THE EFFECT OF AUTHENTIC LEADERSHIP ON

EMPLOYEES' ATTITUDES, BEHAVIORS, AND

PERFORMANCES IN A KOREAN CONTEXT

By

HYE KYOUNG KIM

Bachelor of Engineering in Industrial Management
Kumoh National Institute of Technology
Gyeongbuk, S.Korea
2000

Master of Education in Commercial Education
Kyungpook National University
Daegu, S.Korea
2003

Doctor of Business Administration in Industrial
Management
Kumoh National Institute of Technology
Gyeongbuk, S.Korea
2008

Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
DOCTOR OF PHILOSOPHY
May, 2014

THE EFFECT OF AUTHENTIC LEADERSHIP ON

EMPLOYEES' ATTITUDES, BEHAVIORS, AND

PERFORMANCES IN A KOREAN CONTEXT

Dissertation Approved:

Dr. Lynna J. Ausburn

Dissertation Adviser

Dr. Mary Jo Self

Dr. Belinda Cole

Dr. Ed Harris

Name: HYE KYOUNG KIM

Date of Degree: MAY, 2014

Title of Study: THE EFFECT OF AUTHENTIC LEADERSHIP ON EMPLOYEES'
ATTITUDES, BEHAVIORS, AND PERFORMANCES IN A KOREAN
CONTEXT

Major Field: EDUCATION (OCCUPATIONAL EDUCATION)

Abstract: Few empirical studies have been conducted on authentic leadership. The two main purposes of this study were to investigate the roles and effects of authentic leadership in an organization, and to describe its potential linkage to occupational self-efficacy, interpersonal trust, work engagement, and role-based performance. Also, this study intended to validate the measures of these five variables in a Korean context. The unit of analysis was at the level of employees. To achieve research goals, this study employed several statistical techniques such as bootstrapping procedures and structural equation modeling (SEM). A total of approximately 2,500 Korean workers were selected as potential survey participants, and of these, 365 workers participated in the online survey. After screening and deleting missing data and an outlier, a total of 336 cases were included as the final research sample.

       Through the literature review this study found that there could be influential and positive relationships among the five variables previously stated. This study empirically tested the relationships among the variables using several statistical methods. The first finding was that measurement validation was obtained in a Korean context. Second, authentic leadership had a positive and statistically significant influence on employees' attitudes in terms of their occupational self-efficacy and interpersonal trust. Furthermore, there was a positive and statistically significant influence on organizational behavior in terms of work engagement. Employees' attitudes and organizational behavior also positively influenced role-based performance. Moreover, a multiple mediation model was tested using bootstrapping tests. The results demonstrated that occupational self-efficacy and interpersonal trust mediated the effect of authentic leadership on work engagement. Work engagement also acted as a mediator in the relationship between occupational self-efficacy and role-based performance, as well as in the relationship between interpersonal trust and role-based performance.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Figure   Page

CHAPTER I

INTRODUCTION

Human resources are one of the most important components that constitute an

organization, and their activities within the organization are the major driving forces to facilitate

change and improvement and to achieve organizational goals for continuous development.

Employees, the major human resource constituting an organization, contribute to organization

development and success by fulfilling their duties and works. To achieve their duties, employees

continuously collaborate with other organizational members such as co-workers and their leaders

and participate in organizational activities. Through collaboration and communication with the

organizational members, employees share organizational values, and develop and shape their

organizational attitudes that are directly or indirectly related to organizational performances.

However, in the current working environment where there is high competition among

employees, and in turn, a negative mindset and increased stress, employees have trouble in

building a quality relationship with their co-workers based on trust, and in engaging in their work

(Chen & Spector, 1992; Harris, Harvey, & Booth, 2010). To overcome these problems,

organizational efforts and supports such as supportive leadership and positive organizational

environment are needed to facilitate employees' cooperative activity and to encourage

employees' motivations. Especially needed are supportive organizational environments that put

emphasis on humans and leaders who encourage and deliver hope to employees.

In response to the concerns, several studies have called for supportive and authentic leadership to help employees develop high self-confidence and interpersonal trust, which promote employees to be more engaged in their work and performance improvement (Avolio, Gardner, Walumbwa, Luthans, & May, 2004a).

Leadership is a way to create a vision for the organization and followers, and encourages followers with self-confidence and trust through coordination and communication (Bohn & Grafton, 2002). As a key component of organizational culture, leadership has critical influences on organizations (Kotter & Heskett, 1992). Researchers have devoted great attention to the role of leadership within organizations, especially its effect on followers (e.g., Bass & Avolio, 1990; Song, Kolb, Lee, & Kim, 2012; Walumbwa & Hartnell, 2011; Whittington, Goodwin, & Murray, 2004; Zhang & Bartol, 2010), and several types of leadership have been developed such as transformational leadership, transactional leadership, authentic leadership, empowering leadership, and ethical leadership. Among these, authentic leadership has recently emerged in the literature to complement ethical and transformational leadership (Harter, 2002; Gardner, Avolio, Luthans, May, & Walumbwa, 2005).

Authentic leadership is proposed as the root component of the positive and effective leadership needed to encourage employees' self-confidence and to create employees' trust in management and co-workers (Avolio, Gardner, Walumbwa, Luthans, & May, 2004). Authentic leadership focuses on building positive psychological capacities and a highly developed organizational context that affect leaders' and followers' behaviors (Luthans & Avolio, 2003). Authentic leaders disclose their personal values and motives, and show openness to their followers. Also, they provide positive role modeling of honesty and moral/ethical, future-oriented development of leader-employee relationships.

In work environments that are supportive in developing employees' capabilities and in creating interpersonal trust among organizational members, employees are able to engage more actively in their work and to devote their efforts to achieving better performance. In this regard, the presence of sincere and supportive leadership is the required element for improving employees' performance and

2

organizational success by positively changing employees' attitudes in the current business environment.

Since the 1970s, a considerable number of studies have been conducted on leadership, including transformational leadership, ethical leadership, transactional leadership, charismatic leadership, and authentic leadership (e.g., Avolio & Gibbons, 1988; Bass, 1985; Bass & Riggio, 2010; Dionne, Yammarino, Atwater, & Spangler, 2004; Ghafoor, Qureshi, Azzemi, & Hijazi, 2011; Hmieleski, Cole, & Baron, 2011). These studies have focused on the critical role of leaders within an organization for organizational success. For example, Wang, Law, Hackett, Wang, and Chen's study (2005), focusing on transformational leadership and its effect on followers' performance, revealed that supportive leadership has a significant influence on employees. Authentic leadership, on the other hand, has only recently emerged in the literature (Gardner, Cogliser, Davis, & Dickens, 2011). Moreover, few studies have focused on the relationship between authentic leadership and employees (Khan, 2010).

Since the studies of Bass (1985, 1990) and Bass and Steidlmeier (1999) on authentic leadership, follow-up studies have been conducted to study the critical role of authentic leadership and the difference between authentic leadership and other leadership styles (e.g., Avolio & Gardner, 2005; Avolio et al., 2004a; Champy, 2009; Clapp-Smith, Vogelgesang, & Avey, 2009; Macik-Fey, Quick, & Cooper, 2009). However, most of the research on authentic leadership has been conceptual studies, not statistical studies (Gardner et al., 2011). In their content analysis study, Gardner et al. (2011) found that 91 publications focused on authentic leadership and 59 of those were classified as conceptual studies.

Recently, several empirical studies have examined the influence of authentic leadership on followers' positive attitude (Hmieleski et al., 2011, Walumbwa, Wang, Wang, Schaubroeck, & Avolio, 2010), followers' ethical behavior (Hannah, Avolio, & Walumbwa, 2011), and performance through positive attitude (Hmieleski et al., 2011); however, these studies have limitations to explain the dynamic relationships among leaders, employees, and co-workers. Even though some studies have

3

been conducted to consider the critical effect of authentic leadership on followers through their attitudinal changes or behavioral changes, such studies still remain fragmentary with limitations to explain the complex psychological and behavioral character of employees within organizations. Moreover, interests on leadership in Korea have recently increased due to the request of a new leadership paradigm after the International Monetary Fund (IMF) crisis in the late 1990s. In order to overcome this crisis and to cope with the fast changing world environment, this new leadership paradigm was needed. Studies in Korea have begun to focus on authentic leadership (e.g. Kang, 2013 & Koo, 2013); however, none of these studies have been focused on the linkage of authentic leadership and followers' performance through their attitude and behavior change within a Korean business context.

THEORETICAL FRAMEWORK

The theoretical framework for this study is based upon authentic leadership theory. This leadership theory provides the theoretical foundation of this study to develop the research model and to explain the structural relationships among variables.

As many researchers (e.g., Lester, Vogelgesang, Hannah, & Kimmey, 2010; Walker & Henning, 2004) have emphasized the important role of leaders within the organization, leaders' behavior and value are important because leaders supervise the organization and the followers, and serve as a role model for their followers. Indeed, a leader influences employees' attitudes and behaviors such as developing confidence in themselves and having increased work engagement through working together (Dirks & Ferrin, 2002; Gardner & Schermerhorn Jr. 2004; Kahn, 1990).

Authentic leadership is "a process that draws from both positive psychological capacities and a highly developed organizational context, which results in both greater self-awareness and self-regulated positive behaviors on the part of leaders and associates, fostering positive self-development" (Luthans & Avolio, 2003, p. 243). Authentic leaders are "deeply aware of how they

think and behave and are perceived by others as being aware of their own and others' values/moral perspectives, knowledge, and strengths: aware of the context in which they operate; and who are confident, hopeful, optimistic, resilient, and of high moral character" (Avolio, Luthans, & Walumbwa, 2004b, p. 4). In other words, authentic leaders do not focus on developing their image as leaders and do not engage in their role for honor and personal rewards (Shamir & Eilam, 2005), but rather they act based on their conviction and value-based cause that are internalized by their own personal experiences and reflections on those experiences. Authentic leaders engage in leadership not to dominate the followers but to promote the values and beliefs they have. Considering these characteristics of authentic leaders, authentic leaders can be attractive leaders to serve as role models for their followers.

Authentic leaders continuously endeavor to fully understand themselves and to be ready for the future. As a result of their efforts, authentic leaders develop self-awareness of not only their values and beliefs, but also their strengths and weaknesses, and this knowledge becomes the base of their standards for personal conduct. Authentic leaders are also hopeful, optimistic, and confident, and they continuously promote a positive state of confidence in themselves and their followers. In turn, they become ethical role models for their followers (Luthans & Avolio, 2003). By modeling and providing professional development, authentic leaders try to help followers do the same, i.e., developing a better understanding of themselves and being positive and optimistic. Observing and emulating their authentic leaders, followers will also be authentic followers who have high self-confidence and trust in others and positive organizational behaviors resulting in performance improvement (Dirks & Ferrin, 2002; Hassan & Ahmed, 2011).

Several studies have shown how leaders' authenticity is contagious to their followers (e.g., Avolio et al., 2004a; Gardner et al., 2005; George, 2003; Ilies, Morgeson, & Nahrgang, 2005). For example, Gardner et al. (2005) suggested that followers who work with authentic leaders also develop authentic followership resulting in workplace well-being and increased work engagement. Moreover,

Ilies, Morgeson, and Nahrgang (2005) found that authentic leadership positively affects followers' behaviors through providing support for self-determination.

In the current study, authentic leaders' behaviors, values, and beliefs are viewed as factors that result in changes in followers' behaviors and attitudes such as increased self-confidence and trust. Authentic leaders motivate followers to be more engaged in and aware of their duties by building optimism and hope, by fostering a positive environment, by helping followers find the meaning of work, and by showing consistency in their behaviors according to their values and beliefs that build trust and commitment among followers so that followers can best contribute their efforts for fulfilling their duties (Avolio & Gardner, 2005).

CONCEPTUAL FRAMEWORK

Based on the theoretical discussion, the conceptual framework illustrated in Figure 1 was developed.

Within an organization, employees shape their organizational attitudes and behaviors by their social relationship with their leaders and by recognizing leaders' characteristics. In other words, the relationship with the leaders and the perception on the leaders' characteristics contribute to developing employees' organizational attitudes and behaviors (Dirks & Ferrin, 2002).

From the relationship-based perspective, a social exchange relationship between a leader and employees affects the employees' organizational attitudes and behaviors. Leaders' supports and concerns that are beyond the criteria officially required can lead employees to have organizational obligations toward the leaders and the organization (Blau, 1964). Employees who feel obligations and responsibility toward the organization demonstrate involved behaviors and positively changed attitudes. Employees' changed behavior and attitude such as increased work engagement and increased self-efficacy are regarded as a part of the employees' obligations toward the organization. Due to such obligations, employees actively participate in their work-related role with a positive

6

attitude and try to find solutions to resolve problems even though they face a demanding situation. They eventually accomplish a high level of performance.

From the character-based perspective, employees make inferences about leaders' characteristics such as integrity, fairness, and ability, and based on these inferences, employees determine their organizational attitudes and behaviors (Dirks & Ferrin, 2002). This perspective is also consistent with Mayer, Davis, and Schoorman's (1995) assertion that the three characteristics, ability, benevolence, and integrity that are major components of trustworthiness are critically related with employees' organizational attitudes, especially level of trust.

```
┌─────────────────────────────────────────────────────────────┐
│                                                             │
│  ┌──────────────┐      ┌──────────────┐                     │
│  │              │─────▶│  Employees'  │────┐                │
│  │              │      │   Attitude   │    │  ┌───────────┐ │
│  │  Leadership  │      └──────┬───────┘    └─▶│ Employees'│ │
│  │              │             ▼               │Performance│ │
│  │              │      ┌──────────────┐    ┌─▶│           │ │
│  │              │─────▶│  Employees'  │────┘  └───────────┘ │
│  │              │      │   Behavior   │                     │
│  └──────────────┘      └──────────────┘                     │
│                                                             │
└─────────────────────────────────────────────────────────────┘
```
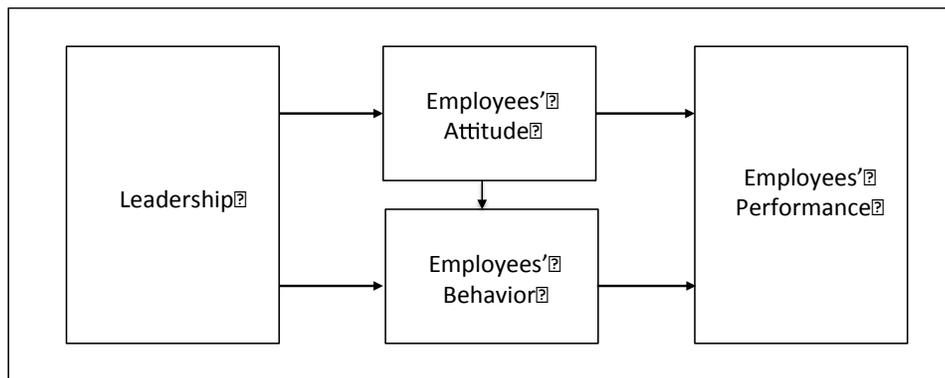
Figure 1. Conceptual Framework

This study regards authentic leadership support for helping and guiding employees as a factor leading to employee accountability toward the organization, which potentially creates a psychological contract between them. Moreover, leaders' characteristics that show high moral character, hopefulness, and integrity also give confidence to their followers and have consequences for organizational attitudes and behaviors.

Leadership, playing one of the most important roles in the organization, leads, motivates, and supports employees for organizational success as well as the employees' success. An effective and supportive leadership can motivate employees and facilitate collaboration among the employees and the leaders (Ilies et al., 2005). According to Avolio et al. (2004a), authentic leaders stimulate changes

in their employees' attitudes and behaviors, such as having a high level of trust in others and having the intention to help each other. Showing high integrity, honesty, and sincere care, authentic leaders help employees to be confident of their abilities (Khan, 2010), which can lead employees to focus on their duties and to fulfill high performance. These aforementioned studies emphasize the important influence of leadership on employee attitudes and behaviors that eventually affect employees' organizational performance.

STATEMENT OF THE PROBLEM

This study focused on identifying what roles authentic leadership has in changing and developing employees' attitudes and behaviors, through a review of the literature and statistical testing of hypotheses.

As presented in the Introduction, there is currently limited evidence regarding critical effects of authentic leadership, and virtually none in the Korean context of interest to this researcher. This lack of strong empirical evidence in a Korean context identifies the problem for this study. Considering the shortage of empirical studies on authentic leadership, particularly in Korea, further research is needed to verify the critical impact of authentic leadership on organizational performance improvement through changes in followers' attitudes and behavior, and to validate the psychometric properties of the proposed measurements. The results of this research may shed light on a human resource management strategy for improving both employee and organizational performance in Korean businesses.

