3	6.27		.792**
D4	6.25		.776**
D5	6.46		.757**
Communication Knowledge & Expertise		.864	
C1	5.78		.794**
C2	6.02		.713**
C3	6.42		.582**
C4	5.95		.765**
C5	5.58		.772**
C6	6.00		.662**
C7	6.04		.701**
C8	5.86		.732**
Organization Structure & Culture		.687	
G1	5.69		.659**
G2	6.26		.668**
G3	6.55		.624**
G5	5.98		.680**
G6	5.48		.668**

Note. ** All item-total correlations were significant at .01 level (2-tailed). The scale reliability tests indicated that D1 should be dropped from the construct of Strategic Decision-Making to increase the reliability coefficient.

Tests for Common Method Bias

Given the nature of the research methodology used (i.e., the online survey of multiple groups of samples), bias associated with the common method should also be checked to see if it presented a problem. In order to check for the presence of common method variance, Harman's single-factor test was used to the entire sample based on Podsakoff, MacKenzie, Lee, and Podsakoff's (2003) discussion. The basic assumption of Harman's single-factor solution is that if a substantial amount of common method variance in the data existed, either a single factor will emerge or a single factor will account for the majority of the covariance among the variables. To test for the potential threat that common method bias could bring to the validity of the study, the researcher applied an exploratory factor analysis with unrotated factor solution to all variables throughout the entire sample. The results of the unrotated factor solution indicated a number of eight factors with eigenvalues greater than one that were necessary to account for the variance in the variables. Both the scree plot and Kaiser Criterion yielded consistent results with eight factors. More importantly, the researcher checked the total variance each factor explained and found no single factor was dominant (the first factor explained 35.72% of variance and the total variance explained by the eight factors was 60.11%). Therefore, common method variance is not a significant problem in the data set.

Approach to Representing Constructs

One important issue in this dissertation is to investigate the validity of the relationships incorporated in the hierarchical measurement model of excellent leadership in public relations. As a multidimensional construct, the measurement of excellent leadership in public relations consists of several components which try to capture the underlying construct of interest. To represent the relationships among the components in a best way, the researcher decided to take Bagozzi and Edwards' (1998) conceptual framework for construct specification. They suggested a general approach to representing constructs in organizational research that incorporates the ideas of construct *depth* and *dimensionality*. By bringing the issues of construct depth and dimensionality into clearer focus, it is meaningful to investigate construct validation for those multidimensional and hierarchically arranged constructs.

The general framework presented by Bagozzi and Edwards is organized in terms of constructs, operationalizations, and their hierarchical arrangement. The specification of the hierarchical structures relating factors to one another can be depicted at various depths. Based on their methods of construct specification using confirmatory factor analytic tools, four alternative measurement models were described in great details. The *total disaggregation model* is characterized by treating all measure items individually as indicators of the latent construct of interest. The *partial disaggregation model* and the *partial aggregation model* involve the aggregation of individual items (e.g., summed or averaged) into subsets. The aggregates can be used as indicators of the components, and the level of abstraction can be varied. Finally, when one sums all items in a scale and uses the sum as the representation of the global construct, this type of model is termed the *total aggregation model*. The total aggregation model is the most abstract representation of a scale or construct.

The rationale for creating composites and representing their relationships in a measurement model should be driven by theoretical framework as well as the practical concerns. According to Baggozi and Edwards, the total disaggregation model is "the most concrete representation of construct" (p. 50) because each indicator is treated as an individual item of a component. It gives the most detailed level of analysis of the statistical properties for each individual item. It can also specify and test the distinctiveness of multiple components by examining the correlations between components in the Phi matrix. However, the total disaggregation model at a single level only specifies common variance. To estimate common, specific, and error variance of the indicators, a second-order CFA model is preferred. The hypothesized higher order dimensions can help to achieve the degree of uniqueness. Another primary disadvantage of the total disaggregation model is about the large amounts of measurement error it will exhibit because of the highest number of parameters it has. As a consequence, as sample sizes increase, it is highly likely that the total disaggregation models will fail to fit the data satisfactorily (Baggozi & Edwards, 2005, pp. 50-53).

For total aggregation models, the number of estimated parameters is largely reduced, and a more condensed representation of a construct is achieved. It is quite necessary for the researchers to consider collapsing complex scales with many components and items into composites of facets at a more abstract or global level, which, in turn, could simplify the model structure and to examine the integrity of the measures of the latent variables. The essence of the underlying meaning of a global construct can be captured. However, since the total aggregation model is the most abstract representation of a scale or a construct, it is highly likely that the complete aggregation may bring inherently ambiguous. In addition, based on previous studies, the total aggregation models generally yield poor model fit (e.g., Bagozzi & Edwards, 1998; Bagozzi & Heatherton, 1994). Therefore, the researcher decided not to represent the leadership construct in a total aggregation model in this study.

Thus, to produce more stable estimates of structural relationships, the researcher decided to follow the general approach suggested by Bagozzi and Edwards (1998) partially. First, the researcher represented the measure items and components into a *first-order total disaggregation* model to test the common variance. Secondly, several *partial disaggregation* models were presented and tested as the researcher proposed in Figure 1.1. Chi-square difference tests were applied to the models find out the best way to represent the complex construct of leadership in public relations. Then, a *second-order partial disaggregation model* was tested to explore the underlying structure among the first-order factors and their relationships to the global construct "excellent leadership in public relations." As discussed in above paragraphs, this approach would greatly simplify the estimation of the model and would create consistency among the complex the measured components of the alternative models. The integrity of the underlying structure of the complex construct, leadership in public relations, would be achieved. The overall goodness-of-fit both at the theoretical level and the practical level were evaluated. Finally, a *structural equation* model was tested to find out how organizational structure and culture would affect the achievement of excellent leadership in public relations.

The First-order Total Disaggregation Model

Model identification is another important assumption of confirmatory factor modeling. Since the approach of confirmatory factor analysis (CFA) deals specifically with measurement models, which is the relationships between observed measures and latent variables, all aspects of the CFA model will need to be prespecified by the researcher and be strongly driven by theory or prior research evidence. Scholars (e.g., Brown, 2006; Kline, 2005) suggested that, in order to estimate the parameters in CFA, the measurement model must be identified. According to Brown (2005), "model specification pertains in part to the difference between the number of freely estimated model parameters and the number of pieces of information in the input variance-covariance matrix (p. 62)." Brown further defined that "a model is overidentified when the number of knowns (i.e., number of variances and covariances in the input matrix) exceeds the number of freely estimated model parameters" (p. 67). And an underidentified model cannot be estimated because of the existence of an infinite number of parameter estimates.

Therefore, based on Brown's guidelines for model identification, the number of pieces of information in the input matrix in this study included 40 variances (*p*) and 780 covariances [*p(p-1)/2*]. The first-order total disaggregation model contained 102 freely estimated parameters: 33 factor loadings (one indicator will be served as marker indicator and thus their factor loadings will be fixed), 40 error variances, 7 factor variances, and 22 factor covariances. Thus, the measurement model itself is overidentified with 718 degree of freedom [df=(40+780)-102] and goodness-of-fit evaluation can be applied to the model.

Moreover, LISREL program itself performs a simple test for identification issue during the estimation process. It will alert the user when possible identification problems exist. In the model estimated in this study, no such warnings were appeared, which further guaranteed the model has been identified.

Estimation Method and Fit Criteria

To assess the strength of measurement between the items and associated constructs, a first-order total disaggregation model was estimated. This model examines the system of relationships among measures of 40 indicators and 7 constructs (self insight, shared vision, team collaboration, ethical orientation, relationship building, strategic decision-making, and communication knowledge management). Correlation matrix was used as input to test the model (see Appendix D for the correlation matrix of 40 indicators). As illustrated in Table 5.1, parameter estimates and fit indices implied that the hypothesized dimensions of leadership in public relations at the first-order level provided a good fit for the observed covariances among the collection of item measures. The minimum fit function Chi-square is 1420.001 with 709 degree of freedom ($p<.001$). Although X^2 is not significant and quite large, the normed and non-normed fit indices are very high suggesting good model fit (NFI=.922, NNFI=.955). Estimation of the model also produced the following goodness-of-fit indices: CFI=.959, SRMR=.062, and RMSEA=.068 with the 90% confidence interval of (.062; .073). See Table 5.1 for detailed findings of the first-order total disaggregation model.

Table *5.1*. Findings for the first-order total disaggregation model and construct reliability (N=222)

Construct/Indicators	Parameter Estimates (*t*-value)[a]	Standard errors	Composite Reliability (CR)	Average Variance Extracted
Self Insight			.680	.300
S1	.879 (6.22)	.141		
S3	.759 (6.79)	.112		
S4	.922 (7.36)	.125		
S5	1.00	-		
S6	.903 (7.02)	.129		
Shared Vision			.743	.332
V1	.738 (6.64)	.111		
V2	1.00	-		
V3	.868 (6.90)	.126		
V4	.536 (4.89)	.109		
V5	.804 (6.97)	.115		
V6	.802 (6.58)	.122		
Team Collaboration			.816	*.486*
T1	.566 (7.42)	.076		
T3	.547 (8.86)	.062		
T4	.982 (12.35)	.080		
T5	1.00	-		
T6	.745 (9.84)	.076		
Ethical Orientation			.743	.375
E1	.691 (6.67)	.104		
E2	.802 (7.31)	.110		
E4	.656 (7.21)	.091		
E5	.677 (7.13)	.095		
E6	1.00	-		
Relationship Building			.784	.366
R1	.637 (7.89)	.081		
R2	.409 (7.13)	.057		
R4	1.00	-		
R5	.957 (9.76)	.098		
R6	.561 (7.12)	.079		
R7	.399 (5.57)	.072		
R8	.632 (8.86)	.071		
Strategic Decision-Making			.790	.486
D2	.969 (9.75)	.099		
D3	.960 (9.66)	.099		
D4	1.00	-		
D5	.780 (8.52)	.092		
Communication Knowledge Management			.856	.432
C1	.925 (12.96)	.071		
C2	.821 (9.02)	.091		
C3	.576 (7.39)	.078		
C4	.959 (9.45)	.101		
C5	1.00	-		
C6	.821 (8.34)	.098		
C7	.718 (8.11)	.089		
C8	.903 (8.50)	.106		

Note. [a] Figures in parentheses are t values. Based on one-tailed t test: t values>.165, p<.05; t values>2.33, p<.01. Estimates without t values and standard errors are fixed parameters.

Factor loadings were generally high except for R7 in the component of relationship building (estimated lambda is .399). The examination of the *t* values associated with each of the loadings indicated that, for each item, they exceed at least the critical values of the .05 significant level (critical value=1.96). Therefore, all items are significantly related to their specified constructs. However, indicator measurement errors, which are obtained from the diagonal of the measurement error correlation matrix (the theta-delta matrix) in the LISREL output, varied from moderate to relatively high (e.g., the theta-delta for S6 is .899, the theta-delta for V2 is .754). The relatively high indicator measurement errors are also reflected in the low variance extracted measures (see the right panel of Table 5.1). The variance extracted measures estimate the amount of common variance among latent construct indicators; and a variance extracted of greater than the minimum value of .50 will be supportive of the convergent validity check (Fornell & Larcker, 1981). The lower level of variance extracted for the constructs in this model indicated that more than half of the variance for the specified indicators was not accounted for by the designated construct. The researcher believed part of the reason is from the large measurement error and some unidentified unique variance associated with each construct.

Construct reliability was also assessed by using the composite reliability (CR) measures. According to Fornell and Larcker (1981), composite reliability is a measure of the overall reliability of a collection of heterogeneous but similar items. It assesses whether the specified indicators are sufficient in their representation of the constructs. Nunally (1978) suggested that a cut-off value of .70 is appropriate for checking the internal consistency of the construct. In this first-order total disaggregation model, most constructs displayed satisfactory levels of validity, as indicated by composite reliabilities ranging from .743 to .856 (except for the construct of self insight, where CR=.680, marginally satisfies the requirement).

The results obtained on the standardized residuals and modification indices also indicated that the true score variance is quite satisfactory. Although some large modification indices have been suggested by the LISREL program, especially for the theta-delta matrix, the researcher inspected those modification indices suggested several cross loadings among indicator measurement errors. Therefore, the researcher did not justify the construct and its associated indicators.

To demonstrate discriminant validity, the suggested cutoff of .90 is used as implied distinctness in construct content (e.g., Bagozzi, 1980; Bagozzi & Fornell, 1982; Gold, Malhotra, & Segars, 2001). Inspection of the factor intercorrelations exhibited in Table 5.2 and 5.3 revealed that self insight and shared vision are not distinct (φ=.962); relationship building and communication knowledge management are not distinct as well (φ=.949), which suggested a poor discriminant validity for the above constructs. Therefore, the researcher respecified the first-order model by collapsing the two constructs (self insight and shared vision) into a single factor and retested the model. The fit indices did not improve significantly (X^2=1391.68, *df*=680, p<.001; CFI=.957; NFI=.919; NNFI=.953; SRMR=.063; RMSEA=.069 with 90% confidence interval of [.064; .074]). To treat this new specified model as a nested model from the originally specified disaggregation model, a chi-square difference test was conducted. The result indicated that ΔX^2 (28) = 28.32, p>.10, which failed to reject the originally specified model. Therefore, to be consistent with the theoretical framework the researcher proposed, the researcher decided to keep the constructs in the way as they were proposed. Thus, self insight and shared vision are two separate constructs, as are relationship building and communication knowledge management.

Table 5.2. Estimated Factor Variances and Covariances

Component	SI	SV	TC	EO	RB	DM	CK
SI	.314 (.071)						
SV	.328 (.058)	.370 (.085)					
TC	.358 (.059)	.408 (.066)	.633 (.095)				
EO	.251 (.049)	.277 (.054)	.384 (.063)	.412 (.089)			
RB	.363 (.061)	.399 (.068)	.546 (.077)	.415 (.069)	.623 (.108)		
DM	.286 (.048)	.331 (.055)	.356 (.055)	.280 (.050)	.420 (.063)	.409 (.068)	
CK	.307 (.056)	.374 (.065)	.455 (.070)	.373 (.065)	.569 (.083)	.389 (.060)	.577 (.108)

Note. Figures in parentheses are standard errors. SI=self insight, SV=shard vision, TC=team collaboration, EO=ethical orientation, RB=relationship building, DM=strategic decision-making, CK=communication knowledge management.

Table 5.3. Standardized Phi Matrix (Factor correlations)

Component	SI	SV	TC	EO	RB	DM	CK
SI	1.00						
SV	.962*	1.00					
TC	.804	.844	1.00				
EO	.699	.711	.752	1.00			
RB	.820	.832	.870	.820	1.00		
DM	.799	.850	.700	.683	.832	1.00	
CK	.722	.810	.753	.766	.949*	.800	1.00

Note. All correlations are significant at .01 level. * indicating the values exceeding .90 as a sign of poor discriminant validity

The First-order Partial Disaggregation Models

As Bagozzi and Edwards (1998) pointed out, the primary disadvantage of the total disaggregation model is the measures of factors tend to exhibit greater amounts of measurement error. The disadvantages were reflected clearly in the total disaggregation model the researcher has tested in this study: (1) great amount of measurement error associated with each item (e.g., relatively moderate to high values found in the theta-delta matrix); (2) large number of parameters to be estimated (e.g., *df*=720); and (3) low level of construct discriminant validity (e.g., factor covariance is larger than .90). Although the statistical properties have been evaluated for each individual item, a large amount of variance among the factors and the measures of the factors have been left to the measurement error. The error variances for these items could be a possible reason for the lower level of distinctiveness of factors (i.e., the components of self insight and shared vision [φ=.962], or the components of relationship building and communication knowledge management [φ=.949]) the analysis has exhibited. Therefore, to improve the overall model fit statistically and practically, the researcher performed a series of nested model tests at a partial disaggregation level.

As explained in previous section, another way to represent constructs is through the partial disaggregation model (Bagozzi & Edwards, 1998). Structurally, the total disaggregation model and the partial disaggregation model are quite similar; however, the term "partial" used here reflects the fact that items for a component are split into sets of aggregated items, and the aggregates can be used as indicators of the component. Since items are handled and indicators are formed, the primary advantage of the partial disaggregation model is the reduction of the number of parameters to estimated, which eventually could decrease the amount of measurement error associated with each item. Another advantage of the partial disaggregation model is its ability to evaluate the distinctiveness of factors and the estimation of the reliability of each indicator and the aggregated components. In addition, the approach of partially aggregating items into a more abstract level provides the possibility of specifying a higher-order factor models (e.g., second-order factor models) to separate common variance, specific variance, and measurement error (see Landis, Beal, & Tesluk, 2000).

To aggregate items and form composites, an empirically equivalent method described by Nunnally and Bernstein (1994) has been employed in this study. The philosophy of aggregating items is to create "truly empirically equivalent composite measures" (Landis, Beal, & Tesluk, 2000, p. 189). Therefore, items would be assigned to composites so that these measures would have equal measures, variances and reliabilities (Nunnally & Bernstein, 1994). If empirical equivalence can be achieved among composites, the great improvement in overall model fit should be detected in the measurement model.

To be more specific in the method itself, the researcher first computed item means, item standard deviations, and item-total correlations for each construct (see Table 4.1 and 4.2 for specific values). The next step was to create two composites for each construct based on the statistical properties of each item. Specifically, items with approximately same mean, standard deviation, and item-total correlations were identified as a pair. One item from the pair was placed into one composite and the other item was placed into the second composite. The procedure was finished until all items in one construct have been assigned to one composite. Since several constructs (e.g., self insight, team collaboration, and ethical orientation) had odd number of items, the extra item was evaluated by the researcher and put into the composite that best equated the two subscales. Eventually, for each construct, two composites with empirically equivalence were formed, which resulted in a total of 14 composite indicators (please see Table 6.1 for the items and the composites they formed). Aggregated items were averaged and the correlations were generated between each composite. The correlation matrix with standard deviation was used as the LISREL input for model analysis (see Table 6.2).

Table 6.1. Item aggregation for composite indicators

Construct	Composite Indicators	Individual Items
Self Insight	S11	S1, S4
	S12	S3, S5, S6
Shared Vision	V11	V3, V5, V6
	V12	V1, V2, V4
Team Collaboration	T11	T5, T6
	T12	T1, T3, T4
Ethical Orientation	E11	E1, E4
	E12	E2, E5, E6
Relationship Building	R11	R2, R5, R8
	R12	R1, R4, R6, R7
Strategic Decision Making	D11	D3, D5
	D12	D2, D4
Comm Knowledge Management	C11	C2, C3, C4, C8
	C12	C1, C5, C6, C7

The first nested model tested was the first-order partial disaggregation model with seven factors. All seven constructs with composite indicators were tested at the first level, and structurally, it was equivalent to the total disaggregation model the researcher has tested in previous section. The model fit indices indicated that the use of composite indicators extensively decreased the Chi-square value: the minimum fit function Chi-square dropped from 1420.001 to 127.584. As a consequence, the degrees of freedom dropped from 709 to 56. Other model fit indices also exhibited significant values: NFI=.976; NNFI=.978; CFI=.987; SRMR=.036; RMSEA=.073 with 90 percent confidence interval of [.056; .092]. Table 6.3 presented the results from the first-order partial disaggregation model, where it can be seen that the model fit improved greatly.

