

CEO Humility and Its Relationship with Middle Manager Behaviors and Performance:
Examining the CEO-Middle Manager Interface

by

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ABSTRACT

In spite of the existence of successful humble CEOs, the current strategic leadership literature has little understanding regarding what humility is and how humble CEOs influence organizational effectiveness by creating a context to motivate managers. After applying the self-concept framework to integrate the humility literature, I proposed four mechanisms through which CEO humility were related to middle manager ambidextrous behaviors and job performance: CEO empowering leadership, empowering organizational climate, top management team integration and heterogeneity. After developing and validating a humility scale in China, I collected survey data from a sample of 63 organizations with 63 CEOs, 327 top management team members and 645 middle managers to test the research model. Except for top management team heterogeneity, the other three CEO-middle manager mediating mechanisms received moderate support. Specifically, I found that humble CEOs were empowering leaders; their empowering leadership behaviors were positively associated with top management team integration and empowering organizational climate, which in turn correlated positively with middle manager ambidexterity and job performance.

DEDICATION

I dedicate this work to:
Lizhen Li & Hanqing Ou, my beloved parents
and
Wai Hung Ng, my dear husband.

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Five years ago when I started my doctoral program, I thought it would be MY own lonely journey in pursuit of intellectual freedom and truth. However, when looking back, I have to humble myself with a thanksgiving heart, acknowledging that I could not have travelled this far without the intellectual stimulation from my mentors, the emotional support from friends, and the tremendous sacrifice from my family. This is a blessed journey walking with God, and it is my opportunity to thank HIS angels below.

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TABLE OF CONTENTS

	Page
LIST OF TABLES.....	viii
LIST OF FIGURES.....	x
CHAPTER	
1 INTRODUCTION.....	1
Statement of Problem	1
Contributions of the Study.....	4
Structure of the Dissertation.....	6
2 LITERATURE REVIEW	7
Overview.....	7
Strategic Leadership Research	7
Humility as the Focal Construct.....	10
CEO Empowering Leadership Behaviors.....	21
Empowering Organizational Climate.....	23
Top Management Team Integration and Heterogeneity.....	25
Managerial Ambidexterity and Job Performance	29
Summary	33
3 THOERETICAL MODEL.....	34
Overview.....	34
CEO Humility and Empowering Leadership Behaviors	39
CEO Empowering Leadership and Empowering Organizational Climate	40

	Page
CEO Empowering Leadership Behaviors and Top Management Team Integration.....	43
CEO Humility and Top Management Team Heterogeneity.....	44
Empowering Organizational Climate and Managerial Ambidexterity	45
Top Management Team Integration and Managerial Ambidexterity	47
Top Management Team Heterogeneity and Managerial Ambidexterity	48
Managerial ambidexterity and Managerial Job Performance.....	50
Contingency Between Empowering Organizational Climate and Managerial Ambidexterity.....	51
4 METHOD OVERVIEW	53
Overview	53
Justification of testing the model in the Chinese context	53
5 HUMILITY SCALE DEVELOPMENT AND VALIDATION STUDY	55
Objectives	55
Humility Scale Development	56
Humility Scale Refinement and Validation	60

	Page
6 HYPOTHESIS TESTING STUDY	74
Sampling Frame	74
Sample Size Requirement for the Main Study.....	75
Data Collection	76
Sample Description.....	79
Data Quality	79
Measures	80
Control Variables.....	86
Analytical Procedures.....	88
Results	89
7 DISCUSSION.....	104
CEO Humility	105
Mechanisms Linking CEO Humility and Middle Managers	111
Implications of Other Findings.....	116
Contributions, Limitations, Managerial Implications.....	119
Conclusion	122
REFERENCES	124
APPENDIX	
A INSTITUTIONAL REVIEW BOARD APPROVAL FORMS FOR HUMILITY SCALE DEVELOPMENT AND VALIDATION STUDY.....	181

B	INSTITUTIONAL REVIEW BOARD APPROVAL FORMS FOR HYPOTHESIS TESTING STUDY	183
C	MAIN STUDY TOP MANAGEMENT TEAM MEMBER TIME 1 SURVEY	184
D	MAIN STUDY TOP MANAGEMENT TEAM MEMBER TIME 2 SURVEY	192
E	MAIN STUDY MIDDLE MANAGER SURVEY	195

LIST OF TABLES

Table		Page
1.	Commonality and Differences of Various TMT Process Constructs	154
2.	Factor Loadings From Principal Axis Factoring with Oblimin Rotation of 14 Humility Items.....	155
3.	Summary of the Humility Measure Refinement Process Based on Self- Report Data	156
4.	Standardized Factor Loadings and Composite Reliability for Each Dimension of the Humility Measure after Refinement Process based on Other-Report Data	157
5.	Results of Confirmatory Factor Analysis for Humility Dimensionality Based on Other-Report Data	158
6.	Results of Confirmatory Factor Analysis for Humility Discriminant Validity with Related Constructs	161
7.	Correlations between Humility and Related Measures.....	163
8.	Correlations among Humility Dimensions using Self Report and Other Report Approaches	164
9.	Data Aggregation Analysis for CEO Humility, CEO Empowering Leadership, TMT Integration and Empowering Organizational Climate	165
10.	Means, Standard Deviations, and Intercorrelations of among Study Variables	166

Table	Page
11. Multilevel Confirmatory Factor Analysis Tests of Discriminant Validity.....	169
12. Multilevel Confirmatory Factor Analysis Tests of Common Method Variance	170
13. HLM Estimates Testing the Interaction Effect of Power Distance Orientation	171
14. Model Fit Indices for the Baseline Research Model and Alternative Models	172
15. Model Fit Indices for Alternative Models in Search of the Best Fitting Model	173

LIST OF FIGURES

Figure		Page
1.	Conceptual Illustration of Humility.....	176
2.	Proposed Research Model	177
3.	Multilevel Mediation Model Results.....	178
4.	The Best Fitting Multilevel Structural Equation Model	179

Chapter 1

INTRODUCTION

Statement of Problem

Strategic leaders, or “people who have overall responsibility for the organization” (Boal & Hooijberg, 2000: 516), can establish organizations in their likeness, rejuvenate mature organizations, or devastate organizations due to their misconduct (Finkelstein, Hambrick, & Cannella, 2009). Scholars have been actively looking at the phenomenon of strategic leadership from executives’ characteristics, including demographics (Cannella, Park, & Lee, 2008; Finkelstein & Hambrick, 1990; Hambrick, Cho, & Chen, 1996; Henderson, Miller, & Hambrick, 2006) and psychological attributes (Chatterjee & Hambrick, 2007; Gupta & Govindarajan, 1984; Hayward & Hambrick, 1997; R. J. House, Spangler, & Woycke, 1991; Miller & Droge, 1986; Wally & Baum, 1994).

Acknowledging the central role of self-concepts in affecting executives’ cognition, motivation and behaviors (Hiller & Hambrick, 2005), scholars are increasingly interested in studying excessively high self-regard, such as narcissism (Chatterjee & Hambrick, 2007), hubris (Hayward & Hambrick, 1997; Hayward, Shepherd, & Griffin, 2006; J. Li & Tang, 2010), and over confidence (Malmendier & Tate, 2005, 2008; Simon & Houghton, 2003). Some scholars address the potential benefits of such high self-regard for organizations, including articulating an inspiring future and attracting certain types of followers (Galvin, Waldman, & Balthazard, 2010; Hiller & Hambrick, 2005; Maccoby, 2001; Rosenthal & Pittinsky, 2006); and some associate such inflated self-views with

negative organizational outcomes such as excessively aggressive acquisitions (Chatterjee & Hambrick, 2007; Hayward & Hambrick, 1997), unwarranted investment projects (Malmendier & Tate, 2005, 2008), and risky product introductions (Simon & Houghton, 2003). Exaggerated self-regard is also suspected to be among the causes of undue persistence with actions (Hayward, Rindova, & Pollock, 2004), company scandals (Bryce, 2004), and the 2008-2009 worldwide financial crisis (Cohan, 2009; J. Collins, 2009; G. Tett, 2009).

While much research debate has been devoted to the bright and dark sides of these attention-grabbing individuals, I propose to study another more mysterious category of strategic leaders. These leaders often manage to escape from public attention but are by no means less controversial, and I name them as the humble ones. As will be revealed in more details later, I define humility as a developmental orientation *that is grounded on a self-concept of subordinating oneself to an ideal, and it is manifested as (1) self-awareness and self-improvement, (2) other appreciation and other enhancement, and (3) low self-focus and self-transcendent pursuit.*

Scholars have some evidence that humble CEOs transform organizations from good to great ones (J. C. Collins, 2001), and some management writers suggest the strategic importance of CEO humility in dynamic environments (Ancona, Malone, Orlikowski, & Senge, 2007; Drucker, 1992; Ireland & Hitt, 1999; J. A. Morris, Brotheridge, & Urbanski, 2005; Vera & Rodriguez-Lopez, 2004; Weick, 2001). However, there is a lack of consensus regarding what humility represents, and there is limited empirical evidence regarding how it

affects CEOs' behaviors, strategic decisions or performance. The only existing empirical study on humble CEOs is in Collins' book (2001) *Good to Great*, which demonstrated that some great organizations had humble leaders, but it didn't empirically test the organizational processes through which humble leaders make an impact. Therefore, my dissertation will focus on humility at the CEO level, and examine the mediating processes regarding how humble CEOs influence lower level managers' behaviors and performance.

Particularly, I examine managers who "operate at the intermediate level of the corporate hierarchy, operating two or three levels below the CEO"(Dutton & Ashford, 1993: 398). These managers are the "linking pins" between hierarchical levels (Katz & Kahn, 1978) and "knowledge engineers" synthesizing hands-on and strategic information (Nonaka, 1994). They also play an important role in both strategy implementation and formation (Bower, 1986; Mintzberg & Waters, 1985). In spite of their strategic importance, we know little about how organizations, particularly CEOs, motivate these individuals to engage in activities beneficial to organizations' adaptation and success. Scholars have mainly focused on CEOs' impact on strategic choices or organizational performance but disregarded their roles as leaders and their impact on employee productivity (Finkelstein et al., 2009), leaving unexplained a black box of "organizational processes that determine a firm's financial performance and long-term survival" (Yukl, 2008: 709).

To open this black box, I integrate the literatures on leadership behaviors (Bass, 1985; Yukl, 2002), top management team (TMT) heterogeneity (Carpenter,

Geletkanycz, & Sanders, 2004) and dynamics (Ling, Simsek, Lubatkin, & Veiga, 2008), and organizational climate and culture (Kotter & Heskett, 1992; Schein, 2010). Specifically, I examine four mechanisms through which CEOs influence lower level managers' activities and performance, that is, how humble CEOs influence managers through: 1) engaging in empowering leadership behaviors, 2) facilitating an empowering organizational climate, and 3) creating an integrated and 4) heterogeneous top management team.

Contributions of the Study

This study contributes to the strategic leadership literature in two ways. First, it renders a more complete picture of the CEO population and strengthens our ability to provide constructive advices to practitioners. Humble CEOs do exist, and some of them are quite successful (Ancona et al., 2007; J. C. Collins, 2001), and a dearth of studies on them creates a void in our comprehensive understanding of the CEO population. In addition, our recommendation to practitioners based on an incomplete profile of CEOs is insufficient. For example, scholars studying exaggerated self-regard have identified and cautioned its negative consequences, such as dysfunctional persistence, escalation of commitment, or imprudent risk taking (Hayward et al., 2004; Hiller & Hambrick, 2005). While these warnings are valuable to avoid organizational failure, they fall short in suggesting what types of CEOs can bring about sustained organizational excellence. By studying CEO humility, a potentially important yet underexplored characteristic of strategic leaders, I may be able to shed some light on this issue.

Particularly, scholars studying narcissism may regard humility as the opposite of narcissism, thinking that there is no need to study humility because it will predict exactly the opposite of what narcissism predicts. As will be revealed in the Literature Review Section (Chapter 2), humility may be negatively related with narcissism but has research values as a unique predictor (J. A. Morris et al., 2005; Owens, 2009; Tangney, 2002). The strategic significance of humility is scattered in the literature (J. C. Collins, 2001; Drucker, 1992; Vera & Rodriguez-Lopez, 2004; Weick & Sutcliffe, 2001), and my dissertation will apply a self-concept based framework to integrate the literature on humility.

Second, this study attempts to unveil the organizational processes through which humble CEOs influence middle managers. While the roles of middle managers in strategy implementation, organizational learning and corporate entrepreneurship have been broadly examined (for a review, Wooldridge, Schmid, & Floyd, 2008), little is known about the organizational processes through which strategic leaders motivate these managers to achieve organizational goals (Sully de Luque, Washburn, Waldman, & House, 2008). Particularly, there are separate studies on CEOs, top management teams, and middle managers, but we still have limited knowledge regarding how leadership processes from different hierarchical layers synchronize to achieve organizational effectiveness (Yukl, 2009). My dissertation thus intends to fulfill this void by studying the mediation process between CEO humility and manager behaviors and job performance.

Structure of the Dissertation

To achieve the objectives of studying CEO humility and its relationships with middle manager behaviors and performance, the dissertation is organized into the following sections. In Chapter 2, I review relevant literatures, including strategic leadership as a general domain of my dissertation, CEO humility as the focal construct, the mediation processes linking CEOs and middle managers, and managerial ambidextrous behaviors and job performance as outcomes. In Chapter 3, I outline the theoretical model and present the hypotheses. In Chapter 4, I provide an overview of the methods used to examine CEO humility. Next, Chapter 5 details the humility scale development and validation study, and Chapter 6 provides the method and results of the main study for hypothesis testing. Finally, Chapter 7 is the Discussion Section on the theoretical and managerial implications of the dissertation studies, as well as limitations and future research directions.

Chapter 2

LITERATURE REVIEW

Overview

In the following sections, I articulate the research motivation and contributions by highlighting the empirical and theoretical gaps in the literature, and explain the reasons for choosing those constructs for the subsequent theoretical model. This literature review chapter is organized as follows.

I first review the strategic leadership literature to explain the importance of studying psychological attributes of strategic leaders and the mediating processes between executive attributes and organizational outcomes. Then, I review the humility literature to dispel the misconceptions of humility and conceptualize it as a positive orientation that is beneficial to organizational functioning. Next, I detail the four mediating mechanisms to be examined in the theoretical model: CEO empowering leadership behaviors, empowering organizational climate, top management team integration and its heterogeneity. Finally, I explain the meaning and importance of managerial ambidexterity and job performance as outcomes.

Strategic Leadership Research

Studies on strategic leadership have proliferated after Hambrick and Mason's (1984)'s seminal work on the upper echelon theory. Valuable insights on strategic leaders' impact on strategic choices and organizational performance have been cumulated through studies on executives' demographics (Finkelstein & Hambrick, 1990), psychological attributes (Chatterjee & Hambrick, 2007; Hayward & Hambrick, 1997), leadership behaviors (Agle, Nagarajan, Sonnenfeld,

& Srinivasan, 2006; Waldman, Ramirez, House, & Puranam, 2001), and social networks (Westphal, 1999). Scholars have suggested two major future research directions: 1) directly examine executives' psychological attributes and 2) study organizational processes that channel executive influences (Cannella & Monroe, 1997; Finkelstein et al., 2009; Yukl, 2008). In the following, I will explain these two research directions.

First, although the upper echelon perspective initially proposed to use demographics as proxies to capture executives' cognition and values (Hambrick & Mason, 1984), it is well acknowledged that using proxies instead of measuring the underlying psychological characteristics creates an unexplored "black box" and hinders validity (Lawrence, 1997; Priem, Lyon, & Dess, 1999). Scholars thus encourage direct examination of executives' psychological attributes (Cannella & Monroe, 1997; Finkelstein et al., 2009).

More recent studies have directly examined executives' psychological characteristics such as the big five personality factors (R. S. Peterson, Smith, Martorana, & Owens, 2003), values (Fu, Tsui, Liu, & Li, 2009; Sully de Luque et al., 2008), and self-concept based characteristics (Chatterjee & Hambrick, 2007; Hayward & Hambrick, 1997; Hiller & Hambrick, 2005; Malmendier & Tate, 2005, 2008). Particularly, scholars studying the self-concept based characteristics mainly examined deficit traits and undesirable outcomes. My dissertation intends to add to this stream of research by following the advice of positive organizational scholarship and focusing on one positive self-concept based characteristic, -- humility.

Second, we still have limited understanding of the organizational processes through which CEOs impact organizational outcomes. While the strategic leadership research mainly focuses on the direct relationship between executive characteristics and strategic choices or organizational performance, CEOs are more than just strategic decision makers. Besides coordinating the formulation of competitive strategies through strategic decision making and resource allocation (Chandler, 1962; Porter, 1980; Quinn, 1980), they are also context creators (Bower, 1986; Burgelman, 1983). In other words, they create a context to influence employee motivations through their leadership behaviors (Agle et al., 2006; Waldman et al., 2001), symbolic actions (Pfeffer, 1981), and development or modification of organizational policies (Boal & Hooijberg, 2000; Yukl, 2008). After all, CEOs are leaders of leaders (the top management team, the middle managers or operational supervisors), and the understanding of their context creation potential will provide a more complete understanding of CEOs' roles and advance our knowledge of organizational processes.

One way to study their context creation role is through studying CEO's leadership behaviors in influencing top management teams and organizational climate. Particularly, top management team research has just started to explore the impact of CEOs on the top management teams (R. S. Peterson et al., 2003; Simsek, Veiga, Lubatkin, & Dino, 2005), whereas the organizational climate and culture research have long acknowledged CEOs' role in shaping the construction of shared values and perceptions, which impact organizational members' attitudes and behaviors (Ostroff, Kinicki, & Tamkins, 2003; Schein, 2010; Tsui, Zhang,

Wang, Xin, & Wu, 2006). By incorporating leadership theories, which originates from studies on middle to lower level managers and have extended to the strategic level (Agle et al., 2006; Crossan, Vera, & Nanjad, 2008; Elenkov, Judge, & Wright, 2005; Waldman et al., 2001), my dissertation advance our understanding of CEOs as context creators and explore how CEOs influence middle managers through leadership behaviors, which in turn relate to top management team dynamics and organizational climate.

Humility as the Focal Construct

This section begins by describing various misconceptions of humility, and then discusses how humility is different from several conceptually related constructs. I conclude by enumerating the conceptual potential of humility as a CEO psychological attribute and justifying the importance of advancing our understanding of CEO humility.

Various perspectives on humility. The concept of humility exists extensively in philosophy, religion, and literature, but we have little consensus about it. As Grenberg stated,

“We might pity the self-abasers, despise the deceivers, and admire the saints; but in no case are we, the common persons, tempted, willingly and in full knowledge thereof, to emulate the humble states thus portrayed.” (Grenberg, 2005: 5)

There are three common attitudes towards humility that collectively serve to drive humility away from the level of attention it deserves. The first associates humility with lowliness, unworthiness, meekness, or lacking self-esteem (D. C.

Klein, 1992; P. A. Knight & Nadel, 1986; Langston & Cantor, 1989; Weiss & Knight, 1980). In other words, humble people are “self-abasers” who reject their own worth and admit to being inferior to others; therefore, based on such a viewpoint, humility is neither a virtue nor strength worthy of studying.

The second attitude towards humility regards it as a socially desirable disguise, a cunning way of achieving one’s purpose by pretending to be inferior. That is, people who claim to be humble are only “deceivers”, and their deceptively humble behaviors are impression management tactics to conform with social norms (Gergen, 1968; Goffman, 1959) or gain others’ liking (D. J. Schneider, 1969; Stires & Jones, 1969). Genuine humility is thus too difficult to discern and study for this group of scholars. The final attitude towards humility treats it as an admirable trait that exists only in saints and has nothing to do with common people (Bonomo, 2004; Casey, 2001), again, making it impractical or unworthy of study.

These three attitudes are stunningly different from the rich theological and philosophical discussions about the construct of humility, as well as people’s perceptions about it. The Buddhist, Taoism, and Christian teachings all view humility as an important virtue that everyone should practice (J. A. Morris et al., 2005; C. Peterson & Seligman, 2004). Philosopher Immanuel Kant contended that humility was fundamental to most other virtues; similarly, Newman concluded that humility was a necessary condition of self-realization (J. Newman, 1982). Exline and Geyer’s (2004) pioneering empirical study on humility found that people generally viewed humility favorably.

Scholars studying positive psychology or positive organizational behavior have endeavored to rehabilitate humility as a rich, multifaceted construct (Lee & Ashton, 2004; J. A. Morris et al., 2005; C. Peterson & Seligman, 2004; Tangney, 2002). For example, Lee and colleagues (Ashton & Lee, 2005; Lee, Ashton, Morrison, Cordery, & Dunlop, 2008) extended the big-five personality framework to include honesty-humility as the sixth dimension of personality, and they suggested that honesty-humility was a behavioral pattern characterized by avoiding the manipulation of others for personal gain, feeling little temptation to break rules, being uninterested in possessing lavish wealth and luxuries, and feeling no special entitlement to elevated social status or privilege. Tangney (2002) identified the key elements of humility as an accurate self-assessment of abilities and achievements, self-awareness of one's mistakes and limitations, openness to new ideas, information and advice, keeping one's abilities and accomplishments in perspective, low self-focus, and an appreciation of the value of all other things. Similarly, J. A. Morris and colleagues (J. A. Morris et al., 2005) defined humility as "a personal orientation founded on a willingness to see the self accurately and a propensity to put oneself in perspective", and humility included self-awareness, openness, and transcendence. Most recently, Owens (2009) defined humility as a developmental orientation, which he found to be associated with a willingness to view oneself accurately, teachability, an appreciation of others' strengths and contributions, and a low self-focus.

While these definitions of humility begin to converge, a more theory-driven integration of the humility facets can be gained by linking humility to a

unique self-concept. According to Baumeister (1998), a self-concept tries to answer the question of “who am I”, and an individual makes sense of who one is through three prototypical patterns of experiences: (1) the experience of *reflexive consciousness* aiming to understand the existence of self in relation to the world, (2) the experience of an *interpersonal being* attempting to appreciate who one is in relation to other people, and (3) the experience of *executive function* in which the self is an active agent and decision-maker, that is, one experiences who one is by what one does.

Using Baumeister’s (1998) framework, I suggest that humility is grounded in the individual’s belief that there is something in the world (not somebody) greater than the self (as well as others) (J. A. Morris et al., 2005; Tangney, 2002). In many religions, this something is the omnipotent God (Worthington, 2007). However, being humble does not necessarily mean being religious. In philosophical discussions on virtues, humility comes from submitting oneself to transcendent moral principles (Grenberg, 2005). People can also become humble simply because of how they connect to a greater reality, contemplate natural wonders, or put themselves in a broader perspective (J. A. Morris et al., 2005; C. Peterson & Seligman, 2004). I broadly categorize these transcendent, greater-than-oneself beings and perspectives as ideals.

As suggested earlier, individuals experience the existence of self by reflecting on who they are in relation to the world, in relation to other people and by what they do. Humble people experience the existence of self uniquely in these three aspects due to their willingness to subordinate themselves to an ideal. In the

following, I explain how these unique experiences constitute the multiple facets of humility.

Self-awareness and self-improvement. Humble people subordinate themselves to an ideal and accept that they are imperfect; their motive of reflexive consciousness is to obtain an accurate self-knowledge and to seek constant improvement (Owens, 2009; C. Peterson & Seligman, 2004; Tangney, 2002).

It is worth noting that accepting oneself as imperfect does not imply self-abasement or suggest self-deprecation (Templeton, 1997). Humble people are aware of their talents and abilities. Knowing their own limitations helps them to put their strengths in perspective (Emmons, 2003). This self-acceptance of imperfection thus keeps them from both arrogance and self-contempt. Being aware of one's inclination to oversee weaknesses (Grenberg, 2005), the humble ones are not afraid of disclosing themselves and admitting their mistakes, and they actively seek feedback about themselves (J. A. Morris et al., 2005; Tangney, 2002).

Humble people also keep an open mind (Templeton, 1997) and are eager to improve. Knowing their limitations, they endeavor to obtain comprehensive information or even contradictory information (Tangney, 2002) to avoid biased conclusions. Knowing that they fall short from an ideal (J. Newman, 1982), they have a ceaseless desire to learn (J. A. Morris et al., 2005; Owens, 2009).

Other appreciation and other enhancement. By subordinating both themselves and others to an ideal, humble people see others similarly as themselves, that is, others also have strengths and weaknesses. As Newman

pointed out, “[humility] requires a severe appraisal of oneself combined with a reasonably generous appraisal of others” (1982: 283). Not at the expense of devaluation of themselves, humble people recognize others’ positive worth and appreciate their strengths and contributions (J. A. Morris et al., 2005). Such appreciation is grounded on the understanding of their own strengths and thus does not generate a need for entitlement or domination over others (C. Peterson & Seligman, 2004).

Different from narcissistic people, humble people see others’ weaknesses with empathy and compassion (Comte-Sponville, 2001). Seeing others’ mistakes or limitations, humble people do not think that they are better than others (Templeton, 1997), and they have a genuine interest to enhance others.

Self-transcendent pursuit and low self-focus. Humble people have a self-transcendent pursuit in life as part of their executive function. That is, by linking to an ideal, humble people no longer put themselves at the center of their world (Murray, 2007; Tangney, 2002). Their pursuit in life is less about themselves, but rather “the larger community” (Tangney, 2002), the greater whole (Crocker, Garcia, & Nuer, 2008), moral principles (Grenberg, 2005), or the ultimate truth in universe (Isaacson, 2007). Their passion towards this pursuit is so strong that they become “forgetting of the self” (Tangney, 2002). Such self-transcendence protects them from excessive egos, so that they are free from the burdens of trying to create attention on them (Tangney, 2002). They are also less attracted by materialism or excessive luxury (C. Peterson & Seligman, 2004).

A developmental orientation. Concurring with Owens (2009), I regard humility as a developmental orientation. In other words, humility possesses trait and state duality: it is not so fluid as states that change frequently; yet it is not so stable as traits that can be generalized across situations and time (Youssef & Luthans, 2007). Scholars who regard humility as a character strength or virtue also share a similar idea of the malleability of humility (C. Peterson & Seligman, 2004). An orientation or character strength is relatively stable for a period of time, but it can also be changed gradually with the individual's experiences or by deliberate training. For example, a person can be initially arrogant but gradually discover his limitations after some failures in life, and thus become humble. To this extent, humility can be cultivated slowly. In fact, humility training is regarded as a psychotherapeutic treatment for aggression / anger control (Means, Wilson, Sturm, Biron, & Bach, 1990); whereas Peterson and Seligman suggested that religious practices such as Zen Buddhism, Christianity, or Taoism could develop humility by "encouraging self-transcendence" (2004: 473).