PURPOSE OF THE STUDY

Within an organization, employees as social beings continuously interact with their co-workers, customers, and their leaders for their shared goals. A constructive and healthy relationship with co-workers and leaders can keep employees focused on their duties, and this concentration on their

duties, in turn, can lead them to accomplish positive and increased performances, increased job satisfaction, and low turnover intention.

Among the organizational members who affect employees' social lives within the organization, a leader is one of the most important because an effective leader can motivate employees and facilitate their collaboration. Therefore, a better understanding is needed about how a leader can encourage employees to become more engaged in their duties, how a leader can motivate employees, and what types of leadership can effectively affect employees' ability and social relationships within the organization. In other words, further research is needed to explain how organizational members are interconnected and have a mutual effect on shaping their organizational attitude and relational attitude by interacting with their leaders. Based on the findings of such research, suggestions can be made as to the most effective way to develop and shape employees' positive organizational attitudes and to increase organizational performances.

Thus, the main purpose of this study was to investigate the critical role of authentic leadership and its effects on employees' attitudes and behavior. More specifically, this study described the influence of authentic leadership on employees' performance through employee attitudes (self-efficacy and interpersonal trust) and organizational behavior (work engagement). Furthermore, this study validated the proposed measurements in a Korean context. To this end, this study reviewed the literature and developed research hypotheses based on the literature review. The hypotheses were tested using statistical methods.

RESEARCH QUESTIONS AND HYPOTHESES

This study was guided by the following three research questions:

RQ1: Are the hypothesized measurements valid and reliable in a Korean context?

RQ2: What are the structural relationships among authentic leadership, occupational self-efficacy, interpersonal trust, work engagement, and role-based performance?

RQ3: Do occupational self-efficacy and interpersonal trust have a mediating role in the relationship between authentic leadership and work engagement, and do work engagement and occupational self-efficacy, and work engagement and interpersonal trust jointly contribute to role-based performance?

As shown in Figure 2, this study examined five variables in four constructs: authentic leadership, occupational self-efficacy, interpersonal trust, work engagement, and role-based performance. Furthermore, among these variables several structural relationships are hypothesized that will be tested by statistical methodology to evaluate the theoretical propositions of this study. That is, to verify the relationships between independent variables and dependent variables, this study developed the hypotheses and test them statistically using methods such as bootstrapping test and structural equation modeling (SEM).
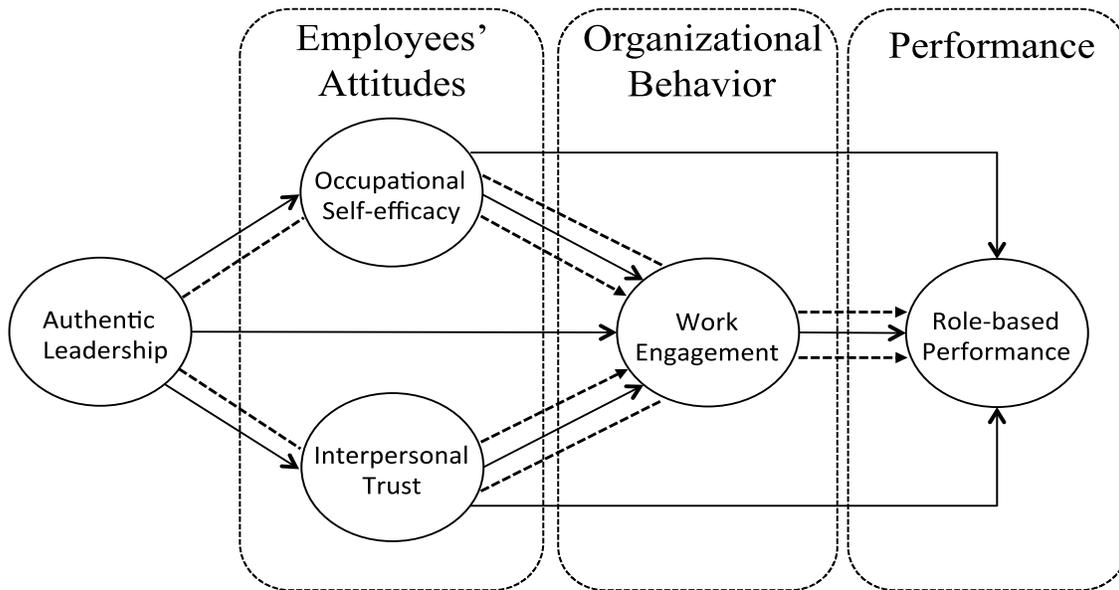
Figure 2. Research Model

Note. Dotted lines indicate the indirect paths between authentic leadership and work engagement through occupational self-efficacy and interpersonal trust; also indicated by dotted lines is the indirect path between occupational self-efficacy and role-based performance through work engagement, as well as between interpersonal trust and role-based performance through work engagement.

To achieve the research purpose, this study proposed 11 research hypotheses based on the research model to test and verify the effect of authentic leaders on employee attitudes, organizational behaviors, and performance.

Hypothesis 1: *The measurements of authentic leadership, occupational self-efficacy, interpersonal trust, work engagement, and role-based performance are valid and reliable concepts in the Korean context.*

Hypothesis 2: *Authentic leadership will positively influence employees' occupational self-efficacy.*

Hypothesis 3: *Authentic leadership will positively influence employees' interpersonal trust.*

Hypothesis 4: *Authentic leadership will positively lead to employees' work engagement.*

Hypothesis 5: *Employees' occupational self-efficacy will positively influence work engagement.*

Hypothesis 6: *Employees' interpersonal trust will positively influence work engagement.*

Hypothesis 7: *The influential relationship between authentic leadership and work engagement will be mediated by employees' occupational self-efficacy and interpersonal trust.*

Hypothesis 8: *Employees' occupational self-efficacy will positively influence role-based performance.*

Hypothesis 9: *Employees' interpersonal trust will positively influence role-based performance.*

Hypothesis 10: *Employees' work engagement will positively influence role-based performance.*

Hypothesis 11: *The influential relationship between employees' occupational self-efficacy and role-based performance, and between employees' interpersonal trust and role-based performance will be mediated by work engagement.*

DEFINITION OF KEY TERMS

Conceptual Definitions

Authentic leadership	A process that draws from both positive psychological capacities

and a highly developed organizational context, which results in both

greater self-awareness and self-regulated positive behavior on the

part of leaders and employees, fostering positive self-development.

The authentic leader is confident, hopeful, optimistic, resilient,

transparent, moral/ethical, future-oriented, and gives priority to

developing employees to be leaders (Luthans & Avolio, 2003, p.

243).

Self-efficacy	Beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments (Bandura, 1997, p. 3)
Interpersonal trust	The willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party (Mayer et al., 1995, p. 712)
Work engagement	Positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption (Schaufeli, Salanova, González-Romá, & Bakker, 2002, p. 72)
Role-based performance	Measuring multidimensional performances such as job, career, innovator, team member, and organization citizenship role (Welbourne, Johnson, & Erez, 1998)

Operational Definitions

Authentic leadership	An approach to leadership by those who deeply understand the nature of oneself (self-awareness); show one's sincere and authentic self (relational transparency); work with an objective point of view and listen to opposing opinions before making a decision (balanced

processing); and act according to his/her internal moral standards and show consistency of belief and action (internalized moral perspective) and is measured by Authentic Leadership Inventory (ALI) (Neider & Schriesheim, 2011)

Occupational self-efficacy Employee's belief in his or her own ability and competence to perform his or her tasks in a job, measured by a short version of the occupational self-efficacy scale (Rigotti, Schyns, & Mohr, 2008)

Interpersonal trust Based on past experience, employee's evaluation of the trustworthiness of his or her co-workers and leadership, and measured by the Interpersonal Trust at Work Scale (ITWC) (Cook & Wall, 1980)

Work engagement Employee's positive perception of vigor, dedication, and absorption to the work, measured by the Utrecht Work Engagement Scale-9 (UWES-9) (Schaufeli, Bakker, & Salanova, 2006)

Role-based performance Employee's self-rating of role performances as an innovator, employee, career preparator, team member, and organization citizen, measured by the Role-based Performance Scale (RBPS) (Welbourne et al., 1998)

Korean context The region where interests on leadership have recently increased due to the request of a new leadership paradigm after the International Monetary Fund (IMF) crisis in late 1990s

LIMITATIONS AND ASSUMPTIONS OF THE STUDY

Limitations

This study has potential limitations even though the research model and procedures are well designed based on the theoretical foundation and literature review.

1. First of all, to measure employee performance, this study used a role-based performance scale that can measure employees' multi-dimensional roles such as an innovator and a team member within the organization. Even though this instrument measures employees' multifunctional roles, this measurement can be criticized in terms of objectivity because it was based on employees' subjective performance ratings.

2. As with all studies, there are other variables that are not included in this study as output variables. In this study, employees' role-based performances are only measured as a performance; however, other variables could be considered as the result of change of attitude and behavior such as creativity, knowledge sharing, job satisfaction, organizational commitment, financial return, and decreased turnover intention.

3. Regarding the sampling procedure, the major target research sample consists of those who worked in one specific area of S. Korea. 336 employees from medium-sized enterprises (SMEs) and conglomerates participated in completing the entire survey questionnaire. While this study included the voices from both SMEs and big companies, the generalizability of the results is still limited because the sampling method was based on purposive/volunteer sampling, and the samples were collected in one specific area of the Korea.

Assumptions

The following assumptions were made for this study.

1. First of all, certain assumptions regarding hypotheses development were made. These assumptions concerned the order and directions among the variables and the suggested research model. This study assumed that the suggested order of the variables as an independent variable and dependent variables and the relationship among them were well developed based on the literature

review. And to support the assumptions, the influential relationships among the variables were statistically tested.

2. Another assumption for the study was that survey participants understood all survey questions and answered all questions sincerely. For the purpose of the study, five variables (authentic leadership, occupational self-efficacy, interpersonal trust, work engagement, and role-based performance) were included in the questionnaire. According to the procedure of translation and back translation suggested by Brislin, Lonner, and Thorndike (1973), all questionnaires that were originally developed in English were well translated into Korean.

SIGNIFICANCE OF THE STUDY

Theoretical Significance

The interest in authentic leadership has been growing, but related empirical studies are insufficient compared to studies on other types of leadership. In fact, empirical studies on authentic leadership that focus on its effect on followers' attitudes and organizational behaviors are especially lacking in the literature (Gardner et al., 2011).

The current study has several significant values, both scholarly and practically. In terms of scholastic value, this study contributes to the theoretical development of authentic leadership especially in Korean. The major theoretical implication of this study is the contribution of the results to the development of literature on authentic leadership by providing empirical evidence of the importance of authentic leadership and its effect on employees' role-based performance through positively changing employees' attitude and work behavior.

In addition, this study measured employees' performances as an innovator, employee, career preparator, team member, and organization citizen. All employees have several different roles within the organization. For example, an employee works with his or her coworkers as a team member and

15

devotes him/herself to the development of the organization as an employee. This study measured employees' multifunctional roles, whereas many previous studies have focused on measuring one or two performances such as job satisfaction and turnover intention.

Practical Significance

In terms of practical values, this study shows why authentic leadership is important within an organization for organizational development and employees' success. More specifically, this study demonstrates that authentic leadership can be an important force in promoting employees' positive attitude and behaviors that ultimately lead to organizational performance improvement. This result indicates critical implications for human resource development (HRD) practices. Especially, this result suggests ideas about what characteristics of leadership should be considered when a company chooses leaders and what kinds of leadership development programs should be provided to current leaders and potential leaders.

The results found in the study also suggest that leaders need to note the way to boost employees' positive attitude and behavior such as being highly confident in their work because the attitude and behavior are directly and indirectly associated with organizational performance.

Work engagement is directly affected by authentic leadership and is indirectly influenced by authentic leadership as well as through occupational self-efficacy and interpersonal trust. In order to improve the level of employees' work engagement, human resource (HR) management should focus on the way to boost occupational self-efficacy and interpersonal trust in management and co-workers through helping successful applications of employees' skills and know-how to demanding work situations (Xanthopoulou, Bakker, Heuven, Demerouti, & Schaufeli, 2008) and the creation of a healthy competition relationship among employees (Karatepe & Olugbade, 2009).

CHAPTER II

REVIEW OF LITERATURE

The purpose of this study is to examine the influence of authentic leadership on employees' attitude in terms of occupational self-efficacy and interpersonal trust, and organizational behavior in terms of work engagement, and the effect of employees' attitude on organizational behavior (work engagement) and performance (role-based performance). Moreover, this study explores the mediating role of occupational self-efficacy, interpersonal trust, and work engagement in the structural model. This chapter will review relevant variables that construct the hypothesized model: authentic leadership, occupational self-efficacy, interpersonal trust, work engagement, and role-based performance.

Authentic Leadership

Concept of Authentic Leadership

Henderson and Hoy (1983) made the first attempt to formally define leadership authenticity and inauthenticity as "the extent to which subordinates perceive their leader to be maximizing the acceptance of organizational and personal responsibility for actions, outcomes, and mistakes; to be non-manipulating of subordinates; and to demonstrate a salience of self over

17

role" and "the extent to which subordinates perceive their leader to be 'passing the buck' and blaming others and circumstances for errors and outcomes; to be manipulating subordinates; and to be demonstrating a salience of role over self," respectively (p. 6). Ever since, a growing number of scholars (e.g., Avolio et al., 2004a; Luthans & Avolio, 2003) has considered authentic leadership to be an ideal leadership style in that it responds to the rapidly changing business environment and makes a balanced relationship with the followers by encouraging a positive organizational environment in the workplace. Before defining the concept of authentic leadership through reviewing the literature, the concept of authenticity should first be addressed.

Unlike sincerity, which refers to the extent to which one's expression of thoughts and feelings is aligned with the reality that one has really experienced or has felt, *authenticity* implies one's relationship with oneself (Erickson, 1995). More specifically, authenticity refers to "owning one's personal experiences, be they thoughts, emotions, needs, wants, preferences, or beliefs, processes captured by the injunction to know oneself" and "further implies that one acts in accord with the true self, expressing oneself in ways that are consistent with inner thoughts and feelings" (Harter, 2002, p. 382). And Kernis (2003) defines authenticity as "the unobstructed operation of one's true, or core, self in one's daily enterprise" (p. 13) and suggested four discriminable components of authenticity: awareness, unbiased processing, action, and relational orientation. The awareness component involves knowing one's needs, values, feelings, desires, and self-relevant cognitions. The unbiased processing component does not involve denial or distortion of private knowledge, but rather encompasses objectivity and acceptance of one's positive and negative aspects. The third component, action, is related with one's actions. In other words, this concerns whether people act in accord with their true self. Finally, relational orientation indicates being genuine and achieving openness in one's close relationship. Similarly, Ilies, Morgeson, and Nahrgang (2005) viewed authenticity as "a broad psychological construct reflecting one's general tendencies to view oneself within one's social environment and to conduct one's life according to one's deeply held value" (p. 376).

These definitions and suggested multi-components of authenticity have provided theoretical foundation of authentic leadership and helped define authentic leaders (Gardner et al., 2005; Walumbwa, Avolio, Gardner, Wernsing, & Peterson, 2008).

Authentic leaders are "those individuals who know who they are, what they think and behave and are perceived by others as being aware of their own and others' values/moral perspective, knowledge, and strengths; aware of the context in which they operate; and who are confident, hopeful, resilient, and of high moral character" (Avolio et al., 2004b, p. 4). And authentic leaders are characterized as those who have the following attributes: "the role of the leader is a central component of their self-concept, they have achieved a high level of self-resolution or self-concept clarity, their goals are self-concordant, and their behavior is self-expressive" (Shamir & Eilam, 2005, p. 398-399). Thus, authentic leaders can be "distinguished from less authentic or inauthentic leaders by four self-related characteristics: 1) The degree of person- role merger i.e. the salience of the leadership role in their self-concept, 2) The level of self-concept clarity and the extent to which this clarity centers around strongly held values and convictions, 3) The extent to which their goals are self-concordant, and 4) The degree to which their behavior is consistent with their self-concept" (Shamir & Eilam, 2005, p. 399).