Table 6.3. Findings for the first-order partial disaggregation model (N=222)

Construct/ Composite Indicators	Standardized Loading (*t*-value)[a]	Standard errors	Composite Reliability (CR)	Average Variance Extracted
Self Insight			*.576*	*.404*
S11	.477 (9.50)	.050		
S12	.449 (8.96)	.050		
Shared Vision			.735	.581
V11	.537 (12.85)	.042		
V12	.475 (11.69)	.041		
Team Collaboration			.773	.632
T11	.669 (13.11)	.051		
T12	.546 (13.46)	.041		
Ethical Orientation			.815	.692
E11	.455 (11.74)	.039		
E12	.592 (15.05)	.039		
Relationship Building			.825	.687
R11	.592 (14.75)	.037		
R12	.532 (14.08)	.038		
Strategic Decision-Making			.803	.672
D11	.563 (13.13)	.043		
D12	.639 (14.36)	.045		
Comm Knowledge Management			.850	.740
C11	.630 (15.79)	.040		
C12	.670 (14.94)	.045		

Note. [a] Figures in parentheses are t values. Based on one-tailed t test: t values>.165, p<.05; t values>2.33, p<.01. Almost all constructs exhibited high level of composite reliability (>.70) and variance extracted measure (>.50) except for the construct of self insight (CR=.576; AVE=.404).

Table 6.2. Correlation matrix and standard deviation for 14 composite indicators (N=222)

	S11	S12	V11	V12	T11	T12	E11	E12	R11	R12	D11	D12	C11	C12
S11	1.000													
S12	0.402	1.000												
V11	0.456	0.543	1.000											
V12	0.496	0.422	0.578	1.000										
T11	0.393	0.530	0.524	0.467	1.000									
T12	0.563	0.389	0.480	0.558	0.635	1.000								
E11	0.405	0.277	0.388	0.328	0.487	0.452	1.000							
E12	0.508	0.345	0.436	0.432	0.506	0.493	0.670	1.000						
R11	0.577	0.422	0.529	0.516	0.520	0.560	0.452	0.538	1.000					
R12	0.438	0.389	0.415	0.463	0.591	0.571	0.433	0.542	0.684	1.000				
D11	0.372	0.436	0.544	0.403	0.450	0.410	0.334	0.348	0.579	0.481	1.000			
D12	0.452	0.492	0.570	0.499	0.501	0.513	0.443	0.499	0.596	0.530	0.668	1.000		
C11	0.471	0.398	0.501	0.482	0.507	0.553	0.409	0.593	0.650	0.666	0.547	0.538	1.000	
C12	0.451	0.370	0.504	0.474	0.542	0.523	0.409	0.537	0.637	0.609	0.569	0.521	0.742	1.000
SD	0.729	0.731	0.678	0.651	0.848	0.678	0.617	0.652	0.649	0.654	0.713	0.755	0.717	0.793

Note. All correlations are significant at .05 level.

Table 6.4. Standardized Phi matrix (factor correlations)

Construct	SI	SV	TC	EO	RB	DM	CK
Self insight	1.000						
Shared vision	.990	1.000					
Team collaboration	.927	.830	1.000				
Ethical orientation	.747	.628	.711	1.000			
Relationship building	.881	.762	.846	.719	1.000		
Strategic Decision Making	.845	.821	.724	.599	.811	1.000	
Comm Knowledge Management	.777	.744	.772	.708	.899	.762	1.000

Factor loadings on the composite indicators in the first-order partial disaggregation model were generally moderate to high, ranging from .449 to .670. The examination of the *t* values associated with each of the loadings indicated that, for each composite, they exceeded at least the critical values of the .05 significant level (critical value=1.96). Therefore, all composite indicators were significantly related to their specified constructs. More importantly, composite indicator measurement errors, which were obtained from the diagonal of the measurement error correlation matrix (the theta-delta matrix) in the LISREL output, varied from low to moderate in most cases. Hence, true score variance was improved. However, correlations among factors were moderate to high, which re-address the lower level of distinctiveness among factors, especially for the constructs of self insight and shared vision (φ=.99). Squaring a factor correlation provides the proportion of overlapping variance between two factors (Brown, 2006). Therefore, self insight and shared vision shard 98.1% of their variance ($.99^2$=.981), which indicated that two constructs are so similar to each other and one construct needs to be dropped or be combined.

Thus, the researcher collapsed self insight and shared vision into one construct and re-specified the first-order partial disaggregation model with six latent variables (constructs) as the second nested model. The model fit indices indicated the model fits data reasonably well: X^2 (62) =133.75, $p<.01$; NFI=.975; NNFI=.980; CFI=.986; SRMR=.038; RMSEA=.070 with 90 percent confidence interval of [.053; .087]. The composite reliability for the new construct was improved to .789. The variance extracted measure was improved to .484, which marginally satisfied the minimum criterion of .50. More importantly, the inspection of the factor correlation matrix indicated that there was no value greater than .90, which satisfied the suggested cutoff value of .90 as implied distinctness in construct content (Bagozzi, 1980; Bagozzi & Fornell, 1982; Gold, Malhotro, & Segars, 2001). Moreover, other components showed similar intercorrelations no matter in the total or partial disaggregation models.

A Chi-square difference test was also conducted to compare the two first-order partial disaggregation models, and the results indicated that ΔX^2 (6) = 6.166, $p>.10$. Although, based on the Chi-square difference test, we failed to get the conclusion that the model with six constructs is superior than the one with seven constructs, and vice versa, the evaluation of model fit cannot rely on the Chi-square tests with the isolation of other information to support the conclusion of a good-fitting model (e.g., Bagozzi & Edwards, 1998; Brown, 2006). The above analysis has provided initial support for the acceptability of the first-order partial disaggregation model with six constructs as properly specified. Therefore, the previously separated constructs of self insight and shared vision were eventually collapsed and combined into a single construct to probe the self dynamic dimension with team collaboration as a separate dimension.

The Second-order Partial Disaggregation Model

To further explore the relationships among the constructs and their contribution to the global construct “excellent leadership in public relations,” a second-order partial disaggregation model was developed by the researcher at a more abstract level. A major advantage of higher-order factor analysis is to provide a more parsimonious account for the correlations among lower-order factors. The pattern and magnitude of the strong correlations among the six constructs in the first-order CFA solution have driven the researcher to propose a single higher-order factor as constituting relatively abstract dimensions of the global construct “excellent leadership in public relations.” The conceptual basis for the specification of a single higher-order factor is that, as a global construct, excellent leadership in public relations is believed to account for the correlations among the first-order factors (e.g., self insight, shared vision, team collaboration, etc.). All six first-order factors are believed to represent styles of leadership aimed at improving communication effectiveness at a managerial level.

The test of the second-order partial disaggregation model yielded some significant model fit indices: Minimum fit function Chi-square=157.714, *df*=71, $p<.01$; NFI=.969; NNFI=.978; CFI=.983; SRMR=.043; RMSEA=.074 with 90 percent confidence interval for [.058; .089]. Since the higher-order model was overidentified, the nested Chi-square test was also used to determine whether the specification produced a significant degradation in fit if compared to the first-order solution. The results indicated that ΔX^2 (9) = 23.964 (i.e., 157.714-

133.750, *df*=71-62), p<.05. As the critical value of X^2 with *df*=9 is 16.919 (α=.05), it can be concluded that the higher-order solution is not significantly superior than the first-order partial disaggregation model. However, the Chi-square difference test did indicate that the second-order partial disaggregation model to be almost equally good fitting. Since the analysis of a higher-order solution should be fully confirmatory, the researcher has already named the six factors and their relationships to the single higher-order during the conceptualization process. The researcher would argue there is no need for additional conceptual justification (see Figure 1.3 for graphic presentation of the final model).

In addition, as exhibited in Table 6.5., the completely standardized estimates from the higher-order solution indicated that each of the first-order factors loaded strongly onto the second-order factors (range of loadings = .766-.951). The estimated provided in the psi matrix indicated that the single higher-order factor accounted for a high percentage of the variance in the first-order factors, ranging from 72.2% to 90.4%. Therefore, it can be concluded that the model provided a good account for the correlations among the first-order factors as a practical matter. Table 6.6 exhibited a summary of the fit indices for all the model testing.

Therefore, as an acceptable solution to answer the second research question, which addressed the key dimensions of the complex construct, the model testing confirmed that the leadership construct encompasses six essential dimensions: *self dynamics, team collaboration, ethical orientation,* *relationship building, strategic decision-making capability, and communication knowledge management capability.* Although the procedure of model testing indicated that the final results exhibited a slightly deviation from the originally proposed theoretical dimensions (e.g., the combination of self insight and shared vision into a single dimension of self dynamics, and the separation of team collaboration as another single dimension representing the variance of the leadership construct), the researcher would argue the re-specification process did not change the nature of the construct itself: leadership in public relations still represents a complex and multifaceted phenomenon. Instead, the confirmatory approach helped the researcher detect the conceptual redundancy and increase the level of parsimony in the measurement model.

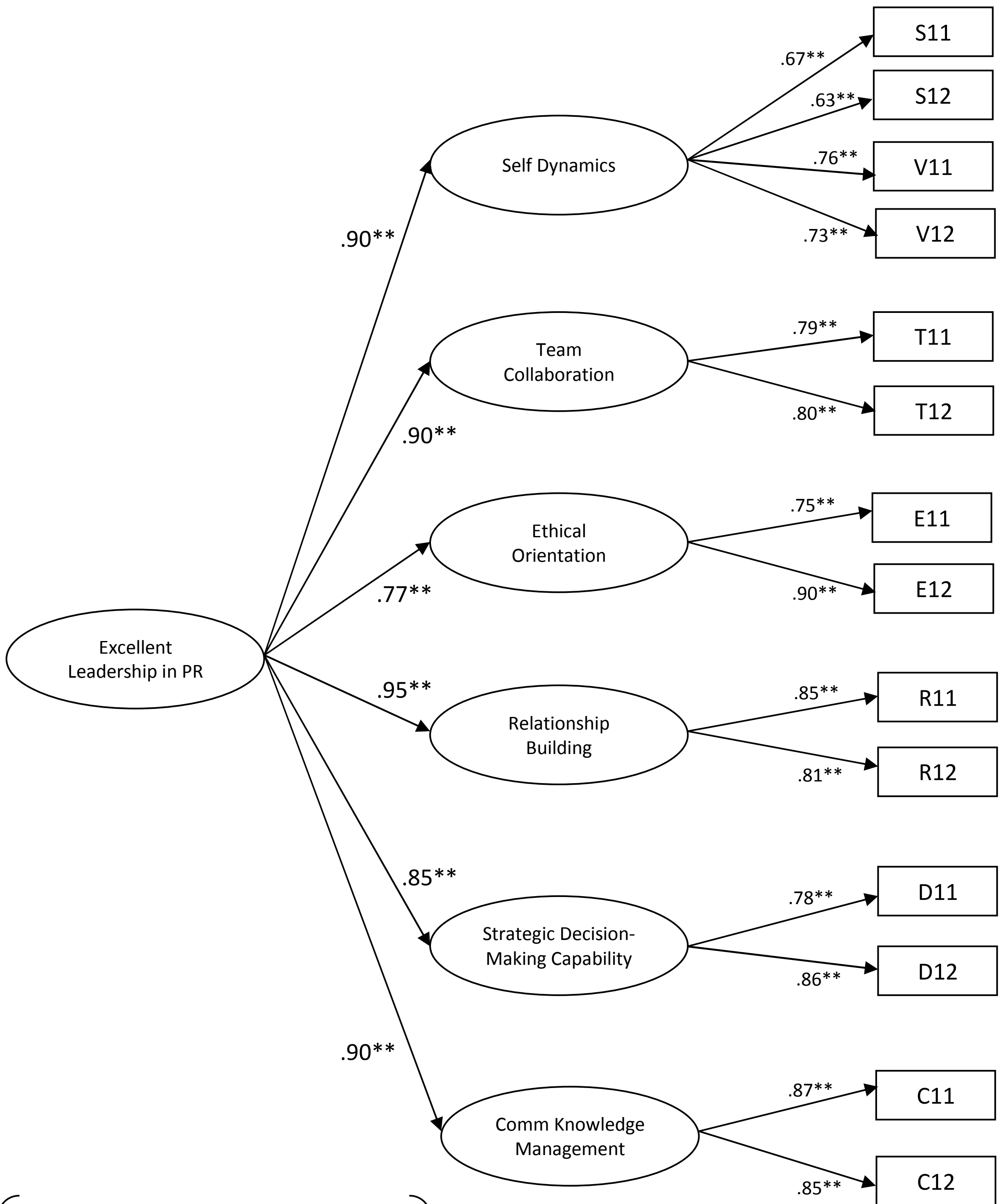
Table 6.5. Findings for the second-order partial disaggregation model (N=222)

	First-order factor loadings (standardized solution)					
Composites	SI/SV	TC	EO	RB	DM	CK
S11	.674	-	-	-	-	-
S12	.631	-	-	-	-	-
V11	.759	-	-	-	-	-
V12	.725	-	-	-	-	-
T11	-	.790	-	-	-	-
T12	-	.804	-	-	-	-
E11	-	-	.745	-	-	-
E12	-	-	.899	-	-	-
R11	-	-	-	.849	-	-
R12	-	-	-	.806	-	-
D11	-	-	-	-	.781	-
D12	-	-	-	-	.856	-
C11	-	-	-	-	-	.875
C12	-	-	-	-	-	.848
	Second-order factor solution in the Gamma matrix (standardized)					
	Excellent Leadership in Public Relations					
SI/SV	.899					
TC	.897					
EO	.766					
RB	.951					
DM	.850					
CM	.897					

Table 6.6. A summary of mode fit indices

Model Description	X^2	*df*	NFI	NNFI	CFI	SRMR	RMSEA
1. First-order total disaggregation model	1420.00	709	.922	.955	.959	.062	.068
2. First-order partial disaggregation model (7 factors)	127.58	56	.976	.978	.987	.036	.074
3. First-order partial disaggregation model (6 factors)	133.75	62	.975	.980	.986	.038	.070
4. Second-order partial disaggregation model	157.71	71	.969	.978	.983	.043	.074

Figure 1.3. Second-Order Partial Disaggregation Model of Excellent Leadership in Public Relations (Final Model)



Chi-square=156.26, df=71, p<.01
NFI=.969
NNFI=.978
CFI=.983
SRMR=.043
RMSEA=.074

The Structural Equation Model

Based on previous tests, a well-behaved higher-order factor solution for the global construct of excellent leadership in public relations has already been established. The achievement of excellent leadership in public relations should encompass six major factors such as self-dynamics, team collaboration, ethical orientation, relationship building capability, strategic decision-making capability and the ability to apply and manage communication knowledge and expertise. In the following section, the researcher tested the hypothesized influence the factor organizational structure and culture would have on the achievement of excellent leadership in public relations. At the level of structural model, the researcher aggregated all items into a single measure of the designated factor of the leadership construct to simplify the model structure as showed in Figure 1.4: the global construct of leadership in public relations consists of six factors, and organizational structure and culture will have a direct impact on the leadership construct itself.

As discussed before, the main advantage of the approach is its simplicity in terms of the factor structure and its ability to capture the essence of the underlying meaning of a scale. Therefore, all items in each scale for the designated construct were summed. The summed scores were used as the scale scores. Correlations were generated between every composite scale in the data, and the resulting matrix was used as the LISREL input (Table 7.1.exhibited the correlation matrix at the scale level).

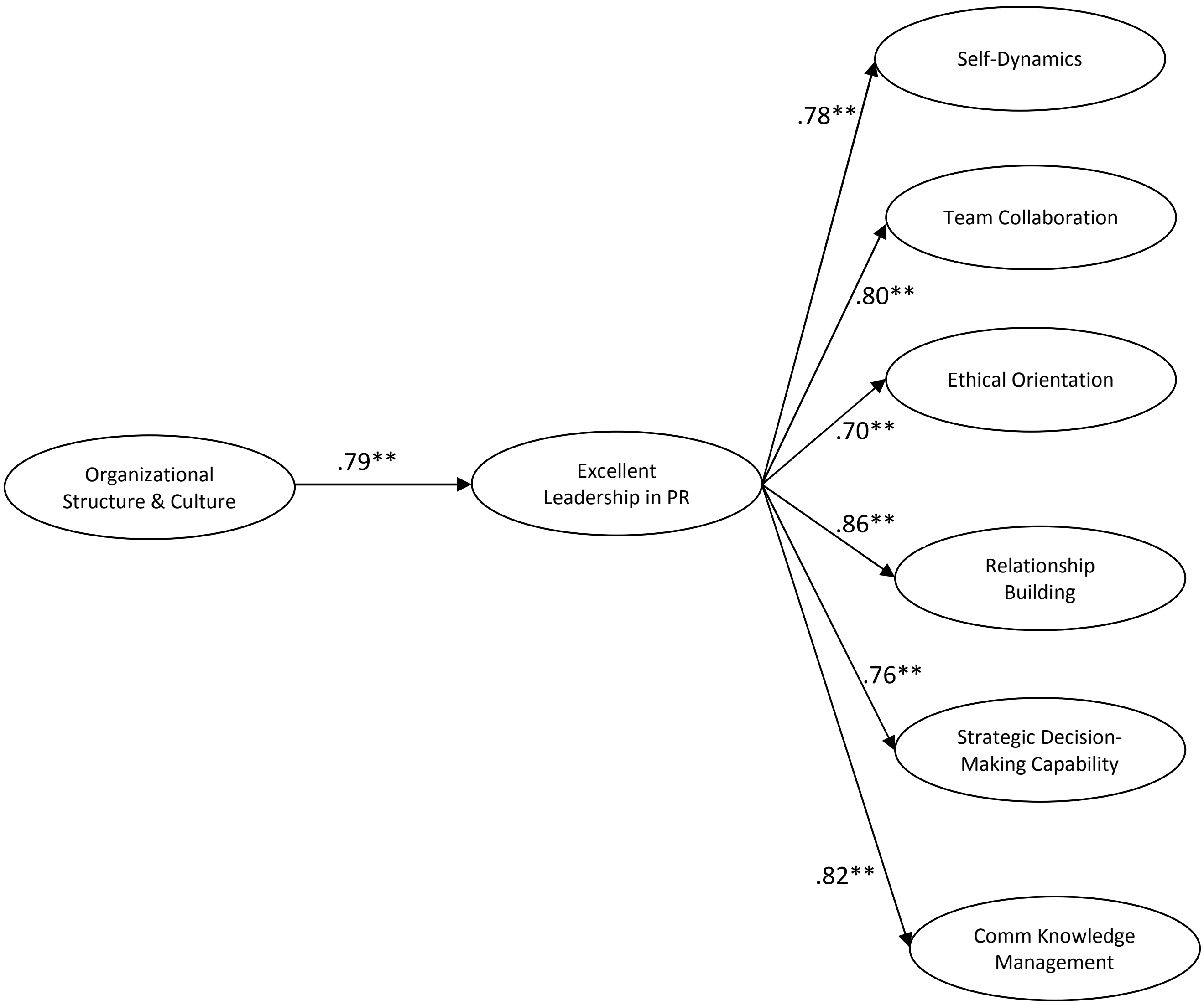
Table 7.1. Correlation matrix with standard deviations of the primary group at the scale level

Composites	SD	TC	EO	RB	DM	CK	G11	G12
SD	1.000							
TC	.685	1.000						
EO	.543	.586	1.000					
RB	.634	.677	.594	1.000				
DM	.662	.567	.491	.644	1.000			
CK	.616	.629	.587	.745	.637	1.000		
G11	.339	.336	.347	.401	.387	.398	1.000	
G12	.425	.516	.481	.541	.481	.461	.461	1.000
S.D.	.547	.675	.586	.599	.671	.705	.780	.821

Note. SD=self-dynamics including self insight and shared vision; TC=team collaboration; EO=ethical orientation; RB=relationship building; DM=strategic decision-making; CK=communication knowledge management; G11 and G12 are two composites for the factor of organizational structure and culture.