In summary, I define humility as *a developmental orientation that is grounded on a self-concept of subordinating oneself to an ideal, and it is manifested as (1) self-awareness and self-improvement, (2) other appreciation and other enhancement, and (3) self-transcendent pursuit and low self-focus.* As shown in Figure 1, humble people are more inclined to see their weakness and therefore are self-aware and open to learning, and they are also more likely to see others' strengths and thus appreciate and intend to enhance others. The center of both orientations is their self-transcendent pursuit and low self-focus.

Insert Figure 1 about here

Differentiation from conceptually related constructs. Even among scholars who view humility as a virtue or strength, disagreements exist regarding the definition of humility. Some scholars believe that humility is the opposite of narcissism (Hiller & Hambrick, 2005), whereas others mainly emphasize the commonality of humility and modesty (Ashton & Lee, 2005; C. Peterson & Seligman, 2004). Tangney (2002) and Owens (2009) have endeavored to differentiate humility from narcissism, modesty as well as other constructs such as openness to experience and learning goal orientation. I include narcissism, core self-evaluation, and modesty into the discussion because management scholars are most likely to confuse them with humility (c.f., Hiller & Hambrick, 2005; Owens, 2009).

Narcissism. Narcissism is a personality trait encompassing grandiosity, arrogance, self-absorption, entitlement, fragile self-esteem, and hostility (Rosenthal & Pittinsky, 2006). To some extent, narcissism represents a self-concept that individuals put themselves as the center of the world, and thus it predominantly revolve around self-focus and drawing attention. It is apparent that humility involves a facet about low self-focus, which should be negatively related with narcissism; however, humility, as full manifestation of a self-concept of subordinating oneself to an ideal, includes more than just a “self-focus” facet. It covers other facets such as self-improvement, other appreciation, self-transcendent pursuit, and transcendent self-concept, to which narcissism cannot

find exact opposite components. Therefore, narcissism is conceptually different from humility, and it is expected to have no relationship or weakly negative relationship with humility.

Core self-evaluation. Core self-evaluation (CSE) refers to a positive self-concept that is indicated by self-esteem (individual's global evaluation of self-worth), generalized self-efficacy (individual's belief in one's capability to successfully execute and perform tasks), internal locus of control (individual's belief that one can control the occurrence of life events), and emotional stability (absence of anxiety; Judge, Locke, & Durham, 1997). Some scholars (Finkelstein et al., 2009; Hiller & Hambrick, 2005) have suggested creating a meta-construct of "positive self-regard" that includes CSE, narcissism, hubris, and overconfidence, indicating that these constructs are closely related. I argue that these scholars may have overlooked the differences between a *positive* self-concept such as CSE and *exaggerated* self-concepts like, narcissism, hubris and overconfidence.

While narcissism, hubris and overconfidence may be positively related with CSE, humility may also be positively related with CSE. True humility comes from recognition of one's capability and is accompanied with "exaltation and self-esteem" (J. Newman, 1982); therefore, humility may be associated with self-esteem and self-efficacy positively. Further, humble people may have an internal locus of control as they tend to shoulder the responsibilities of mistakes themselves (J. C. Collins, 2001). By acknowledging and accepting their weaknesses, humble people are free from anxiety and jealousy when things go

against them or they see capable others, they thus maintain high emotional stability (J. Newman, 1982). Indeed, using three undergraduate samples of 524 individuals in total, Owens (2009) found that CSE was positively related with humility.

Modesty. Modesty is “a moderate, nonboastful self-presentation” (Tice, Butler, Muraven, & Stillwell, 1995). Although some scholars endeavor to expand this construct to include properties similar to humility (S. X. Chen, Bond, Chan, Tang, & Buchtel, 2009; Sedikides, Gregg, & Hart, 2007), a more commonly held understanding of modesty regards it as an individual’s constrained social portrayal of one’s own strengths and achievements (Baumeister & Jones, 1978; Hareli & Weiner, 2000). Therefore, modesty is more about individuals’ self-presentation (Leary, 1996) and less about their fundamental beliefs. Further, modesty is narrower than humility, because the latter not only considers one’s own strengths and achievements, but also one’s weaknesses and others’ strengths (Tangney, 2002).

The potential benefits of humility for strategic leaders. A few empirical studies have started to examine the positive outcomes of humility. Using samples of students or lower level employees, these studies have found that humility was positively related with fair decisions (Hilbig & Zettler, 2009), cooperation and prosocial behaviors (Exline & Geyer, 2004), study performance as well as performance improvement (Owens, 2009). Then, is humility also a virtue for leaders, especially CEOs? Are humble CEOs suitable for today’s largely uncertain environment?

While scholars use various labels to describe highly uncertain environment, such as turbulence, dynamism, hostility, ambiguity, complexity, hyper-competition or high velocity, most of them agree that many organizations are or will be operating in such environments (Crossan et al., 2008; Ireland & Hitt, 1999). Globalization has fundamentally changed organizations' competitive landscape: their competition comes not just from the local, but also global players, destructive technological changes are more frequent, industry boundaries are increasingly ambiguous, and economic, social and political trends are notoriously unpredictable (Bettis & Hitt, 1995).

What types of leaders are most able to lead organizations in such environments? Interestingly, some of the characteristics of effective strategic leaders proposed by scholars seem to be surprisingly consistent with the properties of humility. Drucker (1992) contended that effective leaders for the future "are painfully aware that they are not in control of the universe", and they are not afraid of "strengths in associates and subordinates". Weick concurred that leaders needed to "drop pretense, drop omniscience, drop expert authority, drop a macho posture, and drop monologues", and they needed to be able to say "I don't know" (2001: 99). Ireland and Hitt similarly suggested that leaders needed to be confident but without hubris: "Insightful top managers recognize that it is impossible for them to have all the answers, are willing to learn along with others, and understand that the uncertainty created by the global economy affects people at the top as well as those lower down in the organization." (1999: 45) Ancona and colleagues also emphasized the importance of "incomplete" leaders in chaotic

environments, suggesting that “only when leaders come to see themselves as incomplete – as having both strengths and weaknesses – will they be able to make up for their missing skills by relying on others”(2007: 92).

These insights point to an exciting yet underexplored venue to study effective strategic leaders facing high environmental uncertainty: the humble ones. To reveal how humble CEOs enable organizations to prepare for uncertain environments, I will introduce four mediating mechanisms, namely CEO empowering leadership, empowering organizational climate, TMT integration and heterogeneity.

CEO Empowering Leadership Behaviors

Overview of empowering leadership. Leading in a highly uncertain environment requires top managers to realize their own limitations and rely on others' expertise (Ancona et al., 2007). Humble leaders give others the freedom and opportunity to be flexible and make choices based on their own judgments, and these leaders also demand their discipline and responsibility to deliver performance and efficiency. I contend that leadership behaviors that are most in line with the above descriptions are essentially empowering leadership behaviors, which are characterized by sharing power with the subordinates and raising their intrinsic motivation to perform (Conger & Kanungo, 1988; Srivastava, Bartol, & Locke, 2006).

Emerging from the literature on self-managing teams (Druskat & Wheeler, 2003; Manz & Sims, 1987), empowering leadership behaviors generally include the following dimensions: enhancing the meaningfulness of work, fostering

participation in decision making, expressing confidence in high performance, and providing autonomy from bureaucratic constraints (Ahearne, Mathieu, & Rapp, 2005). *Enhancing the meaningfulness of work* includes behaviors helping the subordinates understand the importance of their work and how their work and their objectives related to those of the organization. *Fostering participation in decision making* includes soliciting opinions from and making decisions with the subordinates. *Expressing confidence in high performance* includes believing subordinates' ability to handle demanding tasks, perform and improve. *Providing autonomy from bureaucratic constraints* includes supporting subordinates to do their jobs in their way and keeping rules and regulations simple.

Differentiation of empowering leadership from other leadership

behaviors. The essence of empowering leadership is to “lead others to lead themselves” (Manz & Sims, 1987: 119) by “giving people the confidence, competence, freedom and resources to act on their own judgments” (Ciulla, 2004: 59). Such characteristics justify why I choose empowering leadership over other relevant leadership behaviors such as transformational leadership (Bass & Avolio, 1994) and participative leadership (Koopman & Wierdsma, 1998).

Transformational leadership. Transformational leadership is characterized by idealized influence, inspirational motivation, intellectual stimulation and individual consideration. Transformational leadership shares many conceptual similarities with empowering leadership, and is indeed found to be positively related with organizations' exploratory activities (Jansen, Vera, & Crossan, 2009). However, empowering leadership has a conceptually closer

linkage with humility. Specifically, empowering leadership focuses on the followers and emphasizes sharing power with subordinates, arousing intrinsic motivation by increasing employees' self-determination and self-efficacy. While transformational leadership also taps into this aspect by eliciting socialized charisma (Brown & Trevino, 2006), it lays additional emphasis on the leader themselves, which may result in personalized charisma and cause follower dependence (Kark, Shamir, & Chen, 2003).

Participative leadership. Participative leadership captures the part of empowering leadership by emphasizing participative decision making and sharing authority with subordinates (Carson, Tesluk, & Marrone, 2007; Koopman & Wierdsma, 1998). However, it does not include aspects of enhancing the meaningfulness of work, expressing confidence in high performance, and providing support and autonomy from bureaucratic constraints. Scholars have noticed that delegation without support and motivation may result in disappointment and low efficiency (Argyris, 1998). I choose empowering leadership over participative leadership because the former includes the elements of participative leadership as well as equipping subordinates with resources and competency.

Empowering Organizational Climate

Through empowerment, employee become sensors and actors for organizations facing a highly uncertain environment (Weick & Sutcliffe, 2001). Empowerment is an intrinsic motivation when employees see the value of their work (meaning), believe in their capability to perform well (competence), feeling

that they have autonomy to make choices (self-determination), and think that they can influence the work (impact) (Ashforth, 1989; Bandura, 1989; Conger & Kanungo, 1988; Gist, 1987; Spreitzer, 1995; Thomas & Velthouse, 1990). Empowered employees are found to have high job satisfaction and commitment and positive work performance (B. J. Avolio, W. Zhu, W. Koh, & P. Bhatia, 2004; Liden, Wayne, & Sparrowe, 2000; Spreitzer, 1995). One of the most important antecedents of empowerment is the organizational structures, policies and practices. When these contextual factors create a shared perception of empowerment among employees, there is an empowering organizational climate in the organization (Seibert, Silver, & Randolph, 2004; Spreitzer, 1996).

Climate is the “perception of formal and informal organizational policies, practices, and procedures” (Ostroff et al., 2003: 571). When climate is perceived at the individual level, it refers to a psychological climate; and when the psychological climate is shared among employees in the organizational, it is called an organizational climate (Hellriegel & Slocum Jr, 1974; James & Jones, 1974). In my dissertation, I focus on empowering organizational climate because the impact of humble CEOs is more likely to explain the shared perceptions instead of individual perceptual differences among employees. Specifically, humble CEOs, as context creators, influence the empowering organizational climate through their development or modification of organizational structure, policies and practices (Finkelstein et al., 2009; Yukl, 2008), and humble CEOs can also influence employees’ interpretation and perceptions of those established contextual factors through their symbolic actions (Pfeffer, 1981).

Scholars have identified various social-structural practices that empower employees (Bowen & Lawler, 1992; Lawler, Benson, & Mohrman, 2001; Spreitzer, 1996), among which Seibert et al. (2004) and Blanchard, Carlos and Randolph (1999) measured information sharing, autonomy through boundaries, and team accountability. *Information sharing* refers to “providing potentially sensitive information on costs, productivity, quality and financial performance to employees”; *autonomy through boundaries* describes “organizational structures and practices that encourage autonomous action, including the development of a clear vision, clarity regarding goals, work procedures, and areas of responsibility”; and *team accountability* is “the perception that teams are the locus of decision-making authority and performance accountability in organizations” (Seibert et al., 2004).

Top Management Team Integration and Heterogeneity

As organizations increasingly face external uncertainty and internal complexity, strategy formation and implementation is less of the business of single CEOs but more of the collective effort of CEOs and the top management teams (TMTs; Finkelstein et al., 2009; Pearce & Conger, 2003). TMTs, also commonly referred as dominant coalitions (Cyert & March, 1963) or top management groups (Hambrick, 1994), are “relatively small constellation of executives at the top” . They have impacts on strategic choices (e.g., Bantel & Jackson, 1989; Hambrick, Cho, & Chen, 1996; Sanders & Carpenter, 1998; Smith, Collins, & Clark, 2005; Tihanyi, Ellstrand, Daily, & Dalton, 2000;

Wiersema & Bantel, 1992) and firm performance (e.g, Cannella, Park, & Lee, 2008; Haleblian & Finkelstein, 1993b; Smith et al., 1994).

Studies usually examine the following three central elements of TMTs: composition, structure, and process (Finkelstein et al., 2009). Composition refers to the TMTs' central tendency or heterogeneity in values, beliefs, cognitions and experiences captured by demographic variables; structure refers to team members' role interdependence and size; processes refer to interactions among the team members.

Substantial knowledge has cumulated on how these three elements impact organizations (For recent reviews, Finkelstein et al., 2009), yet far less is known regarding the antecedents of these elements. In my dissertation, I examine how humble CEOs influence the TMTs. I focus on TMT integration and heterogeneity because they are most likely to be influenced by CEO humility and have impact on middle manager behaviors and performance. In the following, I will first review the literature on top management team process and then heterogeneity.

Top management team process and TMT integration. Studies on TMT processes include behavioral integration(Carpenter et al., 2004), social integration (Hambrick, 1994; Simsek et al., 2005), and strategic consensus (Smith et al., 1994). *Behavioral integration* refers to the degree to which TMTs engage in mutual and collective interaction, and it includes three elements: (1) quantity and quality of information exchange, (2) collaborative behavior, and (3) joint decision making (Hambrick, 1994; Simsek et al., 2005). *Social integration* is the degree to which an individual is psychologically linked to others in a group, which includes

attraction to the group, satisfaction with other members of the group, and social interaction among the group members (O'Reilly, Caldwell, & Barnett, 1989; Smith et al., 1994). Strategic consensus captures the “agreement of all parties to a group decision” (Dess, 1987: 313).

Insert Table 1 about here

As shown in Table 1, while these three constructs were developed independently, they overlapped with one another. I thus propose to combine the common elements of these three constructs and examine an expanded top management team integration construct. It includes four dimensions: collaborative behavior, information sharing, joint decision making, and shared vision. While the first three dimensions are inherent in the behavioral integration construct, I argue that it is necessary to include shared vision as part of TMT integration. A shared vision refers to “a common mental model of the future state of the team or its tasks that provides the basis for action within the team” (Pearce & Ensley, 2004: 260-261). A shared vision not only cognitively provide a commonly agreed-upon direction that all team members aim towards, but also offers a future image that get team members excited and motivated. Because TMT members have their own unique responsibilities and need to take independent actions, a shared vision guarantees that these actions are in unity and consistent with the common purpose. The sensemaking literature suggests that individuals can make *independent* decisions *socially* when they speak to the “phantom others” (Weick, 1995). That is, with a shared vision, the individual team members can anticipate

what other team members will respond to their decisions and ensure that other team members will not feel their decisions out of the loop. In addition, when divergent ideas and perspectives arise, a shared vision orients team members to focus on the tasks and avoid destructive relational conflicts (Tsai & Ghoshal, 1998). In this way, a shared vision is a necessary aspect of TMT integration.

Top management team heterogeneity. Integrated TMTs encourage information sharing and facilitate strategy implementation, yet they may suffer from lack of creativity if they all think similarly. TMT heterogeneity, as a proxy of cognitive heterogeneity, thus, is a critical complement to TMT integration (Finkelstein et al., 2009).

TMT heterogeneity typically captures the diversity of TMT members' demographic characteristics such as age, tenure (team, firm, industry or work tenure), functional background, education (education level or major), and international experience (Carpenter et al., 2004). Heterogeneity is often regarded as a double-edged sword. On the one hand, it is a proxy of cognitive complexity, perspective breadth, and problem-solving capacity (Hambrick et al., 1996; Hambrick & Mason, 1984). Heterogeneity thus represents cognitive resources beneficial to organizations' innovation (Elenkov et al., 2005; West & Anderson, 1996), strategic change (Wiersema & Bantel, 1992), and global strategic posture (Carpenter & Fredrickson, 2001). On the other hand, scholars are also aware of the negative impact of heterogeneity such as causing relational conflict (D. Knight et al., 1999) and behavioral disintegration (J. T. Li & Hambrick, 2005). TMT heterogeneity predicts slower strategic responses and may hamper strategy

implementation (Hambrick et al., 1996). These conflicting functions of TMT heterogeneity seem to be a mixed blessing to firm performance, but scholars found that it had stronger positive effects in uncertain environments (Finkelstein et al., 2009).

Studies on TMT heterogeneity mainly focused on its impact on strategic decisions and firm performance, and less is known about its antecedents (c.f., Boone, Van Olffen, Van Witteloostuijn, & De Brabander, 2004). TMT Scholars have proposed several promising venues such as environmental factors (environmental complexity, instability, or munificence) and organizational context (strategy, past performance, or CEOs; Carpenter et al., 2004; Finkelstein et al., 2009). In my dissertation, I propose that CEO humility is an antecedent of TMT heterogeneity.

Managerial Ambidexterity and Job Performance

In this section, I review the middle manager outcome constructs in the dissertation: managerial ambidexterity and job performance.

Managerial ambidexterity. The notion of managerial ambidexterity is derived from research on organizational ambidexterity, a construct specifying an organization's capability to simultaneously explore new opportunities and exploit existing certainties (March, 1991). Organizational ambidexterity is regarded as a competitive advantage towards sustained performance in an uncertain environment (O'Reilly & Tushman, 2008; Raisch, Birkinshaw, Probst, & Tushman, 2009). Exploration is associated with activities such as “search, variation, risk taking, experimentation, play, flexibility, discovery, innovation”,

and exploitation includes “refinement, choice, production, efficiency, selection, implementation, execution”(March, 1991: 71). While scholars usually examine ambidexterity at the organization level (e.g., He & Wong, 2004; Lubatkin, Simsek, Ling, & Veiga, 2006), others have acknowledged the strategic importance of managerial ambidexterity (Gibson & Birkinshaw, 2004; Tushman & O'Reilly, 1996). Unlike lower level employees who may be assigned to engage in either exploratory or exploitative activities separately, middle managers have to engage in both activities because they are ultimately responsible to integrate the potentially conflicting inputs of exploitation and exploration from employees (Floyd & Lane, 2000; Tushman & O'Reilly, 1996).

Managerial ambidexterity refers to “a manager’s behavioral orientation toward combining exploration and exploitation related activities within a certain period of time”(Mom, van den Bosch, & Volberda, 2009: 812). Managers’ exploratory behaviors include those that are not described by existing company policies, have unclear outcomes or cost implications, or require new knowledge and skills, for example, evaluating diverse options in products/services, processes or markets. Their exploitative behaviors are those relying solely on past experience and knowledge and specified by existing policies, for example, making budgets for regular routine activities.

Although classic management textbooks mainly emphasize managers’ exploitative activities such as planning, organizing, staffing and controlling, managers, as the “linking pins” between the top and the bottom (Katz & Kahn, 1978), also engage in exploratory activities. According to Floyd and Wooldridge

(1992), middle managers are involved in exploratory activities such as championing strategic alternatives and facilitating adaptability. Middle managers also engage in other exploratory behaviors such as issue-selling to promote organizational change (Dutton & Ashford, 1993; Dutton, Ashford, O'Neill, & Lawrence, 2001), synthesizing knowledge to facilitate strategic renewal (Floyd & Lane, 2000; Nonaka, 1994), interpreting and integrating informational flow to generate organizational learning (Crossan, Lane, & White, 1999), and identifying opportunities and developing initiatives to advance corporate entrepreneurship (Floyd & Wooldridge, 1999; Fulop, 1991).

While scholars have addressed the potential benefits of managers engaging in ambidextrous behaviors, empirical studies on the antecedents of such activities are rare. Wooldridge and colleagues (2008) outlined four categories of potential antecedents, namely, individual, group, organization and environment ones. Specifically, they proposed that managers' activities and performance was influenced by: (1) their own personality, social capital, and relationships with higher level managers, (2) the work units' interest, power and embeddedness, (3) the organization's strategy and reward system, and (4) the environment's uncertainty, competition and national culture. Mom et al. (2009) examined individual and organizational antecedents, and found that managers' decision-making authority and managers' social networks increased managerial ambidexterity. To contribute to this emerging research stream, my dissertation examines how humble CEOs influence middle managers' ambidexterity and

performance through empowering organizational climate and TMT integration and heterogeneity.

Managerial job performance. Following Motowidlo (2003), managerial performance, or managers' job performance, is defined as the expected organizational value of work behaviors. There are various frameworks categorizing job performance dimensions, ranging from two (Borman & Motowidlo, 1993) to eight dimensions (Campbell, 1990). In my dissertation, I focus on managers' task performance and creative performance, because organizations face increasingly uncertain environments that require managers to be able to align and adapt. Specifically, managers' task performance refers to performance that generally appears on formal job descriptions (Motowidlo, 2003; Tsui, 1984), whereas creative performance refers to performance in initiating and implementing novel ideas (Rodan & Galunic, 2004). These two dimensions are expected to be positively correlated and they are the logical outcomes of managers' ambidextrous behaviors.

Previous research has generated rich understanding of individual level antecedents of job performance, including personality (Barrick & Mount, 1991; R. P. Tett, Jackson, & Rothstein, 1991), knowledge, skills, motivation (J. E. Hunter, 1986; Schmidt, Hunter, & Outerbridge, 1986), and job attitudes (L. W. Hunter & Thatcher, 2007). Recent studies started to examine how organizational context, such as organizational climate (Carr, Schmidt, Ford, & DeShon, 2003; Seibert et al., 2004) and human resource practices (Takeuchi, Chen, & Lepak, 2009), influences employee job performance. Following this line of research, my

study examines how the humble CEO creates an organizational context to influence managerial job performance.

Summary

From Chapter 2, it becomes clear that there is a great potential to advance the strategic leadership literature by studying an under-explored CEO characteristic, - humility, and by studying the mediation process between the CEO and managerial activity and performance. Particularly, scholars have examined the topics of CEOs, TMTs, and managers rather independently, with some understanding about how CEOs act as a context creator and influence the TMTs as well as how the organizational context influences managers. There are a paucity of studies that integrate these research streams together and examine a more comprehensive process linking CEOs and managers. Such a task is valuable to advance theory because the macro level and micro level studies tend to develop independently. As such, there is largely a lack of understanding of the interfaces between the two (R. House, Rousseau, & Thomashunt, 1995; Rousseau, 1985), and multilevel theorization and research hold the potential to narrow this gap (K. J. Klein et al., 2000).

Chapter 3

THEORETICAL MODEL

Building on the self-concept based construct of CEO humility, I develop a cross-level mediation model that specifies the linkages among the CEO, TMT and managers. In this chapter, I first illustrate three fundamental theories that provide an overarching theoretical framework to guide the model development; then I will propose nine hypotheses of the research model.

Overview

The cross-level research model addresses the processes by which CEOs, as an organization level factor, transmit their effect down through the TMT and organizational climate to individual managers in the organization. The major challenge in proposing a cross-level mediation model is that scholars have proposed various mechanisms to explain each process but lacked an overarching perspective to integrate these research streams. Responding to Pfeffer and Fong's call for a "unified conceptualization of organizational and human behavior" (2005: 373), I draw on the self-expression motive perspective (Ashforth, 2001; Katz & Kahn, 1978; Shamir, 1991), self-determination theory (Deci & Ryan, 1980, 1985, 1991, 2000), and social learning theory (Bandura, 1977) to guide hypothesis development. These three theories are interrelated and complementary to one another, providing an integrated theoretical framework to comprehend the multilevel mediation processes.

Self-expression motive perspective

The desire to express our cherished beliefs and self-concept is regarded as one of the intrinsic motivations of people's behaviors (Katz & Kahn, 1978; Korman, 1970). Acting in consistence with one's self-conception derives positive feelings such as intrinsic pleasure and satisfaction (Ashforth, 2001; Katz & Kahn, 1978), whereas acting contradictory to the salient and valued identities arouses cognitive dissonance (Festinger, 1957) and negative feelings of guilt or shame (Near & Miceli, 1987). From the self-expression motive perspective, human behaviors are not always instrumental but rather expressive of the self. Part of the self-concepts underlying self-expression are personal or social identities (Tajfel, Billig, Bundy, & Flament, 1971; Turner, 1985), and when group or organizational identities become salient, individuals tend to behave in line with those identities and fight for the interest of the group or the organization (Ashforth & Mael, 1989; Stryker, 1980).

As an application of this perspective, CEOs behaviors can be regarded as an expression of their self-concepts rather than just means to control or manipulate followers. Similarly, the top management team and the associated managers are more likely to behave in a way that is consistent with their own self-concepts, and when the group or the organization becomes their self-concepts, they tend to behave in consistence with their group or organizational membership as a way of self-expression.

Self-determination theory

The self-determination theory (Deci & Ryan, 1980, 1985, 1991, 2000) states that (1) human motivation requires conditions to satisfy three innate psychological needs: needs for competence, autonomy and relatedness; and (2) that certain regulatory processes and goals are more likely to satisfy these needs, thus generating higher intrinsic motivation or internalized extrinsic motivation. Among the three fundamental needs, *need for competence* emphasizes the need for engaging optimal challenges and experience mastery or effectiveness, *need for relatedness* concerns attachment and feelings of security, belongingness, and intimacy with others, and *need for autonomy* refers the tendency to work for inner coherence and integration through self-organization and regulation. The self-determination theory suggests that these fundamental needs are universal among individuals, and satisfactions to those needs are essential nutriments for growth, integrity and well-being for individuals as adaptive organisms. This perspective has been supported by studies on students (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000), gymnasts (Gagne, Ryan, & Bargmann, 2003) and employees (Deci et al., 2001). Individuals are motivated to engage in goal achieving activities when the goals themselves allow them to experience need satisfaction (intrinsic motivation), or when the contextual conditions promoting those goals allow for greater need satisfaction (extrinsic motivation) (Deci & Ryan, 2000).

According to Deci and Ryan (2000), certain goals and goal attainment processes are better at satisfying the fundamental needs and thus are intrinsically motivating. For example, goals such as relationships, personal growth, and community contribution were labeled as intrinsic aspirations, and were more

positively related with self-actualization, vitality, social productivity and well-being than extrinsic aspiration such as financial success (Kasser & Ryan, 1993, 2001). In addition, individuals are motivated when the goal attainment process provides higher need satisfaction (Deci, Connell, & Ryan, 1989). For example, people are more motivated in environments that provided choice, meaningful positive feedback, and interpersonal ambience (Deci, Eghrari, Patrick, & Leone, 1994; Gagné, Koestner, & Zuckerman, 2000). The self-determination theory explains how humble CEOs, through their leadership behaviors, provide goals and goal attainment processes that satisfy the TMT and the middle managers' fundamental needs, thus motivating them to engage in desirable behaviors.