There have been various efforts to define authentic leadership (e.g., Gardner et al., 2005; Harter, 2002; Walumbwa et al., 2008). Among these scholarly efforts, Luthans and Avolio's (2003) study was considered a remarkable work that reignited scholarly interest in authentic leadership (Gardner et al., 2011). Luthans and Avolio (2003) defined authentic leadership and the authentic leader as follows:

> Authentic leadership in organizations is a process that draws from both positive psychological capacities and a highly developed organizational context, which results in both greater self-awareness and self-regulated positive behaviors on the part of leaders and associates, fostering positive self-development……. The authentic leader is confident, hopeful, optimistic, resilient, transparent, moral/ethical future-oriented, and gives priority to developing associates into leaders themselves. The authentic leader does not try to coerce or

even rationally persuade associates, but rather the leader's authentic values, beliefs, and behaviors serve to model the development of associates. (p. 243)

More recently, an attempt was made to modify Luthans and Avolio's (2003) initial definition of authentic leadership as well as definitions offered by other studies such as Gardner et al. (2005) and Ilies et al. (2005). Walumbwa, Avolio, Gardner, Wernsing and Peterson (2008) defined authentic leadership as "a pattern of leader behavior that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalized moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development" (p. 94) with four components of authentic leadership: self-awareness, relational transparency, balanced processing, and internalized moral perspective. Self-awareness refers to knowing one's strengths and weaknesses and to understanding how one makes meaning of the world (Kernis, 2003). Relational transparency refers to showing one's authentic self to others and this behavior promotes building trust between a leader and followers (Kernis, 2003). Balanced processing refers to a rational decision-making process that is done based on objective analysis and relevant data (Gardner, Avolio, Luthans, et al., 2005). Lastly, internalized moral perspective refers to the internalized form of self-regulation (Ryan & Deci, 2003). Thus one's behavior and decision-making are expressed consistently with internalized value (Avolio & Gardner, 2005).

In their study to explore the links between authentic leadership and followers' performance, Ilies et al. (2005) explained that the importance of authentic leaders' behavior and existence is manifested when they are leading others. They proposed a four-component model of authentic leadership based on the components of authenticity suggested by Goldman and Kernis (2002) and Kernis (2003): self-awareness, unbiased processing, authentic behavior/acting, and authentic relational orientation.

In accordance with the perspective of Walumbwa et al. (2008) on authentic leadership and for the purpose of this study, authentic leadership was defined in the current study as an

20

approach to leadership by those who deeply understand the nature of oneself (self-awareness),

show one's sincere and authentic self (relational transparency), work with an objective point of

view and listen to opposing opinions before making a decision (balanced processing), and act

according to his/her internal moral standards and show consistency of belief and action

(internalized moral perspective). By expressing one's true and sincere self in daily life and

making decisions objectively, this process results in building a positive environment and affects

followers (Ilies et al., 2005).

Differentiating Authentic Leadership from Related Leadership Theories

To better understand and to differentiate authentic leadership from related leadership

theories, an effort should be made to distinguish authentic leadership from other popular

leadership theories such as transformational leadership, charismatic leadership, and servant

leadership.

The major distinctive characteristic of authentic leadership, compared with other

leadership theories, is that authentic leadership is a "root construct" that underlines all positive

leadership approaches (Avolio et al., 2004a; May, Chan, Hodges, & Avolio, 2003). Thus,

authentic leadership can incorporate transformational, servant, charismatic, or other positive

forms of leadership (Avolio & Gardner, 2005). The following provides more detailed discussion

of these other forms of leadership:

First, charismatic leadership is "an attribution based on follower perceptions of their

leader's behavior" (Conger, Kanungo, & Menon, 2000, p. 748). Weber (1968) distinguished three

types of authority: authority based on rational grounds, authority based on traditional grounds,

and authority based on charismatic grounds. A charismatic leader's authority stems from the

followers' faith and trust in their leaders, unlike rational authority and traditional authority which

focus on the legality of rules and the inviolability of age-old traditions (Bryman, 1992). That is,

charismatic authority rests on "devotion to the exceptional sanctity, heroism or exemplary

character of an individual person, and of the normative patterns or order revealed or ordained by

him" (Weber, 1968, p. 215). Therefore, interactions between leaders' attributes and followers'

trust in leaders are critical in charismatic leadership, whereas legality and inheritance of authority

are essential in rational and traditional leadership (Larsson & Rönnmark, 1996).

Followers show allegiance to leaders who possess charisma, but this allegiance is distinct

from followers' adherence to the traditional authority. Charismatic leaders' unique attributes and

abilities that are called charisma make followers trust in leadership, whereas followers' adherence

to the traditional authority arises from customary right (Bryman, 1992). Charismatic leaders

themselves serve as examples for followers by empowering them, inspiring them, and articulating

a vision and mission.

Like authentic leadership, charismatic leadership helps followers to be motivated and to

accomplish better performance. However, there is a major difference between the two: authentic

leaders' self-awareness of value and internalized moral perspective influence followers, whereas

charismatic leaders use rhetoric to influence their followers (Avolio & Gardner, 2005).

Second, the discussion on transformational leadership originated from the study of

charismatic leadership. Thus, the major features of transformational leadership include some

components of charismatic leadership (Smith, Montagno, & Kuzmenko, 2004). Transformational

leadership occurs when leaders support their followers' needs, serve as a role model, and

empower followers to achieve their shared vision (Bass & Avolio, 1988). Transformational

leaders inspire their followers' motivation, intellectually stimulate, provide individualized

consideration, and serve as a charismatic role model for their followers (Bass, 1985).

For followers' success and emotional relationships between leaders and followers,

transformational leaders are also optimistic, hopeful, and moral oriented, traits that are also

considered as the features of authentic leaders. Thus, it is required for transformational leaders to

be authentic leaders; however, this does not mean that authentic leaders are transformational (Avolio & Gardner, 2005).

Lastly, servant leadership is a positive leadership model that emerged from authentic leadership. Servant leaders view leadership as an opportunity to serve others and to support them to find their potential. Servant leaders try to serve their followers by listening, showing empathy, providing resources, and supporting rather than focusing on the leaders' position and power (Greenleaf, 1977). Thus, servant leadership is the "understanding and practice of leadership that places the good of the followers over the self-interest of the leader. Servant leadership promotes the valuing and development of people, the building of community, the practice of authenticity, the providing of leadership for the good of those led and the sharing of power and status for the common good of each individual, the total organization and those served by the organization" (Laub, 1999, p. 83). Although authentic leadership and servant leadership have some common characteristics—most notably that both types of leaders lead from personal conviction and have a genuine desire to serve and help followers, they also differ in some respects. Servant leadership puts priority on the interest of followers, and to do this the leaders try to satisfy followers' needs and desires. But authentic leaders do not respond to the desires of followers and just strive to show their genuine and real self to their followers.

Authentic Leadership and Followers' Relations

Leadership is an interactive process between leaders and followers (Graen & Scandura, 1987), and this interactive process influences followers' perceptions, attitudes, and behaviors in organizations. According to Bandura (1997), trustworthiness and credibility of the person being modeled are to be highly valued by followers, and then the followers have intentions to learn and to emulate. Authentic leadership can be positive modeling, which allows authentic leaders and

23

followers to build an authentic relationship, resulting in positive work attitudes such as commitment to work, job satisfaction, and employee engagement (Luthans & Avolio 2003).

Authentic leadership plays a key role in organizational changes by helping employees find value in their work and life and the supporting work environment (Avolio & Gardner, 2005; Luthans & Avolio, 2003). Several studies have examined the influence of authentic leadership on followers in terms of building confidence, creating hope, job satisfaction, engagement, and performance (e.g., Avolio et al., 2004a; Gardner & Schermerhorn, 2004; Gardner et al., 2005). More detailed discussion of previous studies is provided in the following section.

In their study to develop a self-based model of authentic leader and follower development, Gardner et al. (2005) explained the key role of authentic leadership as a role model for followers. According to Gardner et al. (2005), authentic leaders' consistent behavior and words based on self-awareness, balanced processing, transparency, and authentic behavior are key factors for developing authentic followership. That is, as shown in Figure 3, authentic leaders strive to have self-awareness of their values, identity, emotions, and motive/goals, and this awareness of themselves provides them a foundation for their behavior such as making decisions based on balanced processing. By observing their leaders' authentic behavior and values, followers begin to emulate them and develop authentic followership. As a result of this modeling, followers show positive outcomes such as trust, engagement, and workplace well-being, and sustainable and veritable performances.
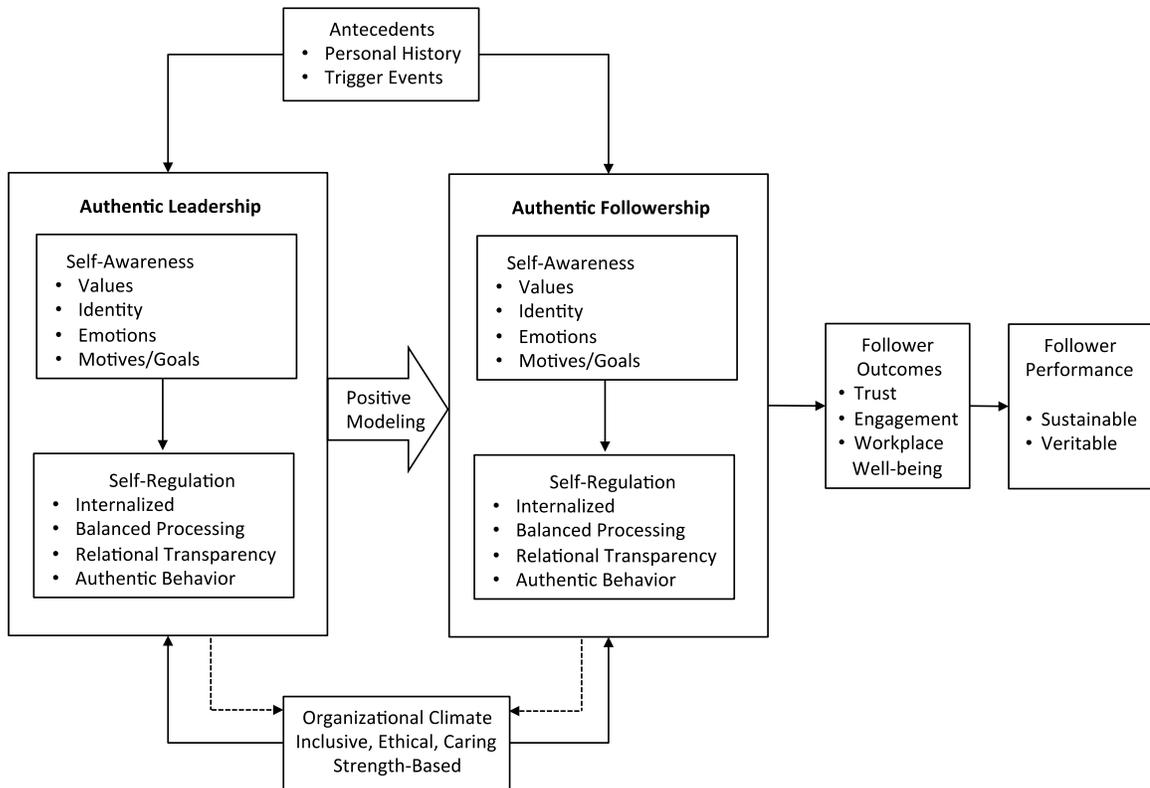
Figure 3. Gardner et al.'s (2005) Authentic Leader and Follower Development Model (p. 346).

Scholars have attempted to explain how authentic leaders affect follower attitudes,

behaviors, and performance with a broader theoretical framework. As shown in Figure 4, Avolio

et al. (2004a) proposed a framework that focuses on the process mechanisms that show how

authentic leadership positively links to followers' attitudes and behaviors. They suggested that

authentic leadership can improve followers' engagement, commitment, and job satisfaction,

which eventually influence followers' behaviors through the personal identification and social

identification with the organization. In the relationship between authentic leadership and

followers, this study especially focused on the role of trust and positive emotions as intervention

variables for the first time. More specifically, this study proposed the important role of the

psychological processes of identification, positive emotions, trust, and optimism in the influential

relationship between authentic leadership and followers' attitudes and behaviors.
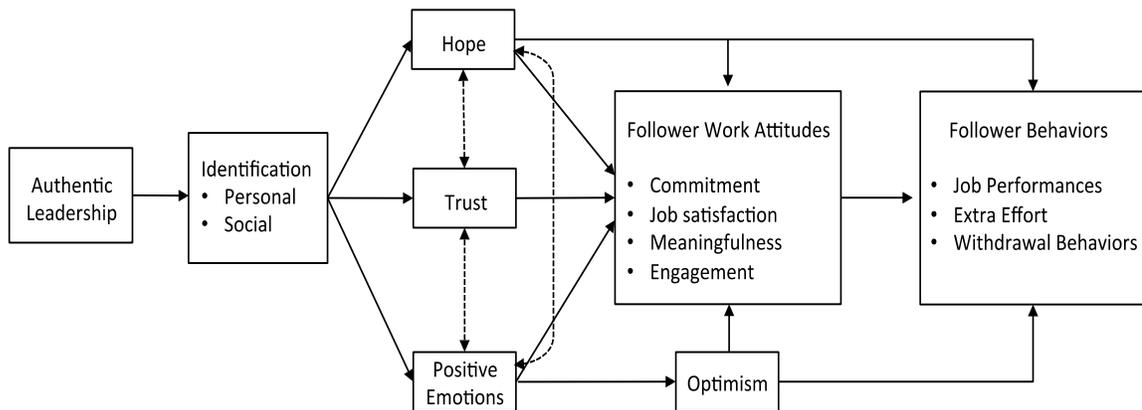
Figure 4. Avolio et al.'s (2004a) Framework Linking Authentic Leadership to Followers' Attitudes and Behaviors (p. 803).

More recently, unlike previous studies that approached the link between authentic leadership and followers at the individual level of analysis, some studies have made an effort to integrate authentic leadership and positive organizational behaviors using a multi-level perspective. As shown in Figure 5, Yammarino, Dionne, Schriesheim, and Dansereau (2008) conceptualized authentic leadership not only in terms of individual leaders, but also in terms of leader-follower association in the multiple organization level. Thus, Yammarino et al. (2008) studied the influence of authentic leadership on positive organizational behavior at the individual, group/team, and organization levels. They reviewed and analyzed 27 conceptual and empirical publications, and found that authentic leadership has a positive effect on performance through positive organization behavior at the individual, group, and organizational levels.

```
┌──────────────┐      ┌──────────────┐      ┌──────────────┐
│  Authentic   │─────▶│  Positive    │─────▶│              │
│  Leadership  │      │Organizational│      │ Performances │
│              │      │  Behavior    │      │              │
└──────────────┘      └──────────────┘      └──────────────┘
```

1. Individual level -Treat followers similarly 2. Leader-follower dyad -one-to-one connections 3. Group level -Authentic leadership Shared mental model 4. Organization level -Authentic leadership Values in organization	1. Individual level -Confidence/self-efficacy -Hope, optimism, etc. 2. Group level -Group/team efficacy -Group potency, etc. 3. Organization level -Collective efficacy -Positive vision, etc.	1. Individual level -Satisfaction -Less turnover, etc. 2. Group level -Higher team performance -High morale ,etc. 3. Organization level -Positive culture -Higher organizational Performance, etc.

Figure 5. Yammarino et al.'s (2008) Basic Notion Linking Authentic Leadership and Performance (pp. 694 ~ 703).

In summary, the studies discussed above have voiced the same view that authentic leadership plays as the key contributor in influencing followers' attitudes and behaviors regardless of whether the study used an empirical approach or a conceptual approach. Positive values, motives, behaviors, and goals practiced and delivered by authentic leaders can be contagious to their followers, and the followers find their strengths and values in their work, resulting in followers' performance improvement. In accordance with this view, this study assumed that there is a positive relationship between authentic leadership and followers' attitudes and behaviors; leaders can serve as effective role models in the positive development of the attitudes and behaviors of followers.

Occupational Self-efficacy

Concept of Self-efficacy

In daily life, people continuously face situations in which they must make a decision such as what method they should use to solve problems, and the decisions are usually made based on

their judgment ability and information they have. The judgment is called self-efficacy, and affects one's behavior and attitude toward the given situations or work (Bandura, 1982).

Self-efficacy has been defined as the "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3). Self-efficacy influences the way people think, behave, and motivate themselves (Bandura, 1997). Depending on the level of self-efficacy, they make decisions about what activity they will participate in, how much effort they will exert, and whether they will embrace adventure and take risks (Bandura, 1977).