As theorized, distinct causal path from organizational structure and culture predicts its impact on leadership effectiveness. The test of the structural model indicated that organizational structure and culture did exhibit a strong direct effect on leadership construct (the standardized regression coefficient is .786, $p<.01$), which further supported the discussion of the function of organizational structure and culture in leadership effectiveness (see Figure 1.4 for final structural model). Moreover, the overall goodness-of-fit indices of proposed conceptual model indicated that the structural model fit the data very well: the minimum fit function Chi-square is 40.140 (df=19, p=.003); NFI=.979; NNFI=.984; CFI=.989; SRMR=.029; RMSEA=.067 with 90 percent confidence interval of [.035; .098]. Therefore, the testing of the structural model has confirmed the answers for RQ3, which addressed the relationship between the constructs of organizational structure and culture and public relations leadership.

Figure 1.4: A Structural Model of Leadership in PR and Organizational Structure & Culture (Final Model)



Chi-Square=40.14, df=19, p=.003
NFI=.979
NNFI=.984
CFI=.989
SRMR=.029
RMSEA=.067

Concluding remarks

Therefore, the researcher concluded that, by using the primary group data set, the global construct of excellent leadership in public relations has been confirmed as a complex phenomenon, consistent with the theoretical framework reviewed and developed by previous scholars. The nature of multi-facet also helped the researcher raise a research question to explore the key dimensions the construct includes, as reflected in RQ2 at the end of Chapter II. This complex phenomenon was mirrored by the pattern and magnitude of loadings between its measured dimensions of self dynamics, team collaboration, ethical orientation, relationship building, strategic decision-making capability, and communication knowledge management capability (see Figure 1.3 for the final higher-order measurement model). Therefore, the global construct of excellent leadership in public relations was interpreted as a mathematical composite of its dimensions. Importantly, no single dimension of the construct itself was sufficient in describing or predicting the phenomenon. Each of the dimensions contributed uniquely to the overall capability of an effective leader in public relations.

Moreover, as illustrated in Figure 1.4, the causal path between organizational structure and culture and leadership in public relations was positive and of high magnitude, which explained the answers for RQ3. The strong regression coefficient implied that organization structure contributed uniquely to the achievement of leadership effectiveness inside the organization, which is consistent with developed theoretical perspectives outlined in the pervious chapters of this study.

The findings revealed a more precise operationalizable aspect of the construct and its dimensions and yielded some insight into the magnitude of their association. The strength of item loadings, consistency in directional path, and match to theoretical foundation seemed to strongly imply that both the measurement model and the structural model provided valid insights into the exploration of leadership in public relations and the relationship between organizational structure and leadership effectiveness. In next chapter, the researcher extended the findings from the primary group to multiple samples. Specifically, measurement invariance was assessed at different levels to test the validity of the models across different groups.

Chapter VI

MULTIPLE-GROUP ANALYSIS

In this chapter, the researcher tested the higher-order measurement model and the structural model across three groups and presented the findings from multiple-group analysis. The purpose of this chapter is to continue the quantitative data analysis and seek answers for RQ4: Are those key dimensions of excellent leadership in public relations universally relevant? This chapter is organized as the follows: 1) to explain the importance of measurement invariance assessment in cross-national research; 2) to test the equality of the higher-order measurement model at different levels (e.g., configural, metric, scalar, factor variances, and latent means); and 3) to test the equality of the strong direct effect that organizational structure and culture has had on public relations leadership in the structural model.

Measurement Invariance (MI) Assessment

Multiple-group and cross-national comparative research has been widely done in different fields (e.g. marketing, organizational behaviors, consumer research, etc). Although such research has provided valuable insights for scholars and practitioners in different organizations and cultures, the importance of minimizing underlying biases in cross-national empirical research cannot be ignored. This draws attention to a potential source of bias: If results from cross-national analyses are different than expected, researchers should question “whether the results are measurement and scaling artifacts or true cultural differences” (Mullen, 1995, p. 574).

Therefore, as a well-known problem with conducting cross-national research for comparative purposes, the assessment of measurement invariance (MI) have been addressed by scholars in order to ensure the comparability of cross-national research (e.g., Mullen, 1995; Myers, et al., 2000; Steenkamp & Baumgartner, 1998). As a technique used in cross-national studies, measurement invariance addresses the question whether the same models hold across different populations (Mullen, 1995). Failure to achieve consistency and inequivalent scales are the major threats to metric equivalence in cross-national research (Myers, et al., 2000). Therefore, some scholars argued that the validity of cross-national analyses could be questioned if MI is not established and reported (Van de Vijver & Leung, 1997).

As discussed in Chapter V, one of the major advantages of confirmatory factor analysis is its capability to examine the equivalence of all measurement and structural parameters of the factor model across multiple groups. To assess measurement invariance, researchers have proposed more detailed multiple-group or cross-national MI procedures. For instance, Steenkamp and Baumgartner (1998) recommend a multi-group CFA approach to assessing MI: (1) *configural invariance*, which is to determine whether the number of factors and pattern of indicator-factor loadings is identical across groups; (2) *metric invariance*, which is to determine the equality of factor loadings across groups; (3) *scalar invariance* or *factorial invariance*, which is to determine the equality of indicator intercepts; and (4) the evaluation of the equality of indicator residuals. Moreover, a stepwise procedure is recommended for multiple-group CFA analysis, whereby the analysis begins with the least restricted solution and subsequent models are evaluated by adding restrictive constraints gradually.

Moreover, Steenkamp and Baumgartner (1998) also recommend a standard way to compare the fit of the nested models: the Chi-square difference test. Although the Chi-square difference test should be conducted to compare the fit, it suffers from the same well-known problems as the chi-square test for evaluating overall model fit (e.g., very sensitive to sample size and unbalanced group sizes). Thus, other alternative fit indices have been recommended: the root mean square error of approximation (RMSEA); the consistent Akaike information criterion (CAIC); the comparative fit index (CFI), and the nonnormed fit index (NNFI). Relatively, smaller values of RMSEA and CAIC and larger values of CFI and NNFI indicate better models. These alternative fit indices have been proved to be particularly effective to compare models because they take into account both goodness of fit and model parsimony by imposing a penalty on fitting additional parameters (see Steenkamp & Baumgartner, 1998, pp. 82-84).

Therefore, based on theoretical concern and the importance of measurement equivalence assessment, the themes introduced in this chapter are extended to the simultaneous analysis of the leadership construct and its dimensions to multiple groups (the primary group, the SPRF group and the international group). The major purpose of extending the leadership measurement model and structural model to data collected from different groups is motivated by the desire to address the question whether the same models (both measurement and structure) hold across different populations. To be more specific in this case, the psychometric properties of data from multiple groups should be able to answer the questions: (1) whether public relations practitioners at different levels and from different cultures have the same value on those hypothesized factors and indicators of leadership in public relations; (2) whether their scores on the measure of those hypothesized factors remain the same; and (3) whether public relations practitioners in different groups have the same understanding and interpretation for the complex phenomenon of leadership in public relations.

Thus, to address above issues, the assessment of MI is an indispensable part of the study, and it should be established and reported as a strong support for the model validation. Thus, the researcher followed the most widely recognized stepwise sequence of multiple-groups CFA invariance evaluation suggested by Brown (2006): (1) test the CFA model separately in each group; (2) conduct the simultaneous test of identical factor structure (configural invariance); (3) test the equality of factor loadings (metric invariance); (4) conduct the test of the equality of indicator intercepts (scalar invariance); and (5) add equal constraints to factor variances and latent means. The report of results was also organized following the above steps.

MI Assessment for the Higher-order Measurement Model

Although the internal consistency reliability has already been checked for the primary group, to enhance the scale stability over time and across groups, the researcher also checked the internal reliability of the constructs across three groups. All reliabilities were generally high in all three groups (see Table 8.1).

Table 8.1. Reliability of measures for dimensions of the leadership construct

	Internal Consistency Reliability (Cronbach's α)		
	Cross-Sectional Data		
Subscale	Primary Group *(N=222)*	SPRF Group *(N=161)*	International *(N=100)*
Self insight	.705	.782	.716
Shared vision	.735	.793	.803
Team collaboration	.801	.803	.824
Ethical orientation	.776	.830	.862
Relationship building	.791	.823	.827
Strategic decision-making	.792	.787	.807
Comm knowledge management	.864	.881	.851

Next, the researcher proceeded with a sequence of measurement invariance tests. To illustrate the assessment of measurement invariance using multiple-group CFAs, the researcher used data collected from the SPRF group (N=161) and the international group (N=100). The categorical demographic information of the two groups has been reported in Chapter V. Since the second-order partial disaggregation model reported in Chapter V represented the factors and the inter-factor relationships in a more refined way, the multiple-group CFAs for the measurement model were limited to this model. Correlation matrices for the SPRF group and the international group, shown in

Table 8.2 and Table 8.3, were used as input for analysis. Again, LISREL 8.8 was used to analyze the measurement invariance tests.

The tests of the second-order measurement model separately in each group indicated that the model fit the data quite well in both groups. For the SPRF group, the selected model fit indices showed that the Chi-square is 139.821 (*df*=71, p<.01); NFI=.971; NNFI=.982; CFI=.986; SRMR=.042; RMSEA=.074 with 90% confidence interval of [.054; .093]. The completely standardized solution for the model also indicated high loadings on the lower-order factors, ranging from .701 to .939. Each of the first-order factors loaded strongly onto the second-order factor (excellent leadership in public relations), ranging from .767 to .974. Using the estimates from the diagonal of the Psi matrix, it can be seen that the higher-order factor accounted for 59%-95% of the variance in the first-order factors.

Table 8.2. The SPRF group: Sample correlations, Means (*M*), and Standard Deviations (*SD*); N=161

	S11	S12	V11	V12	T11	T12	E11	E12	R11	R12	D11	D12	C11	C12
S11	1.000													
S12	0.571	1.000												
V11	0.419	0.497	1.000											
V12	0.561	0.543	0.596	1.000										
T11	0.492	0.594	0.498	0.635	1.000									
T12	0.477	0.482	0.536	0.578	0.601	1.000								
E11	0.576	0.405	0.424	0.445	0.412	0.472	1.000							
E12	0.578	0.503	0.474	0.507	0.489	0.575	0.731	1.000						
R11	0.507	0.437	0.594	0.627	0.479	0.646	0.470	0.568	1.000					
R12	0.540	0.557	0.638	0.681	0.596	0.647	0.465	0.604	0.761	1.000				
D11	0.356	0.440	0.512	0.431	0.423	0.457	0.375	0.452	0.647	0.580	1.000			
D12	0.580	0.578	0.585	0.568	0.582	0.596	0.436	0.551	0.605	0.660	0.657	1.000		
C11	0.592	0.577	0.575	0.559	0.571	0.571	0.505	0.617	0.666	0.710	0.599	0.629	1.000	
C12	0.502	0.578	0.482	0.583	0.543	0.489	0.449	0.560	0.628	0.667	0.569	0.620	0.787	1.000
M	6.457	6.093	6.366	6.228	6.071	6.240	6.671	6.455	6.373	6.216	6.488	6.320	6.289	6.098
SD	0.633	0.769	0.617	0.676	0.857	0.628	0.500	0.601	0.635	0.613	0.627	0.715	0.592	0.839

Table 8.3. The International group: Sample correlations, Means (*M*), and Standard Deviations (*SD*); N=100

	S11	S12	V11	V12	T11	T12	E11	E12	R11	R12	D11	D12	C11	C12
S11	1.000													
S12	0.369	1.000												
V11	0.365	0.696	1.000											
V12	0.413	0.487	0.701	1.000										
T11	0.271	0.543	0.541	0.426	1.000									
T12	0.415	0.464	0.440	0.493	0.709	1.000								
E11	0.371	0.422	0.535	0.491	0.461	0.524	1.000							
E12	0.364	0.517	0.615	0.570	0.527	0.570	0.803	1.000						
R11	0.533	0.474	0.574	0.614	0.525	0.671	0.602	0.705	1.000					
R12	0.494	0.419	0.565	0.609	0.581	0.677	0.501	0.669	0.793	1.000				
D11	0.415	0.488	0.521	0.494	0.358	0.403	0.482	0.591	0.592	0.561	1.000			
D12	0.306	0.491	0.513	0.470	0.340	0.404	0.426	0.480	0.489	0.485	0.742	1.000		
C11	0.449	0.412	0.474	0.555	0.432	0.587	0.590	0.605	0.690	0.574	0.579	0.468	1.000	
C12	0.271	0.394	0.451	0.427	0.441	0.505	0.519	0.503	0.548	0.486	0.505	0.502	0.728	1.000
M	6.035	6.057	6.213	6.013	5.880	5.947	6.255	6.113	6.087	5.890	6.190	6.015	5.978	5.735
SD	0.916	0.731	0.657	0.698	0.759	0.704	0.672	0.653	0.673	0.703	0.706	0.790	0.677	0.673

For the international group, the selected model fit indices also exhibited significant values: Chi-square=108.692 (*df*=71, $p<.01$); NFI=.955; NNFI=.978; CFI=.983; SRMR=.051; RMSEA=.076 with 90% confidence interval of [.048; .102]. It can be seen from the above model fit indices that the Chi-square value dropped for the international group, even though the degrees of freedom remained the same for both groups. This is because many aspects of the CFA are influenced by sample size and the Chi-square is very sensitive to sample size. Unbalanced group sizes will affect many aspects of the CFA model (e.g., overall fit statistics, standard errors, and standard residuals). Although it is preferable for the sizes of the groups to be as balanced as possible, researchers have argued that it is permissible to conduct multiple-group CFA with unequal sample sizes and the researcher should be cautious when interpreting the results (see Brown, 2006, pp. 266-299).

The completely standardized solution for the model also indicated moderate to high loadings on the lower-order factors, ranging from .515 to .963. Each of the first-order factors loaded strongly onto the second-order factor, ranging from .755 to .944. Using the estimates from the diagonal of the Psi matrix, it can be seen that the higher-order factor accounted for 57%-89% of the variance in the first-order factors. Based on the tests of second-order measurement model in each group, the researcher ensured that no markedly disparate parameters have obtained and the posited higher-order measurement model was acceptable in all three groups; therefore, the multiple-group CFAs can be conducted for the next step.

First, the simultaneous analysis of identical factor structure (configural invariance) was conducted to three groups (the primary group, the SPRF group, and the international group). The test of configural invariance imposed no constraints across the groups; instead, it was used to assess whether the same simple structure of factor loadings could be obtained from the three groups. The solution provided an acceptable fit to the data: Chi-square=406.227 (df=213, p<.01); NFI=.967; NNFI=.980; CFI=.984; SRMR=.051; RMSEA=.074 with 90% confidence interval of [.063; .085]. The percentage of contribution the three groups brought to the multiple-group model X^2 of the identical factor pattern solution were 38.82% (primary group, X^2=157.714), 34.42% (the SPRF group, X^2=138.821), and 26.76% (the international group, X^2=108.692). Inspection of the common metric in completely standardized solution manifested the same number of factors and factor loading patterns for all three groups. Therefore, the second-order measurement model was supported by three groups, and the configural invariance solution served as the baseline model for subsequent tests of measurement invariance. Table 8.4 showed a summary of the measurement invariance tests at different levels.

Second, to test metric invariance, the factor loadings at both the lower-order and the higher-order were constrained to be equal across three groups. As suggested by scholars (e.g., Brown, 2006; Mullen, 1995; Steenkamp & Baumgartner, 1998), the test of equal factor loadings is a critical test in multiple-groups CFAs because this test determines whether the measures have the same meaning and structure for different groups of respondents. To be more specific, the purpose of testing metric invariance in this study was to investigate whether the measures of excellent leadership in public relations and its dimensions have the same meaning and structure for senior public relations professionals nationwide, junior- to medium-level public relations professionals nationwide, and public relations professionals from other cultures (e.g., U.K., Singapore). The results of the metric invariance test would advance our understanding of the leadership phenomenon from a more generalizable perspective, namely, to treat excellent leadership in public relations as a global construct.

In the current data set, the multiple-groups CFA with equal factor loading constraints exhibited an overall good fit to the data and did not significantly degrade fit relative to the equal form (configural invariance) solution. The selected model fit indices are X^2 (241) = 452.502 ($p<.01$), NFI=.963, NNFI=.980, CFI=.982, SRMR=.104; RMSEA=.074 with 90% confidence interval of [.064; .085]. The nested Chi-square difference test indicated that X^2_{diff} (28)=46.28. According to the X^2 distribution, with 28 degrees of freedom, the critical value of X^2 is 41.337 with α=.05 and the critical value of X^2 is 48.278 with α=.01. Therefore, the results of the metric invariance solution can be interpreted in two ways. A relatively conservative way to interpret the Chi-square difference test will yield the conclusion that the equal factor loadings model did significantly degrade the overall model fit, if compared to the configural invariance solution by using the critical value of X^2=41.337 (α=.05). This interpretation would lead to the conclusion that the metric invariance is not supported in the study, and respondents in the three groups exhibited different understandings of the construct and its indicators. However, since the Chi-square test is very sensitive to sample size, due to the relatively large sample size and unbalanced group sizes in this study, the researcher decided to take a relatively less conservative way to interpret the results, which would use the critical value of X^2=48.278 (α=.01). Thus, the equal factor loadings model did not significantly degrade the fit if compared to the configural invariance solution. From this perspective, the metric invariance solution is supported, and the factor loadings of the leadership indicators were equivalent across three groups. To further confirm the conclusion, the researcher also inspected the modification indices and did not find any disparate parameters.

Because the constraint of equal factor loadings (metric invariance) did not significantly degrade the fit of the solution, it can be concluded that the indicators exhibited comparable relationships to the global latent construct of excellent leadership in public relations across three groups. Therefore, the next step was to impose scalar invariance on the model. The Chi-square difference was examined and showed that the equal intercepts model did not result in a significant degradation of fit if compared to the full metric invariance solution: ΔX^2=44.88, Δdf=26, p>.01 (with 26 degrees of freedom, the critical value of X^2 is 45.642, α=.01). The modification indices for the intercepts (Tau-Y) exhibited small values, which indicated the intercepts (Tau-Y) for all indicators were invariant across three groups. Hence, it can be concluded that the scalar invariance has been supported.

The last and most restrictive aspect of measurement invariance to be tested is the equality of the indicator error variances. As seen in Table 8.4, this solution produced $X^2(297)=615.157$, $p<.001$; NFI=.949; NNFI=.975; CFI=.973; and RMSEA=.082, which suggested the model fit was not desirable, especially with SRMR larger than 0.1 and RMSEA larger than .80. The Chi-square difference test showed that $\Delta X^2=117.78$, $\Delta df=30$, $p<.01$, which resulted in a significantly degradation of model fit. Therefore, it can be concluded that the equal indicator error variances were not supported in this study. The inspection of modification indices for error variances also indicated several values (e.g., $\Theta_{\varepsilon 2,5}$, $\Theta_{\varepsilon 2,9}$, $\Theta_{\varepsilon 5,9}$) significantly greater than zero in the SPRF group and the international group. This could be an indication that errors associated with measures of different constructs exhibited a significant common-method variance. Thus, the researcher argued that there is an instrumentation bias existed in this study. The existed bias implied that all three groups generated different error patterns associated with measures of constructs.