Social learning theory

Bandura (1977) proposed in his social learning theory that individuals learned to behave in a certain way through vicarious, symbolic, and self-regulatory processes. The *vicarious* process describes how individuals learn by observing others' behaviors and their consequences, the *symbolic* process suggests that individuals are able to use symbols and engage in anticipatory thinking, and the *self-regulatory* process indicates that individuals can regulate their behaviors and such regulations are reinforced by external influences such as models and rewards.

Particularly, Bandura (1977) detailed a four-stage process of role modeling (attention, retention, motor reproduction, and motivation), which reveal several conditions for effective learning, including model attractiveness, behavior salience, informative feedback, and outcome valence. Specifically, people are

more likely to learn from role modeling when (1) the models possess engaging qualities or interpersonal attraction, (2) the behaviors are intrinsically rewarding, (3) there is informative feedback for refinement, and (4) people who engage in the behaviors are rewarded and the rewards are attractive. The social learning theory explains how the TMT members and managers role model after the CEOs' behaviors and learn what is expected and rewarded in the organization.

The self-expression motive perspective, self-determination theory and social learning theory are interrelated and form an integral theoretical framework to explain human behaviors. When the behaviors satisfy their fundamental needs, people tend to model after those behaviors; the more they enact those behaviors, the more likely they internalize the behaviors as part of their self-concept to reduce cognitive dissonance (Ashforth, 2001), and therefore the behaviors become self-expressions; the more self-expressing the behaviors becomes, the more satisfactions of fundamental needs people experience.

As portrayed more below, based on these three theories, I propose that humble CEOs are more likely to exhibit empowering leadership as a way of self-expression (Hypothesis 1), which in turn increases an empowering organizational climate (Hypothesis 2) and the TMT's integration (Hypothesis 3) by satisfying the managers' fundamental needs and social learning process; humble CEOs also tend to increase the TMT's heterogeneity (Hypothesis 4) as a result of their self-expression. Through the self-determination and social learning processes, TMT integration, TMT heterogeneity, and empowering organizational climate are all positively associated with managerial ambidexterity (Hypothesis 5 through 7),

resulting in higher supervisor rated managerial job performance (Hypothesis 8). Hypotheses 7 (the linkage between empowering organizational climate and managerial ambidexterity) is based on the assumption that empowerment satisfies people's fundamental needs; in Hypothesis 9, I propose that power distance orientation moderates this relationship. Accordingly, this chapter is divided into nine sections, each being devoted to one hypothesis. Figure 2 is a graphic representation of the relationship among the constructs in this integrative model of CEO humility and middle manager interface.

Insert Figure 2 about here

CEO Humility and Empowering Leadership Behaviors

I propose that humble CEOs engage in empowering leadership behaviors as a way of self-expression for two reasons. First, humble CEOs acknowledge their limitations and appreciate others' strengths (J. A. Morris et al., 2005); therefore, sharing power with others is a natural form of expressing their humility. Humble people have a propensity to trust and do not mind to admit their need to rely on others' expertise (Mayer, Davis, & Schoorman, 1995; Whitener, Brodt, Korsgaard, & Werner, 1998); therefore, they encourage participative decision making and information sharing. While the narcissistic leaders tend to entitle and exploit followers (Rosenthal & Pittinsky, 2006), the humble ones are more likely to show confidence in the followers' work, include them in decision making, and provide them with autonomy.

Second, humble CEOs are passionate about their self-transcendent pursuit; therefore, they express their humility by enhancing the meaningfulness of the followers' work. As part of their pursuit of self-transcendent ideals, leading an organization is a mission rather than a self-glorifying privilege (Drucker, 1992). The humble CEOs are delighted to have capable followers and honor their strengths and achievements without feeling threatened because they understand that they themselves hold ultimate responsibility for the organization (Drucker, 1992).

In summary, driven by the self-expression motive, humble CEOs engage in empowering leadership behaviors, including informing, participative decision making, showing concern, coaching, and leading by example. Therefore, I propose:

H1: CEO humility is positively related with CEO empowering leadership behaviors.

CEO Empowering Leadership and Empowering Organizational Climate

While studies have shown that empowering leaders foster empowering climates in teams (G. Chen, Kirkman, Kanfer, Allen, & Rosen, 2007; Kirkman & Rosen, 1999), there is an unexplained puzzle regarding how CEOs' empowering leadership behaviors cultivate shared perception of empowerment among lower level managers, who usually do not directly interact with CEOs. Here, I apply both the social learning theory and the self-determination theory to explain this process. Specifically, CEOs' empowering leadership behaviors influence managers' perception through three effects: (1) the cascading effect, whereby

leadership behaviors are role modeled by the TMT members and cascaded downwards to successively lower levels of management (Waldman & Yammarino, 1999); (2) the bypassing effect, whereby CEOs skip levels and directly interact with followers (Yammarino, 1994); and (3) the symbolic management, whereby CEOs' leadership behaviors convey symbolic meanings to help interpretation of organizational intent (Pfeffer, 1981). I now explain each of these processes.

CEOs' empowering leadership behaviors are likely to be cascaded downwards through role modeling. The cascading effect has been found in various leadership behaviors including directive, participative, and transformational styles (Bass, 1981; Bass & Avolio, 1993; Yang, Zhang, & Tsui, 2010), and I expect that it also applies to empowering leadership behaviors. According to social learning theory, CEOs serve as role models to other TMT members because CEOs are highly visible, and empowering leadership behaviors are intrinsically rewarding as they provide autonomy to followers, increase their sense of competence, and facilitate relatedness by participative decision making (Ahearne et al., 2005). The result of role modeling is that CEOs' empowering leadership behaviors are "reflected in similar behavioral patterns" among the TMT (Bass, Waldman, Avolio, & Bebb, 1987: 75), making the managers below them feel empowered.

According to the bypassing effects, CEOs circumvent the TMT members and directly use their empowering leadership behaviors to interact with lower level managers (Yammarino, 1994). For example, CEOs can directly send

empowering messages and cues to organizational members at all levels via internal newsletters, emails, and speeches in organization wide meetings. Similarly, CEOs can express their concerns and care to individual organizational members or include them in decision making processes by setting up hot lines or email accounts to receive opinions, suggestions or complaints, or by meeting managers individually. They can also directly coach some managers by establishing mentoring relationships with them (Galvin et al., 2010). These direct interactions allow CEOs to directly empower managers in a similar way as they influence the TMT members.

In addition, social learning theory suggests that people are able to process symbolic information and engage in anticipatory thinking regarding what are appropriate and encouraged in the organization (Bandura, 1977). CEOs' actions convey organizational meaning to all organizational members who try to interpret the intention and values behind the actions (Barnard, 1938; Pfeffer, 1981). For example, CEOs can show their care to all employees by hosting a farewell dinner for a well-received employee, and they can signal their determination for participative decision making by presenting awards to those who made significant contributions or outstanding suggestions. These symbolic actions become stories or legends told among organizational members (Boje, 1991; Gabriel, 2000), helping them to understand the attached meaning of the organizational structure, policies and practices as empowerment.

In summary, CEOs' empowering leadership behaviors foster an empowering organizational climate among managers through cascading, bypassing and symbolic effects. Therefore, I propose:

H2: A CEO's empowering leadership is positively related to empowering organizational climate as perceived by middle managers.

CEO Empowering Leadership Behaviors and Top Management Team

Integration

I propose that CEOs' empowering leadership behaviors increase TMT integration because the TMT model after the CEOs' behaviors and these behaviors cultivate a shared team identity among the TMT. As a social learning process, TMT members model after CEOs' empowering leadership behaviors, and TMT integration then becomes a reflection of collective mutual empowering behaviors. Through sharing and delegation of control, empowering CEOs increase TMT members' perception of respect and self-efficacy (Spreitzer, 2008), fulfilling the TMT members' needs for competence and autonomy; therefore, they are more willing to emulate the CEOs' behaviors. Empowering behaviors thus become shared behaviors that characterize an integrated team.

In addition, CEOs' empowering leadership behaviors cultivate a shared identity among the TMT members. Empowering leaders encourage team interactions and team oriented behaviors by actively promoting participative decision making, respecting each team member's opinion and contribution, and encouraging solving problems within the team (Arnold, Arad, Rhoades, & Drasgow, 2000). As TMT members frequently interact with one another, and the

decisions they make increasingly reflect collective wisdom, they increasingly foster a group identity in order to maintain self-coherence (Ashforth, 2001), reduce cognitive dissonance (Festinger, 1957), and fulfill the need for relatedness (Deci & Ryan, 2000). Once members are identified with the TMT, behaviors beneficial to their team identity becomes self-expression to them, including sharing information, express their opinions (Abrams, Cross, Lesser, & Levin, 2003; Levin, Whitener, & Cross, 2006), collaborating and sharing resources (Costa, Roe, & Taillieu, 2001). Such open communication and collaboration further enable them to generate a shared vision (Ensley & Pearce, 2001).

In summary, empowering CEOs are able to promote TMT integration through role modeling and cultivating a shared identity. Therefore, I propose:

H3: Empowering leadership behaviors are positively related with TMT integration.

CEO Humility and Top Management Team Heterogeneity

I propose that humble CEOs create a diverse TMT as a result of expressing their openness to learn and appreciation of others. First, humble CEOs are open to learn from others and welcome new ideas in order to achieve their self-transcendent pursuit. Therefore, they purposely look for capable colleagues rather than those who merely think alike or always agree with them (Drucker, 1992). Such a tendency is evidenced in Collins's Good to Great study, which suggested that the utmost important task for humble CEOs was to "[getting] the right people on the bus" (J. C. Collins, 2001: 13), the people who spare no effort in searching for the best answers rather than fighting for their parochial interests. As a result of

searching for different ideas and thus inviting people with different ideas to join the organization, the TMT is likely to be heterogeneous because diverse ideas tend to come from heterogeneous people (K. Y. Williams & O'Reilly, 1998). In support of this logic, Finkelstein et al. (2009) proposed that open-minded CEOs, CEOs who were aware of multiple perspectives, valuing debate, and open to new ideas, had TMTs with greater heterogeneity. A vivid example is Abraham Lincoln, and his success was due to his “strategy of creating a team composed of his most able rivals, people who are unafraid to take issue with him” (Coutu, 2009: 43).

Second, heterogeneous TMT members are more likely to stay with the team even though demographic diversity could cause relational conflicts and hinder collaborations, resulting in team member turnover (Jehn, Northcraft, & Neale, 1999; Pelled, Eisenhardt, & Xin, 1999). Humble CEOs offset the negative impact of conflicts by showing respect and appreciation to different team members and giving them chances to perform, which in turn satisfying team members’ need for belongingness and for competence. Therefore, these heterogeneous TMT members are more likely to stay with humble CEOs.

As a result of expressing their humility, humble CEOs are more likely to form a heterogeneous TMT. Therefore, I propose the following:

Hypothesis 4: CEO humility is positively related with TMT heterogeneity.

Empowering Organizational Climate and Managerial Ambidexterity

In line with the self-determination theory, people are intrinsically motivated to work when granted greater responsibility and autonomy (Katz & Kahn, 1978).

By providing managers with opportunities, resources, and support and preparing them with competency, an empowering organizational climate increases people's psychological empowerment—that is, perceived meaningfulness, potency, autonomy and impact (Spreitzer, 1995, 1996). With their needs for competence and autonomy fulfilled, empowered managers are intrinsically motivated to perform (G. Chen et al., 2007; Liden et al., 2000), more concentrated and resilient (Thomas & Velthouse, 1990) and have higher organizational commitment (B. J. Avolio, W. C. Zhu, W. Koh, & P. Bhatia, 2004); therefore, they are likely to engage in behaviors that are necessary to accomplish their job responsibilities, or the exploitative behaviors (Seibert et al., 2004; Spreitzer, 1995).

In addition, empowered managers are expected to engage in exploratory activities, or new behaviors that are not part of the current routines (Mom et al., 2009). By increasing managers' self-efficacy, that is, fulfilling their needs for competence, empowerment increases their willingness to take risks in exploring new ideas, services and processes (Amabile, 1988; Redmond, Mumford, & Teach, 1993), that is, exploratory activities. Empirical research has shown that empowered individuals are more likely to suggest changes in work methods, processes and policies (Choi, 2007), and followers perceive empowered managers as more innovative (Spreitzer, De Janasz, & Quinn, 1999).

In short, empowering organizational climate encourages managers to engage in both exploitative and exploratory behaviors, which are referred to as managerial ambidexterity by Mom et al. (2009). Thus, I propose the following:

H5: Empowering organizational climate is positively related managerial ambidexterity.

Top Management Team Integration and Managerial Ambidexterity

From the social learning perspective, TMT integration motivates managers to engage in ambidextrous behaviors through symbolic processing and role modeling. First, TMT integration provides symbolic meaning for managers to understand what is appropriate and encouraged in the organization. Scholars have suggested that managers attempted to read the wind, that is, to interpret and align themselves with the upper echelon (Dutton, Ashford, Wierba, Oneill, & Hayes, 1997). TMT integration conveys the message that the organization emphasizes collaboration; therefore, managers are encouraged to focus their attention on productive activities rather than opportunistic behaviors (Mayer & Gavin, 2005). In addition, TMT integration helps individual TMT members send consistent messages to their subordinates (especially managers working directly under them), and it also ensures that messages from different TMT members on relevant strategic practices are consistent with one another. Such information consistency reduces role ambiguity and role conflicts (Katz & Kahn, 1978), motivating managers to engage in behaviors that are oriented towards organizational goals rather than self-interest (Bowen & Ostroff, 2004).

Based on social learning theory (Bandura, 1977), when managers observe the TMT engaging in integration behaviors such as information sharing, collaboration, joint decision making and vision sharing, they are likely to embody those behaviors when they interact with other managers. As a result, managers

across different functions tend to be more collaborative, and are open to share rather than defensive to one another. Their smooth coordination allows them to be more capable in exploitative activities (Bourgeois, 1980). Integration among managers also creates a psychologically safe environment, encouraging managers to engage in more entrepreneurial or exploratory behaviors (Kuratko & Goldsby, 2004; Mantere, 2008).

In brief, TMT integration encourages managerial ambidexterity through symbolic and role modeling mechanisms. Therefore, I propose the following:

Hypothesis 6: Top management team integration is positively related with managerial ambidexterity.

Top Management Team Heterogeneity and Managerial Ambidexterity

TMT heterogeneity increases TMT members' cognitive capability and thus allows them to be better coaches to support their subordinate managers, fulfilling the managers' need for competence. TMT heterogeneity also increases TMT members' intellectual flexibility and openness to new ideas, and thus allows them to challenge the status quo and encourages managers' exploratory activities through social learning. Below are the detailed logics.

While management scholars mainly focus on the impact of TMT heterogeneity on team dynamics and effectiveness, psychology scholars look at how exposure to diversity increases individuals' cognitive complexity, intellectual flexibility and openness to new ideas. Top managers in a heterogeneous team are exposed to divergent and novel ideas, which broaden their attention scope (Louis & Sutton, 1991) and allow them to notice things that they normally filter out.

Working in a heterogeneous team thus enables TMT members to develop their cognitive capability of seeing multiple perspectives. With increased cognitive capability, the TMT members are more able to coach the managers and help them to solve problems arising from accomplishing their job responsibilities. The improved coaching develops the managers and increases their self-efficacy (Davis, Fedor, Parsons, & Herold, 2000), therefore fulfilling their need for competence and motivating them to engage in exploitative activities.

The TMT members working collaboratively in a heterogeneous team also become more intellectually flexible and open to new ideas (S. Hu & Kuh, 2003). When they experience stimulation of novel ideas in the heterogeneous team, they can see linkages among seemingly unrelated issues, and are flexible on various ways of doing things. Supporting this argument, scholars found that students working in racially diverse teams were more able to integrate novel perspectives, reported more positive gain in learning and personal development (Antonio et al., 2004; S. Hu & Kuh, 2003). Similarly, Tadmor and Tetlock (2006) suggested that second-culture exposure shapes socio-cognitive skills and stimulates integrative complexity. Therefore, these TMT members are more likely to challenge their subordinates for new ideas as well as more receptive and supportive to those ideas. As mentioned earlier, managers, as wind readers (Dutton et al., 1997), are able to symbolically process such information and discern that risk taking and exploration are encouraged by their supervisors, and therefore are motivated to engage in exploratory activities. In support of this logic, scholars have found that managers are more likely to engage in issue selling (Dutton & Ashford, 1993;

Dutton et al., 1997) and entrepreneurial activities (Hornsby, Kuratko, & Zahra, 2002) when the TMT are perceived as open and supportive.

Therefore, I propose the following:

Hypothesis 7: Top management team heterogeneity is positively related with managerial ambidexterity.

Managerial ambidexterity and Managerial Job Performance

I propose that ambidextrous behaviors that are targeted toward efficiency and innovation are positively related with middle managers' job performance. It seems straight forward that exploitative activities leads to task performance which is mainly about implementation and fulfilling formal job description, whereas explorative activities benefits innovative performance which requires searching and risk taking. The less obvious links are the ones between exploratory activities and task performance, and between exploitative activities and innovative performance.

Although task performance requires managers to utilize their previous knowledge, skills and experiences; in a fast changing environment they still face circumstances that are not described in the current policies, or circumstances that they need to create flexible interpretation of the current general policies (Katz & Kahn, 1978). Engaging in exploratory activities thus becomes necessary for managers to fulfill their job descriptions. For innovative performance, middle managers are not only required to come up with innovative ideas but also effectively implement them. Therefore, exploitative activities complement

exploratory activities to ensure managers' performance in innovation. In summary, I propose the following

Hypothesis 8: Managers' ambidextrous activities are positively related with their task performance and innovative performance.

Contingency between Empowering Organizational Climate and Managerial Ambidexterity

Cultural values, defined as “motives, values, beliefs, identities, and interpretations or meanings of significant events” shared among a collective (R. J. House, Hanges, Javidan, Dorfman, & Gupta, 2004: 15), impact organizational members' attitudes and behaviors at work (Kirkman, Lowe, & Gibson, 2006; Tsui, Nifadkar, & Ou, 2007). Recently, scholars have recognized individual variances in cultural values, and studied the impact of cultural value orientations, or “individually-held cultural values and beliefs” (Kirkman, Chen, Farh, Chen, & Lowe, 2009: 744).

In my dissertation, I propose to examine the moderating effect of power distance orientation, or “the extent to which an individual accepts the unequal distribution of power in institutions and organization” (Clugston, Howell, & Dorfman, 2000: 15)¹. Individuals experience a sense of autonomy when they are given choices to act according to their own preferences (Deci et al., 1989; Deci & Ryan, 1985). Individuals with higher power distance orientation prefer

¹Power distance orientation is similar to traditionality, defined as an individual's endorsement of hierarchical role relationships (Farh, Earley, & Lin, 1997). Traditionality has been found to similarly moderate the relationships between leadership perception and follower outcomes. I use power distance orientation instead of traditionality because Farh, Hackett and Liang found that power distance orientation was a “stronger and more consistent moderator of perceived organizational support – work outcomes relationships” (2007: 715).

supervisors to give them clear and unquestionable directions and do not enjoy having the autonomy to make their own judgment (Farh et al., 2007). Accordingly, these individuals experience less intrinsic motivation from the empowerment practices that encourage and support independent actions, because independent actions are not in line with their authentic interest and preferences. Therefore, I expect that the link between empowering organizational climate and managerial ambidexterity is weaker for managers with high power distance orientation. In support of this argument, scholars have found that acceptance of hierarchical relationships attenuated the positive impact of empowerment practices on employees' task performance, innovative behaviors, organizational citizenship behaviors, job satisfaction and organizational commitment (Z. X. Chen & Aryee, 2007; Eylon & Au, 1999; Hui, Au, & Fock, 2004; Kirkman et al., 2009).

In summary, I expect that managers with higher level of power distance orientation are less receptive to empowerment practices, and thus exhibit lower level managerial ambidexterity. Therefore, I propose the following:

H9: Individual power distance orientation moderates the relationship between empowering organizational climate and managerial ambidexterity in a way that the relationship is weaker when the manager has a higher level of power distance orientation.

Chapter 4

METHOD OVERVIEW

Overview

I conducted two studies in China to test the hypotheses shown in Figure 2. In Study 1 (Chapter 5), I developed and validated a humility measure for the Chinese context; in Study 2 (Chapter 6), I tested the hypotheses using a sample of 63 organizations with 645 middle managers. Before moving on to details of the studies, I explain the reasons of testing the model in the Chinese context below.

Justification of testing the model in the Chinese context

I chose to test the model in the Chinese context for two reasons. First, compared with their Western counterparts, it is possible to observe higher variance among Chinese CEOs on humility. While CEOs may have a lower level of humility than average individuals, due to their successful track record and prestigious social status (Chatterjee & Hambrick, 2007), CEOs in China are more likely to demonstrate higher humility because this virtue receives high regard in both the Confucian and Tao traditions in China (Kulkofsky & Wang, 2005; Markus & Kitayama, 1991).

Second, China provides a context where managerial ambidexterity is essential for organizations' survival and success. Managerial ambidexterity is most important for organizations operating in a highly uncertain environment (March, 1991; Mom et al., 2009), and for the most part, organizations in China operate exactly in such an environment. While China has enjoyed a GDP growth rate higher than 8% in the past 10 years, the market demand is extremely unstable

due to the frequent changes in economic policies and intensive competitions among both domestic and international players (Luo, 2003; Luo & Park, 2001). Therefore, building internal ambidextrous capabilities are generally beneficial for organizations in China.

Chapter 5

HUMILITY SCALE DEVELOPMENT AND VALIDATION STUDY

Objectives

I pursued four scale validation objectives: (1) to confirm the validity of an existing three-dimension scale of humility (Owens, 2009) in the Chinese context, (2) to develop scales for the four additional dimensions of humility, (3) validate the seven dimensions of humility in China, and (4) to assess whether data collected from “others” is more or just as appropriate as “self-report” data in measuring humility.

As discussed in chapter Two and shown in Figure 2, the comprehensive humility construct consists of seven dimensions: (1) self-awareness, (2) self-improvement, (3) other appreciation, (4) other enhancement, (5) low self-focus, (6) self-transcendent pursuit, and (7) transcendent self-concept. Owens (2009) developed and validated a measure using the first three dimensions, but this measure has not been validated in China. There are no existing scales for the other four dimensions because other humility scales do not cover the same construct domain that I propose (Ashton & Lee, 2005; Exline, Baumeister, Zell, Kraft, & Witvliet, 2008; C. Peterson & Seligman, 2004; Rowatt et al., 2006). I thus developed new items for the additional four dimensions and included them with Owens’ 3 dimensions in the validation process.

Scholars studying humility suggest that individuals are subject to social desirability biases in reporting their own humility, and self-reported humility scales have shown poor convergent and discriminant validity (Exline, 2008;

Owens, 2009; C. Peterson & Seligman, 2004; Rowatt et al., 2006; Tangney, 2002). However, humility consists of a mixture of motivational, cognitive and behavioral elements, and motivational and cognitive components such as self-transcendent pursuit and transcendent self-concept may not be easily observable to others. Therefore, I attempt to compare both the other-report and the self-report approaches in measuring humility.

Humility Scale Development

As mentioned above, the first three dimensions of humility, -- self-awareness, self-improvement, and other appreciation -- have existing scales developed and validated by Owen (2009). Therefore, I focused the scale development effort on the four new four dimensions; that is, other enhancement, low self-focus, self-transcendent pursuit, and transcendent self-concept. I developed new scales following the guidance of DeVellis (1991) and Hinkin (1998) to establish content validity, reliability and stable factor structure.

Phase 1: Item generation and content validity assessment. Item generation can be either inductive or deductive, and the deductive approach is appropriate when there is sufficient theoretical grounding (Hinkin, 1998). I therefore adopted the deductive approach, yet remained flexible to add new items when the initial item pool was submitted for panel reviews. The items were generated in both Chinese and English, and all panel members were bi-lingual to make sure that the items were equivalent in both languages.

Using a deductive approach, I first created the initial pool of 11 items based on my review of the content domain of the four humility dimensions. I carefully

reviewed and edited the items to ensure that they were clear and concise. Next, I subjected this list of items to a panel of 17 members, including 8 management professors, 3 management consultants and 6 working professionals. The panel members received a document including the definition of humility, the dimensions of humility, and the initial item tool. They responded to the questions regarding (1) whether the items were understandable, and (2) whether the items captured the dimensions as specified, and (3) whether they could propose additional items of humility that were consistent with the given definition and dimensions. I then used their comments to improve the clarity and conciseness of the items, eliminated irrelevant items, and generated additional items for each dimension. This process resulted in a pool of 28 items.

Next, the revised item pool was subject to content validity assessment by a second panel of 12 content judges who were doctoral students in management. Following the practices suggested by Hinkin (1998), I provided the definition of humility and its dimensions to the panel members, and I asked them to independently sort the items into each dimension. Items could be categorized as “does not fit any” if the judge thought that it did not fall into any dimension. Accordingly to Hinkin (1998), items demonstrate acceptable content validity and can be retained when no less than 75% of the judges correctly classify them into their dimensions. Based on this criterion, I retained 20 items relating to the four dimensions -- other enhancement, low self-focus, self-transcendent pursuit, and transcendent self-concept.

Phase 2: Exploratory factor analysis and item reduction. To establish stable factor structure and further reduce items, the 20 items surviving the judge analysis were administered to a sample of 276 undergraduate students at the business schools from three cities in China. Sixty percent of these students were women, with an average age of 20.70 ($SD=1.03$). The sample size requirement for a factor analysis varies among scholars: some suggest an item number /sample size ratio, ranging from 1:4 (Rummel, 1970) to as much as 1:10 (Schwab, 1980). In the current case, the item/respondent ratio was better than 1:10, and thus satisfied the requirements for conducting the analysis.

Respondents were asked to indicate to what extent they agreed or disagreed with the 20 statements that described themselves. Responses were obtained on a six-point Likert scale with 1 being strongly disagree, 2 being disagree, 3 being somewhat disagree, 4 being somewhat agree, 5 being agree and 6 being strongly agree. I Used a six-point scale instead of a five-point scale because scholars have found that East Asian individuals were more likely to choose the midpoint, and thus, these scholars recommend using an even numbered scale to increase variances in responses (C. Chen, Lee, & Stevenson, 1995; Si & Cullen, 1998).