Self-efficacy differs from related constructs such as self-concept, outcome expectancies, and perceived control. First of all, self-concept is collective, that is, "our perception of ourselves" (Byrne, 1984, p. 429). Self-efficacy is considered requisite judgments to build one's self-concept beliefs (Pajares & Miller, 1994). In other words, self-concept includes one's judgment of self-confidences, self-esteem, stability, and self-crystallization (Rosenberg & Kapland, 1982). Indeed, in comparison with self-efficacy, self-concept is a more general judgment of one's self, whereas self-efficacy is a context-specific judgment of competence. For example, in the academic area, a student who has high self-concept does not necessarily feel competent in all academic areas (Schunk, 1991).

Bandura (1977, p.193) defined outcome expectancy as a "person's estimate that a given behavior will lead to certain outcomes" and differentiated it from self-efficacy expectations. Because even though individuals may believe that they can achieve a certain performance, if they doubt the achievements, they cannot influence their behaviors. In their study to compare the significance of outcome expectancies and self-efficacy in predicting writing achievement, Shell, Murphy, and Bruning (1989) found that only self-efficacy significantly predicts writing achievement, and this result confirms Bandura's (1986) assertion that self-efficacy plays a key role in promoting motivation.

Perceived control refers to one's general belief about whether one can contribute to the results or external factors affect the results. This belief is theorized as locus of control, referring to the internality or externality of causality (Rotter, 1966). Thus, when people perceive internal locus of control over outcomes, this perception encourages and motivates people. However, researchers have questioned the value of perceived control. For example, students may perceive internal locus of control over performance, but this perception does not guarantee that the students are motivated and have the ability to learn (Schunk, 1991).

Self-efficacy judgment is affected by four principal sources of information: performance attainments, secondary experiences by seeing others' success, verbal persuasion, and physiological states (Bandura, 1982). First, past experiences with successfully accomplished work is the most important source of efficacy information. Successful experiences strengthen self-efficacy but experiences of failure lower it. Through repeated successful experiences, people can build a strong self-efficacy belief, and this belief reduces the negative effect of failures. Indeed, a strong self-efficacy in a certain area can function not only in a similar situation but also in a different activity.

Second, secondary experiences are also a source of information that affects self-efficacy judgment. Seeing others' experience of success is also related to confidence in one's ability. Vicarious experiences can help one have increased self-efficacy and confidence; especially, the influence of such experiences is most effective when one considers him/herself similar to the other person.

Third, verbal persuasion is also commonly considered an information source that helps people believe in their capabilities. Appraisal and encouragement from others such as leaders or colleagues lead people to have a sense of efficacy and to invest time in accomplishing their work or duty. Lunenburg (2011) suggested the idea of the Pygmalion effect for a leader as a way to boost followers' self-efficacy. The Pygmalion effect is a phenomenon in which the more we have expectations for others' success, the better they perform (Rosenthal & Jacobson, 1968). Applying

this Pygmalion effect to the workplace, when leaders trust followers' success, followers can successfully achieve their goals. Lastly, people's physiological state occasionally affects self-efficacy judgment. When people are stressed out and have pain, this may influence physical inefficacy.

In sum, these sources of self-efficacy explain how people have high or low self-efficacy. Self-efficacy is affected by a person's direct or indirect experiences with success/failure and emotional status, and can also be boosted by others' efforts. In other words, in the workplace, leaders' confidence in employees' successful performance improvement helps employees to achieve a high level of performance (Eden, 2003). To maximize leaders' influence on employees' self-efficacy, leaders should have a close relationship with their employees and continuously show their authenticity, optimism, and moral/ethical values to the followers.

Meanwhile, self-efficacy usually has been understood in three different ways: general self-efficacy, task-specific self-efficacy, and domain-specific self-efficacy. Task and domain-specific self-efficacy is constrained to specific task and domain, whereas general self-efficacy includes a broader concept that indicates one's belief in competence to deal with a broad range of situations. Occupational self-efficacy, which is categorized into domain-specific self-efficacy, and is related to the domain of the workplace, is one's belief in his or her ability and competence to implement successfully educational requirements or work in his or her job (Schyns & von Collani, 2002).

Self-efficacy in the Workplace

In the workplace, employees' self-efficacy judgment is strongly important because their activity and intention to engage actively in the work, and their performance are affected by the judgment. Self-efficacy reduces employees' stress and fatigue, as employees' self-efficacy helps them believe that they can control the work and stressful situations (Ozer & Bandura, 1990).

Thus, much organizational behavior literature focuses on the way to improve employees' self-efficacy for both employees' and organizational performance improvement.

According to the level of occupational self-efficacy, employees show differences in their actions and thoughts in the workplace. Employees with a low level of occupational self-efficacy tend to give up because they consider the work assigned to them as exceeding their capabilities, and the employees dwell on their personal inefficiency and blame themselves (Meichenbaum, 1977). Indeed, employees are reluctant to participate in activities that are conceived as exceeding their coping abilities even though the work is within the bounds of their capability. On the other hand, employees with a high level of occupational self-efficacy try harder to successfully accomplish their work and invest more effort and time in completing the work. As a result of this effort, the employees are more engaged in their work and show high performances (Pati & Kumar, 2010; Stajkovic & Luthans, 1998). Considering this feature of self-efficacy, having and hiring employees with high occupational self-efficacy can be critically important for organizational success. And organizations need to find a way to improve employees' self-efficacy in their work.

Interpersonal Trust

Concept of Trust

The importance of trust as a factor that enables building a healthy relationship and as a factor affecting employees' attitudes and behaviors has often been discussed and well documented by many researchers (e.g., Dirks & Ferrin, 2002; Ferres, Connell, & Travaglione, 2004; Jones & George, 1998; Lee, Stajkovic, & Cho, 2011). Given the interest in trust, many researchers have defined trust in different ways.

Cook and Wall (1980, p. 39) defined trust as "the extent to which one is willing to ascribe good intentions to and have confidence in the words and actions of other people." And similarly Mishra (1996) explained that trust is "one party's willingness to be vulnerable to another party based on the belief that the latter party is a) competent, b) open, c) concerned, and d) reliable" (p. 265). More recently, Rousseau, Sitkin, Burt and Camerer (1998) defined trust as a "psychological state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behavior of another" (p. 395).

Although the definitions of trust vary slightly according to the researchers, the main feature of trust is the aforementioned "willingness" of one party (Ferres et al., 2004). This feature of trust is well reflected in the study of Mayer and Schoorman (1995). They defined it as "willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party" (p. 712). This employees' willingness leads to changes in employees' attitudes and behaviors such as increased cooperation, information sharing, work engagement, and work performances (Cunningham & MacGregor, 2000; Ferres et al., 2004; Tan & Tan, 2000). Conlon and Mayer (1994) also found that willingness to trust others is positively related to a person's behaviors.

People's trust is determined by their personal traits, propensity to trust others based on their past experiences, and expectations of others, and trust is also affected by the other party's attributes (Mayer et al., 1995).

As shown in Table 1, many studies have investigated antecedents of trust, and trustees' characteristics and behaviors such as expertise and trustworthiness are critically related to the level of trust (Mayer et al., 1995). Especially the trustworthiness of the trustees plays an important role in increasing the trustors' trust in the trustees, and Mayer, Davis and Schoorman (1995) suggested three characteristics that compose a major portion of trustworthiness: ability, benevolence, and integrity.

Table 1

Studies on Antecedents of Trust

Authors	Antecedents of Trust
Boyle & Bonacich (1970)	Past interactions, index of caution based on prisoners' dilemma outcomes
Butler (1991)	Availability, competence, consistency, discreetness, fairness, integrity, loyalty, openness, promise fulfillment, receptivity
Cook & Wall (1980)	Trustworthy intentions, ability
Dasgupta (1988)	Credible threat of punishment, credibility of promises
Deutsch (1960)	Ability, intention to produce
Farris, Senner, & Butterfield (1973)	Openness, ownership of feelings, experimentation with new behavior, group norms
Frost, Stimpson, & Maughan (1978)	Dependence on trustee, altruism
Gabarro (1978)	Openness, previous outcomes
Giffin (1967)	Expertness, reliability as information source, intentions dynamism, personal attraction, reputation
Good (1998)	Ability, intention, trustees' claims about how (they) will behave
Hart, Capps, Cangemi, & Caillouet (1986)	Openness/congruity, shared values, autonomy/feedback
Hovland, Janis, & Kelley (1953)	Expertise, motivation to lie
Johnson-George, & Swap (1982)	Reliability
Jones, James, & Bruni (1975)	Ability, behavior is relevant to the individual's needs and desires
Kee & Knox (1970)	Competence, motives
Larzelere & Huston (1980)	Benevolence, honesty
Lieberman (1981)	Competence, integrity
Mishra (1996)	Competence, openness, caring, reliability
Ring & Van de Ven (1992)	Moral integrity, goodwill
Rosen & Jerdee (1977)	Judgment or competence, group goals
Sitkin & Roth (1993)	Ability, value congruence
Solomon (1960)	Benevolence
Strickland (1958)	Benevolence

Source: Mayer, Davis, & Schoorman (1995, p. 718).

Trustees' ability determines trustees' characteristics and leads trustors to trust (Cook & Wall, 1980; Jones, James, & Bruni, 1975; Mayer et al., 1995). Benevolence is "the extent to which a trustee is believed to want to do good to the trustor." Trustees' concerns about trustors and their intentions to support them are important in leading trustors to trust (Mayer et al., 1995).

Lastly, trustee's integrity that indicates adherences to a set of principles, having a strong sense of justice, and being congruent with his or her words also affects the degree of trustors' trust (Mayer et al., 1995).

These three components of trustworthiness help to understand how authentic leaders increase followers' interpersonal trust. Authentic leadership can build trust by showing respect for their followers and providing for their concerns (Avolio et al., 2004a). Moreover, authentic leaders' authenticity and integrity based on their internalized values also increase the level of their followers' interpersonal trust.

Interpersonal Trust in the Workplace

As Barnard (1938) explained, organizations are systems of cooperation: Employees continuously interact and communicate with their organizational members for their shared organizational objectives within a workplace. Indeed, because it is not easy for all employees to have the right information and skills for dealing with all problems, cooperation is of great importance. Therefore, in the workplace, working together involves interdependence, and interpersonal trust enables employees to work together more effectively (Mayer et al., 1995). Even though employees may have little or no interpersonal trust with their co-workers and leaders, the employees might cooperate with their organizational members for their organizational objectives. However, employees' trust in co-workers and leadership promotes employees' active participation in communication, information sharing, and their work.

Many researchers have acknowledged that interpersonal trust is an enabling factor that facilitates and promotes organizational behavior such as cooperation and performance improvement (e.g., Mayer et al., 1995; McAllister, 1995). For example, Jones and George (1998) asserted that interpersonal trust is an antecedent for successful cooperation. And they claimed that unconditional trust has a stronger effect on changes in the exchange relationship than conditional

trust, even though conditional trust allows employees to cooperate for the shared organizational goals.

Trust in co-workers and leadership is also linked to employees' attitudes such as job satisfaction, goal commitment, and work engagement (Dirks & Ferrin, 2002; Hassan & Ahmed, 2011; Rich, 1997). When employees have a low level of trust in leadership, they are more likely to be psychologically distressed and this distress causes negative results such as low performances and low work engagement with high intention to leave (Dirks & Ferrin, 2002).

Depending on the presence of interpersonal trust among organizational members, organizational atmosphere, behaviors, and performance will vary. For example, employees who trust their organizational members are more likely to engage in communications and their work, and are willing to help other organizational members (Ferres, Connell, & Travaglione, 2004). On the other hand, a low level of interpersonal trust hinders employees from sharing information and resources; and employees with a low level of interpersonal trust are reluctant to help their co-workers.

Work Engagement

Concept of Work Engagement

In recent years, there has been an increased interest in employees' engagement because employees' increased engagement predicts high performances (Bakker, Demerouti, & ten Brummelhuis, 2012; Bakker & Bal, 2010; Chung & Angeline, 2010; Harter, Schmidt, & Hayes, 2002; Richman, 2006; Saks, 2006).

Kahn (1990) was the one of first researchers to conceptualize engagement and disengagement. He defined engagement as "the harnessing of organization members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances." Whereas disengagement refers to "the uncoupling of

selves from work roles; in disengagement, people withdraw and defend themselves physically, cognitively, or emotionally during role performances" (p. 694). Thus, according to Kahn (1990), engaged employees are more likely to be physically, cognitively, and emotionally present when they are participating in their work activities. Similar to Kahn (1990), Llorens, Schaufeli, Bakker, and Salanova (2007) considered engagement "a persistent, pervasive and positive affective-motivational state of fulfillment in employees" (p. 827).

In another effort to define engagement in a different way, Maslach and Leiter (1997) viewed engagement as the antithesis of burnout. According to Maslach and Leiter (1997), burnout is characterized by emotional exhaustion, cynicism, and lack of professional efficacy; and engagement is characterized by the direct opposites of these characteristics such as energy, involvement, and efficacy. In this view, burnout and engagement are directly opposite concepts and can be measured by the same instrument. That is, low scores on emotional exhaustion indicate energy of engagement.

However, Maslach and Leiter's (1997) view on engagement was criticized by Schaufeli et al. (2002) since using the same instruments for burnout and engagement makes it difficult to study the relationship between burnout and engagement. Therefore, they contributed their efforts to define engagement and to develop a new instrument for engagement.

Schaufeli et al. (2002) defined work engagement as "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (p. 74). Comparing these three characteristics of engagement with burnout, vigor and dedication are directly the opposite of exhaustion and cynicism, but absorption and reduced efficacy are not direct opposites, meaning they are just distinct concepts (Schaufeli et al., 2002). Vigor is characterized by "high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties. Dedication is characterized by a sense of significance, enthusiasm, inspiration, pride, and challenge" (p. 74). And absorption is characterized by "being fully concentrated and deeply engrossed in one's work, whereby time passes quickly and one has

difficulties with detaching oneself from work" (p. 75). In the same perspective, highly engaged employees are expected to accomplish high performances both at the individual level and at the organizational level in business contexts (Halbesleben, 2010; Rich, Lepine, & Crawford, 2010).

The Utrecht Work Engagement Scale (UWES), which included three dimensions of work engagement—vigor, dedication, and absorption—was originally developed to assess work engagement. This questionnaire was composed of 24 items, but later when 7 unsound items were excluded through psychometric evaluation, 17 items remained: 6 items of vigor, 5 items of dedication, and 6 items of absorption (Schaufeli et al., 2002). In the follow-up study, Schaufeli, Bakker, and Salanova (2006) developed a short nine-item version of the UWES consisting of three subscales with nine items: vigor (3 items), dedication (3 items), and absorption (3 items). This short version of the UWES is the most often used instrument to access work engagement.

Considering these definitions of work engagement, in the workplace, the level of work engagement is anticipated to play a key role in promoting performances at the individual level such as career development and at the organizational level such as financial returns (Halbesleben, 2010; Harter et al., 2002; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009b). Employees who are engaged in their work show less absenteeism, lower intention to leave, and strong motivation to learn and develop skills related to their work (Schaufeli, 2012).

Work Engagement vs. Commitment

Although work engagement and organizational commitment are sometimes used interchangeably in the literature, they are quite different concepts (Maslach, Schaufeli, & Leiter, 2001; Saks, 2006).

Organizational commitment is "the relative strength of an individual's identification with and involvement in a particular organization" (Mowday, Porter, & Steers, 1982, p. 226). Employees who are highly committed to the organization have strong intention to accept the

organizational goals and values, are willing to devote themselves to the organization, and have strong intention to stay in the organization (Mowday, Porter, & Steers, 1982).

Considering the definition and characteristics of organizational commitment, the major difference between work engagement and organizational commitment is their focus. Work engagement focuses on work itself, whereas organizational commitment's focus is on the organization (Maslach et al., 2001). In other words, organizational commitment refers to employees' involvement in and attitudinal attachment to a particular organization (Allen & Meyer, 1990; Mowday et al., 1982). On the other hand, work engagement is about the degree to which employees are involved in their work and duties for achieving organizational objectives (Saks, 2006). Therefore, organizational commitment primarily concerns employees' attitude toward an organization and its effect on employees' behaviors such as turnover intention, whereas work engagement concerns job resources such as autonomy, safety, and organizational supports from leaders and co-workers that affect employees' work engagement.