Since the factor loadings and indicator intercepts were invariant across three groups, comparison of the groups on factor variances, factor covariances, as well as the latent factor means can be conducted. Factor variances represent the dispersion of the latent variables and the reliability of the construct continuum within groups (Vandenberg & Lance, 2000). Evaluation of the equality of a factor variance examines whether the amount of within-group variability of the construct differs across groups. Therefore, an equal constraint was imposed to the diagonal elements of Φ (factor variances) across groups, and the results yielded a poor fit to the model: X^2 =515.467 with 269 degrees of freedom ($p<.01$); NFI=.957; NNFI=.978; CFI=.979; SRMR=.123; RMSEA=.077 with 90% confidence interval of [.067; .086]. The Chi-square difference test indicated that the hypothesis that factor variances are invariant across groups was not supported (ΔX^2=17.09, Δdf=2, $p<.01$).

Based on the factor variances (the diagonal elements of covariance matrix of Ksi and Eta) exhibited in Table 8.5, the group with the smaller factor variance (the SPRF group) was using a narrower range of the construct continuum than were the groups with larger factor variances (the primary group and the international group in this study). The international group has been identified as using a wider range of the construct continuum to respond to the indicators reflecting the constructs, if compared to the primary group and the SPRF group. The researcher believed this is because the wide range of demographic differences existing in the international group (e.g., nationality, geographic location, etc) and the difference levels of development of public relations industry within each society. The SPRF group, which exhibited the relatively narrower range of responses to the indicators reflecting the constructs, actually represents the entry- to medium-level public relations executives in the U.S. Their understanding and responses to the indicators reflected the desired leadership-oriented actions and behaviors.

Table 8.4. Tests of measurement invariance of the second-order measurement model of excellent leadership in public relations across three groups

	X^2	*df*	NFI	NNFI	CFI	SRMR	RMSEA (90% CI)
Single Group Solutions							
The Primary Group (n=222)	157.714	71	.969	.978	.983	.043	.074 (.058-.089)
The SPRF Group (n=161)	139.821	71	.971	.982	.986	.042	.074 (.054-.093)
The International Group (n=100)	108.692	71	.955	.978	.983	.052	.076 (.048-.102)
Measurement Invariance							
Equal form	406.227	213	.967	.980	.984	.052	.074 (.063-.085)
Equal factor loadings (λ)	452.502	241	.963	.980	.982	.104	.074 (.064-.085)
Equal factor intercepts (Tau-Y)	497.377	267	.959	.980	.980	.099	.074 (.064-.084)
Equal indicator error variances (Θ_ε)	615.157	297	.949	.975	.973	.138	.082 (.073-.091)
Population Heterogeneity							
Equal factor variance (Φ)	540.910	281	.955	.978	.978	.135	.077 (.067-.077)
Equal latent mean (Alpha)	581.698	285	.952	.976	.975	.115	.080 (.071-.090)

Table 8.5. Factor covariances (diagonal elements of the covariance matrix of Eta and Ksi)

Factors	Primary group	SPRF group	International group
Self-Dynamics	1.043	0.892	1.079
Team Collaboration	1.015	0.932	1.077
Ethical Orientation	1.067	0.930	0.964
Relationship Building	1.017	0.957	1.033
Strategic Decision making	1.017	0.849	1.205
Comm Knowledge Management	1.033	0.929	1.040

Since the previous test failed to determine the invariance of factor variances, it is not necessary to proceed with the comparisons of the factor covariances anymore. However, the establishment of invariant factor loadings and indicator intercepts suggested that the evaluation of group equality of latent factor means can be conducted. Thus, the equal constraint was imposed on latent means (alpha). The results yielded a poor fit for the model itself: X^2 (285)=581.698, p<.01; NFI=.952; NNFI=.976; CFI=.975; SRMR=.115; RMSEA=.080 with 90% confidence interval of [.071; .090]. Although high confidence in fit emerging when NFI, NNFI and CFI exceeded .95, that the value of SRMR exceeded .10, which is the upper limit of the practical fit index, indicated the misspecifications of factor covariances. Table 8.6 and 8.7 exhibited the estimates for the first-order and second-order factors and latent means for three groups by using the primary group as a reference group.

It can be seen from Table 8.7 that, on average, latent means were smaller in the International group than in primary group or the SPRF group. Moreover, the SPRF group exhibited the highest values on latent means, especially in the factors of communication knowledge management capability (.248) and ethical orientation (.168), which indicated this group of respondents believed the acquisition and application of specialized communication knowledge and expertise could determine the effectiveness of the leadership and communication efforts. Moreover, since the majority of the respondents in this group residing at an entry- or medium-level position in public relations in organization, possessing excellent communication knowledge and skills and endorsing strong ethic-oriented actions could be highly related as a true reflection of their experiences and efforts in being a future leader. This result was quite consistent with the findings the researcher has identified in terms of the factor variances: the SPRF group has exhibited a relatively narrower range of variances in terms of their responses to the indicators.

On the contrary, the analysis of the international group has indicated the lowest latent means across three groups, especially for the factors of ethical orientation (-.215) and strategic decision-making capability (-.199). The researcher further checked the ethical orientation and strategic decision-making measure items and found consistent results. The ANOVA tests indicated that the international groups exhibited significantly lower responses to all five measure items if compared to the primary group and the SPRF group. Although instrumental bias could be a possible reason, respondents' understanding and interpretation of the measure items and scales based on the cultural and social values in their countries could be the major reason for the low scores.

Table 8.6. Common metric completely standardized solution for the higher-order measurement model of the leadership construct across three groups (N=483)

Composites	*First-order factor loadings*						*Error Variance*	*Intercept*
	SD	TC	EO	RB	DM	CK		
S11	.653	-	-	-	-	-	.573	6.298
S12	.659	-	-	-	-	-	.565	6.087
V11	.761	-	-	-	-	-	.422	6.271
V12	.760	-	-	-	-	-	.422	6.148
T11	-	.769	-	-	-	-	.409	5.984
T12	-	.825	-	-	-	-	.320	6.098
E11	-	-	.784	-	-	-	.385	6.509
E12	-	-	.914	-	-	-	.165	6.297
R11	-	-	-	.857	-	-	.266	6.212
R12	-	-	-	.854	-	-	.271	6.049
D11	-	-	-	-	.794	-	.369	6.370
D12	-	-	-	-	.859	-	.262	6.206
C11	-	-	-	-	-	.898	.193	6.063
C12	-	-	-	-	-	.832	.309	5.846
	Second-order factor solution							
Factors	Excellent Leadership in Public Relations							
SD	.922							
TC	.896							
EO	.785							
RB	.947							
DM	.844							
CM	.880							

Table 8.7. Latent means by using the primary group as the reference group

Groups	Latent Means					
	SD	TC	EO	RB	DM	CK
Primary group	0.00	0.00	0.00	0.00	0.00	0.00
SPRF group	0.085	0.133	0.168	0.164	0.124	0.248
International group	-0.113	-0.145	-0.215	-0.142	-0.199	-0.099

Note. SD=self dynamics, TC=team collaboration, EO=ethical orientation, RB=relationship building, DM=strategic decision-making capability, CK=communication knowledge management capability

MI Assessment for the Structural Model

In Chapter V, the researcher tested the causal effect of organizational structure and culture on leadership effectiveness. A strong direct effect has been identified as the causal path leading from the construct of organizational structure and culture to the construct of excellent leadership in public relations (see Figure 1.4 for the graphic presentation of the causal relationship). As a follow-up examination, the researcher would like to extend the tests of measurement invariance of the confirmatory factor analysis to the structural equation model by adding equal constraints to the causal path (γ) across three groups. The purpose of estimating the structural equation model by adding equal constraints to γ's is to find out whether the construct of organizational structure and culture exhibited same direct effect on the achievement of excellent leadership in public relations across three groups.

Before conducting the multiple-group analysis, the researcher tested the structural model on the SPRF group and the international group separately. For the SPRF group, the test of the structural model supported that organizational structure and culture did exhibit a strong direct effect on leadership construct (the standardized regression coefficient is .789, $p<.01$). The overall goodness-of-fit indices indicated that the structural model fit the data perfectly: the minimum fit function Chi-square is 23.458 (df=19, p=.218); NFI=.986; NNFI=.996; CFI=.997; SRMR=.024; RMSEA=.038 with 90 percent confidence interval of [.0; .083].

For the international group, the construct of organizational structure and culture also exhibited a strong direct effect on leadership construct (β=.691, $p<.01$). The overall model fit indices provided an undesirable fit to the data due to the large modification indices on error variances: Chi-square is 46.620 (*df*=19, $p<.01$); NFI=.946; NNFI=.951; CFI=.967; SRMR=.060; RMSEA=.121 with 90 percent confidence interval of [.077; .165]. The largest modification index was 17.43 for self dynamics and strategic decision making capability. Especially with RMSEA larger than .80, the international group exhibited a poor fit to the data. However, an examination of the γ parameters (the causal path) in the three groups showed that they are probably equal, since the values were .786, .789, and .691, respectively. Thus, the researcher tested the final model with the γ's constrained to be equal.

When the factor loadings (both λ_x and λ_y), the factor intercepts (both tau-X and tau-Y), factor error variances (both Θ_δ and Θ_ε), and the causal path (γ) were constrained to be equal across three groups, the analysis yielded X^2 = 126.38 with 83 degrees of freedom (p=.002); NFI=.970; NNFI=.990; CFI=.990; SRMR=.082; RMSEA= .057 with 90% confidence interval of [.035; .076]. Thus, this model achieved a better fit eventually by supporting the hypothesis that the positive causal effect from the construct of organizational structure and culture to the construct of excellent leadership in public relations is the same for all three groups. The parameter estimates for the multiple-group structural model analysis were shown in Table 8.8. Moreover, the measurement invariance test on the structural equation model also indicated that all three models have achieved configural invariance, metric invariance, scalar invariance, and factor error invariance at the same time, which further supported the validity of the structural equation models across different groups.

Table 8.8. Common metric completely standardized solution for the structural equation model across three groups (N=483)

Constructs/Indicators	*Exogenous variable* (Organizational Structure & Culture)		
	Factor loadings (λ_x)	Error variances (Θ_δ)	Intercepts (tau-X)
G11	.63	.53	6.21
G12	.86	.21	5.83
	Endogenous variable (Excellent Leadership in PR)		
	Factor loadings (λ_y)	Error variances (Θ_ε)	Intercepts (tau-Y)
Self Dynamics	.81	.37	6.17
Team Collaboration	.79	.41	6.05
Ethical Orientation	.73	.40	6.37
Relationship Building	.86	.25	6.12
Strategic Decision-Making	.77	.48	6.27
Comm Knowledge Management	.82	.40	6.00
	Regression coefficient of Eta on Ksi		
Org. $\longrightarrow$ Leadership		.76	

Concluding remarks

Assessing the applicability of the theoretical frameworks of excellent leadership in public relation to different groups and to other countries is an important step in establishing the generalizability of the leadership theory in public relations. As suggested by Steenkamp and Baumgartner (1998), in order to achieve meaningful comparisons across groups or across countries, the instruments used to measure the theoretical constructs of interest have to exhibit adequate cross-group and cross-national equivalence. Giving the role of measurement invariance in establishing cross-national and multiple-group comparative validity, the researcher has examined configural, metric, scalar, factor variance invariance, and latent means for the second-order measurement model across three groups. Measurement invariance and variance have achieved at different levels.

Therefore, the measurement of the theoretical construct of excellent leadership in public relations exhibited adequate cross-group and cross-national equivalence at different levels. Thus, as the findings for RQ4, the researcher confirmed the universality of the six essential dimensions of leadership construct. Although the assessment of latent means indicated minor variance in three groups, the researcher believed the variance stemmed from respondents' understanding and interpretation of the constructs was under the influence of several factors, such as the industry development itself, the organizational culture, and the cultural values at the societal level. Future research can be designed to find out the reasons for the variance in latent means. Moreover, the researcher also tested the invariance of the causal relationship between organizational structure and culture and the leadership construct. The results manifested that measurement operations yielded sufficient evidence of validity and equivalence, which could further confirm the findings for RQ4. The universality of the influence from organizational structure and culture was also confirmed. It can be treated as an indispensable aspect to achieve in excellent leadership in public relations.

The next chapter presents the patterns and differences between countries deriving from the cultural and social values through the analysis of in-depth interviews. It also provides analogous alternative interpretations of excellent leadership in public relations and its key dimensions from a qualitative perspective.

Chapter VII

QUALITATIVE DATA ANALYSIS

This chapter details the results of qualitative in-depth interviews carried out as part of the dissertation research relating to the measurement of excellence leadership in public relations in different cultures, as addressed in RQ5: What core values and qualities of public relations leadership do different cultures emphasize? As the researcher has explained in Chapter IV, a series of in-depth interviews were carried out with senior public relations executives practicing in London, UK and in Singapore. The interview questions were designed to elicit how public relations professionals in different societies understand and interpret leadership in public relations and how the understanding would be occurring as a result of taking actions in their daily practices in organizations. Along with the results which have been validated in the quantitative analysis, the research efforts from a qualitative perspective continue contributing to the exploration of the constructs of interest and provide an opportunity to observe the cultural values and the public relations practices as they moved towards a mutually beneficial relationship to facilitate communication effectiveness.

In this chapter, the researcher reported the findings in the following sections: 1) sample profile for in-depth interviewees; 2) analytic approach for qualitative data; and 3) three major themes of public relations leadership identified in the analysis.

Sample Profile for Participants

Although the researcher has already addressed the sampling requirements and data collection process for the qualitative interviews in Chapter IV, the researcher would like to briefly summarize the demographic information of individual participants in the beginning of this chapter. The research sample incorporated 11 public relations executives from London, UK and eight from Singapore (coded L and S). Participants from the two countries represented senior public relations professionals with an average of 20 years of working experiences in the profession. Their current job titles also indicated their leading positions in the organization (e.g., Global Head of Communications, European Director of Communications, Vice President of Corporate Affairs, etc.).

In terms of gender distribution, the research sample consisted of six females (four from London and two from Singapore) and 13 males (seven from London and six from Singapore). Male participants heavily outnumbered females. This gender category was coded F (female) and M (male). In order to confidentially identify individual participants without any bias, a number notation was allocated to each individual (e.g., no. 1, no. 2, no. 3, etc), and the indication of their gender and geographic location was also used. Therefore, an example of no. 3FL would indicate the third interviewee was a female from

London, UK. The heterogeneous sample used should be able to give certain level of representativeness of the public relations industry in each country.

Analytic Approach

Qualitative analytical techniques—template analysis and thematic interpretation—were used to analyze the transcripts (Crabtree & Miller, 1992; King, 1998). As a widely used approach in qualitative research, the essence of template analysis is that the researcher produces a template (or a list of codes) representing the themes identified in the textual data. As the analysis moves on, the codes/templates can be modified and added to as the researcher reads and interprets the texts (King, 1998). Based on the template, thematic interpretation was used to identify themes. According to Goulding (2005), a theme represents a topic discussed both frequently and in depth by several participants and supported by several related sub-themes. While taking a more phenomenological approach to explore an understudied area, the method of thematic interpretation is appropriate to be employed in an effort to develop an understanding of the professional intellect. Thus, the 19 in-depth interview cases formed the basis of the research findings presented in this chapter (Appendix C details the in-depth interview questions for both countries), and three main themes were specifically addressed:

(1) How would senior public relations executives define excellent leadership in public relations and its key dimensions?

(2) What are the most crucial leadership skills senior public relations professionals expect to use to facilitate effective communication

initiatives and to engender positive perceptions of the PR value to the organization?

(3) What impact does culture have on the effectiveness of leadership styles? What are those culture-specific boundaries of acceptable and effective leader behaviors in the public relations industry in each country?

Findings

Theme 1: the definition of public relations leadership

The first theme was highly related to the quantitative measurement of the global construct, excellent leadership in public relations. Although the researcher has suggested a global definition that encompasses the nature and features of the multi-faceted phenomenon in Chapter III, understanding and interpretation from the practitioners would give us a richer insight, in line with the quantitative measurement. In response to this theme, the 19 senior public relations executives eluded to a series of concepts and descriptions of leadership in public relations they preferred based on their experiences. However, a common view emerged from the data analysis, which manifested the multi-faceted nature of the construct itself—the difficulty of having a universal definition of excellent leadership in public relations. Respondents' thoughts and discussion eventually led to the conclusion that the definition of leadership in public relations should depend on the purposes to be served by the public relations functions and by the aspect of the phenomenon of most interest to the respondents.

For instance, senior public relations executives conceded that an excellent leader in public relations needs to articulate his/her ideas clearly and is able to set strategic directions for the team and the organization. Even more critically, setting strategic directions is highly related to the visionary ability as a leader. One PR manager described excellent leadership in public relations in the following words:

> "The fundamental premise of our professional leadership starts by being authentic. It starts by being who you are as a leader and understanding your strengths and weaknesses and your development areas … As a leader, you must try to align the needs of your organization with the needs of your client and the needs of the business. And the point is it's not a one-size fits all approach to this" (No. 7ML).

Importance was also placed on a fundamental feature of leadership that has been discussed widely in the literature, which is about the ability of leading by example. Quite a few participants commented on leading by example to illustrate the importance of its function in learning process and for the younger generation of public relations practitioners:

> "A good PR leader must have a clear vision and be able to lead by example because the juniors will see and will follow. If we don't show them a good example in discipline or in the way we present ourselves to internal/external parties, they will be cut" (No. 7MS).

> "My definition of leadership is you have to lead by example. There is no point asking someone to do something that you cannot do as a leader.

You must lead from the front. From a professional way, you must know what you are talking about. Whatever you want to teach your staff, you must have mastered it, not half-baked" (No. 1 MS).

"What I find to be profoundly gratifying to be a leader is to see the impact you can have on another generation of practitioners … You see them grow, progress, and learn new skills. And they start thinking for themselves and becoming a professional, a real seasoned professional. It is a great feeling to know that you had some small parts in that development and that growth" (No. 1ML).

"I would say leading by example. [Since] I have seen a lot of different leadership styles over the years, I think the ones that I have the most respect for are the ones that I've learned the most for" (No. 3FL).

"To be a good PR leader, I think first of all you need to be an excellent counselor, which means you must be someone who can be trusted by clients and valued by clients. Another point is to lead by example. We have to lead by example. As an excellent counselor, you will be expected to giving excellent examples to your colleagues and teams" (No. 6MS).

Another important feature participants have mentioned reflected their thoughts on ethical leadership. Previous research indicated that both public relations scholars and professionals have agreed that ethics is central to public relations practices. During the interviewing process, senior public relations executives have extended the discussion of ethical orientation as a contribution to leadership effectiveness. Since leadership is a process whereby the leader influences others to reach the common goals, they believed that leaders have the ethical responsibility to influence followers in significant ways:

> "There should be a strong ethical dimension within public relations leadership. If you personally feel that something within your organization is not compatible with your own ethical standards, then you must step back from it. And if you don't, then the chances are you won't be doing as good a job for your organization … You have to be ethical fine-tuned as a leader" (No. 1ML).
>
> "The job of PR leadership is to convey the best of our ability and make sure that you ethically help the company to effectively spread that information within visible means, when there's good news. When something goes wrong, you have to educate your own people, to acknowledge mistakes and to take corrective steps very rapidly and in an ethical way" (No. 3MS).