Analyses. First, I ran a principal-axis factor analysis without constraining the number of factors in order to determine the number of factors to be retained in the analysis. I used the criteria of eigenvalue greater than one (Kaiser, 1958) and scree plot (Cattell, 1966) to retain factors. Next, I ran principal-axis factor analyses with oblique rotation to eliminate inappropriate items. An item was considered for potential deletion when 1) its factor loading was lower than 0.40,

2) it had high cross-loading on other factors, that is, its loading on the desired factor is less than twice as on any other factor, or 3) it was not loaded on the desired factor based on theory (DeVellis, 1991; Hinkin, 1998). After deleting items based on the above criteria, I examined the communality statistics to make sure that the remaining items explained a high amount of variance of the data, and I also calculated Cronbach's alphas to ensure that the respective scales maintained an acceptable reliability of no less than 0.70 (Nunnally, 1978). I then re-ran the principal-axis factor analysis with the remaining set of items and checked for additional items for deletion. The process was repeated until a clean set of items emerged.

Results. The principal-axis factor analysis resulted in five factors with eigenvalues greater than one, but the scree plot suggested only four factors should be retained. Because the items were designed to measure four dimensions of humility, I decided to follow the suggestion of the screen plot and retain four factors.

Table 2 shows the factor structure after eliminating items based on the criteria described above. Specifically, six items were dropped, and the dimension of other enhancement had to be eliminated because all three items for this factor could not pass the retention criteria. The remaining 14 items corresponded to the three factors of low self-focus, self-transcendent pursuit and transcendent self-concept. These 14 items had no cross-loadings and each had a factor loading of above 0.40 on the desired factor with an average of 0.64. Therefore, they were

retained for scale validation. Table 2 provides a summary of the remaining items, their factor loadings and Cronbach's alphas.

Insert Table 2 about here

Humility Scale Refinement and Validation

The revised humility measure consists of two parts: (1) Owens' eight-item measure of three humility dimensions, and (2) the 14 items passing the content validity test, measuring three additional dimensions including low self-focus, self-transcendent pursuit and transcendent self-concept. Following DeVellis (1991) and Hinkin (1998), I obtained a different sample to further refine the scales and assessed construct validity of the humility measure (Schwab, 1980), including convergent validity, discriminant validity and criterion-related validity. In addition, I measured humility from both self-report and other-report for comparison.

Participants and procedures. Survey packets were administered to a sample of 336 MBA students or students from Adult Education Programs from three universities located in three cities in China. These students were asked to fill out a survey measuring their own humility and related constructs such as narcissism, core self-evaluation, learning goal orientation, and social desirability. They were also required to bring one survey back home and have it filled out by other individuals who knew them. Each of these other individuals was asked to evaluate the focal participant's humility. In all, I obtained 286 usable surveys from the focal participants for a response rate of 85%, among which 80%, or 228,

returned the survey filled in by other persons who knew them. Sixty six percent of the participants were female with an average age of 29.1 ($SD=5.50$) and average work tenure of 7.49 years ($SD= 5.30$). On average, the other persons knew the participants for 8.56 years ($SD= 8.36$); Fifty five percent of the other persons were female, and their average age was 32.8 ($SD=11.07$). Regarding to the relationship between the participants and the other persons, 37% were friends, 25% were colleagues, 22% were classmates, and 16% were relatives.

Measures. Similar to the scale development study, all measures except social desirability were obtained on a six-point Likert scale with 1 being strongly disagree and 6 being strongly agree.

Humility. Humility was measured with 22 items. The measure included six dimensions: (1) self-awareness, (2) self-improvement, (3) other appreciation, (4) low self-focus, (5) self-transcendent pursuit and (6) transcendent self-concept. Owens' eight-item measure was used for the first three dimensions. The latter three dimensions were measured using the 14 items retained in the scale development study.

Modesty. Modesty was measured by 9 items from Whetstone, Okun and Cialdin (1992) and 5 items from Chen and colleagues (2009). A sample item was "I dislike speaking about myself in positive terms in the presence of others". The Cronbach's alpha of this scale was 0.92.

Narcissism. Fourteen items from NPI-16 (Ames, Rose, & Anderson, 2006) were used to measure narcissism. A sample item was "I insist upon getting the respect that is due me". Two items were excluded because their content

heavily overlapped with two other items in the scale. The Cronbach's alpha of this scale was 0.83.

Core self-evaluation. A 12-item scale from Judge, Erez, Bono and Thoresen (2003) were used to measure four dimensions of core self-evaluation: self-esteem, generalized self-efficacy, internal locus of control, and emotional stability. A sample item is "I am confident I get the success I deserve in life". The Cronbach's alpha of this scale was 0.88.

Learning goal orientation. I used a five-item scale developed and validated by Vandewalle (1997). A sample item is "I often look for opportunities to develop new skills and knowledge". The Cronbach's alpha of this scale was 0.84.

Social desirability. Social desirability were measured using 10 items from Balanced Inventory of Desirable Responding (Paulhus, 1988). A sample item is "I sometimes tell lies if I have to". Respondents were asked to rate these items on a 7-point Likert Scale. Then the scores were recoded. Specifically, scores of 1 and 2 were recoded as 1, and other scores were recoded as 0. The recoded scores were then summed up representing the respondent's social desirability score. The Cronbach's alpha of this scale was 0.76.

Except the newly developed dimensions of humility and social desirability, all other scales were translated from the original English scales. Following Brislin (1970), the English items were translated into Chinese by a native Chinese speaker who was fluent in English, and was then back-translated into English by another bi-lingual management professor. Any discrepancies

between the Chinese and English versions were detected, and the Chinese versions were revised accordingly.

Analysis. The following analyses were conducted to refine and validate the humility measure. First, I conducted confirmatory factor analyses using the humility data collected from the self-reports to refine the humility measure. Following Bollen's (1989) model modification procedure, I specified items loading on the a priori factor structure based on theory, and then checked the model fit indices. According to L.Hu and Bentler (1998), I selected the following fit indices: root-mean-square error of approximation (RMSEA), Tucker-Lewis index (TLI) and comparative fit index (CFI) which are sensitive to models with mis-specified factor loadings. Evaluation of the fit indices is based on the cut-off value of 0.05 for RMSEA and 0.90 for TLI and CFI (L. Hu & Bentler, 1999). When the model didn't fit the data, I checked the modification indices to identify and eliminate items that caused misfit. Modification indices indicate the degree of decrease in overall Chi-square ratio if the corresponding parameter was freed. Items in the "by statements" (statements specifying items loaded on a factor) with modification indices higher than 10 and insignificant factor loadings on desired factors were candidates for elimination (Bollen, 1989; DeVellis, 1991). An item that generated the highest modification index would be deleted. I would then re-run the model and examine the fit indices. This process continued until the set of items retained generated good model fit indices and there were no more items generating modification indices higher than 10.

Second, based on the refined set of items, I ran several CFAs using the humility data collected from other-reports to evaluate convergent validity of the humility items. Following the procedures used by Podsakoff and MacKenzie (1994), the convergent validity of the humility items were assessed by whether (1) the hypothesized six-factor structure explained the covariance of the items, (2) the factor loading of each item were significant and substantial, and (3) each theorized dimension accounted for a moderately large proportion of variance in its measured indicators.

Third, the discriminant validity among humility dimensions were assessed by comparing the six-factor baseline model with a one-factor model and 15 five-factor models created by combining two of the six factors (Anderson & Gerbing, 1988). The models were compared using sequential chi-squared difference test (SCDT; James, Mulaik, & Brett, 1982). When the baseline model was the best fitting model compared with the alternative models, the humility measure demonstrated discriminant validity within humility dimensions.

Four, after confirming the dimensionality of the humility measure, I evaluated the discriminant validity of the humility measure as compared with other related measures such as modesty, narcissism, core self-evaluation and learning goal orientation using three different approaches. The first approach follows Eastman, Goldsmith, and Flynn (1999) using EFA. For each related measure, I ran EFA that included the items of the related measure and the humility items. When the humility items did not cross-load with items of the related measure, the result demonstrated evidence of discriminant validity

between humility and the related construct. The second approach follows Anderson and Gerbing (1988) using CFA. For each related measure, I ran a 7-factor baseline model with the six humility dimensions and the related construct, and then I ran a 6-factor model with the related construct combined with one humility dimension. When all 6-factor models generated worse fit indices than the baseline model, the results supported the discriminant validity of humility dimensions versus the related construct. The third approach follows Bagozzi et al. (1991), and I ran a 5-factor model with humility and other related constructs including modesty, narcissism, core self-evaluation, and learning goal orientation. Discriminant validity would be confirmed when the model generated acceptable fit indices.

Fifth, the nomological validity of the humility measure was assessed by examining the correlations between humility and other related constructs including modesty, narcissism, core self-evaluation, and learning goal orientation (Podsakoff & MacKenzie, 1994). The humility measure was expected to relate positively to modesty, core self-evaluation and learning goal orientation, and negatively with narcissism.

Finally, I examined whether other-report or self-report should be used to measure humility by comparing their 1) measurement model goodness of fit indices including CFI, TLI and RMSEA, 2) composite reliability, 3) correlations with other related constructs, and 4) their correlation with social desirability, and (5) their correlation with each other, on each dimension and the total construct. A certain measure is acceptable when the goodness of fit indices passes the cut-off

values, composite reliability is above 0.70, and correlations with other related measures are in the expected directions. A low correlation with social desirability and moderately high correlations among dimensions would be preferred.

Results. The initial set of humility items undergoing the measurement refinement process included 22 items for six dimensions. As a result, the refinement process eliminated four items to improve model fit. Table 3 summarizes the measurement refinement process. The baseline model generated the following goodness-of-fit indices: $\chi^2(194) = 397.76, p < 0.05$; CFI = 0.90, TLI = 0.89, and RMSEA = 0.06. TLI and RMSEA did not pass the cut-off values of 0.90 and 0.05. The modification index (M.I.) table in the MPLUS analysis reported 6 M.I.s with values greater than 10 in the “by statements”, suggesting that there were items potentially cross-loading with other dimensions. An item generated the highest M.I. was thus eliminated from the model. The procedure was repeated until Model 4, which eliminated four items. Model 4 generated satisfactory goodness-of-fit indices (CFI = 0.96, TLI = 0.95, RMSEA = 0.04), and had no more M.I.s greater than 10.

Given that the all six dimensions belonged to humility, I ran a 2nd order CFA to examine whether a higher order factor could account for the item structure better. Based on Model 4, I added a 2nd order factor using the six 1st order factors as indicators. The comparison between Model 4 and Model 5 involved non-nested model comparison; therefore, Akaike’s Information Criterion (AIC; Akaike, 1987) was used, and a model with lower AIC was considered better. Model 5 generated a higher AIC than Model 4 ($AIC_{diff} = 12.01$); therefore,

the 2nd order measurement model was inferior compared with the measurement model with six 1st order factors, confirming that humility was a composite construct of six dimensions.

Insert Table 3 about here

Convergent validity of the humility dimensions. I assessed the convergent validity of the humility dimensions by applying the refined factor structure of eighteen items on the other-report humility data. The CFA generated good results: $\chi^2(115) = 194.74, p < 0.05$; CFI = 0.95, TLI = 0.94 and RMSEA = 0.05. It indicated that the hypothesized six-factor model structure explained a large covariance of the items. All items loaded on the desired factors significantly, and the standardized loadings were reasonably substantial in size ($M = 0.70, SD = 0.11$). The average composite reliability is 0.75, ranging from 0.66 for transcendent self-concept to 0.81 for other appreciation and low self-focus. The theorized dimensions explained a moderate amount of variance in the items ($M = 51\%, SD = 0.18$). In sum, based on the evidence of good overall model fit, significant factor loadings, and substantial variance explained by the six factors, the 18 items of humility demonstrated good convergent validity. Table 4 shows the item content, factor structure and composite reliability for each dimension.

Insert Table 4 about here

Discriminant validity of the humility dimensions. As shown in Table 5, the baseline model with six factors represented the best fitting model compared

with the one-factor model and the other 15 five-factor models combining two humility dimensions. Results demonstrated that each humility dimension was distinct from one another and could not be combined.

Insert Table 5 about here

Discriminant validity of the humility measure versus other related measures. When using the EFA approach to evaluate discriminant validity, I subjected the 18 humility items and 13 modesty items to principal axis factoring using an oblique rotation, suppressing item loadings smaller than 0.40. No humility item cross-loaded with the modesty items, indicating 100% discrimination between humility items and modesty items; the same results were found when subjecting humility items with narcissism, core self-evaluation items and learning goal orientation items to EFA. Therefore, the EFA results fully supported the discriminant validity between humility measure and other related measures.

I then used CFA to evaluate the discriminant validity of the humility measure. I ran a 7-factor baseline model with six humility dimensions and modesty as separate factors. The baseline model generated good fit indices: $\chi^2(168) = 250.42, p < 0.05$; CFI = 0.97, TLI = 0.96 and RMSEA = 0.04. The model was then compared with six alternative 6-factor models that combined modesty with one humility dimension. All SCDT tests were significant, suggesting that the baseline model remained the best fitting model, and humility dimensions were distinct from modesty. I then ran the baseline models with humility dimensions

and narcissism, core self-evaluation or learning goal orientation. These three models all generated good fit indices: $\chi^2(168) = 240.78, p < 0.05, CFI = 0.97, TLI = 0.96,$ and $RMSEA = 0.04$ for humility and narcissism, $\chi^2(168) = 250.25, p < 0.05, CFI = 0.96, TLI = 0.95,$ and $RMSEA = 0.04$ for humility and core self-evaluation, and $\chi^2(149) = 228.06, p < 0.05, CFI = 0.96, TLI = 0.95,$ and $RMSEA = 0.04$ for humility and learning goal orientation. The SCDT results showed that these baseline models were best fitting models compared with models combining the related construct with humility dimensions. Therefore, the CFA results also fully supported the discriminant validity between humility dimensions and other related measures. Table 6 summarizes the CFA results comparing humility dimensions with related measures.

Insert Table 6 about here

In addition to comparing humility dimensions with each related construct, I ran a five-factor model including humility, modesty, narcissism, core self-evaluation, and learning goal orientation. I created parcels as indicators for each factor because a large number of items as indicators in a confirmatory factor analysis may create problems of insufficient sample size dual factor loadings or correlated residuals (MacCallum, Widaman, Zhang, & Hong, 1999). Specifically, I used the six dimension scores as indicators for the humility construct. I adopted the item-to-construct balance approach recommended by Williams and O'Boyle (2008) and Rogers and Schimtt (2004) to create two or three parcels for each of the other factors. When using the item-to-construct balance approach to create

two parcels from 6 items, I first ran a model with all items loaded on a single factor, and then I rank ordered the items with 1st being the item of the highest loading and the 6th the lowest loading. The first parcel would be composed of the 1st, 4th and 5th items, and the second parcel would be composed of the 2nd, 3rd, and 6th items. The model with five factors generated good fit indices: $\chi^2(109) = 160.36, p < 0.05, CFI = 0.98, TLI = 0.98, \text{ and } RMSEA = 0.04$, further confirming the discriminant validity of the humility construct.

Nomological validity of the humility measure. Table 7 shows two sets of correlations: (1) the correlation between the related measures and other-report humility, and (2) the correlations between the related measures and self-report humility, partialing out the influence of social desirability to control for common method variance. According to Podsakoff et al. (2003), social desirability is one of the causes of common method variance, correlation procedures partially out social desirability helps control for common method variance. As expected, both other-report humility and self-report humility had significantly positive associations with modesty ($r = 0.17, p < 0.05$, and $r = 0.18, p < 0.01$, respectively), learning goal orientation ($r = 0.23$ and 0.22 respectively, $p < 0.01$) and core self-evaluation ($r = 0.16, p < 0.05$, and $0.25, p < 0.01$, respectively), supporting the nomological validity of humility. Humility and narcissism had a negative but insignificant correlation ($r = -0.08$ and -0.07 respectively, $p > 0.05$). In summary, for both humility measures, three out of four correlations with related measures were significant and in the expected direction; the correlations with narcissism

were in the expected direction although insignificant. Therefore, the nomological validity of the humility measure received adequate support.

Insert Table 7 about here

Comparison between self-report and other-report approaches. I compared the self-report and other-report measures of humility in terms of (1) measurement model goodness of fit indices, (2) composite reliability, (3) correlations with related measures, (4) correlations among dimensions, and (5) correlations with social desirability. First, both measures had acceptable measurement model goodness of fit indices ($\chi^2(194) = 182.52, p < 0.05, CFI=0.96, TLI=0.95, RMSEA=0.04$ for the self-report humility measure; $\chi^2(194) = 194.74, p < 0.05, CFI=0.95, TLI=0.94, RMSEA=0.05$ for the other-report humility measure), although the self-report measure had slightly better fit indices. Second, both measures had an average composite reliability (CR) above 0.70. Specifically, the CRs for self-report humility dimensions ranged from 0.64 to 0.79 with an average of 0.74, and the other-report measure had slightly better CRs, ranging from 0.66 to 0.81 with an average of 0.75. Third, as shown in Table 7, both self-report humility and other-report humility correlated with related measures such as modesty, core self-evaluation and learning goal orientation in the expected directions. Therefore, both measures had an acceptable measurement model, exhibited high reliability, and correlated significantly with related measures in the expected direction.

Fourth, I compared the correlations among the humility dimensions. Table 8 is a multi-trait (dimension) multi-method (rater) matrix ((Bagozzi, Yi, & Phillips, 1991). As shown in Table 8, the correlations among the multiple dimensions are higher within the same raters (the top triangle and the right triangle) than that between raters (the rectangle to the left of the table). Within the multi-dimension multi-rater rectangle, the correlations between the two raters of the same dimensions are generally higher than all the different dimension different rater correlations. The only exception is the correlations between self-rated transcendent self-concept and the first four dimensions rated by others. In general, correlations between raters on the same dimensions are higher on those traits that are observable by outsiders, such as self-awareness, self-improvement, other appreciation, and low self-focus. Further, both the average dimensional correlation ($r = 0.45$) and the average composite reliability ($CR=0.75$) of the other report approach is stronger than that of the self-report approach ($r = 0.30$, $CR=0.74$), indicating that the other report approach exhibiting more internally consistent estimates of humility.

Insert Table 8 about here

Taking the above analyses into consideration, I decided to use the other-report approach to measure humility. According to Vazire (2010)'s Self-Other Knowledge Asymmetry Model, the other-report approach is most appropriate when the personality trait measure involves largely behavioral aspects and self-evaluative aspects because the self are less capable in observing their own

behaviors and more subjective to self-serving biases. For the humility measure, the first four dimensions, self-awareness, other appreciation, self-improvement and low self-focus are mainly behavioral dimensions, and self-transcendent pursuit and transcendent self-concept are self-evaluative aspects. Therefore, humility is more appropriate to be measured via other report.

In summary, the scale development and validation generated an 18-item measure of six humility dimensions. This measure exhibited good content validity, convergent reliability, discriminant validity and nomological validity as well as acceptable reliability. The other-report approach represented a better approach than self-report by reducing social desirability bias.

Chapter 6

HYPOTHESIS TESTING STUDY

Sampling Frame

The sampling procedure used to test the integrative model consists of private enterprises in the Yantze River Delta in China, small-to-medium sized and with a firm age above six years. This choice of firms is used to maximize systematic variance (Kerlinger & Lee, 2000) because CEOs with higher managerial discretion (latitude of managerial action) are more likely to influence organizational outcomes, or processes occurring affecting lower levels (Hambrick & Finkelstein, 1987). According to Hambrick and Finkelstein (1987), CEOs have higher discretion in organizations with smaller size, younger age and lower capital intensity and in an environment with high growth rate, instable demand, and fewer powerful outside forces. The specified setting is thus appropriate because CEOs in private organizations have higher managerial discretion than those in state-owned enterprises (J. Li & Tang, 2010), small-to-medium-sized enterprises have relatively fewer employees and lower capital intensity than large ones. I constrained company age to be greater than six because organizations with an age below six are categorized as new ventures (Zahra, Ireland, & Hitt, 2000). They are likely to be struggling for survival and vulnerable to the liability of newness (J. Freeman, Carroll, & Hannan, 1983), and they may not have sufficient resources to pursue organizational ambidexterity. Yantze River Delta in China is regarded as the powerhouse of China, accounting for 23% of China's total GDP yet with 10% of China's population and 2% of land (Jing, 2007). It is nonetheless

a complex environment given the volatility in domestic and international demands due to the financial crisis in 2008-2009. Therefore, this region fulfills what characterized as a munificent yet complex market that increases managerial discretion (J. Li & Tang, 2010).

Sample Size Requirement for the Main Study

While scholars have provided general principles on determining required sample size to detect mediation effects (Fritz & MacKinnon, 2007), detecting multilevel mediation is among the most complex puzzles in this area, and no satisfactory answers have been provided (Thoemmes, MacKinnon, & Reiser, 2010). Therefore, I rely on the Cohen (1988, 1992)'s classic guidelines to determine required sample size for this study. According to Cohen, the minimum sample size is a function of (1) the hypothesis testing method, (2) the significance criterion (α), (3) statistical power ($1-\beta$) and (4) effect size (f^2). In addition, the power of testing a multilevel model requires the consideration of the number of groups, group size, and intraclass correlation (Browne & Draper, 2000).

I use Optimal Design 2.0 (Spybrook, Raudenbush, Congdon, & Martinez, 2009) to conduct a sample size determination analysis. Specifically, the number of organizations is determined by the following formula:

Where J is the number of organizations;

λ is the non-centrality parameter, which is strongly correlated with power;

ρ is the intraclass correlation;

n is the average number of individuals within a company;

R^2 is the effect size.

Following the generally accepted standard, the significance criterion α is set at 0.05, and statistical power (1- β) is set at 0.80. Bliese (2000) suggests that ρ typically is between 0.05 and 0.20; for a conservative test, I set ρ as 0.05. I estimate the average number of middle managers within a company to be 10 assuming that a company has five TMT members and each TMT member has two middle managers on average. Because this is the first attempt to examine the impact of CEO humility on the top management team and organizational climate, I use previous studies on CEO and firm outcomes as a reference point to determine the effect size level (Cohen, 1988). According to Cohen (1992), effect sizes for multiple correlations of 0.02, 0.15 and 0.35 are described as small, medium and large respectively. In previous studies, R^2 ranges from 0.27 (Ling et al., 2008) to 0.59 (Waldman et al., 2001), implying a moderate to strong effect size. The estimated number of organizations is 40 if the effect size is set at 0.35, and 63 if the effect size is set at 0.27.

Data Collection

I approached 387 CEOs with invitation letters, emails and mobile phone messages, among which 237 were from alumni of a prestigious business school in Shanghai, and 150 were from personal referrals. Out of the 387 contacted, 257 organizations didn't respond due to invalid addresses or emails or wrong mobile numbers. Among the remaining 130 organizations, 63 (48.4%) were within the sampling frame and agreed to participate, 30 organizations (23.1%) were screened out because they did not fulfill the requirement of company location, ownership,

age or size, and 37 organizations (28.5%) were not available due to busy schedule during the data collection period.

Data were collected from company archival data and surveys sent to CEOs, the TMT members and middle managers (MMs). CEOs who agreed to participate in the research project appointed a company representative as the contact person. This representative provided company information and CEO demographics. He or she also provided a list of TMT members identified by the CEO and middle managers (MMs) who directly report to either the TMT members or the CEO. When a TMT member or the CEO had more than three subordinate MMs, the organizations randomly provided the names of three MMs.

I then prepared the surveys to the CEO, the TMTs and MMs based on this name list. To increase response rate and ensure response quality, I incorporated Dillman's (2000) Tailored Design Method and Bednar and Westphal's (2006) suggestions specific to surveying top managers. Both of them applied social exchange theory and their advices had successfully increased response rates. Particularly, each survey appeared short and easy to answer. Instead of mailing out the surveys, I visited every company, asked the CEO to fill out his / her survey in the office, and administered the surveys to both the TMTs and MMs in a separate conference room. The purpose of the research project was carefully explained, emphasizing that it was a non-profit scientific research project, and organizations did not have access to the individual responses. Participants' contributions were acknowledged both verbally and with a small gift of business card holders.

Although the surveys were with identification numbers in order to match the TMT members with their subordinating MMs for job performance measure, confidentiality was emphasized during the introduction, and all surveys were directly returned to me rather than to the staff in the company. Two weeks after the company visit, the TMT members were required to fill in a second survey measuring their subordinates' job performance. I left the Time 2 survey packages and questionnaire administration instructions to the company representative during my company visit. These survey packages included self-sealed envelopes to guarantee confidentiality. Reminder phone calls and emails were made to increase response rate for the time 2 survey.

Altogether, I administered 63 CEO surveys, 436 TMT surveys and 672 MM surveys. In these 63 organizations, 62 CEOs, 328 TMTs and 645 MMs completed the surveys, constituting response rates of 98.4%, 94.8% and 96.0%, respectively. Among the 645 MMs, 587 (90%) directly report to TMT members, and 504 of them (85.9%) received job performance evaluation from the TMT members who completed the Time 2 survey.

Sample Description

The sample consisted of 63 organizations from 14 cities in the Yangtze River Delta in China. The organizations represented the following industries: 41.3% from manufacturing, 33.3% from service and 25.4% from trading. The average company size was 823 employees ($SD = 1,927$), and the average company age was 12.03 ($SD = 9.21$).

On average, the CEOs were 41.7 years old ($SD = 9.21$), had 19.3 years of work experience ($SD = 7.17$), 9.79 years of tenure in the company ($SD = 5.02$), and 7.99 years as a CEO ($SD = 4.14$). Eighty nine percent of them were male, and 97% have some college education or above. Among these CEOs, 71% were founders, 18% were promoted internally, and 11% came from external recruitment.

The TMT sample consisted of 328 executives. Organizations had an average of 5 TMT members, ranging from 1 to 13. On average, these executives were 39.3 years old ($SD = 8.61$), had 17.5 years of work experience ($SD = 8.61$), had been working as an executive for 4.46 years ($SD = 3.95$), and had been working with the CEO for 6.11 years ($SD = 4.96$). 70% of them were male, and 86% had college or above education.

The MM sample had 645 participants, including 61% male and 83% with college or above education. On average, these MMs were 35.2 years old ($SD = 7.90$), had a working tenure of 12.9 years ($SD = 8.58$) and a company tenure of 6.13 years ($SD = 6.02$).

Overall, each company had an average of 5 TMT members ($SD = 2.98$) and 10 MMs ($SD = 4.62$).

Data Quality

To ensure data quality, I followed Tabachnick and Fidell (2007)'s data cleaning procedures. First, three research assistants examined the raw data input. They checked all surveys to make sure that the survey ID matched the original

name list, and all surveys had been inputted. They also proofread 30% of the original surveys and found that the raw data file had less than 0.1% mis-input.

I then used SPSS FREQUENCIES to examine whether all values were within range, whether means and standard deviation were plausible, and whether the kurtosis and skewness statistics suggests non-normal distribution. For values that were not within range, I checked the data and corrected the mis-input. All values, except number of employees exhibited a normal distribution. The non-normal distribution of number of employees was common in organizational studies, and natural log transformation was used to adjust it.