Work Engagement Models and Theory in the Workplace

The level of employees' work engagement determines the quality of work performances, and the level of employees' work engagement is determined by many factors in the workplace. Bakker (2011) explained that the level of work engagement is mainly driven by external and internal resources such as job resources and personal resources. Job resources include social support from co-workers and leaders, autonomy, interpersonal trust, and feedback, and these resources perform motivational roles that are directly related to increased work engagement. Personal resources are positive self-evaluations of one's ability. Employees with a high level of self-confidence are predicted to be more motivated to pursue their goals and to be more engaged in their work activities (Bakker, 2011; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009a).

Kahn (1990) also explained how employees experience work engagement and inhabit their work roles according to three psychological conditions: *meaningfulness, safety,* and *availability*. Employees in certain situations think about and consider questions regarding these conditions such as "(1) How meaningful is it for me to bring myself into this performance? (2) How safe is it to do so?, and (3) How available am I to do so?" (Kahn, 1990, p. 703). Depending on the answers to these questions, employees can engage in their task behaviors. Below, a more detailed discussion of these three psychological conditions is presented.

As explained in Table 2, meaningfulness, safety, and availability are related with work elements, elements of social systems, and individual distractions respectively. Employees have psychological meaningfulness when they feel some value in working for the performances. That is, employees experience psychological meaningfulness when they feel that they are big contributors for performances. This meaningfulness is generally affected by factors such as characteristics of the task and role that they are involved in and meaningful interaction with their co-workers and clients. Psychological safety is the feeling that allows employees to invest themselves in the work without any fear to fail. This feeling is affected by interpersonal relationships, group and interpersonal dynamics, management style and process, and organizational norms. Within an organization as a social system, especially when employees are trusted by their organizational members and managerial environments are supportive, employees feel more psychological safety. Lastly, psychological availability is the feeling of readiness—physically, emotionally, and psychologically.

Table 2

Dimensions of Psychological Conditions Suggested by Kahn (1990)

Dimensions	Meaningfulness	Safety	Availability
Definition	Sense of return on investments of self in role performances.	Sense of being able to show and employ self without fear of negative consequences to self-image, status, or career.	Sense of possessing the physical, emotional, and psychological resources necessary for investing self in role performances.
Experiential components	Feel worthwhile, valued, valuable; feel able to give to and receive from work and others in course of work.	Feel situations are trustworthy, secure, predictable, and clear in terms of behavioral consequences.	Feel capable of driving physical, intellectual, and emotional energies into role performance.
Types of influence	Work elements that create incentives or disincentives for investments of self.	Elements of social systems that create situations that are more or less predictable, consistent, and nonthreatening.	Individual distractions that are more or less preoccupying in role performance situations.
Influences	Tasks: Jobs involving more or less challenge, variety, creativity, autonomy, and clear delineation of procedures and goals. Roles: Formal positions that offer more or less attractive identities, through fit with a preferred self-image, and status and influences. Work interactions: Interpersonal interactions with more or less promotion of dignity, self-appreciation, sense of value, and the inclusion of personal as well as professional elements.	Interpersonal relationships: Ongoing relationships that offer more or less support, trust, openness, flexibility, and lack of threat. Group and intergroup dynamics: Informal, often unconscious roles that leave more or less room to safely express various parts of self; shaped by dynamics within and between groups in organizations. Management style and process: Leader behaviors that show more or less support, resilience, consistency, trust, and competence. Organizational norms: Shared system expectations about member behaviors and emotions that leave more or less room for investments of self during role performances.	Physical energies: Existing levels of physical resources available for investment into role performances. Emotional energies: Existing levels of emotional resources available for investment into role performances. Insecurity: Levels of confidence in own abilities and status, self-consciousness, and ambivalence about fit with social systems that leave more or less room for investments of self in role performances. Outside life: Issues in people's outside lives that leave them more or less available for investments of self during role performances.

Source: Kahn (1990, p. 705).

In summary, even though Bakker (2011) and Kahn (1990) explained differently the factors or conditions that affect employees' work engagement experiences, the main drivers of work engagement are job resources and personal resources. Employees inhabit their work when they find values in their work activities and rewarding interpersonal interactions, and they have positive self-confidence and a feeling of readiness.

Role-based Performance

Evolution of Performance Appraisals

Organizations have always made efforts to increase employees' motivation for organizational success, and rewarding employees based on the result of performance appraisals is a way to motivate them. And performance appraisals and their results that provide information and serve as criteria for personnel decisions are critical to both employees and organizations. For example, from the organizational standpoint, performance assessments have provided much information to organizations that are required to make decisions such as developing training programs, performance feedback, promotion decisions, and salary increases (Huber, 1983).

Given the importance of employees' performance assessment, various appraisal methods and perspectives on it have been suggested and have evolved. According to Denisi, Cafferty and Meglino (1984), performance appraisal is "the process by which an observer, often a supervisor or a peer, rates the job performance of an employee" (p. 360), and this measurement method should be accurate and comprehensive to appraise individuals' performance because their performance is a matter of not only what an individual achieves but how he or she achieves it (Armstrong, 2006). However, early performance measurement methods that assessed employees' performance by ranking and comparing implied a number of problems such as accuracy of criteria to compare and rater errors (Welbourne et al., 1998).

41

To overcome this problem, there was an effort to focus on employees' tasks and behavioral performances that can be measured according to the accurate criterion (Welbourne et al., 1998). This effort was fueled by scientific management that believes jobs can be studied and be improved by scientific methods. As a result, assessment requires an accurate job description that specifies employees' work and duties in the organization. According to the job description, employees participate in the organization, and they are assessed by the description. And employees are rewarded based on performances, which are determined by how they perform the work described in the job description.

Recently, there has been a more comprehensive perspective on performance appraisals that focus on individuals and their competencies (Lawler & Ledford, 1992; Mikovich & Boudreau, 1997). This perspective calls for a shift from viewing employees as jobholders to considering them as human resources comprising an organization and working for the organization. Thus, the focus of this appraisal method resides in employees' current skills and capabilities. The person- and competency-based performance appraisal method focuses on the competencies that employees have and their level of performance (Lawler, 1994).

Moreover, another type of performance assessment focuses on non-job performance, normally referred to as organizational citizenship behavior (OCB) (Organ, 1990; Organ, 1997; Smith, Organ, & Near, 1983) or contextual performance (Borman & Motowidlo, 1997; Motowidlo & van Schotter, 1994). Organizational citizenship behavior is employees' activities that are not officially required but for which they volunteer to help their co-workers and invest their time for organizations.

In sum, the focus of performance appraisals has shifted from a person-based performance, to a job-based performance, and then returning to a person-based performance (Welbourne et al., 1998). Compared to early person-based performance appraisals, recent person-based performance assessments focus on individuals and their skills. And besides individuals'

official activities that are required, recent performance appraisals methods tend to include non-official activities such as organizational citizenship behavior.

Concept of Role-based Performance

The basic and important notion in role-based performance measurement is the concept of employees' roles within organizations. Welbourne et al. (1998) pointed out the problems of previous performance assessment that measures employees' performance as if employees had only one role within an organization, and claimed that that performance appraisal has measurement errors because employees perform multiple roles at work, using role theory and identity theory.

However, since employees' potential roles at work are countless, Welbourne et al. (1998) asserted that it is hard to measure employees' performances in all roles including all potential roles. Thus, they called for the consideration of role saliency using identity theory. According to this theory, the most salient and meaningful roles have the strongest meaning to people; in turn, those roles lead employees to act (Thoits, 1991, Welbourne et al., 1998).

Considering these issues on performance appraisals, Welbourne et al. (1998) developed the role-based performance scale (RBPS), including five major employees' roles such as job roles, organizational roles, career role, team role, and innovator role. This scale measures employees' official performances that are required as their duty and employees' extra role performances that are beyond the call of duty. Job roles are the most basic and critical dimension of work performances, and have been studied by many researchers. Job roles are related to participating in the work mentioned in the job description and the contract. Organization roles are associated with the work that is not officially required, that is, organizational citizenship behavior (OCB). Participating in career development programs to develop skills and new knowledge and to upgrade their value as a worker is associated with the career role. And engaging in team activities

as a team member and participating in projects for new ideas and new skills for organizational

success relate to the team role and the innovator role, respectively.

Relations among Variables

Based on the previously discussed literature review, this study found that there could be

influential relationships among five variables: authentic leadership, occupational self-efficacy,

interpersonal trust, work engagement, and role-based performance.

Authentic leadership is a pattern of leaders' behavior that promotes a positive and ethical

organizational climate to foster self-awareness and self-development by continuously showing

leaders' internalized moral perspective and self-awareness. It is expected that when followers

perceive leaders' authentic behaviors and support for their development and well-being, this

perception leads to positive changes in attitudes such as confidence in oneself, trust in others, and

increased engagement. These are the foundations of followers' performance improvement. The

positive effect of authentic leadership on followers' attitudes (self-efficacy and interpersonal

trust) and organizational behavior (work engagement) and the positive influence of followers'

attitude and behavior on performance (role-based performance) have been investigated and

supported by previous empirical studies (e.g., Gardner & Schermerhorn, 2004; George, 2003;

Hassan & Ahmed, 2011; Kahn, 1990; Korsgaard, Brodt, & Whitener, 2002; Pati and Kumar,

2010; Stajkovic & Luthans, 1998).

Authentic leadership theory places a lot of attention on positive psychological capital (i.e.,

moral/ethical, future oriented, confidence, resilience, the possible self, and optimism) as not only

antecedents of authentic leadership development but also as outcomes (Avolio & Luthans, 2006).

Authentic leaders can build positive psychological capital by demonstrating acts of confidence,

optimism, and trust, which in turn results in the positive attitudes and behaviors of their followers.

Regarding the effect of authentic leadership on attitude (self-efficacy and interpersonal trust),

44

Gardner and Schermerhorn (2004) claimed that authentic leaders who truly know themselves, are confident with themselves, and exemplify high moral standards help their followers find their abilities (efficacy) and promote further development by expressing trust in their followers. Moreover, authentic leaders' characteristics such as honesty, fairness, integrity, and openness also build followers' trust in others by increasing the spirit of organizations and authenticity of leadership, and treating employees fairly (Dirks & Ferrin, 2002; Hassan & Ahmed, 2011).

Authentic leaders act according to their inner value and try to be truthful in their relationship with their employees, which can increase employees' identification with their work and help employees to feel more psychologically empowered to do their work (George, 2003). This authentic leaders' behavior and employees' feeling make employees have ownership for their work and help them to be more engaged in their duty. Kahn (1990) said that leaders influence the degree of individuals' engagement in their work.

The presence of self-efficacy determines whether employees engage in the work, whereas the absence of self-efficacy limits employees' activities and engagement in the work. In their empirical study to investigate the role of occupational self-efficacy, organizational support, and supervisor support in increasing employees' engagement, Pati and Kumar (2010) found that occupational self-efficacy positively predicts employee engagement. This shows that the differences in the level of self-efficacy of employees indicate the differences in work engagement (Prakash & Kumar, 2010). Moreover, Stajkovic and Luthans (1998) showed that the level of occupational self-efficacy is positively related to organizational performances. They found that self-efficacy has the strongest effect on work performance among organizational behavior modification, goal setting, and feedback intervention.

Interpersonal trust is also positively related to employees' work engagement and performance improvement. When trust in co-workers and management exist within an organization, then that trust results in felt support from management, increased collaboration, and effective communication with the co-workers (Ferres et al., 2004; Tan & Tan, 2000). Previous

research has provided much evidence that trust is positively related to employees' attitudes and behaviors in terms of organizational citizenship behavior, work engagement, job satisfaction, and organizational commitment (e.g., Butler, Cantrell, & Flick, 1999; Dirks & Ferrin, 2002; Korsgaard, Brodt, & Whitener, 2002). Meanwhile, employees' positive attitude can reinforce the effect of authentic leadership on employees' performance. Based on the study by Peterson, Walumbwa, Avolio, and Hannah (2012), which investigated the relationship between authentic leadership and follower job performance, it is suggested that authentic leadership promotes followers' high level of positivity in the form of self-efficacy, trust, and resilience, resulting in increase their performances. Employees' positive attitude (high self-efficacy and interpersonal trust) is tied to changes in work engagement, which result in higher performance achievement (Salanova, Lorente, Chambel, & Martinez, 2011).

Positively changed employees' behaviors that are directly and indirectly affected by authentic leadership are also related to performance improvement. Employees who are engaged in their work and duties with positive work-related experiences are expected to achieve better performance with lower intentions to leave the organization (Bakker & Bal, 2010; Demerouti & Cropanzano, 2010; Schaufeli & Bakker, 2004). For example, in their study to examine the link between work engagement and job performance, Bakker et al. (2012) found that employees who are energetic and dedicated to their jobs are more likely to show better performance.

Summary

In this chapter, the relevant literature was reviewed to study the definitions and characteristics of each variable and to find the variable's role in the influential relationships.

Regarding authentic leadership as a major component of the hypothesized model that results in changes in employees' attitudes and behaviors, the following topics have been reviewed: (1) the concept of authentic leadership; (2) differentiating it from related leadership theories; and (3) authentic leadership and its effect on followers.

46

Regarding employees' attitudes and behaviors, these topics on occupational self-efficacy and interpersonal trust have been reviewed: (1) the concept of self-efficacy and interpersonal trust, and (2) its role in the workplace. Moreover, with regard to work engagement, topics included (1) the concept of work engagement, (2) comparison of work engagement and commitment, and (3) work engagement models and theory in the workplace.

Regarding employees' performance, the literature on role-based performance was reviewed focusing on the following topics: (1) evolution of performance appraisals, and (2) the concept of role-based performance.

Finally, based on the literature review, the influential relationships among five variables have been identified and discussed.

CHAPTER III

METHODOLOGY

The purpose of this study was to examine how authentic leadership contributes to followers' performance through changing their attitude and behavior in a Korean context.

This chapter describes the research methodology including (1) research design and approach, (2) population and sample, (3) instrumentation and variables, (4) procedures, and (5) data analysis for examining the structural relationship among the five variables.

Research Design and Approach

The general research approach of this study involved a quantitative and empirical analysis to assess the relationship among five variables (authentic leadership, occupational self-efficacy, interpersonal trust, work engagement, and role-based performance). The main purposes of this study were to investigate the roles and effects of authentic leadership in an organization, and to describe its potential linkages to several associated variables as identified in the literature review. Moreover, this study intended to validate the measures of the five variables in a Korean context. To accomplish the research purpose, 11 research hypotheses were developed based on the authentic leadership theory and literature relating to its relationship with followers. The developed hypothesized model was statistically tested using several statistical methods such as structural equation modeling, confirmatory factor analysis, and bootstrapping procedure.

The unit of analysis was at the level of employees. In other words, the effect of authentic leadership on followers was statistically assessed based on followers' perceptions on leadership. Followers' perceptions and feelings on their leaders' approach to leadership were measured using the survey method. Based on data analyses, this study interpreted whether to accept or reject the hypotheses and provided practical and scholastic implications.

Population and Sample

The research population of this study was any employees who are working with their co-workers and leaders through interaction and communication within organizations in Korea. To obtain sample cases for this study, this study first considered contacting Korean Industrial Complex Corp. (KICOX), which has six institutions across the country, each of which has company contact information including employees' information. Among the six branches, one branch was selected to obtain company and employee contact information. Consequently, the sample for this study was employees who worked in one of the industrial complexes in Korea. This study did not limit the selection of research participants, as any employee working within the organization through interaction and communication with their co-workers could be a potential participant in the survey. The potential participants of the survey were asked to respond to each of the questions that measure their perceptions of the items (authentic leadership, occupational self-efficacy, interpersonal trust, work engagement, and role-based performance).

A total of approximately 2,500 were selected as potential survey participants, and 365 Korean employees participated in the online survey (a return rate of 14.6%). Among the questionnaires obtained, 29 were excluded—28 had missing data and one was an outlier (case number 9). The cases with missing data and the outlier were not included in the final sample based on statistical procedures described below. The final sample consisted of 336 employees who voluntarily completed the online survey via Survey Monkey.

Of the 336 employees, 59.5% were male, with the largest group between 30 and 39 years of age (25.0%), followed closely by those 40-49 years of age (23.2%). In terms of job tenure, 24.7% had 3-5 years with their current job; 19.9% had 1-3 years on the job. With regard to size of company, 58.9% worked in conglomerates, whereas 41.1% worked in a small-to-medium sized enterprise (SME).