These statements reflected the function of ethical leadership an effective public relations leader should possess to help him/herself and followers deal with the conflicting values that emerge in rapidly changing work environments and marketplace. Higher level of involvement was also indicated by respondents as an identification of excellent leadership in public relations. Both female and male PR executives admitted the impracticality of being a leader if one is just giving tasks to the team and completely disconnects from the team and/or the business.

Particularly within the discussion of the construct itself, some significant issues related to excellent leadership in public relations have been mentioned by those experienced professionals. Although some similarities and agreement have emerged in the discussion, true disagreement about one single definition of the construct itself was quite obvious. Differences between respondents in their conception of leadership led to differences in the choice of phenomena and events to illustrate and interpret the results. Again, the researcher was not surprised by the findings since throughout the literature there is no universal consensus on the definition of leadership (e.g., Bass, 1990; Yukl, 2002). However, as a multi-facet influencing process, the wide variety of features mentioned by the participants contributes significantly to the understanding of the topic.

Theme 2: important leadership skills

The second theme identified was related to the effective leadership skills and styles senior public relations executives believe they should possess, as well as ones they are looking for in prospective leaders when recruiting young public relations professionals. Analyzing the texts indicated a number of leadership skills and styles they preferred. There were more than 30 responses from the 19 practitioners as can be seen in Table 9.1. The senior PR executives' responses for leadership skills/styles ranged from effective listening ability to strategic thinking ability, with a span of 13 categories. The dominant categories were having sufficient knowledge of the business and the clients, the ability to think and act strategically, being forward looking, and treating leadership as a focus of group process.

Table 9.1. Essential leadership skills valued by senior PR executives

Essential leadership skills	Singapore (n=8)		U.K. (n=11)		Total mentions
	F	M	F	M	
Know your organization & clients	2	3	3	6	14
Think and act strategically	2	5	3	7	17
Being forward looking	2	4	3	6	15
Leadership as a focus of group process	2	4	4	6	16
Fast learning ability	1	3	1	4	9
On top of technology	1	3	1	2	7
First-rate communication skills	1	2	3	3	12
Effective listening ability	1	1	-	2	4
Good analytical ability	1	2	1	1	5
Good judgment	-	1	2	2	5
Relationship management	-	3	-	3	6
Understanding different media	1	-	2	1	4
*Supportive org. structure and culture	2	3	3	4	12

Note. F=female mentions, M=male mentions. *Supportive organizational structure and culture was not an essential leadership skill. Because it has been frequently mentioned by respondents, the researcher would like to list it in the table.

- *Knowing Your Organization and Your Clients*

Senior public relations executives in both U.K. and Singapore perceived that a good public relations leader's role included a responsibility for message construction, the strategic management and development of the communication objectives of the organization, and the integration of the communication team throughout the organization. Therefore, respondents see the importance of having sufficient knowledge of the organization's business and environment, as well as the client's business and needs, before communicating the messages onwards to public in general. Comments from the data included:

> "A good PR leader has to understand their company business very well and has to decide what is the branding of the company. To be more specific, they need to know what the company stands for and what its values are" (No. 2MS).
>
> "Knowing your clients and understanding them will help you with your objective and key messages . . . A good leader should spend time knowing them, knowing the culture of the company. Sometime we spend time just getting the work done, and we forgot what people want. At the end of the day, PR is still people to people" (No. 4FS).
>
> "You need to have a strong awareness of the company and your clients, as well as the marketplace in general" (No. 3MS).

"I believe it is quite essential for a PR leader to have the ability to discern what the client wants if you are in an agency or what your boss wants if you are in corporate" (No. 7ML).

"Understanding the real issue from the client is one of the most important things. Based on that, you will need to be able to manage a client's expectations, especially when their understanding of the PR value is completely off. You need to educate them, give them confidence, and show them value propositions" (No. 6MS).

- *Thinking and Acting Strategically*

In line with the findings in organization and business knowledge, respondents believed it is quite necessary for a public relations leader to know more about the organization's business and its environment before he or she can successfully persuade people in the senior management team within the organization believing in the value of communication efforts. In order to facilitate effective communication, the role of public relations leaders should extend beyond tactical communication tasks and incorporate more strategic concerns. Thinking and behaving strategically could show the senior management team that it is beneficial to communicate in a certain way to broaden the audience's views of the organization and its branding in the marketplace.

The public relations literature also reflects the fact that top communication managers have a strong strategic focus in their views and actions (e.g., Berger, Reber, & Heyman, 2007; Bowen, 2008). The statements in this study further addressed that the need for public relations practitioners to embrace the strategic aspects of their role more fully is more of an issue in recent years than ever before. To some extent, realizing public relations' full potential and value requires the recognition of its acute strategic importance to the organization. This finding has been consistent with one of the key dimensions—strategic decision-making capability—the researcher proposed in the conceptual model. Comments about the strategic focus in public relations leadership from the data included:

> "Too often, I get a paper that is very technical. I think it is particularly apparent in people at the medium-level positions where they are trying to cross over from the medium management team to the senior level. However, if people cannot think and act strategically, it will be very hard for them to achieve at next level" (No. 3MS).
>
> "It's important to have PR practitioners being presented at the senior level and on the strategic decision making forum within any given organization. That's the most important thing as far as I am concerned" (No. 5ML).
>
> "As leader, we need to make sure that people within it [public relations profession] are adequately equipped with the tools to build the profession from within organizations and to build the view of the profession and what it can do within organizations. This goes back to the drive for PR

people to be involved at the strategic level in whatever organization it might be" (No. 7ML).

"A strand about excellence in PR leadership is to make sure that the decisions you make and the recommendations you give about strategic communication issues indeed comes with strategic focus" (No. 9ML).

- *Leadership as a Focus of Group Processes*

The findings in terms of leadership as a focus of group processes echoed the theoretical dimension of team collaboration in the measurement model. The views of leadership as a focus of group change, activity, and process further addressed the importance of leading by example in public relations leadership. Participants agreed that, as a team leader, public relations executives need to be a good internal communicator to the PR team and need to be involved in the group learning processes. For instance, one participant commented:

"A great leader is the one that uses team members' strengths to their advantages and pull them together as a team. All of us have different talents, strengths and weaknesses, and a leader will be able to recognize and pull together those talents to form a strong team that ultimately delivers quality work and make sure the client is satisfied" (No. 6MS).

However, the respondents also indicated it is important for leaders to find the balance between getting involved and being disconnected. Several respondents explained that a major difference between effective leaders and less effective leaders is that the former knows when to get involved and when not to. An example of a comment illustrating an awareness of the balance is:

> "You need to know when to get involved and when not to, especially within a team. If you are partially holding their hands, they are never going to learn. However, it is quite tough because there is a very fine line between being engaged and washing your hands off it." (No. 4FS)

As an issue related to team collaboration, some participants explained the importance of standing for the team and getting them inspired. For instance, one individual commented:

> "If there is a problem, solve it in your house and don't embarrass your staff in front of the client. I tell my clients at the beginning that I am the gatekeeper. So if there is any hate to be shot, it should be shot my way . . . The team will get inspired and be confident because the boss won't hang them" (No. 1MS).

This comment reflected participants' understanding of leader-follower relationship from a transformational leadership perspective. As a more contemporary view of understanding leader-follower interaction, transformational leadership is concerned with developing followers to their fullest potential (e.g., Bass & Avolio, 1990; Yukl, 1999). Effective leaders inspire team members through motivation and encourage them to become committed. Thus, the team spirit is enhanced through this approach. Being team-focused also means the public relations leader needs to gain respect and trust from the followers by showing them respect and trust. Participants perceived the team-centered view could reinforce strong team integrity and desired internal culture.

> "It is important to have the ability to manage and develop the people you work with. Being trustworthy will help public relations leaders gain respect from the staff. Another key issue about team collaboration is to make your team to be a face for the company and to provide an identity for the company in the marketplace" (No. 7MS).

- *Being Forward-Looking*

Similarly to the theoretical dimension of shared vision in the measurement model, the qualitative texts also yielded findings in terms of leader's vision and the ability to enlist followers to the vision. Based on their own learning processes and experiences, participants agreed that effective public relations leaders would be able to articulate compelling visions which specify organizational values and personal beliefs in making things happen and changing things. Moreover, participants addressed the importance of articulating the shared vision from the perspective of being forward looking at a strategic level and enlisting followers into that strategic vision.

> "I think an effective PR leader is somebody who has his or her own house and is able to predict what the future will hold. That's quite a challenge because right now with the economic crisis, what you say today might seem like a joke tomorrow. However, it is still important for the leader to

find the balance between what you are saying now and what kind of impact it will have in the future" (No. 5FS).

"A big part of excellent leadership is enjoying the responsibility of vision, and getting people to believe in that vision. It is also about being in service to your organization, as opposed to being appointed to the person at the top. I think when you put yourself in a service mentality, it keeps your feet on the ground" (No. 8FL).

They also indicated that being visionary means the leader should also be able to deliver the message and the vision not only to internal groups but also to external groups, such as clients and stakeholders. The ability to motivate and to inspire people related to the organization's business is regarded as an essential part of being visionary. Examples of comments illustrating an awareness of this finding are:

"At a senior level, you need to understand where the business is going, not just your business, but your clients' business, and even your strategic partner's business. When you communicate with them, you need to provide a holistic view of things and how this particular solution fits the business" (No. 3ML).

"Having a vision in what you want the company to be and how you are going to get there. A shared vision could motivate people, and you will be able to see progress over time" (No. 7MS).

- *Fast Learning Ability*

Fast learning ability was another important leadership skill mentioned by the participants. This skill related to active learning processes where individuals are active learners of the changing environment. A good public relations leader need to understand what is moving forward in terms of communication skills and the marketplace. The general feeling about the learning ability in changing environments was as important as those fundamental communication skills. Therefore, the researcher would say the fast learning ability is also part of the communication knowledge and expertise that need to be applied and managed appropriately. Although the development of the item measures for the dimension of communication knowledge management capability in the conceptual framework did not include the fast learning ability, as a result, the specific measure can be added to guide future research. An example comment about the fast learning ability is:

> "You need to know what is happening and changing now. As a team leader, one needs abundant experiences to inform team members what can be done and what can't be done. A lot of us get stuck and will say 'we've always done it that way,' but communication is such a fast-moving space that you do have to keep up with the latest techniques and the latest practices" (No. 3ML).

The sophistication of the industry itself presented another challenge, which is about how the communication team can choose appropriate communicating approaches or strategies in different situations and at various levels. One participant commented on the fast changing marketplace:

> "The strategy you used last year is not going to work this year because things change so fast. The rapid change in the level of sophistication itself requires public relations leader possessing fast learning and application capabilities" (No. 9ML).
>
> "Make sure you are comfortable working in a fast-paced environment, and you are comfortable changing directions quickly. Pace can mean a lot of things but I think it is the ability to deal with ambiguity, to have things in a row, and to move quickly . . . You will not survive as a senior level communicator if you couldn't move quickly" (No. 11FL).

- *Value the Power of New Technology and Social Media*

Highly related to the fast learning ability, participants mentioned the importance of staying on top of new technology in the interviews. Thus, the ability to use new technology to improve communication effectiveness can also be treated as one of the essential communication knowledge and skills that a good public relations leader should possess. Therefore, the researcher argued that it is necessary to include the measures of the ability to use new technology in the dimension of communication knowledge management capability in future research.

For some participants, new technology is about finding new tools that enable their communication teams to do what they have always been doing but more efficiently and effectively.

> "A PR leader should be able to find out new technology is not only about sending a press release to news wires and hoping that they all pick it up tomorrow. Being transparent is also an important thing that new technology can bring to you, especially now in this climate" (No. 4FS).

Some participants specifically addressed the advantages of new technology in fundamentally changing the way their organization interacts with public both internally and externally. For example, one Singaporean executive in financial communication believed that technology is an important way to increase the effectiveness of message delivering. She commented:

> "An effective PR leader might be very involved in new technology stuff like blogging and social networks, especially blogging. A lot of business leaders underestimate the power of blogging, especially on the banking side, you don't find many bankers blogging. Because they are so afraid of blogging, they are afraid that readers will criticize them. But I think it can be very effective if it is well used" (No. 5FS).

Another senior executive lamented the pervasiveness of the media and information that is now available. Too much information yielded too much unnecessary work to do in strategic planning, and he suggested one responsibility of the leader is to sift through the reams of information available in order to put out what is really needed and meaningful. His comment reflected a call for more effective approaches to reach target audience by using new technology in an information-obsessed world:

> "The younger generation is coming in and bringing in a lot of new ideas and exciting energy at the technological level. They are applying a lot of things in real life into communications, like Facebook and other social media. We are seeing people who are bringing very new, innovative ideas and different approaches in terms of how we can engage target audiences. I would say it is a great time to be in the communication profession with new technology" (No. 6ML).

- *Supportive organizational structure and culture*

The support from the organization and its senior leaders in the organization has also been addressed in the conversation. For instance, one female participant commented: "Being an effective PR leader is useless if you had a CEO who is not an effective leader or who does not believe in PR," and the truth is "if the CEO believes in PR and supports it, the job is half done" (No. 11FL).

Although this finding is not an essential skill related to excellent leadership in public relations, it showed consistent findings in terms of the impact of organizational structure and culture could have on leadership effectiveness. Gaining support from senior management team, being allowed to offer insightful advice, and being a potential dominant coalition member indicated a higher level of recognition in the organization. Then, the leadership role of the communication team can be leveraged to a managerial level. Participants in both countries expressed similar concerns during the interviews:

> "Depending on the senior management structure of the company, the CEOs, the board of directors, if they appreciate your efforts and see the importance of PR, it is quite a natural thing to have in-house PR staying in the loop for any major announcements and upper-level discussions. But, unfortunately, it is not a common thing for the companies in Singapore" (No. 3MS).
>
> "In my view, the communication director or equivalent should always have a place on the board of any company or organization if the organization wants to be genuinely forward looking and strategic in the work that they do, as well as being genuinely tactically aware about the sorts of things that should be done . . . This is the real main thing about pulling PR practitioners above the norm and really promoting the strategic message" (No. 9ML).
>
> "The communication function needs to have equal weight with other important functions within an organization... I think the companies need to formalize the leadership function of the communication team within the organization" (No. 10FL).

Besides the above key factors the researcher has discussed, participants also listed other skills that would contribute to the leadership effectiveness in public relations. For instance, when considering some fundamental skills related to communication effectiveness, respondents agreed that a good leader should exhibit extraordinary oral and written communication skills at the tactical level.

Respondents mentioned good judgment and analytical ability as an add-on feature. A female participant in U.K. added that good judgment is the most basic attribute of a good PR leader:

> "You must have the ability to see and tell a good story. You need to be able to pretty quickly recognize what the story is, where the story is and how you can tell it in a way to resonate with people" (No. 11FL).

Good analytical ability also indicated the ability for constructing effective message to reach target audience: "It is about finding the angle they [target audience] will want to read about rather than what the journalist wants or the newspaper wants or the government wants" (No. 4FS).

Another PR executive addressed that effective listening skill was as important as the writing skill: "You've got to be able to listen. If you can't listen, then you just can't understand and move on" (No. 3FL).

Skills for retaining long-term relationship with external public that would enhance communication effectiveness were also mentioned by the respondents. However, it is very interesting to see participants addressing a new angle to interpret "relationship management in public relations." Participants commented that the initial misperception of public relations as relationship building needed to be changed:

> "People used to have the misperception about PR and say PR is all about who you know. I disagree with that comment quite passionately. Well,

knowing the right people helps, but it is not as much as 'who you know' anymore. It is about how you know and how you thought the particular communication at a strategic level. If you had good plans, good angles, good strategies, you can achieve it. To put it down to a very succinct message, you need to know, not people, but your skills" (No. 3MS).

Some overall comments about an effective PR leader

Although the in-depth interviews have focused on the leadership construct itself and those essential skills contributing to leadership effectiveness, the participants expressed their holistic views about the topic during the conversation to address the difficulty to get a consensus on the topic across different organizations and individuals. Several insightful comments were noted by the researcher:

- Participants acknowledged there is no consistent formula to define an excellent leader in public relations. The majority of them emphasized the importance of being flexible in this rapid changing environment. Being flexible and able to change the reaction about what PR leadership is contributes to the effectiveness of leadership.
- When being asked the differences between leadership in public relations and leadership in other professions, the majority of participants commented leadership as a general characteristic is a constant across different professions. However, in the case of public relations, the major characteristic of leadership is about delivering strategic communication for the organization.

- By viewing the construct from a more sophisticated level, participants expressed their concerns about improving the reputation of the profession as a whole and trying to explain what public relations is about are big challenges for leaders in the profession. They admitted that there are dozens of different things within public relations, such as different types of roles, different qualities, and different attributes that are required to practice excellently.

Theme 3: Culture's impact on effective leadership style

- *Comments from Singapore*

As an Asian country which exhibits significant cultural diversity and convergence, the practice of public relations in Singapore has evolved from the models used by the British colonialists to a professional status (Chay-Nemeth, 2003). As more and more multinational companies and international public relations consultancies have entered the Singapore economy, the development of the public relations industry has shifted their focus of public relations tactics to strategic management. However, there still are differences between multinational firms and local PR agencies in understanding the importance and function of public relations: Namely, more efforts and importance have been attributed to media publicity than relationship building with key publics in local PR agencies (Chay-Nemeth, 2003, pp. 88-89). More importantly, researchers have pointed out the fact that the practice of public relations in Singapore could be understood by exploring the role of the government in economic and political sectors (e.g., Yeap, 1994) and to see the public relations industry as a combination of advanced industrial development and government intervention.

However, factors influencing the practice of public relations identified by previous researchers such as the concentration on media publicity and high level of government intervention were not mentioned by senior public relations executives in this study. Instead, professionals in Singapore have reached an agreement about the effectiveness of leadership that is not solely based on the cultural value at the societal level; more often, it varied to individuals based on different projects and different company cultures at the organizational level.

For instance, participants indicated that the higher level of being honest and trustworthy could be quite effective and valued in a boutique agency (3-4 employees) in Singapore:

> "We always remind our people to be sensitive, never, never lie. If you pitch a story to someone and they ask something, just come clean with it. If there is information you can't give them, just tell them so. Don't just say 'Yes. Yes. Yes.' Sometimes we get so overwhelmed with results that we forget the right things we should do" (No. 5FS).

> "Because it is my own agency, me and my partners have the same values about being honest and trustworthy. If a project comes along that we don't believe in it, then we don't do it" (No. 3MS).

Professionals have indicated that lower level of sophistication of the industry itself limited people's understanding of the real value public relations can bring to organizations. They expressed similar comments on this issue:

> "In terms of good PR leaders and the PR industry itself, I think we still have a long way to go if compared to the US" (No. 1MS).

> "I feel that there is a lack of interconnectivity between the U.S, the U.K., and Singapore" (No. 5FS).

> "The public relations industry here in Singapore, as well as in Asia, is much less sophisticated than it is in the UK and the US" (No. 4FS).

> "The biggest factor that we face when we are working in markets like Singapore is the level of sophistication on the client's side. Issues such as what the clients understand what PR can do, how it can be used, and what it can achieve eventually are still relatively unsophisticated. Since the level of sophistication is low, you will have to take things back and concentrate on the basics" (No. 3MS).