Missing data were less than 5%. For the TMT sample, the t-tests comparing participants with and without missing data showed that they did not differ in age ($t=1.31, p> 0.10$), gender ($t=0.87, p> 0.10$) or education ($t=1.07, p> 0.10$). For the MM sample, participants with and without missing data did not differ in gender ($t=0.55, p> 0.10$), but participants without missing data were younger ($M = 34.80, t=3.51, p< 0.01$) and with higher education ($M= 3.37, t=2.29, p< 0.05$) than those with missing data (average age = 38.20 and average education = 3.11). To control for selection bias, MMs' age, gender and education were included as control variables in the research model testing. Missing data were excluded when calculating correlations using pairwise deletion, and MPLUS used a missing data estimation procedure by default before running CFA or SEM models.

Measures

Except for CEO humility, TMT integration and managerial ambidexterity, all measures were adapted from existing scales that were developed and validated in the U.S. and had been used previously in China. The CEO humility measure was developed and validated in Study 1. TMT integration and managerial ambidexterity measures, not used in China before, were translated to Chinese and back-translated to English to ensure that the Chinese scales included equivalent content (Brislin, 1970). The two scales were pilot-tested using a sample of 157 MBA students and showed acceptable internal consistency ($\alpha = 0.84, 0.73, 0.86,$ and 0.89 . for the four dimensions of TMT integration, and $\alpha = 0.84$ and 0.77 for the two dimensions of managerial ambidexterity). Unless otherwise noted, all measures were scored using a 6-point Likert-type scale ranging from 1 = strongly disagree or almost never to 6 = strongly agree or always.

Organization level constructs such as CEO humility, CEO empowering leadership, TMT integration and empowering organizational climate required aggregation from individual responses, and the detailed process will be described in the data aggregation section.

CEO humility. Before the administration of the main study, Owens (2010) revised his original measure of humility and added three items. Therefore, the measure used in the main study includes the 18 items developed and validated in Study 1 and 3 new items (two for the self-awareness dimension and one for the self-improvement dimension) by Owens to reflect the most updated measure of humility. The measure included six dimensions: self-awareness (5 items), other appreciation (3 items), self-improvement (3 items), low self-focus (3 items), self-

transcendent pursuit (3 items), and transcendent self-concept (4 items). The TMT members described the CEOs' humility, and they were asked the extent to which they agreed with the statement that described the CEO. A sample item is "my CEO seeks to objectively appraise his/her weaknesses or limitations".

CEO Empowering leadership behaviors. The sixteen-item scale was a combination of an existing scale and four additional items specifically designed for executives. The existing scale was from Ahearne, Mathieu and Rapp (2005) and its Chinese version was used in Zhang and Bartol (2010). It included four dimensions: (1) enhancing the meaningfulness of work, (2) fostering participation in decision making, (3) expressing confidence in high performance, and (4) providing autonomy from bureaucratic constraints. A sample item from the Ahearne et al. measure was "the CEO helps me understand how my objectives and goals relate to that of the company". Four items were added to the fourth dimension of autonomy, and they were "The CEO treats me as a peer rather than a subordinate", "the CEO trusts my dedication to the company", "the CEO gives me a high level of fiscal autonomy", and "the CEO gives me a lot of freedom to experiment with new ideas". TMT members evaluated the CEO's empowering leadership behaviors.

Top management team integration. TMT integration was a multi-dimensional measure, and its 13 items came from three sources: six items measuring collaborative behaviors and joint decision making came from the TMT behavioral integration measure by Simsek et al. (2005); instead of using the items in Simsek et al. (2005), I developed three new items to measure information

sharing because the original items were mainly about the results of decision making (e.g., quality of ideas and solutions) rather than the informational sharing behaviors per se; four items from Pearce and Ensley (2004) were used to measure shared vision. Sample items include “when a team member is busy, other team members often volunteer to help manage the workload”, and “communication among team members are timely and accurate”. The TMT members responded to these items.

Empowering organizational climate. Empowering organizational climate was measured using the 30-item Empowerment Barometer by Blanchard, Carlos and Randolph (1995), the Chinese version of which had been used in Chen, Lam and Zhong (2007). The construct included three dimensions: information sharing, autonomy through boundaries, and team responsibility and accountability. Sample items include “we receive the information needed to help us understand the performance of our organization” and “we share a common vision for our organization at all levels of the organization”. MMs provided empowering organizational climate scores.

TMT heterogeneity. TMT heterogeneity in age, gender, work tenure, company tenure, tenure as an executive, and tenure with the CEO, functional background and educational level were calculated based on the demographics reported by the TMT members. Based on standard approaches (Harrison & Klein, 2007), heterogeneity in continuous variables such as age, tenure and educational level were calculated as the coefficient of variation; whereas heterogeneity in categorical variables such as functional background and gender was calculated

using Blau's index (Tsui & Gutek, 1999). While scholars had created composite index to measure the overall TMT heterogeneity (e.g., Boone et al., 2004), combining different measures of heterogeneity has several disadvantages (Harrison & Klein, 2007). The different measures may cancel out one another and result in non-findings (Pitcher & Smith, 2001); the combination is equivalent to combining apples and oranges and thus generate indefinite interpretations (Lau & Murnighan, 1998); averaging different measures of heterogeneity makes an inappropriate assumption that each component is equal in terms of its relationship with a predictor or outcome (Edwards, 2001), and it masks up the differences among teams with the same overall heterogeneity score (Harrison & Klein, 2007). Therefore, I decided to use each TMT heterogeneity separately without creating an overall heterogeneity measure.

I only included TMT company tenure heterogeneity in the analysis because it was the only category of heterogeneity that had significant correlation with CEO humility.

Managerial ambidexterity. Middle managers' ambidextrous activities were measured using their self-reports on a 14-item scale by Mom et al. (2009). It includes two dimensions: exploratory activities and exploitative activities. Sample items include "searching for new possibilities with respect to products, services, processes, or markets" and "activities of which a lot of experience has been accumulated by yourself". In this study, the Cronbach's alphas were 0.88 and 0.89 for the two dimensions. There are several approaches measuring ambidexterity (Lubatkin et al., 2006; Mom et al., 2009), and I applied two most acceptable

approaches: (1) the additive approach (the average of exploitation and exploration, equivalent to a latent variable indicated by the 14 items), and (2) the multiplicative approach (the product of exploitation and exploration).

Managerial job performance. The measure was adapted from Tsui et al. (1997)'s scale of task performance and Oldham and Cummings (1996)'s 3-item scale of creativity performance. Both measures had been used in China previously and showed adequate internal consistency (Gong, Huang, & Farh, 2009; Song, Tsui, & Law, 2009). To increase response rate, I selectively included 6 items from Tsui et al.'s (1997) scale. Following Stanton et al (2002)'s advice in shortening scales, I selected items with the highest EFA factor loadings and passed professional judgment.

For task performance, the TMT members were asked to rate their middle managers' job performance in quality, efficiency, professional standards, ability, judgment and job knowledge using a 5-point Likert-type scale, with 1 being below average, 2 being somewhat below average, 3 being about average, 4 being somewhat above average and 5 being above average. Creativity performance measures both the originality and practicality of the employees' work (M. W. Morris & Leung, 2010). The TMT members were asked the extent to which they agreed with the following statements: "employee's work is creative", "employee's work is both original and practical", and "employee's work is both adaptive and practical". The statements were evaluated using a 5-point Likert-type scale with 1 being strongly disagree and 5 being strongly agree. The Cronbach's alphas were 0.90 for task performance and 0.87 for creativity performance.

Managers' power distance orientation. Managers' power distance orientation was measured using MMs' self-report. The 6-item scale came from Dorfman and Howell (1988), and it has been used in Farh et al. (2007) on Chinese employees. Sample items include "managers should make most decisions without consulting subordinates" and "managers should not delegate important tasks to employees". The Cronbach's alpha was 0.74.

Control Variables

Four sets of control variables were considered: CEO characteristics, TMT characteristics, middle manager characteristics, and organizational characteristics. To allow for sufficient power to detect the main effects, I included only the control variables that showed significant correlations with the key variables in the research model.

CEO characteristics. Potential CEO characteristics to be controlled were CEOs' demographics, including age, gender, work tenure, company tenure, tenure as a CEO, education level and founder status. These variables have been found to be related to strategic decision making or organizational performance (Buchholtz & Ribbens, 1994; Hambrick & Fukutomi, 1991; Jayaraman, Khorana, Nelling, & Covin, 2000). Among these demographic variables, only CEO education level had significant correlations with the variables in the research model; therefore, I only included CEO education level as a control variable to CEO humility.

Because humility is still a new construct in the literature, it is important to demonstrate whether it provides predictive power above and beyond existing relevant constructs. I thus also ask CEOs to assess their narcissism using 14-

items from NPI-16 developed by Ames et al. (2006). Sample items were “I am an extraordinary person” and “I am apt to show off if I get the chance”. The Cronbach’s alpha was 0.86.

Top management team characteristics. Two team characteristics were considered; TMT size and average team tenure. Team size is expected to be negatively related with team integration (Haleblian & Finkelstein, 1993a). In contrast, average team tenure is expected to be positively related to integration due to better coordination and communication in teams with enhanced longevities (Smith et al., 1994).

Managers’ characteristics. Individual managers’ characteristics include age, gender, work tenure, company tenure, tenure with the top management team member, education level, and job satisfaction were controlled in predicting managers’ job performance.

Job satisfaction was measured by the 5-item job satisfaction index (Brayfield & Rothe, 1951). Sample items included “I find real enjoyment in my work” and “I feel fairly satisfied with my present job”. Middle managers evaluated their own job satisfaction, and the Cronbach’s alpha was 0.89.

Organizational characteristics. Organization age, size and industry sector were included to control for organizational differences in evaluating managers’ job performance. Organizational size was measured by the natural log of number of employees. I did not use the other commonly-used indicator of firm size, the natural log of firm sales, because it was hard to verify the financial data of private organizations in China. Industry sector was coded as a dummy variable with 1 =

manufacturing and 0 = service. Such dichotomization of industry had been used in existing research (Gomez-Mejia, Larraza-Kintana, & Makri, 2003) and helped to reduce indicators included in the subsequent analyses.

Analytical Procedures

Data aggregation. CEO humility, CEO empowering leadership, TMT integration and empowering organizational climate were measured at the individual level and need to be aggregated to the organizational level, therefore, I assessed ICC (1), ICC(2), and Rwg(j) to ensure that the data demonstrates acceptable between-group difference and within-group agreement (K. J. Klein et al., 2000).

Multilevel Structural equation modeling (MSEM). The main research model of eight hypotheses involved a cross-level mediation framework. Specifically, Hypotheses 1 through 4 proposed company level linkages between CEO humility and TMT characteristics and organizational climate. Hypotheses 5 through 7 proposed cross-level linkages between TMT characteristics and organizational climate at the company level and middle managers' ambidextrous activities at the individual level. Hypothesis 8 proposed a linkage between middle managers' ambidextrous activities and job performance. MSEM with latent variables allows simultaneous investigation of multiple paths at different levels and account for measurement errors, and thus provides more reliable and accurate estimates of the hypothesized relationships (Bollen, 1989). Traditional uni-level regression analysis either disaggregates company level data to the individual level or aggregates the individual data to the company level. Disaggregation was

inappropriate because the data were clustered within organizations and thus violated the independence assumption; neither was aggregation appropriate because it discards meaningful individual level variance and neglects within-company variability in the nested data. Although hierarchical linear modeling is often applied in cross-level analysis, it is less than optimal because it cannot control for random measurement errors, explain between-company variance of individual outcomes, or model sophisticated paths among company level data (G. Chen, Bliese, & Mathieu, 2005; Preacher, Zhang, & Zyphur, In press). The MPLUS 5.21 program was used to perform MSEM analyses.

Hierarchical linear modeling. I used hierarchical linear modeling (HLM) to test Hypotheses 9, which involves a cross-level moderation effect on empowering organizational climate at Level 2 and middle managers' ambidextrous activities at Level 1.

Results

Data aggregation and sample split. Between-group differences and within-group agreement need to be established before the aggregation of the individual data for CEO humility, CEO empowering leadership, TMT integration and empowering organizational climate. As shown in Table 9, all four F statistics for ANOVA results were significant (1.89, 1.50, 1.43 and 2.43 respectively, $p < 0.05$), indicating significant between-group differences. The median Rwg(j)s for the four variables were 0.98, 0.93, 0.95, and 0.97, showing high within-group agreement. ICC(1)s for these four variables were 0.14, 0.08, 0.07, and 0.12 respectively, all of which were within the common range of 0.05 – 0.25 found in

Bliese (2000). Therefore, the aggregation of data was justified by significant F statistics for ANOVA, high rwg(j) (James, Demaree, & Wolf, 1984), and non-zero ICC(1) (Bliese, 2000). ICC(2)s were 0.47, 0.33, 0.30 and 0.59, which were lower than the standard of 0.70 as suggested by Klein et al. (2000). Although ICC(2) was a bit low, it should not prevent aggregation when the other indices evidenced adequate within-group agreement and between-group differences (G. L. Chen & Bliese, 2002; Kozlowski & Hattrup, 1992). However, low ICC(2)s might cause lower power in detecting relationships involving Level 2 variables (Bliese, 2000; Liao, Toya, Lepak, & Hong, 2009).

Insert Table 9 about here

Because CEO humility, CEO empowering leadership and TMT integration were all measured by TMT members, I split the sample of TMT members into half to reduce common method variance (Ostroff, Kinicki, & Clark, 2002; Podsakoff et al., 2003). I used split sample 1 to measure CEO humility, used split sample 2 to measure CEO empowering leadership, and the full TMT sample to measure TMT integration.

Data description. Table 10 shows the means, standard deviations, correlations, and internal consistency reliabilities for this study. Mathieu and Taylor (2007) emphasized that the measures should be aligned with their level of analyses; therefore, all variables were presented at their appropriate level. For example, CEO humility and CEO empowering leadership were aggregated from split sample TMT data, TMT integration was aggregated from entire TMT

sample, empowering organizational climate was aggregated from the entire middle manager sample, and middle manager ambidextrous activities and job performance remained at the individual level. As a result, correlations between Level 1 variables were calculated based on the individual-level, middle manager data, correlations between Level 2 variables were calculated based on the aggregated organizational level data, and correlations between Level 1 and Level 2 variables were calculated based on the individual level middle manager data and the disaggregated organizational level data.

Insert Table 10 about here

Measurement model. Multi-level confirmatory factor analysis was conducted to examine the convergent and discriminant validity of the seven key variables in the research model. Specifically, CEO humility, CEO empowering leadership, TMT integration, TMT company tenure heterogeneity and empowering organizational climate were specified at the organization level, and middle manager ambidexterity and job performance were specified at the individual level but were allowed to vary between organizations. To allow higher power to detect organization level relationships, I constructed two or three item parcels for each latent variable based on exploratory factor analysis results (L. J. Williams & O'Boyle, 2008). Item parcels are indicators of latent variables. Creating item parcels by combining subsets of items can reduce the number of indicators that are necessary to represent latent variables. Because TMT company tenure heterogeneity was operationalized with a single indicator, Williams and

O'Boyle (2008)'s formula was used to define this indicator's unique variance, that is, 1 minus reliability multiplied by indicator variance.

As shown in Table 11, the baseline seven-factor multilevel measurement model fit the data well: $\chi^2 (107) = 167.50, p < 0.05$; CFI = 0.98; TLI = 0.97; RMSEA = 0.03. All factor loadings were significant with the mean standardized loading = 0.86, supporting good convergent validity (Anderson & Gerbing, 1988). The baseline model was then compared with several alternative models to evaluate discriminant validity of the variables. The first alternative model was a one-factor model which specified a factor combining variables at the organization level and another factor combining variables at the individual level. This model assumed that there was no discriminant validity of any variable. The model had poor fit to the data: $\chi^2 (128) = 1,530.09, p < 0.05$; CFI = 0.52; TLI = 0.43; RMSEA = 0.13. Because cross-level data violates the assumption of variance independence (L. Hu, Bentler, & Kano, 1992), Satorra-Bentler chi-square test was used to test the model difference (Satorra & Bentler, 1988). The $\chi^2_{diff} (21) = 1,222.21, p < 0.05$, indicating that the baseline model fit the data better and the factors were distinct from one another. Following Hom et al. (2009), I ran three six-factor models by combining constructs that were most strongly correlated in Table 8, because the factors with high correlation were likely to be difficult to differentiate from each other. All three models fit worse than did the baseline model. Specifically, Model 3 combined CEO humility and TMT integration, and the $\chi^2_{diff} (6) = 70.06, p < 0.05$; Model 4 combined CEO empowering leadership and TMT integration, and the $\chi^2_{diff} (6) = 13.79, p < 0.05$; and Model 5 combined

empowering organizational climate and TMT integration, and the $\chi^2_{\text{diff}}(6) = p < 0.05$. Comparisons with these alternative models supported the discriminant validity of the key variables.

Insert Table 11 about here

Estimation of common method variance. Among the seven key variables in the research model, the CEO humility, CEO empowering leadership and TMT integration came from the self-reports of TMT members, and empowering organizational climate and middle manager ambidexterity were from MMs; therefore, there was a potential risk that the results might be biased by common method variance even though I used the split sample approach on some of the measures. I adopted Williams et al. (1989)'s procedures to evaluate the influence of common method variance. Accordingly, four models were estimated: (1) a null model with only one factor, (2) a trait model with trait factors only, (3) a method model with method factors only, and (4) a bi-factor model with both trait and method factors. The influence of common method variance was evident when (1) Model 3 had better fit than Model 1, and (2) Model 4 had better fit than Model 2. Both CEO humility and CEO empowering leadership partially share the same sample of TMT integration, I thus created two method factors accounting for these two sources of common method variance; in addition, I created the third method factor taking into consideration both empowering organizational climate and middle manager ambidexterity came from middle manger self-reports.

As shown in Table 12, the method model (Model 3) fitted the data better than the one factor null model (Model 1) ($\chi^2_{diff}(17) = 2,536.11, p < 0.05$), indicating the existence of common method variance. However, the impact was not substantial because the bi-factor model with both trait and method factors (Model 4) had worse fit than the trait model (Model 2): $\chi^2_{diff}(9) = 34.56, p < 0.05$. Given that the common method variance was not a material concern in this study, I didn't include method factors in the subsequent hypothesis testing procedures.

Insert Table 12 about here

Hypothesis testing. Hypotheses 1 through 8 were tested using MSEM. I first examined the model using the additive managerial ambidexterity. The multilevel mediation model fit the data well: $\chi^2(336) = 646.19, p < 0.05$; CFI = 0.95; TLI = 0.93; RMSEA = 0.043. As shown in Figure 3, CEO humility was related with CEO empowering leadership ($\beta = 0.54, p < 0.01$) and TMT company tenure heterogeneity ($\beta = 0.51, p < 0.01$) after controlling for CEO narcissism and CEO education, supporting Hypothesis 1 and 4 that humble CEOs are more likely exhibit empowering leadership behaviors and build a heterogeneous top management team. The paths from CEO empowering leadership to TMT integration ($\beta = 0.72, p < 0.01$) and empowering organizational climate ($\beta = 0.44, p < 0.01$) were significantly positive, controlling for TMT size and TMT average team tenure; therefore, both Hypothesis 2 and 3 were supported, indicating that

humble CEOs, through their empowering leadership behaviors, were more likely to build an integrated TMT and cultivate an empowering organizational climate.

Among the paths from TMT integration ($\beta = 0.15, p > 0.05$), empowering organizational climate ($\beta = 0.70, p < 0.01$) and TMT company tenure heterogeneity ($\beta = -0.02, p > 0.05$) to middle manager ambidexterity, only empowering organizational climate had a significant and positive link. Therefore, Hypothesis 6 was supported, that is, empowering organizational climate was positively related with middle manager ambidexterity. Neither TMT integration nor TMT company tenure heterogeneity was significantly associated with middle manager ambidexterity, failing to support Hypothesis 5 and 7.

To test Hypothesis 8 (the relationship between middle manager ambidexterity and job performance), I controlled for company age, size and industry sector as well as middle manager's age, gender, education, work tenure, company tenure, tenure with the TMT member and job satisfaction. Because the relationship between middle manager ambidexterity and job performance involve individual middle managers embedded in organizations, MSEM tested the relationship in a way similar to WABA II (Yammarino, 1998). Specifically, MSEM tested whether the relationship between managerial ambidexterity and job performance existed between organizations or within organizations. The results indicated that the relationship existed between organizations, that is, company average middle manager ambidexterity was positively related with company average managerial job performance ($\beta = 0.55, p < 0.01$). However, the

relationship was not homologous: within an organization, managerial ambidexterity did not correlate with job performance ($\beta = -0.10, p > 0.05$).

Insert Figure 3 about here

Hypothesis 9 proposed a cross-level interaction effect of middle managers' power distance orientation on the relationship between organizational empowering climate and middle manager ambidexterity. I used Hierarchical Linear Modeling to test this hypothesis. To reduce multicollinearity, power distance orientation was group-mean centered, and empowering organizational climate was grand-mean centered (Enders & Tofighi, 2007). I included middle manager's age, gender, education and company tenure at Level 1 and industry, company age, size TMT integration and TMT company tenure heterogeneity at Level 2 as control variables. The models were set as below:

Level 1 Model (individual level)

$$\text{Managerial ambidexterity} = \beta_0 + \beta_1(\text{power distance orientation}) + \beta_2(\text{age}) + \beta_3(\text{gender}) + \beta_4(\text{education}) + \beta_5(\text{company tenure}) + \tau$$

Level 2 Model (company level)

$$\beta_0 = \gamma_{00} + \gamma_{01}(\text{industry}) + \gamma_{02}(\text{company age}) + \gamma_{03}(\text{company size}) + \gamma_{04}(\text{empowering organizational climate}) + \gamma_{05}(\text{TMT integration}) + \gamma_{06}(\text{TMT company tenure heterogeneity})$$

$$\beta_1 = \gamma_{10} + \gamma_{11}(\text{empowering organizational climate}).$$

I examined the regression coefficients of power distance orientation, empowering organizational climate and the interaction term between the two. As

shown in Table 13, while the regression coefficient for empowering organizational climate was significant ($\gamma_{04} = 0.37, p < 0.01$), neither coefficients for power distance orientation ($\gamma_{10} = -0.04, p > 0.05$) nor the interaction term ($\gamma_{11} = -0.05, p > 0.05$) were significant. Therefore, Hypothesis 9 was not supported: middle manager power distance orientation did not moderate the relationship between empowering organizational climate and middle manager ambidexterity.

Insert Table 13 about here

In summary, five out of nine hypotheses received strong support. That is, CEO humility was positively related to CEO empowering leadership, CEO empowering leadership was positively related to TMT integration and empowering organizational climate, and empowering organizational climate was positively related to middle manager ambidexterity. The results did not support Hypotheses 5 and 7 which proposed TMT integration and TMT company tenure heterogeneity were positively related to middle manager ambidexterity. The interaction effect of power distance orientation (Hypothesis 9) also did not receive support. Hypothesis 8 proposed the relationship between managerial ambidexterity and job performance, and it was supported at the between-organization model but not at the within-organization model.

Robustness check. To check whether the results were robust, I tested several alternative models and the model fit indices were summarized in Table 14. In Model 1, I replaced the additive measure of middle manager ambidexterity with the multiplicative measure. As mentioned earlier, there are two well-

accepted ways of measuring ambidexterity, the additive way and the multiplicative way. In the previous analysis, I used the additive measure of managerial ambidexterity. To substantiate the robustness of the results, I replaced additive managerial ambidexterity with multiplicative managerial ambidexterity and reran the MSEM model. The model fit the data similarly well: $\chi^2(266) = 479.86, p < 0.05$; CFI = 0.95; TLI = 0.93; RMSEA = 0.04. All factor loadings were significant and substantial in size, and the path coefficients exhibited identical patterns as the one using additive managerial ambidexterity. Specifically, CEO humility was significantly related with CEO empowering leadership ($\beta = 0.55, p < 0.01$) and TMT company tenure heterogeneity ($\beta = 0.45, p < 0.01$). Paths from CEO empowering leadership to TMT integration ($\beta = 0.72, p < 0.01$) and empowering organizational climate ($\beta = 0.44, p < 0.01$) were significant; empowering organizational climate was found to be significantly related with middle manager ambidexterity ($\beta = 0.76, p < 0.01$), which had a significantly positive correlation with job performance at the organization level ($\beta = 0.55, p < 0.01$). The paths linking middle manager ambidexterity with TMT integration ($\beta = 0.06, p > 0.05$) and TMT company tenure heterogeneity ($\beta = 0.05, p > 0.05$) were not significant, and the same result was found for the middle manager ambidexterity and job performance link at the individual level ($\beta = -0.08, p > 0.05$). Therefore, the model was robust to both the additive measure and multiplicative measure of middle manager ambidexterity.

In Model 2, I replaced CEO empowering leadership with CEO transformational leadership to check whether empowering leadership is better

than an alternative leadership variable in the research model. The model fit the data well: $\chi^2(336) = 694.83, p < 0.05$; CFI = 0.94; TLI = 0.93; RMSEA = 0.04. However, the fit indices of CFI and TLI were marginally lower than the model with empowering leadership (CFI = 0.95, TLI = 0.94). In addition, TMT integration's relationship with transformational leadership ($\beta = 0.48, p < 0.05$) was less strong than with empowering leadership ($\beta = 0.72, p < 0.05$). However, the paths linking CEO humility ($\beta = 0.57, p < 0.05$) and empowering climate ($\beta = 0.45, p < 0.05$) with transformational leadership were stronger than empowering leadership ($\beta = 0.54$ and 0.44 respectively, $p < 0.05$).

In Model 3 and 4, I attempted to examine whether using the six dimension scores as indicators of CEO humility instead of using three parcels could generate similarly good model results. Because adding three more indicators requires a larger sample size for statistical power, I removed all the control variables in order to reduce paths estimated in the model, so that the current sample size can have sufficient statistical power to detect effects. Therefore, I first ran Model 3 which was based on the baseline Model removing control variables. The model fit the data well: $\chi^2(119) = 187.73, p < 0.05$; CFI = 0.98; TLI = 0.97; RMSEA = 0.03. The pattern of the paths was identical to the one with control variables. Model 4 was based on Model 3 but I replaced the three humility parcels with the six dimension scores as indicators of CEO humility. Again, the model fit the data well: $\chi^2(170) = 258.54, p < 0.05$; CFI = 0.97; TLI = 0.96; RMSEA = 0.03. The fact that these two models fit the data well further supported that the results of baseline research model were robust.

Insert Table 14 about here

Post hoc analysis to identify the best fitting model. Considering the complexity of the original research model, I conducted post hoc analysis to identify the best fitting model to the data. While it is not required for testing the hypotheses laid out in the dissertation proposal, this procedure will help to find the most parsimonious model.