Instrumentation and Variables

To achieve the research purposes, this study used pre-existing instruments that were previously developed and validated by other researchers (See Appendix A) and also supported by many follow-up studies reported in the literature. Using pre-existing research questionnaires has several advantages (Hyman, Lamb, & Bulmer, 2006). First, researchers are confident about the validity and credibility of the instruments, because the questionnaires have already been validated by the questionnaire developers. Second, the follow-up researchers can save time and money needed to develop new questionnaires.

All scales were initially developed in English, and to apply the scale in Korean business contexts, Brislin et al.'s (1973) translation-back translation procedure was used to ensure similarity between the original English and translated Korean versions of each item. This study invited two Korean professors in the department of human resources at Korean universities, one bilingual professor in the US, and one bilingual doctoral student majoring in human resources to perform the following procedures. First, the bilingual professor and the bilingual doctoral student translated the English versions of the instruments into the Korean versions. The translated instruments were reviewed by two Korean professors; then, they back-translated them into English. The translated Korean versions of the instruments and the back-translated English versions of the instruments were finally reviewed by the bilingual professor and the bilingual doctoral student. Through this process, this study ensured linguistic equivalence between the

English and Korean versions of the instruments. The translated Korean versions of the instruments were sent out to the research participants using procedures described below.

Table 3 shows the original source of instruments and the number of items for five variables (authentic leadership, occupational self-efficacy, interpersonal trust, work engagement, and role-based performance). This combination of five variables has not been used in any previous studies located by this researcher through extensive literature review. All constructs were measured using a 5-point Likert-type scale ranging from 'strongly disagree (1)' to 'strongly agree (5)'. All instruments used were open to researchers, except role-based performance. The developers of the questionnaire on role-based performance required permission. This study obtained permission from the first author via email.

Table 3

Research Instrument Description

Variables	Source	Items
Authentic leadership	Neider & Schrieshein (2011)	14
Occupational self-efficacy	Rigotti, Schyns, & Mohr (2008)	6
Interpersonal trust	Cook & Wall (1980)	6
Work engagement	Schaufeli, Bakker, & Salanova (2006)	9
Role-based performance	Welbourne, Johnson, & Erez (1998)	20
Demographic	Selected by researcher for this study	4

Authentic Leadership

To measure authentic leadership, the Authentic Leadership Inventory (ALI), which was recently developed and validated by Neider and Schrieshein (2011), was used. Based on the Authentic Leadership Questionnaire (ALQ), which was developed by Walumbwa et al. (2008), Neider and Schrieshein (2011) developed ALI to supplement the limitations of the ALQ (such as

51

copyright issues, the issues of construct validity and confirmatory factor analysis). The ALI was initially composed of 16 items (4 items of self-awareness, 4 items of relational transparency, 4 items of internalized moral perspective, and 4 items of balanced processing); however, they subsequently deleted 2 items (1 self-awareness and 1 relational transparency) based on the results of confirmatory factor analysis. The final ALI contains 14 items that can be categorized into 4 sub-factors: self-awareness (S), relational transparency (R), balanced processing (B), and internalized moral perspective (M). Self-awareness indicates leaders' understanding of their strengths and weaknesses, and how they impact their followers (Walumbwa et al., 2008). Relational transparency means that through expressing true thoughts and openly sharing information, followers recognize their leaders' authenticity, while balanced processing is related to leaders' objective decision-making process (Walumbwa et al., 2008). Lastly, the internalized moral perspective is related to leaders' behaviors that are consistent with their internalized value (Walumbwa et al., 2008). Neider and Schriesheim (2011) tested the ALI scales for internal consistency reliability and empirical factor structure with the data from MBA students. The MBA students provided their perceptions of two presidential candidates (McCain and Obama in 2008) regarding leadership styles. The results showed that Cronbach's alpha for both dataset (McCain and Obama) ranged from .74 to .85, indicating acceptable internal consistency reliabilities ($\geq$ .70; Nunnally & Bernstein, 1994). In this study, the ALI scales had an internal consistency reliability of α= .93.

As shown in Table 4, each of the dimensions has three or four questions to measure four dimensions of authentic leadership. The following are sample items for each sub-factor: "My leader describes accurately the way that others view his/her abilities" (self-awareness), "My leader clearly states what he/she means" (relational transparency), "My leader resists pressures on him/her to do things contrary to his/her beliefs" (internalized moral perspective), and "My leader carefully listens to alternative perspectives before reaching a conclusion" (balanced processing). (see Appendix A for entire questionnaires)

Table 4

Authentic Leadership Construct Dimensions and Sub-questionnaires

Four Dimensions	Sub-questionnaires
Self-awareness	• Leader describes accurately the way that others view his/her abilities • Leader shows that he/she understands his/her strengths and weaknesses • Leader is clearly aware of the impact he/she has on others
Relational transparency	• Leader clearly states what he/she means • Leader openly shares information with others • Leader expresses his/her ideas and thoughts clearly to others
Balanced processing	• Leader asks for ideas that challenge his/her core beliefs • Leader carefully listens to alternative perspectives before reaching a conclusion • Leader objectively analyzes relevant data before making a decision • Leader encourages others to voice opposing points of view
Internalized moral perspective	• Leader shows consistency between his/her beliefs and actions • Leader uses his/her core beliefs to make decisions • Leader resists pressures on him/her to do things contrary to his/her beliefs • Leader is guided in his/her actions by internal moral standards

Occupational Self-efficacy

A short version of the occupational self-efficacy scale (Rigotti et al., 2008), which was originally developed by Schyns and von Collani (2002), was used to measure employees' occupational self-efficacy. The instrument initially consisted of 20 items, which were taken from 4 different scales (10 items, general self-efficacy; 7 items, generalized self-efficacy; 2 items, hope; and 1 item, heuristic competence) to measure self-efficacy that is related to the occupational domain. Based on the results of exploratory factor analysis and confirmatory factor analysis, Schyns and von Collani (2002) introduced a short version of the scale, consisting of eight items, which was demonstrated to be a reliable measure (Cronbach alpha = .86) in a German sample. Later, Rigotti et al. (2008) selected six items among the eight items in their study to explore the relationship between occupational self-efficacy and its results (performance, job

satisfaction, commitment, and job insecurity) and to validate the short version of the occupational self-efficacy scale across five countries (Germany, Sweden, Belgium, Britain, and Spain). The results showed that reliability of the occupational self-efficacy scale was between .85 (Belgium) and .90 (Britain), indicating a high reliability of construct. Construct reliability of measurement was also well supported by follow-up research studies (e.g., Pati & Kumar, 2010; Schaufeli & Salanova, 2008).

In this study, the occupational self-efficacy scale showed good reliability (α=.87). As shown in Table 5, sample items are "I can remain calm when facing difficulties in my job because I can rely on my abilities" and "When I am confronted with a problem in my job, I can usually find several solutions."

Table 5

The Measures of Occupational Self-efficacy

Six items	Questionnaires
Occupational self-efficacy 1	• Remain calm when facing difficulties in my job because I can rely on my abilities
Occupational self-efficacy 2	• Find several solutions when I am confronted with a problem in my job
Occupational self-efficacy 3	• Whatever comes my way in my job, I can usually handle it
Occupational self-efficacy 4	• My past experiences in my job have prepared me well for my occupational future
Occupational self-efficacy 5	• Meet the goals that I set for myself in my job
Occupational self-efficacy 6	• Feel prepared for most of the demands in my job

Interpersonal Trust

The Interpersonal Trust at Work Scale (ITWC), which was developed by Cook and Wall (1980), was used to measure interpersonal trust in the workplace. Cook and Wall (1980) pointed out that even though a number of scales have been developed to measure trust, only a few are

directly related to measuring trust in workplace or organizational settings. Thus, they developed the ITWC to complement the existing measures, and the ITWC is comprised of 12 items with two different dimensions: (1) faith in the trustworthy intentions of others (3 items of trust in peers and 3 items of trust in management); and (2) confidence in the ability of others (3 items of confidence in action of peers and 3 items of confidence in action of management). Among these 16 items, 6 items comprising 3 items of trust in peers and 3 items of trust in management, which measure employees' trust in others' trustworthy intention to help their co-workers, were used in this study and were consistent with the purpose of this study to measure employees' trust in their coworkers.

Since Cook and Wall (1980) developed the scale, many other researchers have used it for their follow-up studies and have supported the reliability and validity of the measures (e.g., Mooradian, Renzi, & Matzler, 2006; den Hartog, Chippers, & Koopman, 2002). For example, Mooradian et al. (2006) validated the internal consistency of the scales in terms of Cronbach's alpha (α was .81 for interpersonal trust in peers and α was .85 for interpersonal trust in management) in their study to explore interpersonal trust and its effect on knowledge sharing within and across a team.

In this study, ITWC had an internal consistency reliability of $\alpha= .87$. As shown in Table 6, the interpersonal trust measure has two dimensions, each of which has three questions to measure the two dimensions of interpersonal trust. Sample items for trust in peers and management are as follows: "If I got into difficulties at work I know my colleagues would try and help me out" (trust in peers) and "Management at my firm is sincere in its attempts to meet the employees' point of view" (trust in management).

Table 6

Interpersonal Trust Construct Dimensions and Sub-questionnaires

Two dimensions	Sub-questionnaires
Trust in peers	• My colleagues would try and help me out • Trust the people I work with to lend me a hand • My colleagues can be relied upon to do as they say they will do
Trust in management	• Management is sincere in its attempts to meet the employees' point of view • Quite confident that the firm will always try to treat me fairly • Management would be quite prepared to gain advantage by deceiving the employee (R)

Work Engagement

The Utrecht Work Engagement Scale-9 (UWES-9), developed by Schaufeli et al. (2006), was employed to measure work engagement. The scale includes three dimensions: vigor, dedication, and absorption. The original UWES scale contained 24 items, but 7 unsound items were excluded after psychometric evaluation. In turn, a total of 17 items remained (Schaufeli et al., 2002): 6 items for vigor, 5 items for dedication, and 6 items for absorption. Vigor is related to one's high level of energy and willingness to dedicate efforts to their task. Dedication is one's enthusiasm and inspiration. Absorption is defined as one's full concentration on his or her work. Later, Schaufeli et al. (2006) reduced the number of items of the UWES to nine items using a large international database. Their results showed that Cronbach's alpha of the total 9-item scale exceed the value of .70, indicating reliability of construct. This scale was also proven to be a valid measure by follow-up research (e.g., Hallberg & Schaufeli, 2006; Storm & Rothmann, 2003; Yi-Wen & Yi-Qun, 2005).

Table 7

Work Engagement Construct Dimensions and Sub-questionnaires

Three dimensions	Questionnaires
Vigor	• At my work, I feel bursting with energy • At my job, I feel strong and vigorous • When I get up in the morning, I feel like going to work
Dedication	• Being enthusiastic about my job • My job inspires me • Proud of the work that I do
Absorption	• Feeling happy when I am working intensely • Being immersed in my work • Get carried away when I am working

In this study, UWES-9 had an internal consistency reliability of α= .91. As shown in Table 7, a total of nine items were used in this study to measure employees' work engagement, and sample items are as follows: "At my work, I feel bursting with energy" (vigor), "I am enthusiastic about my job" (dedication), and "I feel happy when I am working intensely" (absorption).

Role-based Performance

To measure role-based performance, this study employed the Role-based Performance Scale (RBPS), developed and validated by Welbourne et al. (1998). This scale was designed to measure multidimensional aspects of employees' performances that include job and non-job dimensions. This scale is composed of 20 items classified into 5 sub-categories: job (doing specifically required work), career (increasing their value by participating career development program and obtaining new skills), innovator (being creative and innovative in their job), team member (working with team members and co-workers), and organization citizenship behavior (doing work and helping others even though it is not required). According to Welbourne et al.

(1998), Cronbach's alpha for the instrument, which indicates internal consistency ranging from .86 to .96, and measurement construct validity are both satisfied.

In this study, RBPS had an internal consistency reliability of $\alpha= .94$. As shown in Table 8, each of the dimensions has four questions to measure each of the four dimensions of the role-based performance.

Table 8

Role-based Performance Construct Dimensions and Sub-questionnaires

Five dimensions	Questionnaires
Job	• Quantity of work output • Quality of work output • Accuracy of work • Customer service provided (internal & external customers)
Career	• Making progress in his/her career • Seeking out career opportunities • Obtaining career goals • Developing skills needed in future career
Innovator	• Coming up with new ideas • Working to implement new ideas • Finding improved ways to do things • Creating better processes and routines
Team	• Working as part of a team or group • Seeking information from others in his/her work group • Making sure that his/her work group succeeds • Responding to the needs of others in his/her work group
Organization	• Doing things that help others when it's not part of the job • Working for the overall good of my company • Doing things that promote my company • Helping out so that my company is a good place to be

Instrument Pilot Test

Before conducting the main survey, it is important to conduct a pilot test to ensure the clarity of the instrument with the representative population. The pilot test is especially important

58

in this kind of study that relies on questionnaires that were originally developed in one language and then translated into another. In this study, the researcher conducted a pilot test to make sure that all translated instruments were understandable for Korean workers.

A total of 46 paper-based questionnaires were distributed to Korean workers, who were then asked to complete the questionnaires and also to provide their feedback regarding clarity of the instruments. Based on the feedback, a few minor changes were made. These were two language changes, the replacement of a word and the deletion of an unnecessary word. Following these minor instrument changes, the decision was made to proceed with the main round of the survey.

Procedures

This study used on-line survey tools to collect data. To recruit participants for the survey, the researcher contacted the Korea Industrial Complex Corporation (KICOX) to obtain the contact information of workers. KICOX is a governmental institution that was founded to support and help local companies, especially small-medium sized companies (SMEs), and to facilitate collaboration between conglomerates and SMEs. The major duties of KICOX are to develop industrial complexes, to facilitate an academia-industry-research cooperation network, and to provide a free agency for factory establishment. For example, KICOX helps establish new companies and provides financial support to the company that has ideas and know-how but lacks the necessary funds to put them into use. These industrial complexes are areas ready to build and/or operate companies by setting up the infrastructure needed to build and to operate companies such as roads, power, and water and sewage systems in place, Across Korea, there are six regional institutions. Each has built the database of companies that are operated in each industrial complex. Within each industrial complex the companies vary in terms of company size and type of business. The researcher contacted one of the KICOX institutions in which the

researcher had a connection and previous work experiences in order to gain permission to access employees' contact information (only e-mail addresses) to recruit participants. In terms of business type, the KICOX institution that the researcher contacted for data collection is characterized as an eclectronic industrial complex. Individual workers were invited to participate in the survey via an invitation email. The invitation email also included consent information and a link to the on-line survey directory on Survey Monkey. The consent information included the explanation that their survey results would not be sent to their company and thus no risks were associated with their participating in the survey. Also, it was explained that if they agreed to participate in the survey, they should click the link to the attached on-line survey directory and that doing so would be regarded as their consent to participate in the study. On the first page of the survey webpage, the overall procedure of the survey was explained, and upon their agreement, they were instructed to begin the survey; otherwise, they could just leave the survey webpage. It was also stated that completing the survey would take about 15 minutes. In about two weeks after the first email was sent to invite participants, the second invitation letter was sent out to remind and encourage them to participate in the survey. The data collection lasted approximately one month.

Regarding the participants' response options to avoid forcing any response, they were allowed to skip any items to which they did not want to respond or provide opinions. To protect participants' anonymity, no individual identification-related questions were included in the survey items; no one (even the researcher) could identify individual identification information. The responses were returned to the Survey Monkey on-line system automatically.

Data Analysis

The data, collected by purposive/volunteer sampling, was analyzed through statistical data procedures. This study employed two data analysis strategies. First, before testing

hypotheses, it is important to assure credibility and reliability of all constructs. Thus, this study measured the credibility and reliability of the construct of each variable using Cronbach-α test and confirmatory factor analysis (CFA). Second, three statistical programs were used to test the hypotheses. Structural equation modeling (SEM) was performed to test the hypothesized structural model using Lisrel 8.8 (Jöreskog & Sörbom, 2001) and SAS 9.2 and a bootstrapping test was performed to test the mediating effects using SPSS version 21. Based on the results of the data analysis, this study determined whether to accept the hypotheses.

Prior to examining the influential relationships among variables, this study examined missing data and outliers by testing Mahalanobis distance (Mahalanobis D^2). A total of 28 missing values were deleted. According to the result of the Mahalanobis D^2 test, which can be used to compute outliers in multivariate data that fell outside the normal distribution of the sample, 1 response score above |3.0| was deleted as an outlier (Kline, 2005; Schumacker & Lomax, 2010). Therefore, a total of 336 cases (of the original 365 participants) were used in this study for further analyses.