Meanwhile, the lower level of sophistication in the local agencies is accompanied by the relatively higher level of control the government has over the media and the social infrastructure. The relatively high level of the control government has in the public relations industry made it less sophisticated and imaginative when working along with government-led organizations. One male respondent who works in the Singapore local office of a multinational public relations agency commented:

> "Working within a very rigid bureaucratic structure who does not fully understand what PR is all about brings lots of challenges in working in a market like this" (No. 7MS).

Another major difference stemmed from the heterogeneous ethnic groups in Asia challenged the job of public relations leaders. Participants commented on the cultural diversity in Asian countries and believed that the function of public relations is not as homogeneous as it is in the U.S. It is recognized that it should take certain skills to be a good leader in the public relations industry in certain Asian country to be able to handle all these nuances.

However, it is quite interesting to recognize that senior public relations executives do not see cultural values would be that challenging in Singapore. They commented on the social value at the national level and indicated that Singaporeans are a very pragmatic group. Thus, they would buy what is economically feasible and they are always after the best job. Examples of comments to illustrate the characteristic are:

> "We are pretty much driven by a system where the best person gets rewarded. So if you work hard and do a good job, plus you are intelligent and apply your intelligence, you probably get rewarded. Generally, it is the system recognized in Singapore" (No. 3MS).

> "I think culture plays a role in Singapore, but not so much. Because we use English as our personal language, so we don't really need to be so conscious about culture. I guess it is because we are all multinational but we all speak one common language. We definitely need to be culturally sensitive and can't be insulting to a certain ethnic group, but we don't need to be so conscious about culture here in Singapore" (No. 4FS).

> "We are in a way very cosmopolitan and westernized. So, our communication today is very fast paced. Of course we are mindful to different ethnic groups and their cultures in this country, but actually we have not been affected by the cultural thing" (No. 7MS).

Compared to cultural differences at the national level or the ethnic group level, cultural values associated with individual companies play a more important role in terms of constructing strategic messages for public relations practitioners in Singapore. A male respondent who has practiced public relations in both a multinational organization and boutique agency commented on that point:

"We do not look at cultural difference very much. Instead, we actually look at a product or the message more carefully if we are going to put the company's culture and personality on the product" (No. 3MS).

- *Comments from the U.K.*

The presence of public relations activity in the UK is significant. The developments of business, economy, and technology have largely influenced the growth of public relations industry. Specifically, London has become the centre for public relations practice, which is due to its key role in the developments in business and financial sectors in the country. Local researchers have pointed out that the growth of public relations practice in the UK can best be explained in analogy with the US (Koper, 2004). However, researchers and local public relations practitioners have argued that, although different public relations functions, such as investor relations, crisis management, public affairs and so on, have been practiced in UK, the managerial function of public relations to deal with organizational-public relationships is still weak (Koper, 2004; L'Etang, 2004).

However, the results from the qualitative interviews revealed different answers, which indicated the strategic role of public relations has been frequently addressed by respondents. Respondents even valued the input at the strategic level as a particular cultural element in the U.K. public relations industry. Participants practicing PR in London agreed that the U.K. public relations industry is a lot more sophisticated than it is in other parts of Europe; therefore, they believed the major difference between the UK profession and profession in other European countries is the higher level of sophistication and the strategic role that PR people play in their organizations.

> "I think for other countries [in Europe] where the profession of public relations is in a developmental phase, the focus of PR is very much on the media relations side of things: you are there to get coverage or you are there to prevent coverage getting in the media. But in the city [London], we always care about thinking strategically" (No. 2ML).

When compared to the profession in the U.S., participants from London admitted that the differences are not so profound between the two countries in terms of cultural values, as well as the level of sophistication in the market. However, after practicing public relations from an international perspective for several years, several respondents commented on the difference between the two countries:

> "I think the difference is the level of creativity is stronger in the U.K. I believe the States is probably better at packaging news ideas and innovation than the U.K" (No. 1ML).

> "U.K. still is a larger consumer of traditional media although it's changing. But there are many, many more daily newspapers that are

widely read than in the U.S. So, the British tend to be very big consumers of traditional news media. PR leaders and their teams have had to be extremely creative at how to get attention with the traditional media being so pervasive" (No. 9ML).

One respondent specifically commented that the public relations industry in the U.K. has a stronger international perspective than in the U.S.

> "The U.S. has such a huge geography but there is not enough diversity inside the four corners of the U.S. But in the U.K., there is a very strong international component to the work force, to the cultural make-up of the country . . . and so our business and strategies tend to be a reflection of that. This is a big learning curve for PR leaders here. It wasn't just about understanding how the profession operates here; moreover, it is about understanding how it works internationally here" (No. 1ML).

Another common issue mentioned by participants from the U.K. addressed the strong regulation framework and ethical obligation the public relations industry performs at the national level or in Europe generally.

> "In the city [London] itself, there is certainly a much stronger regulatory framework which I suppose is a cultural thing. There are very tight rules and regulations about what you can say and when you can say it, particularly when dealing with market sensitive information" (No. 5ML).
> "Public relations profession has a very firm obligation both legally and ethically to not release inappropriate information…Doing so could

potentially move the markets and it is one cultural thing within the city of London in particular" (No. 3ML).

"For me, the communication strategies are the same…the difference is how you implement them. It takes longer to implement strategies cross culturally. For instance, whereas in Europe you've got to stop and look at all the regulations that are involved in an announcement because they are all very different in laws and that sort of thing. That will affect how you implement your strategies" (No.11FL).

Concluding remarks

The last research question (RQ5) aims at exploring those core values and qualities public relations practitioners in the U.K. and Singapore emphasize during their daily acting processes. To find the answer for this research question, in-depth interviews with local practitioners were conducted. Quite interetingly, the in-depth interviews with participants in U.K. and Singapore revealed similar patterns in terms of essential skills an effective public relations leader should possess (e.g., fast learning ability, being forward looking, treating public relations as a team building, etc.). These patterns have been presented in the conceptual model as essential dimensions of excellent leadership in public relations. Moreover, the quantitative analysis has presented the theoretical framework in a more comprehensive way, which encompasses the self dynamics, team collaboration, ethical orientation, relationship building, strategic decision-making capability, and the communication knowledge management capability. Thus, both quantitative and qualitative analyses have revealed consistent findings in terms of the leadership construct and its dimensions, which further confirmed the universality of the leadership skills and behavior in the public relations profession.

As the researcher addressed at the beginning of this chapter, respondents' thoughts and discussion about leadership in public relations largely depend on the aspects of the phenomenon of most interest to them. However, the themes identified in the qualitative analysis, in line with the findings in quantitative measurement approach, provide a holistic view of excellent leadership in public relations as a multi-faceted construct and its essential dimensions. In next chapter, the researcher summarizes the findings for each question generally. The implications for theoretical development and public relations practice are also discussed, followed by the discussion of limitations and guidance for future research.

Chapter VIII

DISCUSSION AND CONCLUSIONS

The purpose of this chapter is to generally discuss both the quantitative and qualitative results of this study. First, the results drawn from both the LISREL analysis in Chapter V and VI and the qualitative assessments in Chapter VII are presented based on the order of the five research questions the researcher has proposed. Next, the overall contributions of this study are discussed, followed by the theoretical and managerial implications of this study in detail. Finally, the limitations of this study are discussed along with the suggestions for future research.

General Discussion

This dissertation was motivated by a desire to understand how leadership has been defined in the field of public relations and the key dimensions that compose the complex leadership process. As the researcher has addressed earlier, one of the main objectives of this dissertation was to integrate the multiple themes and perspectives on leadership research into a unified process perspective in the area of public relations. Thus, the fragmented literature would be integrated into a more holistic view of leadership related activities and behavior in public relations.

To accomplish this major objective, three key streams of literature were reviewed and discussed: managerial leadership, cultural influence on organizational leadership, and leadership research in public relations. Once these streams were reconciled, the concept of excellent leadership in public relations was used as the conceptual framework that served as the basis for the study and the overall measurement model and the structural model. Through this process, the researcher has taken the literature in a tactical way to focus on integrating the concept into a more strategic view of communication management.

While these different streams of literature have been used as the informative theoretical basis, three key research questions were proposed to guide the development and refinement of the measurement model and the structural model: (1) How is excellent leadership defined in public relations? (2) What are the key dimensions of excellent leadership in public relations as they relate to communication effectiveness? and (3) How do organizational structure and culture affect the achievement of excellent leadership in public relations? In the following paragraphs, the researcher briefly summarized the findings for each question.

RQ1*: How is excellent leadership defined in public relations?*

To address the first question, extensive literature on managerial leadership and communication management was evaluated. As indicated in the literature, leadership has been defined as a process that encompasses leaders' attributes and behaviors that can influence task objectives and strategies, commitment and compliance in task-related behavior to achieve those objectives, group maintenance and identification, and the culture of an organization (e.g., House, 1971; Kerr & Jermier, 1978; Vroom & Yetton, 1973; Fiedler, 1978; Yukl, 1989). Eventually, leadership can be used as the source of a competitive advantage for any given organization and of a necessary transformation process for interactive leader-follower relationship (e.g., Bass, 1985; Conger & Kanungo, 1998). More specifically, in the field of public relations, leadership can be conceptualized as preconditions for effective communication management and for gaining access to the dominant coalition (e.g., Berger, Reber, & Heyman, 2007; Bowen, 2008).

Therefore, the various streams of literature gave us the broad foundation that can serve as the basis for the definition of excellent leadership in public relations, which defines leadership in public relations comprehensively to include the major controversies and issues in leadership research, as well as some unique features associated with communication effectiveness, to specify this complex, multifaceted phenomenon.

Moreover, in-depth interviews with senior public relations executives in the U.K. and Singapore also reflected the multi-faceted nature of the leadership construct: participants' conception of excellent leadership in public relations largely reflected their choice of phenomenon to identify leaders and leadership processes. However, thematic interpretation of their answers has found that most definitions of leadership involved the strategic decision-making process, individual traits, solid communication skills, role relationships, and influence on task goals and organizational effectiveness. Although these patterns have not achieved a grand or a universal definition of excellent leadership in public relations, senior practitioners' interpretation helped us develop a better understanding of the traits, behaviors, power, and situational factors in the achievement of excellence in public relations leadership. The sufficient similarity among participants' descriptions did permit a rough scheme of classification of leadership: it has been conceived as the focus of group processes, as a matter of personality, as the exercise of influence expansion, as particular behaviors and actions, as an effect of interaction, and as an instrument to achieve goals. Thus, the complexity of the leadership definition itself reflected the need to explore its key dimensions in a more meaningful and integrating way.

RQ2*: As a complex, multifaceted phenomenon, what key dimensions does the construct of excellent leadership in public relations encompass?*

To address this question, the literature on managerial leadership and excellence in communication was examined and the higher-order measurement model was tested. The literature revealed that five major dimensions served as the basis for the measurement model to explain the complex, multifaceted phenomenon: self dynamics (including self insight, shared vision and team collaboration), ethical orientation, relationship building (including internal and external relations), strategic decision making capability, and communication knowledge and expertise management capability.

The results of the measurement model empirically supported the existence of these dimensions. However, the relatively high factor correlation between self insight and shared vision indicated the conceptual redundancy and the necessity of collapsing the two sub-dimensions into a single meaningful dimension to represent self dynamics; while team collaboration should be treated as a separate meaningful dimension which can explain leader-follower relationship in the communication team of any given organization from a transformational perspective. Meanwhile, the model testing also indicated the necessity of combining internal relations and external relations to a single dimension to address the importance of relationship building to excellent leadership in public relations.

Therefore, the model testing and re-specification process finally have validated six essential dimensions of the multifaceted construct of leadership in public relations: *self dynamics, team collaboration, ethical orientation, relationship building, strategic decision making capability, and communication knowledge and expertise management capability.* An examination of the factor loadings at the lower-order and the higher-order factors did not indicate that any one aspect is more important than any other. The six dimensions and their indicators were relatively equally weighted on the construct itself. In other words, aspects of leadership may exist but not sufficient in amount to completely define a complete leadership phenomenon. For researchers and managers assessing the presence or impact of leadership capabilities, the results implied that the measurement should consider both magnitude and existence of those capabilities. A potential useful area of future research is to utilize this perspective to establish empirical thresholds of leadership capabilities of the communication team across firms, industries, and other subsectors. In addition, understanding the sequence of developing and testing dimensions of leadership will provide a road map for organizations planning to undertake communication management efforts. In absence of such research, public relations practitioners must use their judgment to sequentially build these capabilities.

Thus, taking the results together, we can see the importance of identifying the multidimensional construct and its key dimensions. As noted by Yukl (1989), leadership is a complex phenomenon and most of the prevailing theories are simply focusing on unidirectional models of causality. Previous literature has largely failed to empirically examine the concept in an integrative approach and as multi-dimensional constructs. That shortcoming has been addressed through the development of the measurement model, which integrated the six dimensions to form the overall leadership construct in a global scope. Thus, the integrated approach allowed the researcher taking a broader view of the way individual traits, behavior, power, knowledge, and group maintenance all interact at a strategic level to determine the importance of leadership effectiveness in promoting the communication team's value to the organization.

***RQ3**: How do organizational structure and culture affect the achievement of excellent leadership in public relations?*

The factor of organizational structure and culture has been specifically given attention in this dissertation to find out its impact on the achievement of leadership effectiveness for communication leaders. Based on this assumption, a structural model was proposed and tested by adding the direct causal path from the construct of organizational structure and culture to the multifaceted construct, leadership in public relations. The results implied that organizational structure and culture may improve the communication team's ability to manage communication efforts and improve its effectiveness. The results further suggested that it is not enough to just put an excellent communication team in place to wait for the chance to confirm the efforts they can bring to improve organization performance. Rather, the success of communication leaders should be linked to the flexibility in the organizational structure, a culture that embraces communication efforts, and a distinct process to encourage, value, and share open communication among members.

Over time, researchers have identified that founders and subsequent leaders in organizations respond to the organizational structure and culture and alter their behaviors and leader styles accordingly (e.g., Schein, 1992; Trice & Beyer, 1984). These strategic organizational contingencies have exhibited a direct impact on leaders' attributes and behaviors. Previous research also suggested that leadership may affect organizational form, culture, and practice. Scholars such as Bass (1985), Miller and Droge (1986), and Yukl (2002) have found that founders and subsequent leaders continue to influence or maintain the organizational culture by strategically adjusting their behaviors. Eventually, leader attributes and behaviors that meet the requirements and expectations of strategic organizational contingencies will result in increased leader effectiveness. Thus, a potentially useful area of future research is to investigate how leadership in public relations has influenced or shaped the organizational contingencies such as the organizational environment, form, culture, and practice.

The verification of the direct impact organization structure and culture could have on leadership effectiveness also reflected one of the major issues that have been addressed by the situational approach in leadership research, which is the discussion about organization's legitimating principles and cultural norms as a significant situational moderator in leadership effectiveness. The situational approach in managerial leadership research emphasizes the importance of contextual factors to leader behavior and leader effectiveness. Different research lines have described a variety of contextual factors, including level of the leader's authority in the organization, the attributes of subordinates, centralization of authority in the organization, lateral interdependence in the organization, and forces in the external environment (e.g., Yukl, 1989; Osborn & Hunt, 1975; Hunt & Osborn, 1982). These contextual factors are believed to serve as various situational moderators influencing leader behavior and effectiveness.

We all agree that organizational structure and culture is the glue that binds organization members together in pursuit of a common goal. Scholars have argued that an organization's structure and culture do not only reflect the fundamental beliefs and values of its transformational leaders, but also the beliefs and values of the larger society in which the organization operates (e.g., Emrich, Denmark, & Den Hartog, 2004). Clearly, the organization's philosophy and culture interactively influence its senior leaders in determining what is the right thing to do and what is important and good. Researchers adopting the situational approach have manifested that this influence could move down to successively lower levels of management and contribute to the constraints that are imposed (e.g., Bass, 1990). Furthermore, it would influence the ways in which people are mobilized, resources are allocated, and performance is evaluated. Thus, it, in turn, would affect the patterns of leader-member relations in the organization.

Specifically, the exploration of organizational culture's effect on leadership effectiveness has been narrowed down to the communication team inside the organization in this study. The model testing and the in-depth interviews reflected participants' recognition of the importance of having organizational leaders who value communication efforts, support clear statements of objectives emphasizing cooperation and teamwork, and encourage open communication among organizational members. As a result, public relations practitioners and communicators would be able to exercise more upward influence in the strategic decision-making core in organization.

As addressed in the qualitative data analysis section, another major objective of this dissertation was to identify the relationships between leader behavior and cultural forces at a societal level. To accomplish this, three competing propositions about cultural influences on organizational leadership were reviewed in the literature section: cultural congruence, cultural difference, and near universality of leader behaviors; and two research questions were proposed to guide the development of in-depth interviews in the U.K. and Singapore.

RQ4: Are certain dimensions of excellent leadership in public relations universally relevant while others are culturally specific?

RQ5: What core values and qualities of public relations leadership do different cultures (the U.K. and Singapore) emphasize?

To address **RQ4**, multiple-group analysis with measurement invariance assessment was conducted to test the measurement model and the structural model across three groups. Equal constraints were added to different levels (e.g., configural, metric, and scalar invariance), and the results exhibited adequate cross-group equivalence at different levels. The findings suggested that three groups exhibited similar factor patterns and interpretations of the key dimensions of the leadership construct, which further supported that there are six key dimensions integrated to represent the global construct of public relations leadership: *self dynamics, team collaboration, ethical orientation, relationship building, strategic decision-making capability, and communication knowledge and expertise management capability*. Although it should be noted that the examination of the latent means has indicated some variances for certain dimensions appeared in a specific group, the researcher would argue the difference is not about the nature of the leadership process itself; instead, the different perceptions should stem from the social values and organizational culture that influence the process by which people come to share implicit knowledge of leadership.

To address **RQ5**, in-depth interviews with senior public relations executives in the U.K. and Singapore were conducted. Thematic interpretation of respondents' conversations has revealed similar patterns and dimensions that have been addressed in the quantitative analysis (e.g., team collaboration, strategic decision-making capability, shared vision, etc.). Their discussion suggested that effective leader behaviors are associated with breakthrough improvements at the strategic level and the ability of articulating a vision of a more innovative way of delivering messages, as well as the ability to communicate high performance expectations and confidence in members of the communication team. These thoughts have echoed previous research findings in public relations leadership, which suggested that a strong sense of leadership is an effective approach to gaining credibility and access to the dominant coalition in the organization (e.g., Berger, Reber, & Heyman, 2007; Bowen, 2008).

Specifically, participants' discussion about essential leadership skills reflected their preference of communication leaders who can initiate changes by learning and acting promptly toward the changing environment (e.g., fast learning ability) and by adapting new technology (e.g., value the power of new technology and social media). Participants believed that the adaptive ability on new information technology can make the communication efforts more efficient and provide new solutions to create group dynamics. Thus, it is a must-have skill for an effective public relations leader as the technology revolution continues to alter the communication process and channels.

Overall Contributions

Therefore, through the preceding discussion, it is apparent that this dissertation has made some significant accomplishments. The key contributions of this study are the integration of a widely discussed but fragmented literature base, organizational leadership research, and the extension of the broadly explored topic of leadership to an understudied area, public relations. This effort has addressed some unique features belonging to the profession of public relations, e.g., the strategic application of communication knowledge and expertise, and the ability to construct strategic messages and the ability to maintain healthy relationships both internally and externally.