In searching of the best fitting model, I first removed all control variables that were insignificant. Then I tested whether empowering leadership was indeed a mediator between CEO humility and TMT integration / empowering organizational climate. Following Baron and Kenny (1986)'s procedures, besides the model with mediation paths only, I tested two types of alternative models: (1) a model with only the direct paths from CEO humility to TMT integration / empowering organizational climate, (2) a model with both the direct paths and mediation paths. As shown in Table 15, although CEO humility had direct effects to TMT integration and empowering organizational climate in Model 1 and 3, these direct effects were eliminated when the mediation path of CEO empowering leadership was added (see Model 2 and 4). Therefore, CEO empowering leadership fully mediated the relationship between CEO humility and TMT integration / empowering organizational climate.

Next, since empowering organizational climate was the only mediator that had a significant relationship with managerial ambidexterity, I tested whether TMT integration and TMT heterogeneity indirectly predict managerial

ambidexterity via empowering organizational climate. Model 5 added the path from TMT integration to empowering organizational climate and removed the one from TMT integration to managerial ambidexterity. The results indicated that TMT integration had an indirect effect on managerial ambidexterity via empowering organizational climate ($\beta = 0.40, p < 0.05$). At the same time, the path from empowering leadership to empowering organizational climate became insignificant. Therefore, Model 5 also found that TMT integration fully mediated the relationship between CEO empowering leadership and empowering organizational climate. In Model 6, I ran a similar test on TMT company tenure heterogeneity but didn't find a significant relationship with empowering organizational climate. I then removed TMT company tenure heterogeneity from the model because it didn't predict middle manager ambidexterity. Model 7 represented the best fitting model. Figure 4 has the path coefficients.

Insert Figure 4 about here

Besides finding the best fitting model, it is also important to examine whether CEO humility and CEO empowering leadership have a direct effect on managerial ambidexterity. I first removed job performance from the model, and model 7b represented the best fitting model without job performance. Model 8a and Model 8b were created to examine whether CEO empowering leadership had a direct effect on managerial ambidexterity. In Model 8a, I add a direct path from CEO empowering leadership to managerial ambidexterity based on Model 2. Model 8a generated similar fit indices ($\chi^2(60) = 85.15, p < 0.05$; CFI = 0.99; TLI

= 0.98; RMSEA = 0.03) like Model 7b, but the additional path was insignificant ($\beta = 0.14, p > 0.05$), suggesting that the partial mediation model was less than optimal. In Model 8b, I removed the path from empowering climate to managerial ambidexterity based on Model 8a. The model generated good fit indices ($\chi^2 (58) = 85.40, p < 0.05$; CFI = 0.98; TLI = 0.98; RMSEA = 0.03), and empowering leadership had a significant, positive effect on managerial ambidexterity ($\beta = 0.50, p < 0.05$). Taking Model 8a and 8b into consideration, CEO empowering leadership had a positive direct impact on managerial ambidexterity, which was fully mediated by TMT integration and empowering climate. Model 7b thus remained the best fitting model.

I also examined whether CEO humility had a direct effect on managerial ambidexterity. In Model 9a, I added the path from CEO humility to managerial ambidexterity based on Model 7b. Model 9a generated good fit indices ($\chi^2 (60) = 80.25, p < 0.05$; CFI = 0.99; TLI = 0.98; RMSEA = 0.02). However, the additional path was insignificant ($\beta = -0.19, p > 0.05$), suggesting that the partial mediation model was less than optimal. In Model 9b, I removed the path from empowering climate to managerial ambidexterity based on Model 9a. The model generated good fit indices ($\chi^2 (58) = 89.02, p < 0.05$; CFI = 0.98; TLI = 0.97; RMSEA = 0.03), and the path from CEO humility to managerial ambidexterity remained insignificant ($\beta = -0.33, p > 0.05$). Taking Model 9a and Model 9b into consideration, CEO humility had an indirect effect on managerial ambidexterity via empowering leadership, TMT integration and empowering climate. Model 7b remained the best fitting model.

Given that the besting fitting model included a relatively long sequence, and the majority of the data were cross-sectional, I tested two alternative models with reverse causality. In Model 10a, I switched the causal sequence of CEO empowering leadership and TMT integration. Model 10a was not only lacking theoretical support but also generated worse fit indices ($\chi^2 (61) = 88.81, p < 0.05$; CFI = 0.98; TLI = 0.98; RMSEA = 0.03). In Model 10b, I switched the causal sequence of TMT integration and empowering climate. Similar to Model 10a, Model 10b was lacking theoretical support, and it generated worse fit indices ($\chi^2 (61) = 121.32, p < 0.05$; CFI = 0.96; TLI = 0.95; RMSEA = 0.04). Therefore, the causal chain in Model 7b was supported.

My last analysis in searching for the best fitting model involved replacing the 6-dimension extended humility measure with Owens' 3-dimension measure. While Model 11 had better fit indices than Model 7b ($\chi^2 (61) = 77.06, p < 0.05$; CFI = 0.99; TLI = 0.99; RMSEA = 0.02), the path between CEO humility and CEO empowering leadership became insignificant ($\beta = 0.29, p > 0.05$), suggesting that Owen's measure had less predictive power than the six-dimension extended humility measure. Therefore, Model 7b was substantiated as the best fitting model.

Insert Table 15 about here

Chapter 7

DISCUSSION

My dissertation attempts to contribute to the strategic leadership literature by (1) studying humility, an underexplored personal characteristic of CEOs, and (2) unraveling the mechanisms through which humble CEOs may predict the ambidextrous behaviors and job performance of middle managers. To meet this end, I used Baumeister's (1998) self-concept framework to integrate the current literature on humility and proposed an initial seven-facet humility construct. I then drew from literatures on leadership behaviors, top management team (TMT) heterogeneity and dynamics, and organizational climate to study the mechanisms regarding how humble CEOs relate to middle manager behaviors and performance. The scale development and validation study as well as the main study largely supported the validity of humility as a multi-facet construct. The main study provided moderate support to the research model. This chapter is organized into four sections to discuss the implications of these findings. The first section discusses the findings and implications about CEO humility as a novel construct introduced to the strategic leadership literature. The second section discusses the findings and implications regarding the mechanisms that transmit the impact of CEO humility to middle managers. The third section discusses the implications of other findings, and the fourth covers the contributions, limitations, managerial implications, and conclusions.

CEO Humility

By integrating the literature on humility and studying the relationship between CEO humility and leadership behaviors, TMT and middle managers, my dissertation introduces an underexplored CEO characteristic to the strategic leadership literature. Humility demonstrates strong construct validity through rigorous scale development, validation and main model tests. The main study of CEOs in SMEs in China provides considerable support for the hypotheses, including evidence that CEO humility was positively related to empowering leadership and TMT company tenure heterogeneity, empowering leadership mediates the relationship between CEO humility and TMT integration / empowering organizational climate, and empowering organizational climate had a positive relationship to middle manager ambidexterity. In short, I find that humble CEOs are associated with an enabling context constituting an integrated TMT and ambidextrous middle managers through their empowering leadership behaviors.

Numerous scholars and the practitioners assume that an excellent CEO is “a genius with a thousand *helpers*” (J. C. Collins, 2001: 45). For an organization with such a CEO, organizational performance highly, if not solely, relies on the CEO. Perhaps it is this assumption that guides scholars’ relentless search of the direct relationships, rather than the mediation mechanisms, between CEO characteristics and strategic actions (e.g., Chatterjee & Hambrick, 2007; Hayward, Shepherd, & Griffin, 2006; Malmendier & Tate, 2008; Resick, Whitman, Weingarden, & Hiller, 2009). This assumption may also explain why the news media tends to pay more attention to CEOs as the primary driving force of their

organizations, e.g., Steve Jobs or Lee Iacocca. In spite of the evidence showing that charisma and narcissism are not correlated with organizational performance (Agle et al., 2006; Chatterjee & Hambrick, 2007), these CEOs are still well received by the board of directors, which is illustrated by a study showing a positive relationship between CEO charisma and compensation (Tosi, Misangyi, Fanelli, Waldman, & Yammarino, 2004). In sharp contrast, humble CEOs have received much less credit. Even Collins (2001) found that great organizations were led by humble CEOs, some scholars suspected that these CEOs might be suitable to stable industries, implying that narcissistic leaders might be more suitable for organizations in highly dynamic environment (Chatterjee & Hambrick, 2007; Maccoby, 2003).

Interestingly, my dissertation provides support to an alternative model of excellent CEOs, which I coin as “*genius with a thousand geniuses*”. In line with Drucker (1992), talented CEOs with humble orientation may be mundane, unromantic and boring, but they manage to develop different tiers of capable leaders, enabling them to work in concert to achieve organizational goals. The “*genius with a thousand geniuses*” model presents an attractive alternative for the board of directors when evaluating CEO candidates. By establishing a management team rather than solely relying on the CEO, the organization may be adaptive and sustainable because the adaptive capability is embedded in the organization and all managers become sensors to environmental changes. Thus, replacing the CEO does not create a disaster when sufficient capable successors are present.

My dissertation also supports and extends previous findings on CEO values. Humble CEOs with their self-transcendent pursuit and transcendent self-concept, are more likely to embrace self-transcendent values (Schwartz & Zanna, 1992). Therefore, the findings showing humble CEOs promote middle manager ambidextrous behaviors and job performance are consistent with Fu et al. (2009) that transformational leadership from CEOs with self-transcendent values were more strongly related with employee commitment. As an extension of their findings, I identified and tested the mediating mechanisms regarding how such values influence middle managers.

My dissertation found strong support regarding the relationship between humble CEOs and middle manager behaviors and performance, and several intriguing questions can be considered for future research directions. First, scholars can dig deeper to the question regarding whether humble CEOs are more suitable for stable environment whereas the narcissistic ones fit better into for dynamic environment. Skeptics may argue that dynamic environment requires CEOs to articulate bold vision (Maccoby, 2003) and make strategic decisions swiftly (Eisenhardt, 1989). Humble CEOs who know their limitations may be constrained and cannot come up with a bold vision, and their participative decision making style may make their response to changes too slow. Scholars advocating humility suggest that a dynamic environment requires more humility from the CEO side because no one can solely rely on themselves to fully sense or interpret such frequent and complex changes (Ancona et al., 2007). Furthermore, although narcissistic leaders appear more like a savior for organizations in crisis,

one may wonder why organizations are in crisis in the first place. Perhaps it is the dangerously risky strategic moves or complacency with the status quo that causes narcissistic leaders to fail (J. Collins, 2009). But maybe humble CEOs, by knowing their own limits, constantly learning, and appreciating others, are more capable to lead an organization to achieve sustained growth by avoiding making extremely risky decisions or sticking with the status quo. By testing the effectiveness of humble CEOs in different environment conditions, scholars can extend the current study to the relationships between strategic leader humility and strategic decisions, for example, organizational ambidexterity orientation (March, 1991; Raisch et al., 2009).

Second, scholars can further explore the generalizability of leader humility, particularly in the Western context. This study tested the impact of CEO humility in a Chinese context, which embeds the virtue of humility in its cultural tradition. The culture implicit theory from the GLOBE study (R. J. House et al., 2004) suggests that effective leader characteristics are consistent with the society norms. Will humble leadership be less effective in cultures with high individualism and high masculinity? Collins acknowledged that there were very few humble leaders in U.S., but he didn't preclude that humble leaders would be less effective in such a context. Future studies with a Western sample will help resolve this puzzle.

Third, I encourage scholars to consider a more ambitious research program to integrate the current literature on strategic leader characteristics. The self-concept approach in theorizing humility may provide one way for integration.

Pfeffer and Fong cautioned that the current emphasis on “differentiat[ing] one’s research and inventing new terms” ignores “the interrelated nature of organizational science” (2005: 372), and encouraged the field to have more theoretical integration. Developing a self-concept based definition of humility shows that several cognitive, motivational and behavioral aspects originating from the same self-concept can hold together to provide stronger prediction power. With the cumulated knowledge on strategic values (Fu et al., 2009; Sully de Luque et al., 2008), personality traits (Chatterjee & Hambrick, 2007; J. Li & Tang, 2010; S. J. Peterson, Walumbwa, Byron, & Myrowitz, 2009), and leadership behaviors (Colbert, Kristof-Broiath, Bradley, & Barrick, 2008; Ling et al., 2008), scholars may consider using a self-concept framework to integrate some interrelated characteristics.

Ashforth et al. (2008) suggest that the formation of identification includes the central layer of core identity, middle layer of beliefs, values and goals, and the outer layer of behaviors. Scholars may consider creating prototypical strategic leader identities. For example, broadening Crocker and colleagues’ motivational frameworks for the self (Crocker et al., 2008; Crocker & Niiya, 2008), we can propose two contrasting identities: ecocentric leader identity and egocentric leader identity. For ecocentric leaders who see themselves part of a bigger whole, they believe that they are interdependent, others are as valuable as they are, and satisfying others’ needs are in line with satisfying their own needs. Therefore, ecocentric leaders are more likely to have ecosystem motivation, collectivistic cultural orientation and self-transcendent values, and they are more likely to

exhibit humble behaviors, learning goal orientation and pursue eudaimonic well-being. In contrast, egocentric leaders see themselves as the center of the whole, they believe that they are independent, everyone should only pursue their own wellbeing, and satisfying others' needs is only necessary when it helps in terms of satisfying the egocentric person's own needs. Therefore, egocentric leaders are more likely to have egosystem motivation, individualistic cultural orientation and self-enhancement values, and they are more likely to exhibit narcissistic behaviors, performance goal orientation and pursue hedonic well-being. In this way, we integrate findings on motivation (Crocker et al., 2008; Crocker & Niiya, 2008), values (R. E. Freeman, 2010; Fu et al., 2009; Hofstede, 1984; Sully de Luque et al., 2008), and behaviors (Rosenthal & Pittinsky, 2006) to a holistic framework.

The prototypical identities may also shed light on some of the essential questions in the strategy literature. For example, the fundamental debate in the corporate governance literature is whether managers are agents or stewards, and accordingly that corporations should have more control mechanisms for agentic managers and have more empowerment mechanisms for stewards (Sundaramurthy & Lewis, 2003). Maybe the debate should be less about which assumptions are more close to human nature but rather what types of managers are more likely to be stewards and what types are more likely to be agents. The prototypical identity may suggest that ecocentric leaders are more likely to be stewards and egocentric leaders are more likely to be agents. For another example, the stakeholder theory suggests that managers valuing stakeholders are

more likely to engage in environmental commitment (Henriques & Sadorsky, 1999) and social performance (Agle, Mitchell, & Sonnenfeld, 1999), as compared to those who place a primary value on shareholders; however, with the exception of the work of Sully de Luque et al. (2008), little research has addressed which types of managers are more likely to value stakeholders. Again, the prototypical strategic leader identity helps to address this issue by suggesting ecocentric leaders are more likely to value stakeholders, as compared to egocentric leaders.

Mechanisms Linking CEO Humility and Middle Managers

Scholars from both the strategic management and organizational behavior fields have advocated the importance of studying the role of CEOs as context creators and the processes regarding how CEOs influence lower level employees to achieve organizational goals (Boal & Hooijberg, 2000; Finkelstein et al., 2009; Yukl, 2008). To examine the association between CEO humility and middle manager behaviors and performance, I focus on four mechanisms: CEO empowering leadership, TMT heterogeneity, TMT integration, and empowering organizational climate. The MSEM results showed some encouraging support to the indirect effect of CEO humility on middle managers. My dissertation proposed and examined several possible mechanisms regarding how CEOs are related to middle managers. The results revealed three important mechanisms. First, CEO empowering leadership fully mediated the relationship between CEO humility and TMT integration. Second, TMT integration fully mediated the relationship between CEO empowering leadership and empowering organizational climate. Third, although TMT integration did not have a direct

relationship with middle manager ambidexterity, it had an indirect effect via empowering organizational climate. Four, empowering organizational climate was the only significant path linked to middle manager ambidexterity. I will discuss the implications of these findings below.

CEO empowering leadership as full mediator provides strong support to Avolio's idea that behaviors were "an interpersonal tool that allows others to reflect on and interpret a person's traits, affect and cognition" (working paper: 6). However, several studies found it fruitful to go beyond leadership behaviors and study the antecedents or moderators of behaviors. For example, Resick et al. (2009) found that core self-evaluations were strongly, positively related to transformational leadership but narcissism was not. Fu et al. (2009) found that the congruence between CEO values and transformational leadership had a stronger correlation with middle manager organizational commitment. My research adds to that stream of research by showing humility to be a predictor of CEO empowering leadership behaviors.

The mediation effect of TMT integration on the relationship between CEO empowering leadership and empowering organizational climate is interesting in terms of extending our understanding about leadership across levels. Although there are very few empirical studies about how executives influence distant employees, scholars have proposed several mechanisms, among which include a cascading effect, bypassing effect and symbolic management (Waldman & Yammarino, 1999). The cascading effect suggests that TMT members, who are the CEO's direct reports, role model after the CEO's leadership behaviors, and

TMT members, in turn, become role models to their direct reports, who do not directly interact with the CEO. This effect has gained empirical support in earlier studies (Bass et al., 1987; Yang et al., 2010).

The bypassing effect addresses how CEOs may skip levels and directly interact with lower level employees (Yammarino, 1994), e.g., the middle managers. Symbolic management would suggest that CEOs' leadership behaviors convey symbolic meanings that shape the perception of the middle managers who do not directly interact with the CEO (Pfeffer, 1981). Both the bypassing effect and the symbolic management mechanism suggest that CEO behaviors have a direct impact on middle managers' collective perceptions. While the direct effect has been found in middle manager – frontline employee relationships (Yang et al., 2010), the results in my dissertation didn't show support for this argument. That is, the positive relationship between CEO empowering leadership and empowering organizational climate became insignificant when TMT integration was included as a mediator. This finding suggests a re-evaluation of the existence of the by-pass effect. Ashforth & Rogers (2011) among others argue that the proximal context have a stronger influence on employees than the distal context; therefore, the relationship between a CEO and middle managers may rely on more proximal and concrete mediators (Silva & Sias, 2010), such as leadership cascades, CEOs' impact via the TMT members. Alternatively, Yang et al. (2010) suggested that lower level subordinates' collective value played a moderating role in the by-passing effect, so perhaps some unidentified moderators are in play that cancel out the direct effect of CEOs on middle managers.

The finding of TMT integration as a mediator between leadership and climate is unexpected. Ostroff, Kinicki and Tamkins (2003) summarized four sources of climate formation: 1) organizational structure and practices, 2) homogeneous employees as a result of the attraction-selection-attribution process (B. Schneider & Reichers, 1983), 3) leadership, and 4) group interactions (Naumann & Bennett, 2000). Although TMT integration, as a mediator, can be categorized as a factor involving leaders, it is the interactions among the executives rather than their leadership behaviors per se, thus representing a factor shaping climate formation that was not identified in Ostroff et al. (2003). Griffin and Mathieu (1997) argued that the interactions among group leaders provided social cues for lower level employees to interpret what were appropriate behavioral norms in an organization. In line with their argument, an integrated top management team that engages in collaborative behaviors, information sharing, joint decision making and form a shared vision, may signal that the appropriate behaviors in the organization are not political fights, buck passing or blaming, but rather collaboration and mutual support among departments. Such behavioral norms are consistent with empowering organizational climate that emphasize information sharing, autonomy and team accountability, which explain the association between TMT integration and empowering organizational climate. With a larger sample size, my study supported Griffin and Mathieu (1997)'s proposition regarding the correlation between higher level group processes and lower level employees' collective perceptions. Although less studied in the literature, interdepartmental coordination is essential for overall organizational

effectiveness (Nauta, De Dreu, & Van der Vaart, 2002; Thompson, 1967), TMT integration may serve as an important contextual factor influencing interdepartmental coordination.

The finding that empowering organizational climate was the only significant mechanism through which CEOs linked to individual middle managers is worth noting. It is consistent with previous findings regarding organizational climate influence individual employees' behavior (G. Chen et al., 2007), and it also provides support to the earlier theoretical arguments regarding top executives as sources of organizational climate (Ostroff et al., 2003). Most importantly, this finding points out organizational climate as an essential mechanism transiting the top-down effect. However, the impact of TMT on middle managers still should be not underestimated. For example, in this study, TMT members had an indirect effect via empowering organizational climate.

While CEOs' relationship with middle managers is important for strategic implementation and organizational effectiveness, we need a comprehensive framework to guide our examination of the various mechanisms. Some perspectives have looked separately at the issue. For example, some leadership perspective have proposed that CEO leadership behaviors are the main mechanism, and Waldman and Yammarino (1999) and the current study falls into this realm. The ASA perspective proposed that CEOs could influence middle managers through influencing selection criteria (R. House et al., 1995; B. Schneider, 1987). Perhaps by far, the most integrative perspective is the organizational culture perspective. In his *Organizational Culture and Leadership*

book (Schein, 2010), Schein proposed six primary and six secondary mechanisms through which leaders embed and transmit culture. Specifically, leaders influence employees and cultivate organizational culture by the following mechanism: (1) showing what they consistently pay attention to, measure and control on a regular basis, (2) how they react to critical incidents and organizational crises, (3) how they allocate resources, rewards and status, (4) deliberate role modeling, teaching and coaching, and (5) how they recruit, select, promote and excommunicate.

Leaders can also rely on secondary mechanisms such as organizational design and structure, systems and procedures, rites and rituals, design of physical space, facades and buildings, storytelling and formal statements of organizational philosophy, creeds and charters. Although Schein proposed these mechanisms mainly based on his experience and observation, the mechanisms seem to be quite comprehensive and nicely integrate the leadership, ASA and sensemaking perspectives. Future studies can provide more rigorous theoretical rationale and conduct systematic empirical tests to these mechanisms.

Implications of Other Findings

Several hypotheses didn't find support in the results. First, CEO humility was positively related to only one TMT heterogeneity, - company tenure heterogeneity, which was not related with middle manager ambidexterity. Second, middle manager ambidexterity was related to middle manager job performance in the organization aggregated model, but not in the within-organization model (at the individual level). Third, power distance orientation did not moderate the

relationship between empowering organizational climate and middle manager ambidexterity. The implications of these findings are discussed below.

I hypothesized that humble CEOs create heterogeneous TMTs in order to have a cognitively diverse team for different ideas(Finkelstein et al., 2009). However, CEO humility was positively related to only TMT company tenure heterogeneity and not other demographic heterogeneities. Perhaps company tenure heterogeneity is the most appropriate measure to capture such cognitive diversity in the sample that I studied, the SMEs passing the survival stage in China. Based on what I learned in my interviews, these organizations, with more resources, larger size and experiences, usually face the challenge of establishing a more sophisticated management system within the organization and pursuing a more aggressive expansion strategy. The incumbent TMT members who were hired when the company was small and new may lack skills and knowledge to transform the organization to a formal and structured company. Although such a talent gap can be solved in the long run by training and development from within, the TMT members may even lack such leadership development experiences. Humble CEOs thus have to consider bringing in new team members who have experiences in larger organizations or experiences that are suitable for their future business development. At the same time, they also endeavor to maintain the relative stability of the team in order to provide a smoother transition to the newer system. As a result, humble CEOs create TMTs with both long and short tenure members, resulting in company tenure heterogeneity.

The finding that TMT heterogeneity had no relationship with middle manager ambidexterity may suggest the existence of potential moderators. Past research on TMT heterogeneity has been inconsistent, and scholars increasingly agree that contextual factors should be taken into consideration (Cannella et al., 2008; Carpenter et al., 2004). Carpenter et al. (2004) have proposed that TMT processes, CEO's compensation and leadership can be considered as potential moderators. Particular to the sample in this study, it is likely that CEOs who create a team with high heterogeneity in company tenure may also create a faultline among the TMT (Lau & Murnighan, 1998), which offset the potential benefits of heterogeneity. Specifically, if the new TMT members are hired from bigger and more prestigious organizations, they are usually associated with higher pay, different management style, and perhaps higher education. The alignment of heterogeneity constitutes a faultline that potentially create more conflicts (Lau & Murnighan, 1998) and off-set the positive effect of heterogeneity.

The positive relationship between middle manager ambidexterity and job performance was only supported in the organization aggregated model but not the within organization model. This finding suggests that organizations with high average middle manager ambidexterity also have managers with high average job performance. It implies that middle manager ambidexterity may have a strategic importance for organizations pursuing ambidextrous orientation although it may not be helpful for individual middle managers to improve individual job performance. Although scholars have started to acknowledge that ambidextrous organizations need ambidextrous managers (Mom et al., 2009; O'Reilly &

Tushman, 2008), future research should examine the strategic implications of managerial ambidexterity, e.g., its relationship with organizational ambidexterity.

I didn't find support for the moderating effect of power distance orientation on the relationship between empowering organizational climate and middle manager ambidexterity. Previous studies have consistently found that power distance orientation moderates the impact of empowerment (Farh et al., 2007; Hui et al., 2004; Kirkman et al., 2009). Perhaps, the non-finding in my study is due to the small sample size at the organization level (N=63 compared with N=169 in Farh et al., and N=174 in Kirkman et al.), reducing the capability to detect a significant effect. Another possibility is that there is not much variance in power distance among employees in high tech industries (mean = 2.62, $SD=0.75$).

Contributions, Limitations, Managerial Implications

Contributions. By introducing an underexplored CEO characteristic, - humility, and proposing and testing a model explaining the mechanisms regarding how CEOs influence middle managers, the current study contributes to the strategic leadership literature in several ways. First, although humility has started to gain attention in the positive psychology and organizational behavior literature, little is known regarding humble CEOs in relation to organizational phenomena. By integrating the literature on humility and developing a six-dimension humility construct, this study demonstrates the associations of CEO humility with organizational processes: they exhibit empowering leadership behaviors, they

have top management teams that are both heterogeneous and integrative, and the climate in their organizations is empowering.

Second, studying the interface of CEOs and middle managers addresses the long-existing query among scholars regarding how CEOs affect organizational effectiveness. Scholars attempt to address this query by studying the CEO-TMT interface (Ling et al., 2008), but there is a dearth of knowledge about CEOs' role as context creators that enable middle managers to perform. In my study, I tested several possible mechanisms, including organizational climate, TMT dynamics, and TMT composition. The results highlight the importance of empowering organizational climate, reject the existence of a direct effect of CEOs in middle managers, and suggest more examination regarding how CEOs influence middle managers via the TMT members.

Limitations. Despite of the interesting findings, this study has several limitations. First, the study found a relatively long causal chain linking CEO humility and middle manager ambidexterity, but the majority of the data were cross-sectional. The research design was a result of trade-off between obtaining complete data vs. longitudinal data. Collecting data from multiple time points can increase the capability of testing causal relationship at the expense of respondent attrition over time. Scholars have warned that missing data in group level properties can result in 20% over-or underestimation on within-group agreement (D. A. Newman & Sin, 2009) and attenuate the relationship between group-level variables (Timmerman, 2005). Therefore, I collected the majority of data at Time

1. Still, the causal chain was partially justified by both the theoretical arguments laid out in the theory section and the post-hoc analyses on reverse causality.