Basic Analysis Methods

Even though all scales had been validated in previous studies in terms of reliability and validity, it was important to confirm again the general reliability of the scales in this study before further analysis. Reliability is "the extent to which measurements are repeatable and … any random influence which tends to make measurements different from occasion to occasion is a source of measurement error" (Nunnally, 1967, p. 206). In other words, reliability indicates that measures yield consistent results without large measurement error (Peter, 1979). Cronbach's alpha is commonly used as a reliability coefficient, as an estimator of internal consistency reliability of a multi-item scale (Cortina, 1993), and Cronbach's alpha was used in this study to estimate the observed items' internal consistency estimates.

Cronbach's alpha, which normally ranges between 0 and 1, is the most commonly used measure for estimating the reliability of measurement instruments using three-, four-, or five-point Likert-type scales. The greater the Cronbach's alpha coefficient, the greater the internal consistency of the items. Many researchers consider that when the alpha coefficient is greater than .70, it is adequate for the scale (George & Mallery, 2003; Nunnally, 1978). This was the criterion used in this study.

It is important to assess construct validity before testing theory, as any measure reflects both a theoretical concept and measurement error (Bagozzi, Yi, & Phillips, 1991). The decision to reject or accept hypotheses without assessing construct validity may be doubted. Construct validity is "representing the correspondence between a construct conceptual definition of a variable and the operational procedure to measure or manipulate that construct" (Schwab, 1980, p. 5). Construct validity is the degree to which an operationalization measure measures the concepts it is supposed to measure (Bagozzi et al., 1991).

Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) are both used to estimate construct validity of item sets. Conventionally, EFA is a more appropriate method when the number of common factors is not specified or there is no specific pattern of relationship between the common factors and the indicators. In contrast, CFA is useful when the study has a specific number of factors and a relationship pattern of latent variables and observed variables with a strong conceptual foundation.

Confirmatory factor analysis (CFA) model is a powerful method and commonly used to assess construct validity of item sets as it directly allows researchers to examine the degree to which specific items load on their hypothesized factors. CFA provides the overall degree of fit such as a chi-square (χ^2) statistics that allows researchers to evaluate the overall acceptability of the measurement model.

CFA can be conducted by AMOS, LISREL, and other statistical programs. CFA should be employed prior to assessing the structural relationships among the latent variables using

structural equation modeling (SEM). This study checked construct validity by confirmatory factor analysis as a precursor to structural equation modeling (SEM) and to validate the measurements of the five variables in a Korean context. In addition, Pearson correlation coefficient analysis was performed to examine convergent validity.

Structural Equation Modeling

The structural model of this study was examined by structural equation modeling (SEM), which enables the researcher to assess both the direct and indirect relationships among the variables.

SEM is "a collection of statistical techniques that allow a set of relationships between one or more independent variables (IVs), either continuous or discrete, and one or more dependent variables (DVs), either continuous or discrete, to be examined" (Ullman & Bentler, 2012, p. 661). Comparing SEM with ANOVA and multiple regression analysis, although both ANOVA and multiple regression analysis allow researchers to use multiple dependent variables in their analysis, these methods are limited in explaining how these variables are related. Also, in ANOVA and multiple regression analysis, a variable can be an independent variable or a dependent variable, but a variable cannot be both at the same time (Hoyle, 2012). However, in SEM, a dependent variable can be an independent variable at the same time to predict outcomes, and SEM allows researchers to predict the effect of a set of variables on outcomes.

SEM has sometimes been referred to as covariance structure modeling or causal modeling, as covariance is the primary data for SEM, and SEM is used to estimate the causal effects between variables (Hoyle, 2012). SEM requires two variables— observed variables and not directly observed variables (unobserved variables). Between the two, unobserved variables (known as latent variables or factors) are used to represent concepts of the study, which explain phenomena, and are measured by using the observed variables. Observed variables are often called indicators, measured variables, or manifest variables. In path diagrams, relationships

between latent variables and observed variables are indicated by lines; a hypothesized relationship between two variables is represented by a line with one arrow. Latent variables are represented by circles or ovals, whereas observed variables are represented by squares or rectangles in path diagrams.

Structural equation modeling (SEM) consists of two major components: the measurement model and the structural model. The measurement model specifies how various observed variables are related to the latent variables (i.e., a CFA model), and the structural model explains how various latent variables are related to other latent variables, that is, the causal links between the latent factors.

One of the strengths of SEM is that it allows researchers to test complex and multidimensional relationships among variables that other statistical methods cannot test (Ullman & Bentler, 2012). SEM also allows researchers to evaluate relationships among variables with no measurement error (Forza & Filippini, 1998; Ullman & Bentler, 2012).

Once a hypothesized model is specified, it is important to figure out whether the hypothesized model provides an adequate fit to the data. To do this, SEM provides indications that help researchers to evaluate the goodness of fit of the structural model. Table 9 shows the fit indices provided by SEM software and the fit criteria. These fit indices can be categorized into absolute fit indices and comparative fit indices (McDonald & Ho, 2002). Absolute fit indices are used to compare the researcher's model to a best fitting model (assumed the perfectly fitting model has a fit of zero), whereas comparative (or incremental) fit indices are used to determine fit improvement of the hypothesized model over an alternative (West et al., 2012).

In this study, to assess the adequacy of the hypothesized model to the data, absolute fit indices (Chi-square, root mean square error of approximation [RMSEA], goodness-of-fit index [GFI], adjusted goodness-of-fit index [AGFI], standardized root mean square residual [SRMR], and root mean square residual [RMR]) and comparative fit indices (normed fit index [NFI] and comparative fit index [CFI]) were assessed. Table 9 provides additional information regarding

definitions and fit criteria of fit indices used in this study.

Table 9

Goodness-of-Fit Indices

	Fit Indices	Definition	Fit Criteria
Absolute fit indices	Chi-square (χ^2)	Assess the difference between observed and estimated covariance matrices	The smaller, the better the fit
Absolute fit indices	χ^2/df	Assess the whole fitting degree related to the degree of freedom	< 5
Absolute fit indices	Root Mean Square Error of Approximation (RMSEA)	The discrepancy between the hypothesized model covariance matrix and the population covariance matrix	<.05: good fit .05-.08: reasonable .08-.10: mediocre >.10: poor fit
Absolute fit indices	Standardized Root Mean Square Residual (SRMR)	The difference between the residuals of the hypothesized covariance matrix and the sample covariance matrix	<.08
Absolute fit indices	Root Mean Square Residual (RMR)		<.08
Absolute fit indices	Goodness-of-fit Index (GFI)	Degree of fit between the hypothesized model and the observed model	>.85
Absolute fit indices	Adjusted Goodness-of-fit Index (AGFI)	Adjusted GFI based on degree of freedom	>.80
Comparative fit indices	Comparative Fit Index (CFI)	Assess the model fit by comparison of the hypothesized model with the null model	>.90
Comparative fit indices	Normed Fit Index (NFI)	Assess the hypothesized model by comparing the χ^2 of the hypothesized model to χ^2 of the null model	>.90

Source: Hair, Black, Babin, Anderson, & Tatham (2006); Henry & Stone, 1994; West, Taylor, & Wu (2012).

Mediation Effects

In this study, occupational self-efficacy and interpersonal trust acted as mediators in the

relationship between authentic leadership and work engagement, and work engagement also

65

functioned as a mediator in the relationship between occupational self-efficacy and role-based performance and in the relationship between interpersonal trust and role-based performance. A mediating variable is defined as "a third variable that intervenes in the relation between an independent variable and a dependent variable, transmitting the effect of the independent variable on the dependent variable" (Cheong & MacKinnon, 2012, p. 418). In other words, a mediator represents "the extent that it accounts for the relation between the predictor and the criterion" (Baron & Kenny, 1986, p. 1176). This study assumed that the causal effect of authentic leadership on work engagement and the effect of occupational self-efficacy and interpersonal trust on role-based performance could be facilitated by the mediators (occupational self-efficacy, interpersonal trust, and work engagement).

The mediation effect can be tested by several statistical methods such as Baron and Kenny's (1986) approach, Sobel test (Sobel, 1982), bootstrapping, and estimating and testing direct and indirect paths. Baron and Kenny's (1986) approach estimates the mediation effect using ordinary least squares (OLS) regression. According to this method, mediation occurs when the following conditions are met: (1) the independent variable (X) significantly predicts the meditator (M), (2) the independent variable (X) significantly predicts the dependent variable (Y), and (3) the relationship between the independent (X) and dependent (Y) variables become non-significant when the mediator (M) is entered into the model. However, some researchers (MacKinnon, Krull, & Lockwood, 2000; Preacher & Hayes, 2008; Shrout & Bolger, 2002) have argued that the second condition, X is a significant predictor of Y, is not necessary for mediation to occur.

The Sobel test and bootstrapping are usually used for testing indirect effects in multiple mediator models. Multiple mediator models can be tested by performing separate simple mediation tests (e.g., in a 2-mediator model, 2 separate simple mediation tests are performed) or a single multiple mediation test. Preacher and Hayes (2008) described four advantages of testing single multiple mediation models: (1) testing the total indirect effect of X on Y and testing a

66

regression analysis with multiple predictors yielding equivalent results, (2) determining the extent to which a specific mediator mediates the effect of X on Y, (3) testing multiple mediation tests with reduced likelihood of parameter bias, and (4) determining relative magnitudes of the specific indirect effects by conducting a single multiple mediation test.

In comparing the Sobel test and bootstrapping test, some researchers (Briggs, 2006; Williams, 2004) have argued that bootstrapping is superior due to its low Type 1 error rates.

This study, which tests multiple mediator hypotheses, employed bootstrapping, which is used for testing multiple mediation models. In the bootstrapping method, sampling is continuously conducted and the indirect effect in each re-sampled data set is estimated. This process is repeated thousands of times, and then the approximate value of the sampling distribution of indirect effects is calculated and confidence intervals for indirect effects are constructed (Preacher & Hayes, 2008).

In addition, the mediation effects of occupational self-efficacy, interpersonal trust, and work engagement were evaluated through direct and indirect effect decomposition. Three types of effects (direct, indirect, and total effect) can be analyzed with SEM (Bollen, 1987). Direct effects are of major interest to researchers and commonly obtained via SEM. Indirect effects indicate the overall effect of one variable (X) on another (Y) through one or more mediating variables, and can be quantified by multiplying the effect of X on the proposed mediator and the effect of the mediator on Y partialling out the effect of X. And the total effect of X on Y is the sum of its direct and indirect effects.

Summary of Data Analysis Strategies

In this chapter, overall data analysis strategies were discussed including research design and approach, population and sample, instrumentation and variables, procedures, and data analysis techniques. The overall research design and approach to accomplish the research purpose

was explained. An on-line survey tool was used with employees in Korea, and approximately

2,500 employees were selected as potential participants, among whom 365 participated

voluntarily in the survey to comprise the obtained sample. This study used pre-existing

instruments to measure inter-relations among the five variables and causal relations among the

latent factors. Finally, with regard to data analysis strategy, several data analysis methods were

used including CFA, SEM, and bootstrapping along with basic statistical analysis such as the

construct validity test. Table 10 illustrates the data analysis strategy used for hypotheses testing.

Table 10

Data Analysis Strategy

Research Questions/Hypotheses	Data Analysis
Research Question 1 & H1	Confirmatory Factor Analysis (CFA)
Research Question 2 & H2 ~ H6, H8 ~ H10	Structural Equation Modeling (SEM)
Research Question 3 & H7, H11	Bootstrapping process, Structural Equation Modeling (SEM)
Demographic variables/ basic analysis	Descriptive statistics, Correlation coefficient

CHAPTER IV

FINDINGS

This study was guided by three major research questions: RQ1 Are the hypothesized measurements valid and reliable in the Korean context?; RQ2 What are the structural relationships among authentic leadership, occupational self-efficacy, interpersonal trust, work engagement, and role-based performance?; and RQ3 Do occupational self-efficacy and interpersonal trust have a mediating role in the relationship between authentic leadership and work engagement?; do work engagement and occupational self-efficacy, and work engagement and interpersonal trust jointly contribute to role-based performance? With regard to these three research questions, 11 hypotheses were developed and tested by SEM and bootstrapping. Prior to testing of the hypotheses, this study performed basic statistical analyses such as correlations and reliability analysis.

Basic Statistical Analysis

Basic Assumption and Reliability

As described in the methods section (Chapter III), the collected data were screened by eliminating all missing data cases and an outlier; a total of 336 data cases were used in further data analyses. Even though all measurement scales were validated in previous studies, it was necessary to ensure reliability and validity of measurement scales in this study (Hair et al., 2006).

69

To do this, this study assessed internal consistency of each construct measurement scale by Cronbach's alpha coefficient estimates and examined interconstructs' convergent reliability by interconstruct correlation coefficient estimates. Resulting findings are shown in Table 11.

Table 11

Reliability Estimates

	α for whole items of each instrument		α for sub-dimensions of each instrument	
Authentic leadership	14 items	.93	Self-awareness	.79
			Relational transparency	.72
			Balanced processing	.82
			Internalized moral perspective	.76
Occupational self-efficacy	6 items	.87	6 items with no sub-dimension	.87
Interpersonal trust	6 items	.87	Trust in peers	.83
			Trust in management	.83
Work engagement	9 items	.91	Vigor	.81
			Dedication	.80
			Absorption	.80
In-role performance	20 items	.95	Job	.85
			Career	.82
			Innovator	.84
			Team	.84
			Organization	.87

As shown in Table 11, the internal consistency reliabilities for all of the constructs (shown in the second and third columns in Table 11) – 14 items of authentic leadership, 6 items of occupational self-efficacy, 6 items of interpersonal trust, 9 items of work engagement, and 20 items of role-based performance – as assessed by Cronbach's alpha coefficient, exceeded Nunally's (1978) required level of .70 (from α =.87 to α =.95). Thus, the measures tended to be

reliable in the Korean context. Additionally, this study also assessed the internal consistency for each sub-dimension of the measurements – four dimensions of the authentic leadership measure, six items of the occupational self-efficacy measure (no sub-dimension), two dimensions of the interpersonal trust measure, three dimensions of the work engagement measure, and five dimensions of the role-based performance measure (presented in the fourth and fifth columns in Table 11). The results also demonstrate that the measures for five factors were reliable instruments in the Korean context (coefficient alpha ranges from .72 to .87).

Table 12

Descriptive Analysis, Inter-item Correlations, and Internal Consistency Estimates

Variables	M	SD	α	1	2	3	4	5
1. Authentic leadership	3.50	0.59	0.93	1				
2. Occupational self-efficacy	3.47	0.61	0.87	0.50**	1			
3. Interpersonal trust	3.51	0.60	0.87	0.55**	0.53**	1		
4. Work engagement	3.52	0.56	0.91	0.58**	0.63**	0.55**	1	
5. Role-based performance	3.56	0.52	0.95	0.59**	0.67**	0.66**	0.68**	1

Notes: ** Correlation is significant at the .01 level.
α = Cronbach's alpha coefficient estimates.

Also, correlation analysis indicated acceptable inter-correlations among the latent variables at the $p = 0.01$ level, as shown in Table 12. However, the higher level of correlation coefficients among the latent variables could result in multicollinearity issues, which threaten effective interpretations in further data analyses and mislead the investigators. The variance inflation factors (VIF), which reflect large VIF scores indicating the presence of a high degree of multicollinearity among the latent variables, and tolerance were used to detect multicollinearity. To avoid the issue of multicollinearity, tolerance should be greater than .20 (or .10) (O'Brien,

2007) and VIF should be less than 4 (Miles & Shevlin, 2001). As shown in Table 13, in this

study, VIF scores ranged between 1.74 and 2.03, and tolerance values ranged between .49 and

.58. Thus, it can be concluded that multicollinearity was not found in this study and would not

lead to misleading interpretations of data.

Table 13

Assessing Multicollinearity

Model	Standardized Coefficients (Beta)	t	Sig.	Collinearity Statistics	
				Tolerance	VIF
(Constant)		4.60	<.01		
Authentic Leadership	.122	3.27	<.01	.57	1.73
Occupational Self-efficacy	.225	5.96	<.01	.54	1.83
Interpersonal Trust	.256	6.97	<.01	.58	1.71
Work Engagement	.247	5.75	<.01	.49	2.03

Note: Dependent variable is role-based performance.