More importantly, at the empirical level, this dissertation used the integrated approach to developing a theoretical framework for excellent leadership in public relations, to propose essential dimensions that compose the complex, global construct, to provide operationalization of key construct for use in future studies, and to examine the relationships between the constructs of interest.

To be more specific, this dissertation presented a systematic research effort in presenting the construct of leadership in the area of public relations. As evidenced from the previous discussion, prior to this research, there has been a wide variety of fragmented approaches to researching the concepts of leader and leadership in an organizational setting. The previous fragmented approach generally focused on a single dimension of the complex construct (e.g., the trait approach, the behavior approach, the situational approach, etc.). Although some public relations researchers have raised the questions of determining the role of leadership in helping public relations practitioners in gaining credibility and access to the dominant coalition in the organization (e.g., Berger, Reber, & Heyman, 2007; Bowen, 2008), few studies have examined the topic comprehensively and empirically. Thus, the crucial findings from this project supported the existence of each of those dimensions, while at the same time showed that the public relations leader can effectively manage his/her leadership knowledge at multiple levels to facilitate communication effectiveness at the organizational level.

By seeing himself/herself as being responsible for coordinating and supporting the interactions of individuals in the communication team, public relations leaders can effectively manage the tacit knowledge required for the strategic decision making and provide a vision to strengthen the confidence in team members. Additionally, through the use of innovative approaches and new technology-oriented channels as suggested by the participants, public relations leaders will be able to effectively manage explicit knowledge at the operational level. Moreover, through the integration of the key capabilities, public relations leaders will also be able to embed organizational knowledge (e.g., structure and culture) through the development of specific and strategic routines designed to manage the knowledge and to leverage the perceptions of public relations values in the organization. Thus, the findings help enhance the theoretical development of leadership research in the public relations field, as well as provide concrete directions for organizations planning to undertake communication management efforts.

Finally, this study used a holistic approach to understanding and verifying cultural difference in terms of practitioners' interpretation of excellent leadership in public relations. The findings showed that the relationships among key dimensions, organizational structure and culture, and cultural interpretation. The findings also showed that, in a rapid changing environment, the different interpretation of cultural values and cultural practices is larger at the organization level than at the societal level. Organizational-level cultural influence would affect public relations leaders' behavior and reaction more intensively.

With the growing importance of effective communication management in organizations, this research also provided a much-needed focus to the field of public relations. In the process of empirical analysis, the researcher focused on establishing the need for a balanced and triangulated approach by exploring the constructs of interest through both quantitative measures and qualitative interpretation. Previous theoretical work largely lacked empirical evidence, and the empirical work done to date was largely conducted using smaller, single, and self-selected samples. Therefore, it is impossible to discern whether the results observed could be applied in broader organizational settings and in cross-cultural settings, or they were just isolated observations.

We also admitted that part of the confusion about leadership research and public relations research stems from the lack of published scales suitable for benchmarking. Through the research efforts in this study, the researcher would like to address the importance of applying measurement theory and classical testing theory in advancing theory construction and development in public relations. As a result, another key contribution of this study was the conceptualization and operationalization of such measurement scales. As part of the measurement approach, through extensive literature review, a broad set of potential measure items were identified that could serve to measure excellent leadership in public relations and its dimensions. Those items were refined, through multiple steps, into a single survey instrument that pinpointed specific dimensions of the construct. The test of the higher-order measurement model also suggested necessary refinement for the scales, and the re-specification has been validated through multiple-group analysis.

Thus, for the research community, the researcher would like to suggest that the refined measurement scales can serve as the basis for more in-depth studies in the future, as well as for research debate. Importantly, for practitioners, the instrument can also serve as an invaluable assessment tool to determine the existence and level of development of these leadership capabilities in communication teams and organizations.

Implications for Research and Practice

Similar to many emerging concepts in the field of public relations and communication management, the construct of leadership and theory surrounding knowledge in terms of its content, use, and role within the organization are complex. Leadership spans many levels of analysis and can be approached from different perspectives. This study analyzed leadership in public relations in terms of its content and key factor structure and patterns. Perhaps most importantly, the results indicated that the leadership capabilities (dimensions) are largely complementary and related in a meaningful way. Therefore, they should not be developed in isolation, but rather should be developed in a comprehensive and balanced manner.

A direct implication for future research is that this perspective offers extremely useful insights into operationalizing measurement scales and testing key relationships empirically. The establishment of the construct and its key dimensions and associated item indicators implied that such studies can be launched by the research community in the future. Researchers may analyze leadership in public relations for insights into its impact on individuals and on the interaction between leaders and followers to increase communication responsibility.

As a result of cross-cultural research, the study indicated that when cultural environmental factors both at the national and the organizational levels are examined jointly, organizational culture is more important compared to national cultural differences in influencing the achievement of excellent leadership for the communication team. These results are somewhat surprising in that prior research on cultural differences in leadership has found national cultural and environmental factors to be influential. It can be argued that organizational cultural issues are more influential than national culture when leadership has been taken as an approach for public relations practitioners to gaining credibility in organization, especially in a rapid changing environment and a dynamic market.

This finding thus provided some empirical support for arguments made in the multiple-group analysis section questioning that findings related to national cultural differences may actually be artifacts of other issues, e.g., organizational structure and culture, measurement error and bias, etc. Therefore, the study suggested some new perspectives for researchers conducting cross-cultural research on leadership and addressed the necessity of testing measurement invariance.

For the field of public relations, processes of leadership can be complex and unfamiliar. While the results of this research cannot address all potential issues and situations that practitioners may face in their request to maximize communication effectiveness organizational-wide, it did imply that certain capabilities are must-have factors for effective leadership. Specifically, practitioners who wish to develop effective leadership capabilities and exhibit expertise along dimensions of excellent leadership will tend to be conducive to increasing credibility and getting involved in the strategic decision-making processes that are important for communication effectiveness and influence expansion.

By customizing the process to their needs and developing the capabilities in a balanced manner, public relations practitioners can utilize their leadership knowledge to identify new opportunities, to improve their ability to anticipate and respond to changes, and to increase internal communication efficiency by gaining access to the dominant coalition. For public relations practitioners, it seems that an understanding of how comprehensive dimensions of leadership could influence their individual achievements and the communication objectives at the organizational level would benefit themselves in the practice.

Clearly, organizational managers seeking to establish effective programs of communication management must balance the content of leadership capabilities and organization's infrastructure to leverage the content (e.g., organizational structure and culture). As illustrated in the results section, the flexibility in organizational reporting structure and the support from the senior management team are key factors in maximizing the full benefits of communication management without suffering the negative consequences of imbalance between the structure and the capabilities. Understanding the sequence of developing essential capabilities of leadership in public relations will provide a road map for organizations planning to undertake communication management efforts.

Limitations and Future Research

Importantly, the mathematical manifestation of the strength of item loadings, consistency in the factor patterns and structures, and match to theoretical perspectives outlined in previous chapters seemed to strongly imply that the higher-order measurement model provided valid insight into the global construct of excellent leadership in public relations and its key dimensions. The consistency in directional path of the structural model also presented strong evidence regarding the impact of organizational structure and culture on the achievement of excellent leadership in public relations. However, the researcher would like to suggest that the results should be interpreted in light of the study's limitations.

First, the study suffered from potential measurement errors associated with the instrumentation bias. This limitation has been proved by the failure of testing the equality of the indicator error variance. Different error patterns associated with measures of constructs emerged in three groups. Although the researcher would acknowledge such bias or practice is typical of survey research, especially when multiple groups were involved in the study, future research should put more efforts in reducing measurement errors and instrumental bias.

Second, although broad literature has been reviewed and multiple leadership concepts have been examined, the researcher is by no means suggesting that this is a definitive set of leadership capabilities that should be examined. Rather, researchers should continue to refine and expand the set of leadership capabilities to enhance our understanding of this complex process in leveraging the value of public relations. Similarly, other approaches and covariates, such as nature of subordinates, resource adequacy, leader's position power, etc., should be included in the integrating framework to enhance the clarity of the findings.

Finally, although the context of excellent leadership in public relations has been tested in three different groups, and the results have provided an illustration of the models, the context itself presented a limitation in terms of the international group. The relatively smaller size of the international group, especially the sub-groups in the international sample, placed a restriction of the generalizability of the results. Future research should expand the magnitude of the data collection in multiple countries and conduct a country-by-country analysis of the theoretical model. Although the researcher would like to argue that, through multiple-group analysis, the theoretical model should hold in additional markets, only future research can adequately confirm this issue.

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Appendix A

Final Measurement Scales for the PR Leadership Construct and Its Dimensions

*All items are measured on a seven-point Likert scale

Dimension 1: Self Dynamics (SD)

Please indicate to what extent you agree that each of the self dynamic indicators listed below contributes to excellent leadership in public relations.

A little bit 1 2 3 4 5 6 7 A great deal

SD1: The nature of being dependable
SD2: The capacity for engaging in strategic decision-making
SD3: Being aware of applying diverse strategies depending on different situations
SD4: The nature of being proactive (e.g., risk taker, self-starter, taking initiative)
SD5: The capacity for acting as a change agent in the organization
SD6: The nature of being forward looking
SD7: The capacity for enlisting other communication professionals in a shared vision
SD8: The capacity for providing a vision of potential changes and developments in areas affecting the organization
SD9: The ability to provide organizational leaders with a clear vision about public relations values and role
SD10: The ability to provide organizational leaders with a clear vision of how public relations goals are congruent with organizational goals
SD11: The nature of having a vision of public relations as a management function that is an integral part of the organization's strategic decision-making

Dimension 2: Team Collaboration (TD)

Please indicate to what extent you agree that each of the abilities to collaborate with others listed below contributes to excellent leadership in public relations.

A little bit 1 2 3 4 5 6 7 A great deal

TD1: The ability to collaborate with members in other divisions of the organization to define PR strategies and programs
TD2: The ability to develop a proactive and professional communication team
TD3: The ability to facilitate positive interdependence among team members
TD4: The ability to bring diverse groups together to collaboratively solve problems
TD5: The capacity for inspiring and motivating others

Dimension 3: Ethical Orientation (EO)

Please indicate to what extent you agree that each of the ethical values and orientations listed below contributes to excellent leadership in public relations.

A little bit 1 2 3 4 5 6 7 A great deal

EO1: The ability to maintain the core values of PR as professional standards (e.g., advocacy, honesty, expertise, independence, loyalty, and fairness)
EO2: The ability to integrate these core values into actions
EO3: The process of representing consistent behaviors that can be trusted by others inside and outside of the organization
EO4: The ability to act promptly to correct erroneous communications of team members and other coworkers
EO5: The capacity for understanding ethical differences which grow out of diverse cultures

Dimension 4: Relationship Building (RB)

Please indicate to what extent you agree that each of the relationship-building abilities listed below contributes to excellent leadership in public relations.

A little bit 1 2 3 4 5 6 7 A great deal

RB1: The capacity for developing coalitions to support proposed ideas or actions
RB2: The ability to foster trust and credibility with organizational decision makers
RB3: The ability to mentor and help young professionals achieve success on the job
RB4: The process of regularly briefing members of the organization about public relations programs and results
RB5: The ability to cultivate relationships with key external publics
RB6: The ability to foster trust and credibility with media representatives
RB7: The ability to understand the needs of key publics

Dimension 5: Strategic Decision Making Capability (DM)

Please indicate to what extent you agree that each of the strategic decision-making abilities listed below contributes to excellent leadership in public relations.

A little bit 1 2 3 4 5 6 7 A great deal

DM1: The ability to be proactive in the organization’s internal decision-making processes

DM2: Having knowledge of decision-making processes, practices and structures in the organization
DM3: The ability to span internal/external boundaries and interpret information from publics for organizational decision makers
DM4: Being included in strategic decision-making groups in the organization

Dimension 6: Communication Knowledge Management Capability (CK)

Please indicate to what extent you agree that each of the types of communication knowledge and expertise listed below contributes to excellent leadership in public relations.

A little bit 1 2 3 4 5 6 7 A great deal

CK1: The process of using research to develop appropriate strategies, messages and activities
CK2: The process of converting knowledge about publics and issues into effective and representative advocacy of these publics and issues with decision makers
CK3: The ability to apply public relations knowledge to crisis situations
CK4: The ability to systematically evaluate communication programs and results to increase quality and effectiveness
CK5: The process of using research to help solve communication problems
CK6: The ability to obtain sufficient resources to support needed strategies and projects
CK7: The ability to use knowledge of mass and specialized media to help the organization communicate effectively with publics
CK8: The ability to strategically use new technologies to help the organization communicate and interact with publics

Situational factor: Organizational Structure and Culture (OG)

Please indicate to what extent you agree that each of the aspects of organizational structure and culture listed below can influence excellent leadership in public relations.

A little bit 1 2 3 4 5 6 7 A great deal

OG1: Working in an organization where all of the public relations/communication functions share a common reporting relationship
OG2: Working in an organization that supports and encourages open communication among members
OG3: Having an organizational leader who champions and values public relations
OG4: Reporting directly to the organization's leader
OG5: Working in an organization that values and practices diversity

Appendix B

Survey Instrument for Excellent Leadership in Public Relations

INFORMED CONSENT STATEMENT

Measurement of Excellent Leadership in Public Relations and Its Dimensions
Investigator: Juan Meng

Dear respondent:

You are invited to participate in a research study. The study is called "Measurement of Excellent Leadership in Public Relations and Its Dimensions." The study is being conducted by doctoral student Juan Meng and Dr. Bruce Berger, at the University of Alabama.

We would like to have your opinions and perceptions about leadership in public relations. We want to know what you think about leadership in public relations vs. leadership in other disciplines/areas. Your answers will help us understand the key dimensions of leadership in public relations.

The online survey asks you to indicate to what extent each statement in a particular dimension is important to leadership in public relations. It will take approximately 20 minutes to complete the online survey. The information you provide in this survey will be kept completely confidential. You will not be asked to put your name on this survey and your answers will not be linked to you in any way. Of course, your participation in this study is completely voluntary; you may withdraw from the study at any time without loss of benefits. We would appreciate it very much if you could help us by completing the survey.

CONTACT

If you have any questions at any time, please feel free to contact **Juan Meng**, Doctoral Student in the College of Communication and Information Sciences, at 419-378-2360, or **Dr. Bruce Berger**, Faculty Advisor, at 205-348-7692. If you have any questions about your rights as a research participant, you may contact **Ms. Tanta Myles**, The University of Alabama Research Compliance Officer at 205-348-5152.

I willingly agree to participate in this survey.

____Yes

____No

Excellent Leadership in Public Relations Survey

Excellent leadership in public relations includes a number of interrelated qualities and dimensions, each of which is important. However, some qualities are likely to be more important than others, and this survey seeks your perceptions about the relative importance of a number of qualities of excellent leadership in public relations. In the first eight questions for Section I, please carefully assess each statement to indicate the extent to which you agree with its relative importance to excellent leadership in public relations. Use a scale of 1-7 for your answer, where “1” equals “a little bit” important and “7” equals “a great deal” of importance.

SECTION I

Excellent leadership in public relations includes a number of interrelated qualities and dimensions, each of which is important. However, some qualities are likely to be more important than others, and this survey seeks your help in evaluating the relative importance of some of these qualities of excellent leadership. We are interested in which qualities you consider to be more important than others. In the eight question areas for Section I, please carefully assess each statement to indicate the extent to which you agree with its relative importance to excellent leadership in public relations. Use a scale of 1-7 for your answer, where “1” equals “a little bit” important and “7” equals “a great deal” of importance.

1. Personal Attributes

Please indicate to what extent you agree that each of the personal attributes listed below contributes to excellent leadership in public relations.

A little bit 1 2 3 4 5 6 7 A great deal

1. The nature of being dependable
2. The nature of being trustworthy
3. The capacity for engaging in strategic decision-making
4. Being aware of applying diverse strategies depending on different situations
5. The nature of being proactive (e.g., risk taker, self-starter, taking initiative)
6. The capacity for acting as a change agent in the organization

2. Vision

Please indicate to what extent you agree that each of the abilities to envision the future listed below contributes to excellent leadership in public relations.

A little bit 1 2 3 4 5 6 7 A great deal

1. The nature of being forward looking
2. The capacity for enlisting other communication professionals in a shared vision
3. The capacity for providing a vision of potential changes and developments in areas affecting the organization
4. The ability to provide organizational leaders with a clear vision about public relations values and role
5. The ability to provide organizational leaders with a clear vision of how public relations goals are congruent with organizational goals
6. The nature of having a vision of public relations as a management function that is an integral part of the organization's strategic decision-making

3. Team Collaboration

Please indicate to what extent you agree that each of the abilities to collaborate with others listed below contributes to excellent leadership in public relations.

A little bit 1 2 3 4 5 6 7 A great deal

1. The ability to collaborate with members in other divisions of the organization to define PR strategies and programs
2. The ability to actively cope with crisis situations
3. The ability to develop a proactive and professional communication team
4. The ability to facilitate positive interdependence among team members
5. The ability to bring diverse groups together to collaboratively solve problems
6. The capacity for inspiring and motivating others

4. Ethical Orientation

Please indicate to what extent you agree that each of the ethical values and orientations listed below contributes to excellent leadership in public relations.

A little bit 1 2 3 4 5 6 7 A great deal

1. The ability to maintain the core values of PR as professional standards (e.g., advocacy, honesty, expertise, independence, loyalty, and fairness)
2. The ability to integrate these core values into actions
3. The ability to represent the organization without engaging in deceptive practices or communications
4. The process of representing consistent behaviors that can be trusted by others inside and outside of the organization
5. The ability to act promptly to correct erroneous communications of team members and other coworkers

6. The capacity for understanding ethical differences which grow out of diverse cultures

5. Relationship Building

Please indicate to what extent you agree that each of the relationship-building abilities listed below contributes to excellent leadership in public relations.

A little bit 1 2 3 4 5 6 7 A great deal

1. The capacity for developing coalitions to support proposed ideas or actions
2. The ability to foster trust and credibility with organizational decision makers
3. Being sought out for advice and counsel by executives in the organization
4. The ability to mentor and help young professionals achieve success on the job
5. The process of regularly briefing members of the organization about public relations programs and results
6. The ability to cultivate relationships with key external publics
7. The ability to foster trust and credibility with media representatives
8. The ability to understand the needs of key publics

6. Strategic Decision Making

Please indicate to what extent you agree that each of the strategic decision-making abilities listed below contributes to excellent leadership in public relations.

A little bit 1 2 3 4 5 6 7 A great deal

1. Having knowledge of the organization's business and its environment
2. The ability to be proactive in the organization's internal decision-making processes
3. Having knowledge of decision-making processes, practices and structures in the organization
4. The ability to span internal/external boundaries and interpret information from publics for organizational decision makers
5. Being included in strategic decision-making groups in the organization

7. Communication Knowledge and Expertise

Please indicate to what extent you agree that each of the types of communication knowledge and expertise listed below contributes to excellent leadership in public relations.

A little bit 1 2 3 4 5 6 7 A great deal

1. The process of using research to develop appropriate strategies, messages and activities
2. The process of converting knowledge about publics and issues into effective and representative advocacy of these publics and issues with decision makers
3. The ability to apply public relations knowledge to crisis situations
4. The ability to systematically evaluate communication programs and results to increase quality and effectiveness
5. The process of using research to help solve communication problems
6. The ability to obtain sufficient resources to support needed strategies and projects
7. The ability to use knowledge of mass and specialized media to help the organization communicate effectively with publics
8. The ability to strategically use new technologies to help the organization communicate and interact with publics

8. Organizational Structure and Culture

Please indicate to what extent you agree that each of the aspects of organizational structure and culture listed below can influence excellent leadership in public relations.