Second, since both CEO humility and CEO empowering leadership were measured by the TMT members, the correlation between these two could be due to attribution bias or consistency motif (Podsakoff et al., 2003). However, as shown in the scale development and validation study, humility is susceptible to social desirability bias and thus not appropriate for the use of a self-report approach. In the main study, I managed to mitigate the threat of common method bias by splitting the TMT sample to measure CEO humility and empowering leadership from different TMT members. In addition, I also statistically tested the method variance in the main model and found that the impact of method variance was not a concern.

Third, the sample came mainly from small-to-medium sized organizations located in a Chinese region, and its findings may not be applicable to large organizations. The constraint in having such organizations in the sample is to increase the likelihood of having CEOs with sufficient managerial discretion, so that I can detect the impact of CEOs on middle managers as a group. However, departments and divisions in large organizations are less interdependent, and the organizational climate can be fragmented (Kuenzi & Schminke, 2009). In addition, the CEOs may have more leeway to structurally separate the organization so that different units can engage in different activities (O'Reilly & Tushman, 2008). Thus, CEOs may rely on different mechanisms to integrate the fragmented and differentiated parts to achieve holistic organizational goals.

Managerial implications. The current study evidenced that CEO humility had positive impacts on TMT integration and empowering organizational climate, both of which enable TMT and MMs to work toward organizational goals. The solid finding on CEO humility has important implications for organizations. Scholars have cautioned of candidates who act like CEOs (Bennis & O'Toole, 2000). However, when organizations face big uncertainty or crises, the vision-hungry board of directors may still be attracted by candidates who can express eloquently and act boldly. My study provides an alternative for the board of directors to consider, the humble ones who are capable of cultivating and enabling context so that all managers become sensors to the external environment. It is likely a better choice for organizations facing highly dynamic environment. Further, organizations may consider providing humility training in their executives. With a group of humble executives, the organization may be more likely to create a learning culture, strengthen the empowering climate, and potentially achieve organizational ambidexterity.

Conclusion

Once upon a time, there was a famous doctor who was able to save people from serious disease; however, he said that his brother who received little attention was actually a better doctor because he saw minor symptoms and cured the patients before they became very ill. This story tells us that sometimes we are so eager to find savior-like CEOs that we ignore the true heroes, who are able to prevent crises and maintain sustainable organizational growth by building an enabling context that a thousand geniuses work together. I propose that humble

CEOs may be such leaders. By showing the mechanisms regarding how humble CEOs influence middle managers' behaviors and job performance, my dissertation serves as a small step to unveil the mystery of such leaders. I hope this study can stimulate more interest in these leaders, and more scholars can help build a comprehensive understanding of CEO-middle manager linkages.

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Table 1*Commonality and Differences of Various TMT Process Constructs*

	Collaborative behavior	Information sharing	Joint decision making	Agreement
Behavioral integration (Hambrick, 1994; Simsek et al. 2005)	When a team member is busy, other team members often volunteer to help manage the workload; team members are willing to help each other complete jobs and meet deadlines; team members are flexible about switching responsibilities to make things easier for each other	Teams are effective in terms of quantity of ideas, quality of solutions, level of creativity and innovation	Team members usually let each other know when their actions affect another team member's work; team members usually discuss their expectations of each other	team members have a clear understanding of the joint problems and needs of other team members
Social integration (Smith et al., 1994; O'Reilly et al., 1989; Jansen et al., 2008)	Team members are always ready to cooperate and help each other; Team members get along together very well		Everyone's input is incorporated into most important company decisions	When final decisions are reached, it is common for at least one member to be unhappy with the decision (Reversed)
Strategic consensus (Dess&Origer, 1987)				Agreement of all parties to a group decisions

Table 2***Factor Loadings From Principal Axis Factoring with Oblimin Rotation of 14******Humility Items (N = 276)***

Item	Cronbach's Alpha	Factor Loadings		
		Hum L	Hum P	Hum C
<u>Low self focus(Hum L)</u>	0.81			
1. I do not like to draw attention to myself.		0.83		
2. I keep a low profile.		0.80		
3. I am not interested in obtaining fame for myself.		0.69		
<u>Self transcendent pursuit (Hum P)</u>	0.75			
4. I find more satisfaction from spiritual things than from wealth and possessions.			0.42	
5. I have a sense of personal mission in life.			0.61	
6. I devote my time to the betterment of the society.			0.85	
7. My work makes the world a better place.			0.75	
<u>Transcendent self concept (Hum C)</u>	0.77			
8. I believe that all people are a small part of the universe.				0.42
9. I believe that I am not the most important compared with others in the world.				0.59
10. I believe that no one in the world is perfect, and I am no better or worse than others.				0.58
11. I believe that there is something in the world greater than I am.				0.73
12. I believe that there is something in the world more important than myself.				0.61
13. I believe that I belong to a greater whole.				0.53
14. I believe that not everything is under my control.				0.53

Note. Loadings less than .40 are omitted.

Table 3***Summary of the Humility Measure Refinement Process based on self-report data***

Model	χ^2	<i>df</i>	RMSEA	CFI	TLI
Baseline Model <i>6-factor model with 21 items</i>	397.76	194	0.06	0.90	0.89
Model 1 <i>6 factor model eliminating 1 item</i>	352.25	174	0.06	0.91	0.90
Model 2 <i>6 factor model eliminating 2 items</i>	281.92	155	0.05	0.93	0.92
Model 3 <i>6 factor model eliminating three items</i>	225.97	137	0.05	0.95	0.94
Model 4 <i>6 factor model eliminating 4 items</i>	182.53	194	0.04	0.96	0.95
Model 5 <i>2nd order model based on Model 5</i>	212.54	129	0.05	0.95	0.94

Note. RMSEA = root-mean-square error of approximation. CFI = comparative fit index. TLI = Tucker-Lewis Index.

Table 4***Standardized Factor Loadings and Composite Reliability for Each Dimension******of the Humility Measure after Refinement Process***

Items	CR^a	Other report Loading	Self- report Loading
<u>Self Awareness</u>	0.71		
1. actively seek feedback even if it is critical.		0.61	0.39
2. acknowledge when others have more knowledge and skills than him/her.		0.71	0.79
3. admits when he/she doesn't know how to do something.		0.71	0.74
<u>Other appreciation</u>	0.74		
4. takes notice of others' strengths.		0.82	0.75
5. often compliment others on their strengths.		0.80	0.81
6. shows appreciation for the contributions of others.		0.67	0.67
<u>Self-improvement</u>	0.81		
7. is willing to learn from others.		0.81	0.71
8. is open to the ideas and advice of others.		0.74	0.66
<u>Low self-focus</u>	0.81		
9. does not like to draw attention to himself / herself.		0.81	0.82
10. keeps a low profile.		0.70	0.76
11. is not interested in obtaining fame for himself / herself.		0.68	0.59
<u>Self-transcendent pursuit</u>	0.80		
12. has a sense of personal mission in life.		0.57	0.56
13. devotes his / her time to the betterment of the society.		0.86	0.91
14. his / her work makes the world a better place.		0.81	0.62
<u>Transcendent self-concept</u>	0.66		
15. believes that all people are a small part of the universe.		0.50	0.76
16. believes that no one in the world is perfect, and he / she is no better or worse than others.		0.46	0.55
17. believes that there is something in the world greater than himself / herself.		0.73	0.76
18. believes that not everything is under his / her control.		0.59	0.70

Note. ^a CR = composite reliability based on other-report data

Table 5***Results of Confirmatory Factor Analysis for Humility Dimensionality Based on Other-Report Data^a***

Model	χ^2	<i>df</i>	RMSEA	CFI	TLI	$\Delta\chi^2$	Δdf
Model 0 (Baseline model) – 6 factor model	182.53**	120	0.04	0.96	0.95		
Model 1: one factor model	789.99**	135	0.13	0.60	0.55	607.46**	15
Model 2: 5- factor model combining self-awareness and other-appreciation	277.38**	125	0.07	0.91	0.89	94.85**	5
Model 3: 5- factor model combining self-awareness and self-improvement	217.66**	125	0.05	0.94	0.93	35.13**	5
Model 4: 5- factor model combining self-awareness and low self-focus	416.36**	125	0.09	0.82	0.78	233.83**	5
Model 5: 5- factor model combining self-awareness and self-transcendent pursuit	388.29**	125	0.09	0.84	0.80	205.76**	5
Model 6: 5- factor model combining self-awareness and transcendent self-concept	250.81**	125	0.06	0.92	0.91	68.28**	5

Model 7: 5 factor model combining other-appreciation and self-improvement	216.25**	125	0.05	0.94	0.93	33.72**	5
Model 8: 5 factor model combining other-appreciation and low self-focus	393.10**	125	0.09	0.84	0.80	210.57**	5
Model 9: 5 factor model combining other-appreciation and self-transcendent pursuit	348.87**	125	0.08	0.86	0.83	166.34**	5
Model 10: 5 factor model combining other-appreciation and transcendent self-concept	340.81**	125	0.08	0.87	0.84	158.28**	5
Model 11: 5 factor model combining self-improvement and low self-focus	390.73**	125	0.09	0.84	0.80	208.2**	5
Model 12: 5 factor model combining self-improvement and self-transcendent pursuit	352.17**	125	0.08	0.86	0.83	169.64**	5
Model 13: 5 factor model combining self-improvement and transcendent self- concept	261.12**	125	0.06	0.92	0.90	78.59**	5
Model 14: 5 factor model combining low self-focus and self-transcendent pursuit	377.45**	125	0.08	0.85	0.81	194.92**	5

Model 15: 5 factor model combining low self-focus and transcendent self-concept	418.37**	125	0.09	0.82	0.78	235.84**	5
Model 16: 5 factor model combining self-transcendent pursuit and transcendent self-concept	394.71**	125	0.09	0.84	0.80	212.18**	5

Note. a. The measurement model was based on other-report measure. RMSEA = root-mean-square error of approximation. CFI = comparative fit index. TLI = Tucker-Lewis Index. $\Delta\chi^2$ = change in chi square between the alternative model and the baseline model. Δdf = change in degrees of freedom between the alternative model and the baseline model. **p < 0.01.

Table 6***Results of Confirmatory Factor Analysis for Humility Discriminant Validity******with Related Constructs based on other-report data***

Model	χ^2	SCDT
<u>Humility dimensions with modesty</u>		
Model 0 (Baseline model) - 7 factors	250.42	
Model 1 combining self-awareness and modesty	546.92	296.5**
Model 2 combining other appreciation and modesty	651.96	401.54**
Model 3 combining self-improvement and modesty	477.20	226.78**
Model 4 combining low self-focus and modesty	414.12	163.70**
Model 5 combining self-transcendent pursuit and modesty	465.19	214.77**
Model 6 combining transcendent self-concept and modesty	698.96	448.54**
<u>Humility dimensions with narcissism</u>		
Model 0 (Baseline model) - 7 factors	240.78	
Model 1 combining self-awareness and narcissism	530.32	289.54**
Model 2 combining other appreciation and narcissism	636.58	395.80**
Model 3 combining self-improvement and narcissism	470.10	229.32**
Model 4 combining low self-focus and narcissism	460.24	219.46**
Model 5 combining self-transcendent pursuit and narcissism	468.40	227.62**
Model 6 combining transcendent self-concept and narcissism	858.68	617.90**
<u>Humility dimensions with core self-evaluation</u>		
Model 0 (Baseline model) - 7 factors	250.25	
Model 1 combining self-awareness and core self-evaluation	517.26	267.01**
Model 2 combining other appreciation and core self-evaluation	593.94	343.69**
Model 3 combining self-improvement and core self-evaluation	435.97	185.72**
Model 4 combining low self-focus and core self-evaluation	499.83	249.58**
Model 5 combining self-transcendent pursuit and core self-evaluation	411.24	160.99**
Model 6 combining transcendent self-concept and core	724.00	473.75**

self-evaluation

Humility dimensions with learning goal orientation

Model 0 (Baseline model) - 7 factors	228.06	
Model 1 combining self-awareness and learning goal orientation	472.82	244.76**
Model 2 combining other appreciation and learning goal orientation	493.93	265.87**
Model 3 combining self-improvement and learning goal orientation	380.50	152.44**
Model 4 combining low self-focus and learning goal orientation	487.68	259.62**
Model 5 combining self-transcendent pursuit and learning goal orientation	405.69	177.63**
Model 6 combining transcendent self-concept and learning goal orientation	557.85	329.79**

Note. SCDT = Sequential chi-square difference test.

** $p < 0.01$.

Table 7*Correlations between Humility and Related Measures*

	Six-dimension expanded measure of humility		Owens' three-dimension measure of humility	
	Other report	Self-report ^a	Other report	Self-report ^a
Modesty	0.17*	0.18**	0.14*	-0.08
Narcissism	-0.08	-0.07	-0.09	0.10
Learning goal orientation	0.23**	0.22**	0.25**	0.31**
Core self-evaluation	0.16*	0.25**	0.16*	0.22**

Note. a The correlation between self-report humility and related measures partialled out the influence of social desirability to control for common method variance.

* $p < 0.05$; ** $p < 0.01$.

Table 8

Correlations among Humility Dimensions using Self Report and Other Report Approaches

	1	2	3	4	5	6	7	8	9	10	11	12
<u>Self-report</u>												
1. self awareness	(0.69)											
2. Self improvement	0.53**	(0.64)										
3. Other appreciation	0.46**	0.55**	(0.79)									
4. Low self focus	0.08	0.18**	0.19**	(0.77)								
5. Self transcendent pursuit	0.15*	0.23**	0.29**	0.19**	(0.75)							
6. Transcendent self concept	0.48**	0.43**	0.42**	0.13*	0.11	(0.79)						
<u>Other Report</u>												
7. self awareness	0.37**	0.30**	0.31**	0.16*	0.20**	0.29**	(0.71)					
8. Self improvement	0.30**	0.33**	0.31**	0.13*	0.20**	0.21**	0.63**	(0.74)				
9. Other appreciation	0.29**	0.25**	0.34**	0.10	0.17*	0.24**	0.66**	0.71**	(0.81)			
10. Low self focus	0.06	0.12	0.14*	0.25**	0.12	0.18**	0.44**	0.34**	0.39**	(0.80)		
11. Self transcendent pursuit	0.10	0.23**	0.14*	0.03	0.23**	0.04	0.30**	0.42**	0.39**	0.34**	(0.80)	
12. Transcendent self concept	0.21**	0.26**	0.21**	0.05	0.12	0.17*	0.50**	0.40**	0.45**	0.38**	.38**	(0.66)

Note. Numbers in the brackets are composite reliabilities for each dimension.

* p< 0.05; ** p<0.01.

Table 9

*Data Aggregation Analysis for CEO Humility, CEO Empowering Leadership,
TMT Integration and Empowering Organizational Climate*

	CEO humility	empowering leadership	TMT integration	empowering climate
ANOVA F statistics	1.89**	1.50*	1.43*	2.43**
Median Rwg(j)	0.98	0.97	0.96	0.97
Maximum Rwg(j)	0.99	0.99	1.00	0.99
MinimumRwg(j)	0.85	0.58	0.75	0.89
ICC(1)	0.14	0.08	0.07	0.12
ICC(2)	0.47	0.33	0.30	0.59

Note. * $p < 0.05$; ** $p < 0.01$.

Table 10

Means, Standard Deviations, and Intercorrelations of among Study Variables

	Mean	SD	N	1	2	3	4	5	6	7	8	9	10	11
1 manager age	35.21	7.90	623	1.00										
2 manager gender	1.61	0.49	635	0.16**	1.00									
3 manager education	3.33	0.92	630	-0.30**	0.01	1.00								
4 manager work tenure	12.96	8.58	628	0.92**	0.15**	-0.32**	1.00							
5 manager company tenure	6.13	6.02	631	0.50**	0.06	-0.36**	0.51**	1.00						
6 manager tenure with supervisor	3.84	3.48	621	0.34**	-0.03	-0.36	0.33**	0.51**	1.00					
7 Job satisfaction	4.36	0.89	617	0.17**	0.11**	-0.11*	0.18**	0.06	0.10*	1.00				
8 Company Industry	0.41	0.50	63	0.22**	0.11**	-0.18**	0.19**	0.20**	0.20*	0.02	1.00			
9 Company age	14.03	9.22	63	0.23**	0.13**	-0.23**	0.27**	0.46**	0.27*	0.07	0.41*	1.00		
10 Company size - ln(employee)	5.57	1.42	63	0.21**	0.14**	-0.08*	0.23**	0.27**	0.03	0.00	0.37*	0.35*	1.00	
11 CEO education	4.32	1.03	63	0.10*	-0.02	0.22**	0.07	-0.04	0.07	0.12*	-0.13	-0.05	-0.16	1.00
12 CEO Narcissism	3.56	0.68	62	-0.10*	-0.10*	0.06	-0.07	-0.04	0.03	-0.02	0.01	-0.14	-0.13	0.00
13 TMT size	5.49	2.98	63	0.06	0.04	-0.16*	0.04	0.11*	0.03	0.02	0.30*	0.18	0.47*	-0.01
14 TMT average team tenure	4.30	1.98	63	0.14**	0.05	-0.13**	0.16**	0.41**	0.21*	0.02	0.08	0.47*	0.29*	-0.01

15	TMT average company tenure	6.88	4.20	63	0.27**	0.09*	-0.21**	0.32**	0.59**	0.33* *	0.10*	0.19	0.76* *	0.40* *	-0.02
16	CEO humility	4.47	0.50	63	0.07	0.05	-0.07	0.07	0.06	0.14* *	0.06	-0.02	0.14	0.23	0.04
17	CEO empowering leadership	4.53	0.46	63	-0.03	-0.05	0.12**	0.01	0.02	0.01	0.02	-0.14	0.03	0.02	0.28*
18	Empowering organizational climate	4.03	0.36	63	0.05	-0.07	-0.05	0.04	0.04	0.18* *	0.21* *	0.00	0.03	-0.07	0.16
19	TMT integration	4.27	0.43	63	-0.03	-0.06	-0.03	0.01	0.09*	0.11*	0.08	-0.16	0.17	-0.06	0.25*
20	TMT company tenure heterogeneity ^a	1.95	1.21	59	-0.13**	0.01	0.13**	-0.13**	-0.09*	0.04	0.01	-0.27*	-0.06	-0.08	0.13
21	TMT education heterogeneity	5.02	2.13	53	-0.04	-0.02	0.32**	-0.04	-0.25**	-0.17*	0.04	-0.08	-0.27*	-0.24	0.12
22	Middle manager power distance orientation	2.62	0.75	641	0.23**	-0.01	-0.17	0.24**	0.18**	0.08	0.05	0.03	0.09*	0.04	0.05
23	Middle manager ambidexterity (additive)	3.96	.66	644	0.06	0.06	0.19**	0.08	-0.07	-0.07	0.26* *	-0.07	-0.02	0.00	0.08
24	Middle manager ambidexterity (multiplicative) ^b	15.8 2	5.33	644	0.07	0.07	0.17**	0.07	-0.07	-0.06	0.27* *	-0.06	-0.02	0.00	0.07
25	Middle manager job performance	3.56	0.69	504	-0.02	0.00	0.03	-0.01	0.04	0.12*	0.10*	0.07	0.04	0.03	0.05

	12	13	14	15	16	17	18	19	20	21	22	23	24
12 CEO Narcissism	1.00												
13 TMT size	-0.10	1.00											
14 TMT average team tenure	-0.03	0.15	1.00										
15 TMT average company tenure	-0.19	0.20	0.73*	1.00									
16 CEO humility	-0.24	0.06	0.31*	0.27*	(0.90)								
17 Ceo empowering leadership	0.11	0.00	0.24	0.12	0.31*	1.00							
18 Empowering organizational climate	0.02	0.07	0.07	0.10	0.31*	0.36*	1.00						
19 TMT integration	0.06	-0.09	0.24	0.13	0.41*	0.57*	0.47*	1.00					
20 TMT company tenure heterogeneity ^a	-0.14	-0.15	0.30*	0.26	0.32*	-0.01	0.09	-0.05	1.00				
21 TMT education heterogeneity	0.10	-0.22	-0.26	-0.32*	-0.14	0.13	0.19	0.13	0.05	1.00			
22 Middle manager power distance orientation	-0.11*	0.03	0.00	0.07	0.02	-0.06	-0.02	-0.02	-0.03	-0.01	1.00		
23 Middle managerl ambidexterity (additive)	0.09*	-0.04	0.00	0.00	0.01	0.14*	0.18*	0.09*	0.04	0.09*	-0.08	1.00	
24 Middle manager ambidexterity (multiplicative) ^b	0.09*	-0.03	0.02	0.00	0.01	0.14*	0.20*	0.10*	0.03	0.08	-0.07	0.99	1.00
25 Middle manager job performance	0.10*	0.03	0.10*	0.16*	0.03	0.10*	0.15*	0.14*	0.08	0.07	0.09*	-0.02	-0.01

Note. * $p < 0.05$. ** $p < 0.01$ (two-tailed).

Table 11***Multilevel Confirmatory Factor Analysis Tests of Discriminant Validity***

Model	χ^2 ^a	<i>df</i>	RMSEA	CFI	NFI	$\Delta\chi^2$ ^b	Δdf
1. 7-factor model: distinct factors for CEO humility, CEO empowering leadership, TMT integration, empowering organizational climate, TMT company tenure heterogeneity, middle manager ambidexterity and job performance.	167.50**	107	0.03	0.98	0.97	-	-
2. One factor model	1,530.09**	128	0.13	0.52	0.43	1,222.21**	21
3. 6-factor model: CEO humility and TMT integration combined	238.34**	113	0.04	0.96	0.94	70.06**	6
4. 6-factor model: CEO empowering leadership and TMT integration combined	183.78**	113	0.03	0.98	0.97	13.79**	6
5. 6-factor model: empowering organizational climate and TMT integration combined	272.65**	113	0.05	0.95	0.93	78.98**	6

Note. ^a χ^2 is Satorra-Bentler scaled χ^2 . ^b $\Delta\chi^2$ is Satorra-Bentler scaled adjusted χ^2 difference.
 ** p < 0.01.

Table 12***Multilevel Confirmatory Factor Analysis Tests of Common Method Variance***

Model	χ^2 ^a	df	$\Delta\chi^2$ ^b	Δdf
Model 1: One factor Null model	3042.82**	135	-	-
Model 2: Trait model	301.89**	103	-	-
Model 3: Method model	609.65**	118	Compared with model 1 2536.11**	17
Model 4: Bi-factor model with both trait and method factors	333.49**	94	Compared with Model 2 34.56**	9

Note. ^a χ^2 is Satorra-Bentler scaled χ^2 . ^b $\Delta\chi^2$ is Satorra-Bentler scaled adjusted χ^2 difference.

** p < 0.01.

Table 13***HLM Estimates Testing the Interaction Effect of Power Distance Orientation ^a***

	Coefficient Estimate	s.e.
Intercept	4.07**	0.41
Industry	-0.15*	0.07
Company Age	0.01	0.01
Company Size	0.02	0.02
TMT integration	-0.05	0.09
TMT Company Tenure Heterogeneity	-0.01	0.02
Empowering Organizational Climate (EOC)	0.41**	0.11
Power Distance Orientation (PDO)	-0.06	0.04
EOC * PDO	-0.12	0.12

Note. ^a the outcome variable is additive managerial ambidexterity.

*p< 0.05. ** p< 0.01.

Table 14***Model Fit Indices for the Baseline Research Model and Alternative Models^a***

Model	χ^2	<i>df</i>	RMSEA	CFI	NFI
Baseline Model: Model 0: research model using the additive measure of managerial ambidexterity	646.19**	336	0.04	0.95	0.93
Alternative Models:					
Model 1: Replacing the additive measure of managerial ambidexterity with the multiplicative measure	479.86**	266	0.04	0.95	0.94
Model 2: Replacing CEO empowering leadership with transformational leadership	694.83**	336	0.04	0.94	0.93
Model 3: Research model without control variables	187.73**	119	0.03	0.98	0.97
Model 4: CEO humility indicated by six dimensions instead of three parcels	258.54**	170	0.03	0.97	0.96

Note. ^a The measurement model was based on other-report measure. RMSEA = root-mean-square error of approximation. CFI = comparative fit index. TLI = Tucker-Lewis Index.

**p < 0.01.

Table 15

Model Fit Indices for Alternative Models in Search of the Best Fitting Model

Model	χ^2	<i>df</i>	RMSEA	CFI	NFI	Notes on paths
Model 0 Research model excluding control variables	187.73**	119	0.030	0.976	0.970	
Model 1 Add CEO humility – TMT integration path and remove empowering leadership – TMT integration path	207.85**	119	0.034	0.970	0.961	CEO humility – TMT integration path = 0.47**, but the model fit is less good compared with Model 0.
Model 2 Include both CEO humility – TMT integration path and CEO humility – empowering leadership – TMT integration path	187.67**	118	0.030	0.976	0.969	CEO humility – TMT integration path was no longer significant.
Model 3 Add CEO humility – empowering organizational climate path and remove empowering leadership – empowering climate path	192.90**	119	0.031	0.975	0.968	CEO humility – empowering organizational climate path = 0.29*, but the model fit is less good compared with Model 0.
Model 4 Include both CEO humility – TMT integration path and CEO humility – empowering leadership – TMT integration path	186.79**	118	0.030	0.976	0.970	CEO humility – empowering organizational climate path was no longer significant.
Model 5 Add TMT integration and empowering	186.30**	120	0.029	0.977	0.971	TMT integration – empowering organizational climate path = 0.40**

organizational climate path and remove TMT integration – Managerial ambidexterity path						However, empowering leadership - Empowering organizational climate path = 0.14 (n.s.)
Model 6 Add TMT heterogeneity and empowering organizational climate path and remove TMT heterogeneity – Managerial ambidexterity path	191.20**	120	0.030	0.976	0.969	TMT integration – empowering organizational climate path = 0.14 (n.s)
Model 7 Best fitting model	170.77**	107	0.030	0.978	0.972	All paths are significantly positive. Best fitting model.
Model 7b Best fitting model without job performance	85.42**	61	0.025	0.99	0.98	
Model 8a Based on Model 7b, add CEO empowering leadership -> managerial ambidexterity path	85.40*	58	0.03	0.98	0.98	CEO empowering leadership -> managerial ambidexterity path is insignificant.
Model 8b Based on Model 8a, remove empowering climate -> managerial ambidexterity path	85.15*	60	0.03	0.99	0.98	CEO empowering leadership -> managerial ambidexterity path is significant.
Model 9a Based on Model 7b, add CEO humility -> managerial ambidexterity path	80.25*	60	0.02	0.99	0.98	CEO humility -> managerial ambidexterity path is insignificant.
Model 9b Based on Model 9a, remove empowering	89.02*	58	0.03	0.98	0.98	CEO empowering leadership -> managerial ambidexterity path is

climate -> managerial ambidexterity path							insignificant.
Model 10a	88.81**	61	0.027	0.98	0.98		All paths are significantly positive.
Based on Model 7b, switch the sequence of empowering leadership and TMT integration							
Model 10b	121.32**	61	0.04	0.96	0.95		The TMT integration -> managerial ambidexterity path is insignificant.
Based on Model 7b, switch the sequence of TMT integration and empowering climate							
Model 11	77.06**	61	0.02	0.99	0.99		The CEO humility -> CEO empowering leadership path is insignificant.
Based on Model 7b, replace the 6-dimension extended humility measure with Owen's 3-dimension humility measure							

Note. RMSEA = root-mean-square error of approximation. CFI = comparative fit index. TLI = Tucker-Lewis Index.