A little bit 1 2 3 4 5 6 7 A great deal

1. Working in an organization where all of the public relations/communication functions share a common reporting relationship
2. Working in an organization that supports and encourages open communication among members
3. Having an organizational leader who champions and values public relations
4. Having access to organizational leaders in order to discuss important issues
5. Reporting directly to the organization's leader
6. Working in an organization that values and practices diversity

9. Do you think the organization you now are working for has the following conditions?

A little bit 1 2 3 4 5 6 7 A great deal

1. In my organization, all of the public relations/communication functions share a common reporting relationship
2. My organization supports and encourages open communication among members
3. We have at least one organizational leader who champions and values public relations
4. PR practitioners in my organization don't have access to organizational leaders to discuss important issues
5. The PR leader in my organization reports directly to the organization's leader

6. My organization does not value and practice diversity

SECTION II

This section asks you to rank qualities and dimensions of leadership in PR and to respond to two open-ended questions.

10. Most Important Qualities and Dimensions of Excellent Leadership in PR

Please indicate which **three** of the following qualities or aspects you believe contribute the most to excellent leadership in public relations.
Please type **the equivalent numbers** of your top THREE choices **in order of importance** in the comment box. For example, if you believe that No. 6, No. 3, and No. 9 are the most important qualities for excellent leadership in PR, you only need to type **"6, 3, and 9"** in the comment box.

1. Communication knowledge and expertise
2. Strategic decision-making capabilities
3. Ability to demonstrate the value of public relations
4. Relationship-building abilities
5. Ethical values and orientation
6. Being visionary and inspiring
7. Ability to collaborate and build teams
8. Being trustworthy and dependable
9. Ability to solve problems and produce results
10. An organizational culture that supports communication

11. Source of Leadership Skills and Development

There are many sources of shaping and developing individual leadership skills and beliefs, and all of the following may contribute to the development of such skills. Please indicate **which three of the following you believe are the most important contributors to the development of excellent leadership skills in public relations.**

Please type **the equivalent numbers** of your top THREE choices **in order of importance** in the comment box. For example, if you believe that No. 6, No. 3, and No. 9 are the most important sources of leadership development, you only need to type **"6, 3, and 9"** in the comment box.

1. Examples set by excellent role models
2. Powerful personal experiences or events
3. Genetics

4. Formal education (university level)
5. On-the-job experiences
6. Mentors and mentoring programs
7. Professional development programs (e.g., through PRSA, IABC or others)
8. Communication skills training (persuasion, listening, public speaking, etc.)
9. Individual initiative and desire

12. PR Leadership vs. Other Leadership

Do you believe that the qualities of excellent leadership in public relations are somewhat different from the qualities of excellent leadership in other fields or disciplines?

_____ Yes. I believe the qualities of excellent leadership in PR are somewhat different.
_____ No. Excellent leadership is more or less the same in any field.

If you answered "yes" to the above, please indicate **the most important ways (up to three) in which leadership in public relations is different from leadership in other fields based on the following list.**

Please indicate the most important 3 statements by typing the equivalent numbers **in order of importance** in the comment box. For example, if you think No. 7, No. 5, and No. 9 are the most important differences between PR leadership and leadership in other disciplines, you only need to type **"7, 5 and 9"** in the comment box to indicate your order of importance.

Leadership in PR is different from leadership in other fields in that it requires:

1. Ability to strategically construct messages
2. A clear and compelling vision of how communication connects the organization to its publics and the larger social system
3. Ability to advocate effectively with executives on behalf of diverse publics
4. Comprehensive understanding of media and information systems, channels and technologies
5. Ability to do more with fewer resources than other leaders in the organization
6. Strong negotiation and conflict-resolution skills
7. Comprehensive understanding of the needs and concerns of diverse publics
8. Ability to effectively develop and carry out comprehensive communication strategic plans
9. Ability to cultivate relationships with a wide range of individuals inside and outside the organization
10. An unwavering belief in the importance of honest and ethical organizational communications and actions

13. In your opinion, who is currently the most outstanding public relations leader at the national level, and why?

____

____

14. Briefly describe a personal experience or event in your life which strongly influenced your beliefs about leadership qualities and values:

____

____

SECTION III

This is the last section of the survey.
Please complete the following questions, which will capture demographic information that will be used only for categorizing the data. All information will be kept completely confidential.

<Q1>
Your total years of professional experience in public relations:
______Less than 3 years
______3 to 5 years
______5 to 10 years
______10 to 15 years
______More than 15 years
______Other, please specify:

<Q2>
Your current title:

______

<Q3>
The type of organization for which you work:
______Private corporation, including self-employed
______Public corporation
______Nonprofit organization
______Public relations/communication agency

_______Government organization
_______Educational institution
_______Other, please specify:______________________

<Q4>
Total number of employees in your entire organization:
_______Fewer than 100
_______100-499
_______500-999
_______1,000-2,499
_______2,500-4,999
_______5,000-9,999
_______10,000-24,999
_______25,000-49,999
_______50,000 or more
_______Don't know

<Q5>
Total number of employees in your organization who hold professional positions in public relations, communications or related fields (e.g., government affairs, community relations, etc.):
_______Fewer than 5
_______5-9
_______10-19
_______20-49
_______50-99
_______100 or more
_______Don't know

<Q6>
Your gender:
_______Male
_______Female

<Q7>
Your age:
_______18-30
_______31-40
_______41-50
_______51-60
_______Over 60

<Q8>

Your level of education:

______High school graduate or equivalent
______Some college
______Associate degree
______Bachelor's degree
______Master's degree
______Doctoral degree
______Law degree
______Other, please specify:____________________________

<Q9>

If you obtained your degree from a college/university, what was your major?

______Journalism
______Public Relations
______English
______Communication
______Business in general
______Political science
______Other, please specify:____________________________

<Q10>

Which of the following best describes your ethnicity?

______White/Caucasian
______Black/African American
______Spanish/Hispanic/Latino
______Asian/Asian American
______Pacific Islander
______Native American
______Other

Thank you so much for your time and opinions!

Appendix C

In-Depth Interview Guide

In-Depth Interview Guide
Excellent Leadership in Public Relations

Dear _________________, this is Juan Meng, a doctoral candidate at the University of Alabama. I am pleased to have the opportunity to talk to you today, and I want to thank you for taking the time to be interviewed and for helping me with my dissertation research.

As part of my dissertation research, I will interview 10 public relations professionals like you—highly successful and emerging leaders in PR in your country—to help me learn more about the cultural influence and the achievement in excellent leadership in public relations.

We need about 40-60 minutes to complete the interview. I will record the interview and transcribe it later. The research findings will contribute significantly to my dissertation research and will be published on the website of the Plank Center for Public Relations Leadership at the University of Alabama.

Opening/Establishing Questions

1. Please tell me your current job title and the areas of your job responsibilities?

2. Now, please tell me why you are working in the public relations/communication profession rather than in some other field? What drew you to public relations? At what point in your life did you decide on a PR career?

Thank you very much. Generally, I have two broad sets of questions to discuss with you today. The first set deals with your thoughts and perceptions about leadership issues in general in public relations. The second set focuses more on the cultural or social influences on the achievement of leadership in public relations. Let me start with more general questions.

Public Relations Leadership Questions

1. Please briefly describe the major public relations functions PR practitioners act in the U.K. (e.g., media relations, crisis communication, or marketing communication, etc.)

2. Please define what "excellent leadership in public relations" means to you.

3. In your opinion, what three qualities or attributes are most important to excellent leadership in PR? (Please explain why each is important.)

4. Do you believe professional can learn to become leaders, or is leadership inherited?
   a. What steps can professionals, esp. young professionals, take to develop their leadership skills or qualities?

5. Please name three professional skills or personal qualities that have contributed the most to your own success in PR.
    a. Why are these so crucial?
    b. Where did you develop these skills or qualities, or what is their source?

6. Can you describe a specific situation in which excellent leadership made a difference in how a problem was solved, how your organization was perceived, or how a group of people were treated or communicated with?

7. Is leadership in PR somehow different from leadership in other professional fields?
    a. If so, how? Any specific qualities, skills or values?
8. Which approach or metrics are the most effective in terms of demonstrating the ROI of communication efforts to senior leaders in the organization? And eventually influence them to support, contribute, and participate in communication efforts?

9. What can PR leaders do to help other executives in your organizations better understand the role and value of public relations?

10. What are the “must-have” elements to garner support fro communication efforts from senior leaders in the organization?

Contextual Variables: The Cultural factors

1. What are the main cultural factors/aspects that are having an impact on the public relations industry and its practices in your country?

2. How do these main cultural factors influence the industry, your specific practices, and what have been your public relations responses? Please provide examples.

3. What are those culture-specific boundaries of acceptable, effective leader behaviors and practices in your organization and/or the public relations industry in your country?

4. How are these culture-specific behaviors and practices affecting the day-to-day operations and crisis management within your organization or the industry?

5. Will gender role differences be a concern in terms of the interpretation of excellent leadership in public relations?

6. Is there any specific leadership style or behavior that your culture or this society values?

7. Do you think there are leader behaviors, attributes, and organizational practices that are universally accepted and effective across cultures? Especially, when your organization functions in different places or worldwide?

8. As multinational corporations increased rapidly in number, they also automatically increased the speed of washing out the cross-cultural differences in transcending organizational functions. Do you think this tendency will have an impact on the practice of excellent leadership in public relations?

Closing questions:

1. What are the biggest changes you foresee in the field in your country during the next 10 years?

2. What can PR leaders do to increase the credibility of the PR profession in your society?

3. What important skills do you find most lacking among young professionals in the field?

4. What's your best advice to new professionals in the field regarding being successful in the public relations profession? In other words, what are the most important ingredients for success in PR?

Thank you very much for your time and valuable opinions!

Appendix D

Correlation Matrix Used for the First-Order

Total Disaggregation Measurement Model

Correlation matrix of 40 indicators (n=222, the primary group)

	S1	S3	S4	S5	S6	V1	V2	V3	V4	V5	V6	T1	T3	T4	T5	T6	E1	E2	E4	E5	E6
S1	1.00																				
S3	0.16	1.00																			
S4	0.34	0.39	1.00																		
S5	0.33	0.39	0.38	1.00																	
S6	0.18	0.38	0.17	0.51	1.00																
V1	0.28	0.39	0.43	0.40	0.30	1.00															
V2	0.33	0.21	0.27	0.29	0.22	0.39	1.00														
V3	0.17	0.40	0.22	0.33	0.48	0.31	0.39	1.00													
V4	0.20	0.21	0.23	0.12	0.06	0.16	0.21	0.25	1.00												
V5	0.32	0.28	0.43	0.19	0.18	0.30	0.35	0.31	0.54	1.00											
V6	0.22	0.45	0.39	0.28	0.37	0.20	0.24	0.32	0.27	0.52	1.00										
T1	0.30	0.04	0.30	0.17	0.13	0.20	0.32	0.20	0.25	0.39	0.14	1.00									
T3	0.36	0.31	0.42	0.29	0.18	0.35	0.35	0.22	0.27	0.32	0.23	0.40	1.00								
T4	0.37	0.29	0.45	0.43	0.31	0.40	0.39	0.42	0.27	0.34	0.32	0.37	0.52	1.00							
T5	0.29	0.25	0.34	0.41	0.38	0.33	0.40	0.49	0.19	0.28	0.29	0.40	0.39	0.66	1.00						
T6	0.26	0.43	0.25	0.32	0.42	0.23	0.29	0.49	0.29	0.23	0.34	0.28	0.38	0.48	0.57	1.00					
E1	0.28	0.15	0.28	0.14	0.20	0.18	0.22	0.15	0.16	0.31	0.28	0.31	0.29	0.34	0.38	0.38	1.00				
E2	0.33	0.19	0.29	0.23	0.22	0.22	0.27	0.23	0.17	0.32	0.29	0.26	0.22	0.36	0.39	0.39	0.76	1.00			
E4	0.28	0.15	0.28	0.23	0.23	0.24	0.20	0.21	0.17	0.26	0.29	0.19	0.26	0.39	0.37	0.31	0.40	0.45	1.00		
E5	0.35	0.21	0.22	0.23	0.13	0.22	0.28	0.19	0.22	0.20	0.22	0.16	0.25	0.34	0.30	0.33	0.30	0.35	0.40	1.00	
E6	0.36	0.16	0.32	0.23	0.26	0.24	0.33	0.31	0.13	0.34	0.17	0.31	0.26	0.42	0.39	0.25	0.32	0.36	0.36	0.39	1.00

Correlation matrix of 40 indicators (*continued*)

	S1	S3	S4	S5	S6	V1	V2	V3	V4	V5	V6	T1	T3	T4	T5	T6	E1	E2	E4	E5	E6
R1	0.21	0.20	0.26	0.22	0.24	0.24	0.27	0.35	0.13	0.23	0.29	0.30	0.28	0.35	0.46	0.46	0.27	0.32	0.26	0.20	0.23
R2	0.27	0.30	0.30	0.14	0.05	0.14	0.31	0.33	0.28	0.30	0.25	0.22	0.28	0.30	0.28	0.36	0.24	0.29	0.16	0.21	0.11
R4	0.33	0.23	0.28	0.40	0.32	0.29	0.32	0.42	0.23	0.26	0.15	0.39	0.37	0.53	0.54	0.50	0.27	0.33	0.32	0.35	0.45
R5	0.43	0.28	0.42	0.41	0.35	0.32	0.32	0.36	0.37	0.38	0.30	0.31	0.37	0.56	0.44	0.30	0.30	0.34	0.44	0.45	0.48
R6	0.18	0.13	0.33	0.25	0.12	0.30	0.34	0.21	0.18	0.28	0.11	0.32	0.27	0.25	0.28	0.23	0.24	0.24	0.22	0.22	0.26
R7	0.20	0.09	0.22	0.19	0.08	0.15	0.12	0.11	0.12	0.15	0.05	0.14	0.18	0.25	0.20	0.17	0.26	0.24	0.17	0.29	0.24
R8	0.31	0.29	0.40	0.25	0.14	0.22	0.35	0.27	0.13	0.36	0.23	0.26	0.26	0.33	0.41	0.31	0.25	0.27	0.29	0.26	0.26
D2	0.25	0.46	0.30	0.40	0.40	0.24	0.34	0.34	0.23	0.28	0.46	0.25	0.32	0.37	0.34	0.43	0.25	0.34	0.36	0.31	0.28
D3	0.29	0.35	0.34	0.26	0.25	0.23	0.25	0.29	0.26	0.41	0.31	0.24	0.32	0.36	0.40	0.40	0.31	0.28	0.25	0.30	0.22
D4	0.30	0.26	0.46	0.31	0.20	0.37	0.42	0.38	0.22	0.45	0.36	0.36	0.30	0.47	0.44	0.31	0.26	0.40	0.43	0.31	0.35
D5	0.19	0.38	0.22	0.30	0.26	0.17	0.30	0.35	0.23	0.39	0.40	0.25	0.21	0.26	0.24	0.31	0.18	0.19	0.20	0.19	0.19
C1	0.35	0.25	0.31	0.28	0.22	0.19	0.36	0.27	0.21	0.33	0.32	0.36	0.22	0.34	0.41	0.36	0.25	0.28	0.25	0.39	0.33
C2	0.27	0.30	0.29	0.28	0.24	0.28	0.36	0.33	0.19	0.33	0.24	0.36	0.28	0.37	0.39	0.33	0.33	0.37	0.26	0.30	0.37
C3	0.33	0.21	0.25	0.13	0.12	0.24	0.29	0.17	0.24	0.39	0.25	0.25	0.36	0.28	0.17	0.18	0.33	0.30	0.23	0.37	0.29
C4	0.34	0.32	0.39	0.30	0.22	0.26	0.41	0.36	0.16	0.38	0.31	0.31	0.25	0.49	0.41	0.41	0.29	0.38	0.24	0.34	0.40
C5	0.29	0.21	0.24	0.29	0.27	0.22	0.37	0.29	0.18	0.28	0.28	0.34	0.22	0.39	0.45	0.40	0.32	0.37	0.33	0.42	0.35
C6	0.30	0.21	0.27	0.27	0.23	0.22	0.35	0.37	0.26	0.43	0.27	0.25	0.32	0.38	0.38	0.37	0.27	0.21	0.24	0.35	0.36
C7	0.19	0.12	0.36	0.25	0.10	0.26	0.26	0.15	0.23	0.38	0.24	0.32	0.25	0.41	0.33	0.27	0.26	0.33	0.20	0.26	0.18
C8	0.19	0.26	0.31	0.32	0.17	0.31	0.26	0.31	0.09	0.25	0.19	0.28	0.24	0.42	0.43	0.33	0.24	0.29	0.18	0.30	0.39

Correlation matrix of 40 indicators (*continued*)

	R1	R2	R4	R5	R6	R7	R8	D2	D3	D4	D5	C1	C2	C3	C4	C5	C6	C7	C8
R1	1.00																		
R2	0.36	1.00																	
R4	0.37	0.27	1.00																
R5	0.32	0.30	0.54	1.00															
R6	0.23	0.26	0.39	0.38	1.00														
R7	0.09	0.28	0.30	0.33	0.52	1.00													
R8	0.27	0.45	0.43	0.41	0.50	0.36	1.00												
D2	0.43	0.31	0.30	0.37	0.25	0.19	0.43	1.00											
D3	0.40	0.47	0.29	0.32	0.33	0.22	0.51	0.50	1.00										
D4	0.40	0.29	0.34	0.43	0.38	0.26	0.52	0.50	0.52	1.00									
D5	0.33	0.32	0.24	0.33	0.37	0.12	0.39	0.54	0.46	0.41	1.00								
C1	0.41	0.35	0.41	0.43	0.36	0.17	0.41	0.32	0.49	0.42	0.30	1.00							
C2	0.43	0.27	0.50	0.41	0.37	0.24	0.50	0.40	0.45	0.43	0.38	0.56	1.00						
C3	0.25	0.32	0.32	0.43	0.27	0.36	0.34	0.30	0.35	0.30	0.21	0.36	0.40	1.00					
C4	0.36	0.38	0.54	0.43	0.23	0.23	0.40	0.31	0.44	0.45	0.27	0.54	0.51	0.39	1.00				
C5	0.37	0.31	0.41	0.42	0.27	0.10	0.37	0.32	0.41	0.40	0.22	0.74	0.44	0.29	0.57	1.00			
C6	0.35	0.34	0.38	0.47	0.37	0.17	0.38	0.32	0.48	0.38	0.45	0.42	0.32	0.31	0.42	0.47	1.00		
C7	0.31	0.32	0.38	0.33	0.41	0.41	0.39	0.23	0.42	0.41	0.24	0.42	0.41	0.44	0.45	0.36	0.42	1.00	
C8	0.35	0.22	0.46	0.38	0.34	0.28	0.41	0.25	0.44	0.40	0.26	0.44	0.49	0.33	0.48	0.43	0.41	0.60	1.00

Note. S1-S6=self insight, V1-V6=shared vision, T1-T6=team collaboration, E1-E6=ethical orientation, R1-R8=relationship building, D2-D5=strategic decision-making capability, C1-C8=communication knowledge management capability.