**p < 0.01.

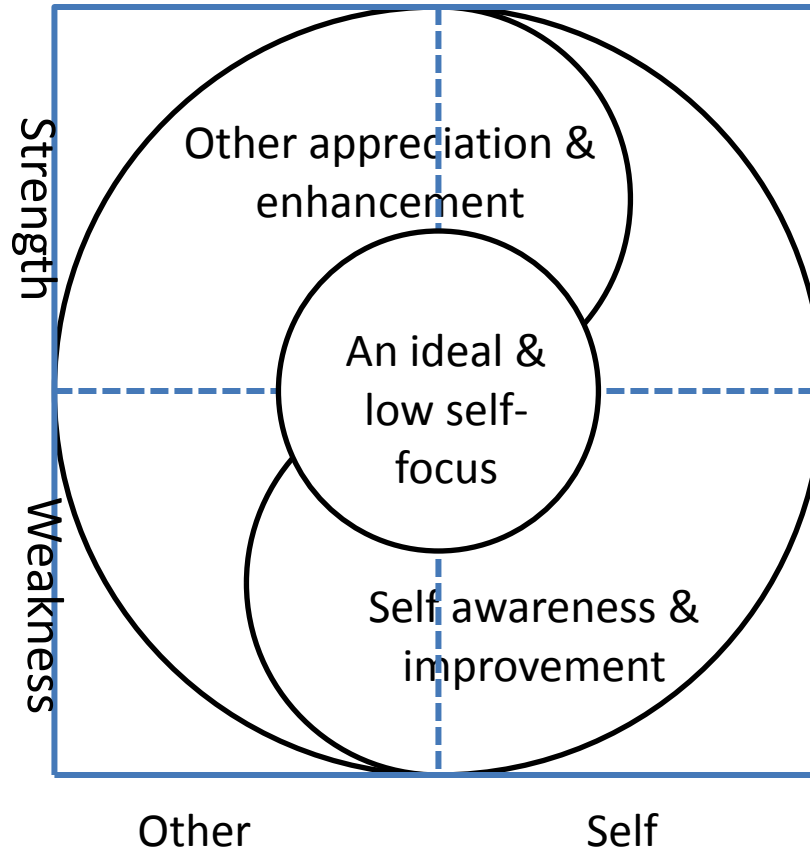


Figure 1

Conceptual Illustration of Humility

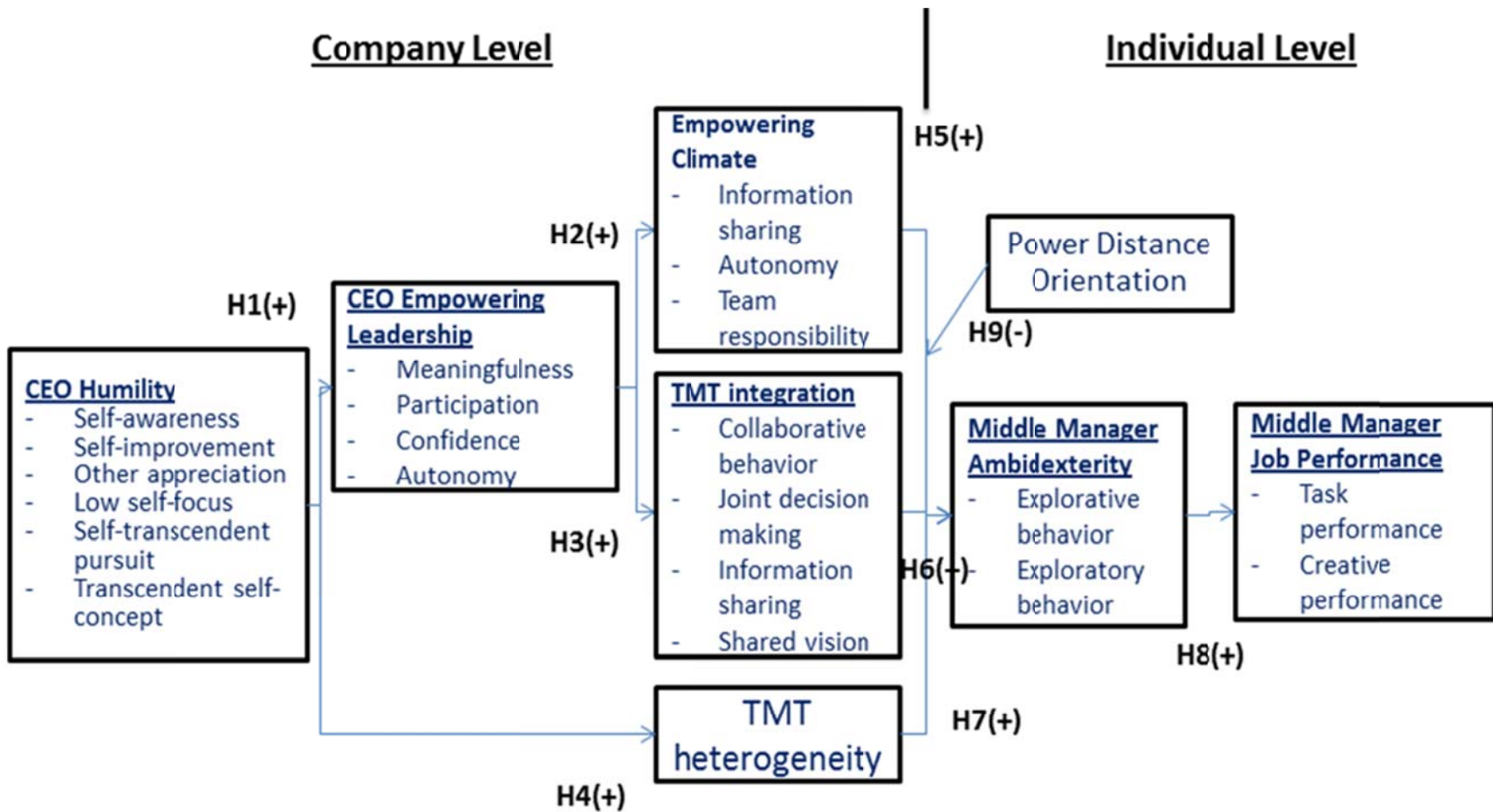


Figure 2

Proposed Research Model

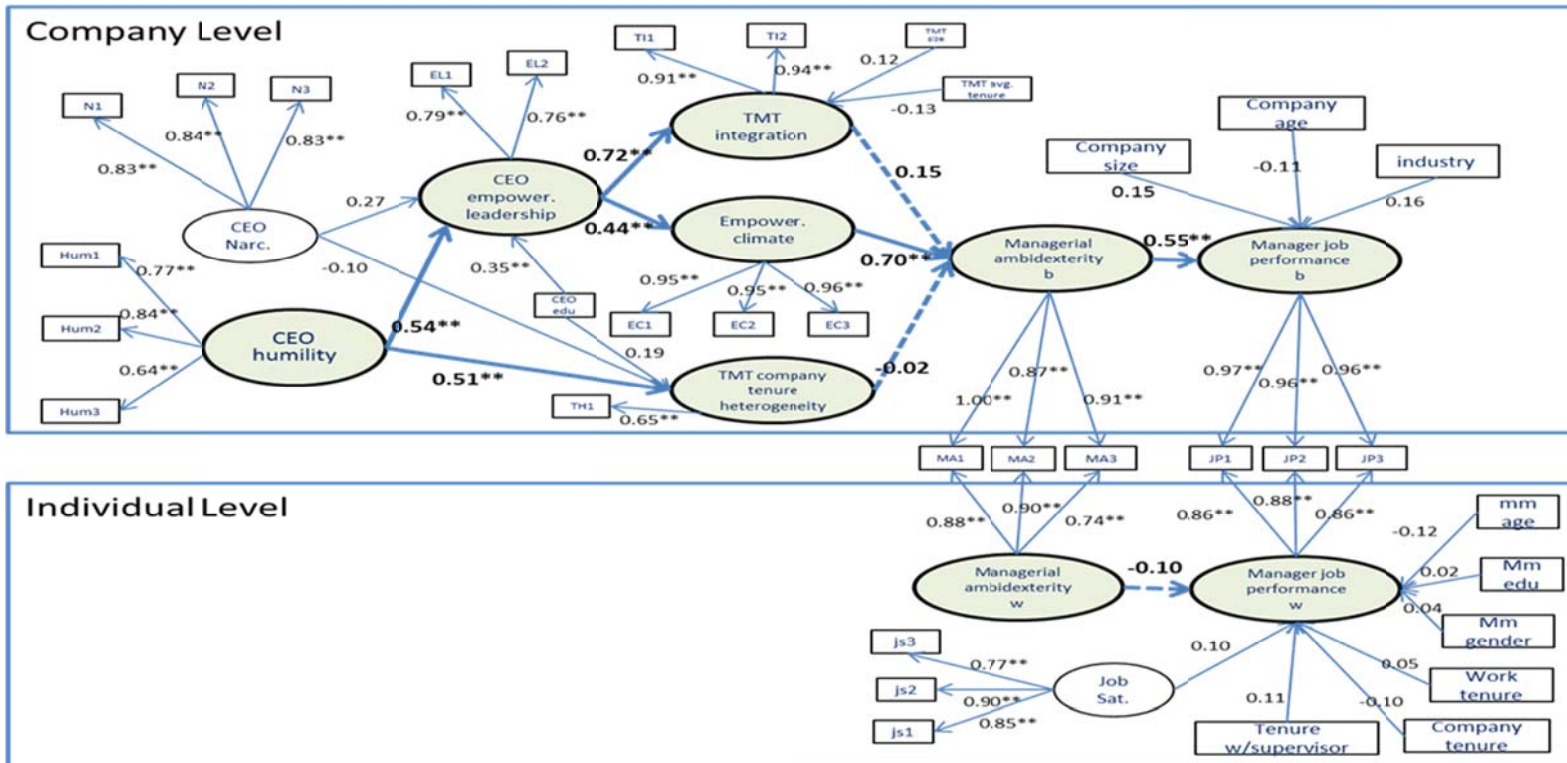


Figure 3

Multilevel Mediation Model Results

Note. Solid arrows and asterisks indicate statically significant factor loadings or path coefficients. Dashed arrows indicate insignificant path coefficients. ** p< 0.01.

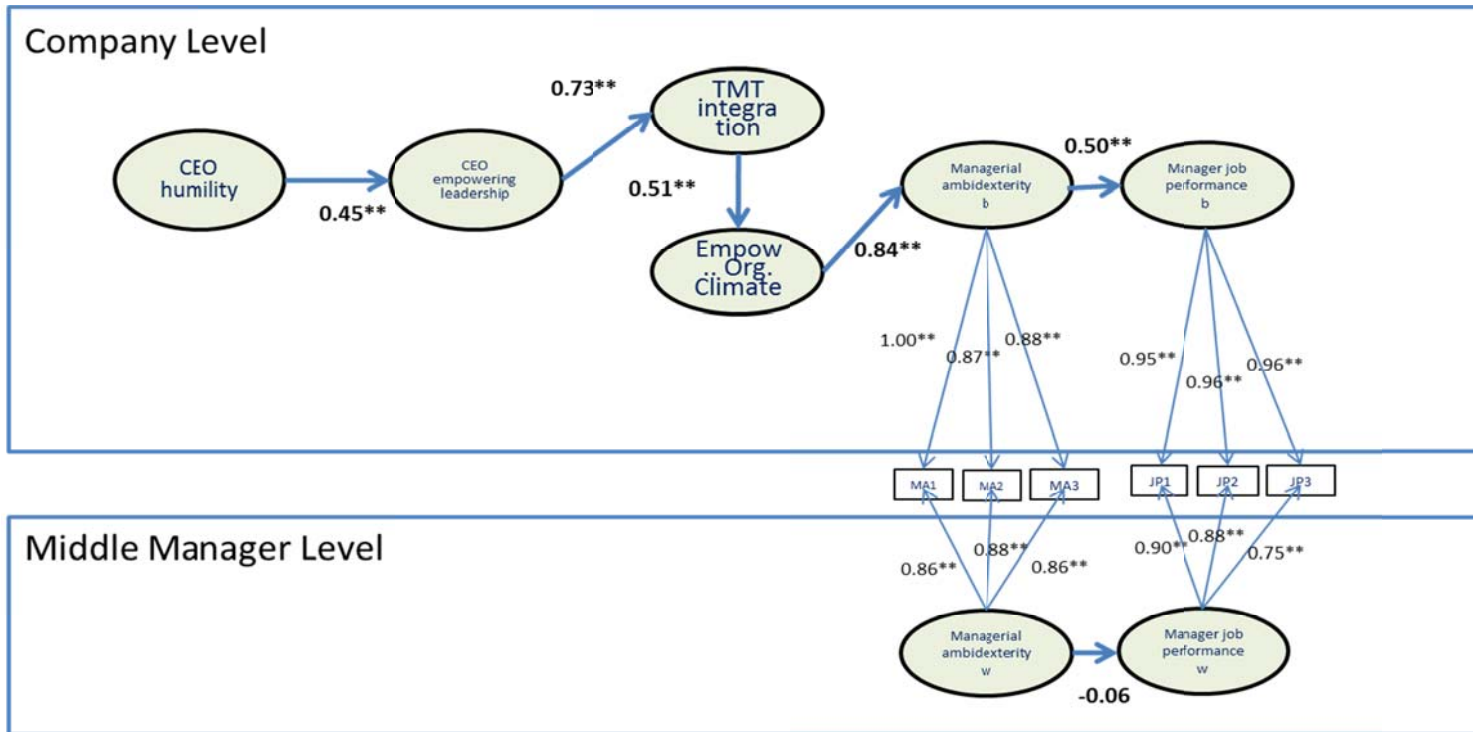


Figure 4

The Best Fitting Multilevel Structural Equation Model

Note. Indicators to the company level variables were omitted in the figure to simplify the figure.

APPENDIX A

INSTITUTIONAL REVIEW BOARD APPROVAL FORMS FOR
HUMILITY SCALE DEVELOPMENT AND VALIDATION STUDY



Office of Research Integrity and Assurance

To: Anne Tsui
BA

From: Mark Roosa, Chair *MR*
Soc Beh IRB

Date: 05/25/2010

Committee Action: Exemption Granted

IRB Action Date: 05/25/2010

IRB Protocol #: 1005005174

Study Title: Humility scale development and validation

The above-referenced protocol is considered exempt after review by the Institutional Review Board pursuant to Federal regulations, 45 CFR Part 46.101(b)(2).

This part of the federal regulations requires that the information be recorded by investigators in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. It is necessary that the information obtained not be such that if disclosed outside the research, it could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.

You should retain a copy of this letter for your records.

APPENDIX B
INSTITUTIONAL REVIEW BOARD APPROVAL FORMS FOR
HYPOTHESIS TESTING STUDY



Office of Research Integrity and Assurance

To: Anne Tsui
BA

From: Mark Roosa, Chair *SM*
Soc Beh IRB

Date: 05/24/2010

Committee Action: Exemption Granted

IRB Action Date: 05/24/2010

IRB Protocol #: 1005005175

Study Title: CEO humility and managerial ambidexterity

The above-referenced protocol is considered exempt after review by the Institutional Review Board pursuant to Federal regulations, 45 CFR Part 46.101(b)(2).

This part of the federal regulations requires that the information be recorded by investigators in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. It is necessary that the information obtained not be such that if disclosed outside the research, it could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.

You should retain a copy of this letter for your records.

APPENDIX C
MAIN STUDY TOP MANAGEMENT TEAM MEMBER
TIME 1 SURVEY

Section 1 CEO Personal Characteristics

CEO characteristic 1

Please tell us how well the following statements describe your CEO. For each item, please circle the number that best represents the extent to which you agree or disagree with that statement.	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat agree	Agree	Strongly Agree
My CEO ...						
1. actively seek feedback even if it is critical.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
2. acknowledges when others have more knowledge and skills than him/her.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
3. admits when he/she doesn't know how to do something.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
4. seeks to objectively appraise his/her weaknesses or limitations.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
5. admits it when he/she makes mistakes.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
6. takes notice of others' strengths.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
7. often compliments others on their strengths.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
8. shows appreciation for the contributions of others.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
9. is willing to learn from others.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
10. is open to the ideas of others.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
11. is open to the advice of others.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
12. does not like to draw attention to him/herself.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
13. keeps a low profile.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
14. is not interested in obtaining fame for him/herself.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
15. has a sense of personal mission in life.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
16. devotes his/her time to the betterment of the society.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
17. My CEO's work makes the world a better place.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
18. believes that all people are a small part of the universe.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
19. My CEO believes that no one in the world is perfect, and he/she is no better or worse than others.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
20. believes that there is something in the world	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6

greater than him/her.						
21. believes that not everything is under his/her control.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6

CEO characteristic 2

Please tell us how well the following statements describe your CEO. For each item, please circle the number that best represents the extent to which you agree or disagree with that statement.						
	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat agree	Agree	Strongly Agree
1. My CEO knows that he/she is good	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
2. My CEO likes having authority over people.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
3. My CEO finds it easy to manipulate people.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
4. My CEO insists upon getting the respect that is due him/her.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
5. My CEO is apt to show off if he/she gets the chance.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
6. My CEO always knows what he/she is doing.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
7. Everybody likes to hear his/her stories.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
8. My CEO expects a great deal from other people.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
9. My CEO really likes to be the center of attention.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
10. People always seem to recognize his/her authority.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
11. My CEO feels that he/she is going to be a great person.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
12. My CEO feels that he/she can make anybody believe anything he/she wants them to believe.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
13. My CEO feels that he/she is more capable than other people.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6

14. My CEO feels that he/she is an extraordinary person. 1 2 3 4 5 6

Section 2 CEO leadership

CEO Leadership Behaviors 1

The following statements are also about **Your company's CEO leadership behaviors**. For each item, please circle the number (between 1 and 6) that best represents the extent to which you agree or disagree with that statement.

	Strongly Disagree	Disagree	Somewhat Disagree	Somewhat agree	Agree	Strongly Agree
My CEO						
1. helps me understand how my objectives and goals relate to that of the company.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
2. helps me understand the importance of my work to the overall effectiveness of the company.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
3. helps me understand how the function that I am in charge of fits into the bigger picture.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
4. makes many decisions together with me.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
5. often consults me on strategic decisions.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
6. solicits my opinions on decisions that may affect me.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
7. believes that I can handle demanding tasks.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
8. believes in my ability to improve even when I make mistakes.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
9. expresses confidence in my ability to perform at a high level.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
10. allows me to do my job my way.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6

11. makes it more efficient for me to do my job by keeping the rules and regulations simple.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
12. allows me to make important decisions quickly when necessary without consulting him/her.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
13. treats me as a peer rather than a subordinate.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
14. trusts my dedication to the company.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
15. gives me a high level of fiscal autonomy.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
16. gives me a lot of freedom to experiment with new ideas.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6

CEO Leadership Behaviors 2

This section measures transformational leadership behaviors. The scale was from Multifactor Leadership Questionnaire, and the permission for use was obtained through Professor David Waldman. The material was copy right protected and thus was not included here.

Section 3 Top Management Team Characteristics

The following set of questions asks you about the top management team's characteristics . Please rate the extent to which you agree or disagree with these statements about the team.	Strongly Disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly Agree
1. When a team member is busy, other team members often volunteer to help manage the workload	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
2. Team members are flexible about switching responsibilities to make things easier for each other	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
3. Team members are willing to help each other complete jobs and meet deadlines	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
4. Team members usually let each other know when their actions affect another team member's work	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6

5. Team members have a clear understanding of the joint problems and needs of other team members	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
6. Team members usually discuss their expectations of each other.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
7. Communications among team members can be described as open and fluid.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
8. Team members often share their experience and expertise.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
9. Communications among team members are timely and accurate.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
10. My teammates provide a clear vision of who and what our team is.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
11. My teammates provide a clear vision of where our team is going.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
12. Because of my teammates, I have a clear vision of our team's purpose.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
13. My teammates and I have a common sense of purpose of the team.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6

Section 4 Personal Information

(**The information will only be used for research purpose and will be kept confidential. We will not share any individual information with any third parties. All analytical results will be reported in an aggregated format. We appreciate your candid responses.**)

1. age : _____ years
2. Gender (Please select): 1) female 2) male
3. Education level :
1 junior high school or below 2 high school 3 some college
4 bachelor 5 master 6 ph.d.
4. Highest degree you've earned: _____
5. What is your educational background?
1 Science (e.g., math, biology, medicine, physics, chemistry, etc.)
2 Engineering (e.g., computer science, electrics, energy, architecture, environmental science etc.)
3 Social science (e.g., psychology, sociology, management, finance, communication, etc.)
4 Humanities (e.g., history, philosophy, language, literature, religion, arts, etc)
6. How long have you been working full _____ years _____ months time?

7. How long have you been working in the _____ years _____ months
current company?
8. How long you have been working in as a _____ years _____ months
top management team member in this
company?
9. How long you have been working with _____ years _____ months
your current CEO?
10. Birth Place: _____ province _____ city
11. Working location: _____ province _____ city

APPENDIX D
MAIN STUDY TOP MANAGEMENT TEAM MEMBER
TIME 2 SURVEY

Section 1 Middle Manager Performance

	Subordinate A	Subordinate B	Subordinate C
<p>Please rate the task performance of the three middle managers that directly report to you. For each of the six aspects, please choose a score from 1 to 5 (1=below average, 2=somewhat below average, 3=about average, 4=somewhat above average, 5=above average) to evaluate your subordinates' actual job performance. All your responses are kept confidential.</p>			
1. Employee's quality of work			
2. Employee's efficiency			
3. Employee's professional standards			
4. Employee's ability to perform core job tasks			
5. Employee's judgment when performing core job tasks			
6. Employee's job knowledge with reference to core job tasks			

<p>Please rate the creative performance of the three middle managers that directly report to you. For each of the three aspects, please choose a score from 1 to 5 (1=strongly disagree 2=disagree 3=neutral 4=agree 5=strongly agree) to evaluate your subordinates' actual job performance.</p>	<p>Subordinate A</p>	<p>Subordinate B</p>	<p>Subordinate C</p>
<p>1. Employee's work is creative.</p>			
<p>2. Employee's work is both original and practical.</p>			
<p>3. Employee's work is both adaptive and practical.</p>			

APPENDIX E

MAIN STUDY MIDDLE MANAGER SURVEY

Section 1 Organizational Climate

This section measures empowering organizational climate, and the scale was from Empowerment Barometer by Blanchard, Carlos, and Randolph (1995). The material was copy right protected and thus was not included here.

Section 2 Manager-Subordinate Relationship

The following statements are descriptions about what a manager-subordinate relationship should . For each item, please circle the number (between 1 and 6) that best represents the extent to which you agree or disagree with that statement.	Strongly Disagree	Disagree	Slightly Disagree	Slightly agree	Agree	Strongly agree
1. Managers should make most decisions without consulting	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
2. It is frequently necessary for a manager to use authority and	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
3. Managers should seldom ask for the opinions of employees.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
4. Managers should avoid off-the-job social contacts with employees.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
5. Employees should not disagree with management decisions.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
6. Managers should not delegate important tasks to employees.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6

Section 3 Individual work behaviors

The following statements are about work related activities . Please recall to what extent you, in the last six months, engaged in the work related activity as described below. For each statement, please circle the number (between 1 and 6) that best represents the extent to which you agree or disagree with that statement.	Never	To a small extent	To a moderate extent	To a large extent	To a very large extent	Always
1. Searching for new possibilities with respect to products / services, processes, or markets.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
2. Evaluating diverse options with respect to products / services, processes, or markets.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
3. Focusing on renewal of products / services or processes	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
4. Activities for which the associated yields or costs are currently unclear.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
5. Activities requiring adaptability on your part.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
6. Activities requiring you to learn new skills or knowledge.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
7. Activities that do not (yet) clearly fit into existing company policy.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
8. Activities for which a lot of experience has been accumulated by yourself.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
9. Activities which you carry out as if it were routine.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
10. Activities which serve existing (internal) customers with existing services / products.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
11. Activities of which it is clear to you how to conduct them.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
12. Activities primarily focused on achieving short-term goals.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
13. Activities which you can properly	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6

conduct by using your present knowledge.

14. Activities which clearly fit into existing company policy. 1 2 3 4 5 6

Section 4 Attitudes towards Your Job

Below are statements that describe how you may feel about your job. For each statement, please circle the number (between 1 and 6) that best represents the extent to which you agree or disagree with that statement.

	Strongly disagree	Disagree	Somewhat disagree	Somewhat agree	Agree	Strongly Agree
1 · I feel satisfied with my present job.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
2 · I find real enjoyment in my work.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
3 · I consider my job rather unpleasant.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
4 · I would be very happy to spend the rest of my career with this organization.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
5 · I really feel as if this organization's problems are my own.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
6 · I feel a strong sense of belonging to my organization.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
7 · I feel "emotionally attached" to this organization	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
8 · I feel like 'part of the family' at my organization.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6
9 · This organization has a great deal of personal meaning for me.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6

Section 5 Personal information

(The information will only be used for research purpose and will be kept confidential. We will not share any individual information with any third parties. All analytical results will be reported in an aggregated format. We appreciate your candid responses.)

1. Age: _____ years
2. Gender (Please select): 1) Female 2) Male
3. Education level (please select):
1) junior high school or below 2) high school 3) some college 4) bachelor
5) master 6) ph.d.
4. Highest degree you've earned: _____ University
Name: _____
5. What is your educational background?
 - 1) Science (e.g., math, biology, medicine, physics, chemistry, etc.)
 - 2) Engineering (e.g., computer science, electronics, energy, architecture, environmental science etc.)
 - 3) Social science (e.g., psychology, sociology, management, finance, communication, etc.)
 - 4) Humanities (e.g., history, philosophy, language, literature, religion, arts, etc.)
6. How long have you been working full time? ____ Years ____ Months
7. How long have you been working in the current company? ____ Years
____ Months
8. How long you have been working with your current supervisor? ____ Years
____ Months
9. Current position title: _____
10. Birth Place: _____ Province _____ City