Research Question 1

With regard to Research Question 1, this study examined the construct validities: the

fourteen-item (4-factor) measure of authentic leadership (Neider & Schrieshein, 2011); the six-

item measure of occupational self-efficacy (Rigotti et al., 2008); the six-item (2-factor) measure

of interpersonal trust (Cook & Wall, 1980); the nine-item (3-factor) measure of work engagement

(Schaufeli et al., 2006); and the twenty-item (5-factor) measure of role-based performance

(Welbourne et al., 1998). Regarding RQ 1, this study developed and tested one hypothesis:

Hypothesis: *The measurements of authentic leadership, occupational self-efficacy, interpersonal trust, work engagement, and role-based performance are valid and reliable concepts in the Korean context.*

Assessing Measurement Model Fit

The overall confirmatory factor analysis (CFA) for the whole hypothesized model was conducted. CFA results are shown in Table 14. This study considered a variety of fit indices, as shown in Table 14, to determine how well the proposed model fit the sample data. Among these fit indices, Chi-Square value is the traditional measure for assessing overall model fit; however, since this fit index is sensitive to sample size, it has been recommended that other alternative fit indices such as χ^2/df ratio be considered to assess model fit (Bentler & Bonnet, 1980). When large samples are used, the chi-square statistic tends to reject the model, whereas when small samples are used, the power of the chi-square statistic as an index to assess model fit rarely exists and small samples tend to accept poor models.

As shown in Table 14, χ^2/df ratio was 2.46, satisfying the recommended level (< 5; Wheaton, Muthen, Alwin, & Summers, 1977). The value of RMSEA fell in the range of .05 to .08 and was considered as reasonable fit; in this study, RMSEA was .066, which indicated a close-fitting model. In addition, SRMR (.042), RMR (.042), CFI (.96), and NFI (.93) were indicative of a good fit to the data, while GFI (.89) and AGFI (.86) were close to .90. Even though the values of GFI and AGFI were under the recommended value of .90, which is considered a rule of thumb, these values satisfied other researchers' recommended values of .85 and .80 for GFI and AGFI, respectively (e.g., Anderson & Gerbing, 1984; Cole, 1987; Marsh, Balla, & McDonald, 1988). Additionally, Table 15 shows the factor loadings as a result of the CFA. The bigger factor loadings indicate adequacy of measurement model, and all factor loadings were above .50. Consequently, the overall fit indices of the proposed model indicated that the measurement model

was an acceptable fit to the data, and showed acceptable item-to-factor scale validity. It could therefore be said that the measurements of authentic leadership, occupational self-efficacy, interpersonal trust, work engagement, and role-based performance are valid and reliable concepts in the Korean context.

Table 14

Results of Confirmatory Factor Analysis (CFA) for all Hypothesized Measurements

Model Fit Indices	χ^2	χ^2/df	RMSEA	SRMR	RMR	GFI	AGFI	CFI	NFI
Measurement Model	395.03[*]	2.46	.066	.042	.042	.89	.86	.96	.93

Note: * p < .001

Table 15

Factor Loadings of the Overall CFA

Authentic leadership		Occupational self-efficacy		Interpersonal trust		Work engagement		Role-based performance	
AL 1	.90	SE 1	.70	Trust 1	.78	ENG 1	.88	PER 1	.81
AL 2	.89	SE 2	.77	Trust 2	.81	ENG 2	.88	PER 2	.80
AL 3	.92	SE 3	.80			ENG 3	.83	PER 3	.80
AL 4	.87	SE 4	.68					PER 4	.87
		SE 5	.76					PER 5	.84
		SE 6	.73						

Note: n = 336

The validity of the construct was also assessed in terms of convergent validity and discriminant validity. The convergent validity indicates how well the observed variables capture the properties of the construct, and evidence of convergent validity was assessed using three measures—factor loadings, composite reliability, and average variance extracted (AVE). As

shown in Table 16, all factor loadings of the observed items (ranging from .68-.92) were

significant at the level of $p < 0.001$. The composite reliabilities of the latent variables ranged

between 0.77 and 0.94, which exceeded the recommended criteria of 0.60 (Fornell and Larcker,

1981). In addition, the AVEs for the latent variables were greater than .50 (Fornell and Larcker,

1981), ranging between .55 and .80.

Table 16

Summary of Results of Measurement Models

Variables	N of Items	Scale CR	Factor Loading (λ)	AVE
1. Authentic leadership	4	.94	.87-.92	.80
2. Occupational self-efficacy	6	.88	.68-.77	.55
3. Interpersonal trust	2	.77	.78-.81	.63
4. Work engagement	3	.90	.83-.88	.75
5. Role-based performance	5	.91	.80-.87	.68

Notes: CR =Composite Reliability; AVE= Average Variance Extracted

This study conducted nested model comparisons (Anderson & Gerbing, 1988; Bagozzi et

al., 1991) by chi-square difference tests to test discriminant validity, which refers to testing

whether the five constructs differ. To perform chi-square difference tests, this study compared the

fit of the current five-factor model with nested models in which one pair of factors' correlation

parameters (for example, authentic leadership and occupational self-efficacy) was constrained to

unity. As depicted in Table 17, every nested model showed poorer chi-square than that of the

current five-factor model. In addition, none of the compared nested measurement models' fits

were statistically changed ($\Delta\chi^2 \leq 3.84$); therefore, this result provided evidence for discriminant

validity of the measures.

In sum, considering separate CFA results and overall CFA for the whole hypothesized

model, it could be said that hypothesis 1 was supported and RQ1 was answered in the affirmative.

Table 17

Results of Nested Measurement Model Comparisons

Models	Chi-square	*df*	RMSEA	GFI
Unconstrained main measurement model	395.03	160	.066	.89
Constrained models				
Authentic leadership and self-efficacy	470.45	161	.076	.88
Authentic leadership and trust	482.29	161	.077	.87
Authentic leadership and work engagement	505.95	161	.080	.87
Authentic leadership and performance	490.91	161	.078	.87
Self-efficacy and trust	484.62	161	.077	.87
Self-efficacy and work engagement	513.40	161	.081	.87
Self-efficacy and performance	520.36	161	.082	.87
Trust and work engagement	470.41	161	.076	.88
Trust and performance	511.93	161	.081	.87
Work engagement and performance	508.93	161	.080	.87

Research Question 2

With regard to Research Question 2, this study developed eight hypotheses to examine structural relationships among the five latent variables based on theoretical backgrounds and findings of previous studies done by other researchers:

H2) Authentic leadership will positively influence employees' occupational self-efficacy.

H3) Authentic leadership will positively influence employees' interpersonal trust.

H4) Authentic leadership will positively lead to employees' work engagement.

H5) Employees' occupational self-efficacy will positively influence work engagement.

H6) Employees' interpersonal trust will positively influence work engagement.

H8) Employees' occupational self-efficacy will positively influence role-based

performance.

H9) Employees' interpersonal trust will positively influence role-based performance.

H10) Employees' work engagement will positively influence role-based performance.

These eight hypotheses shown in Figure 6 were tested by structural equation modeling analysis.
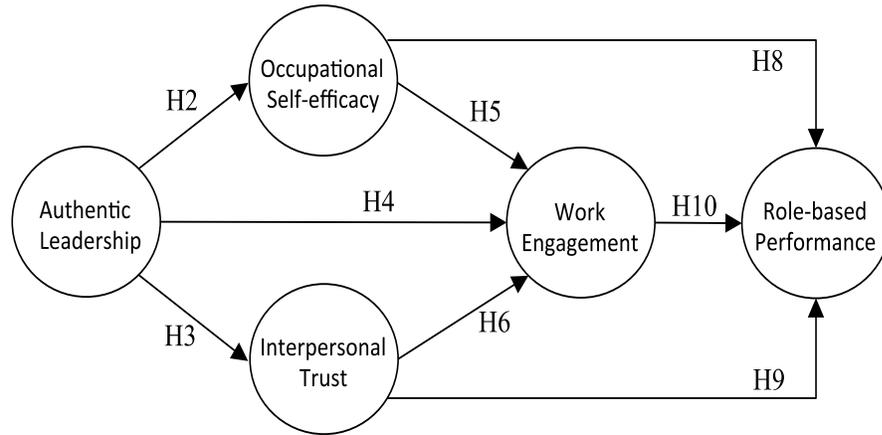
Figure 6. *Hypothesized Research Model with Paths*

Structural Equation Modeling Analysis

Structural Model Analysis

The structural relationships among five variables were tested by structural equation modeling (SEM) using the Lisrel 8.8 statistical package (Jöreskog & Sörbom, 2001). SEM allows researchers to examine measurement errors and both direct and indirect structural relationships among variables. Various fit indices were used to assess the adequacy of the model fit.

The 20 × 20 correlation matrix generated by SAS 9.2 statistical software was input for the LISREL program. The latent variables used in the analysis were authentic leadership, occupational self-efficacy, interpersonal trust, work engagement, and role-based performance.

As shown in Table 18, the hypothesized model provided an overall adequate fit to the data except for the chi-square statistic [$\chi^2(162) = 429.66$, $p = < .001$, $\chi^2/df = 2.65$, RMSEA $=.07$, SRMR $= .06$, RMR $= .06$, GFI $= .89$, AGFI $= .85$, CFI $= .95$, NFI $=.92$].

Table 18

Model Fit Indices for Hypothesized Model

Model Fit Indices	χ^2	χ^2/df	RMSEA	SRMR	RMR	GFI	AGFI	CFI	NFI
Hypothesized Model	429.66[*]	2.65	.07	.06	.6	.89	.85	.95	.92

Note: * p < .001

As depicted in Figure 7, ellipses are used to represent latent variables, and rectangles are used to represent indicators of the latent variables. With regard to the measurement part of the structural model, the associations between latent variables and their indicators are represented by a line with one-sided arrow. The numbers near the single-headed lines are factor loadings of the indicators. All factor loadings of the constructs for each latent variable are greater than .50 (Hair et al., 2006), indicating statistical significance (factor loadings ranged from .68 to .90). The influential relationships among latent variables are represented by a line with one arrow, and thus a line with one arrow between two latent variables indicates the influence of one variable on the other variable. The effect size of the paths was determined by standardized path coefficient (SPC), which represents standardized regression coefficients that measure the effect of one variable on other variables. The significance of SPC is determined by a *t*-value, and when *t*-value is higher than |1.96| (Kline, 2011), SPC estimates are statistically significant.

SPCs with *t*-value for the each influential relationship are depicted near the one-single headed lines in Figure 7. The results showed that all hypothesized structural relationships among the five latent variables were statistically supported. Authentic leadership had positive and statistically significant influence on employees' occupational self-efficacy (SPC = .57, *t* = 9.20; *H2*), employees' interpersonal trust (SPC = .68, *t* = 10.53; *H3*), and employees' work engagement (SPC = .26, *t* = 2.86; *H4*). Employees' occupational self-efficacy positively influenced work engagement (SPC = .45, *t* = 7.20; *H5*) and role-based performance (SPC= .32, *t* = 5.31; *H8*), and

employees' interpersonal trust positively influenced work engagement (SPC = .26, *t* = 3.55; *H6*) and role-based performance (SPC = .44, *t* = 7.16; *H9*). Also, employees' work engagement positively influence role-based performance (SPC = .26, *t* = 3.77; *H10*).
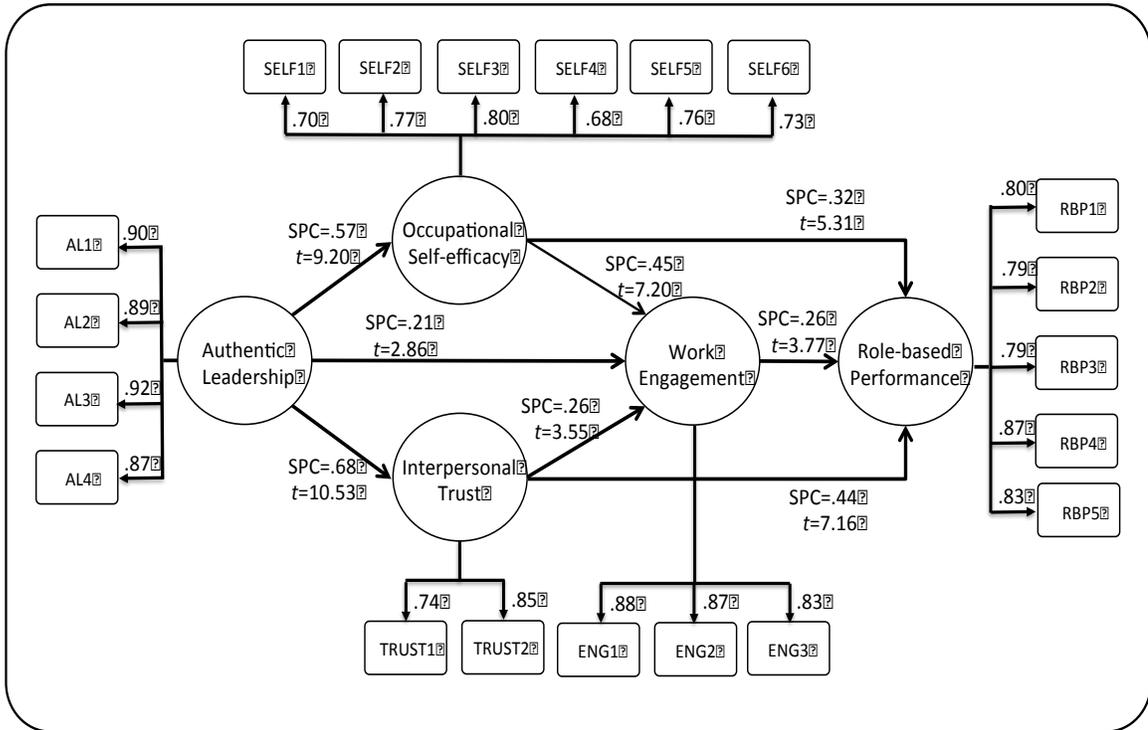
Figure 7. *SEM Results with SPC Estimates*

Research question 3

With regard to Research Question 3, this study developed two hypotheses to examine the mediating role of occupational self-efficacy, interpersonal trust, and work engagement:

H7) The influential relationship between authentic leadership and work engagement will be mediated by employees' occupational self-efficacy and interpersonal trust.

H11) The influential relationship between employees' occupational self-efficacy and role-based performance, and between employees' interpersonal trust and role-based performance will be mediated by work engagement.

These two hypotheses shown in Figure 8 were tested by bootstrapping procedures using SPSS statistical software.
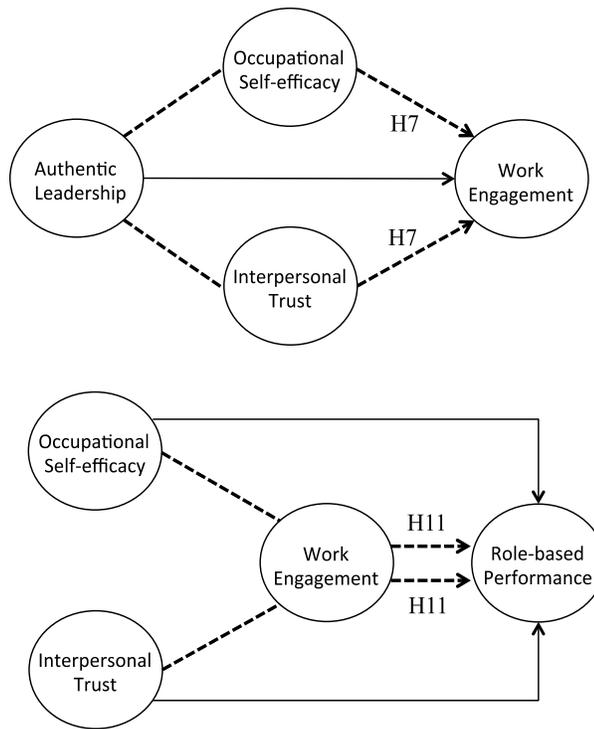
Figure 8. *Mediating Models (H7 & H11)*

Analysis of Mediating Effect

This study bootstrapped the indirect effects of authentic leadership on work engagement, using SPSS. With regard to H7, Table 19 showed the estimates and 95% CIs (percentile, BC, and BCa) for testing the mediating effect of occupational self-efficacy and interpersonal trust. As shown in Table 19, total indirect effects through occupational self-efficacy and interpersonal trust were .2823 with a 95% BCa bootstrap CI of .1711 to .3665. The indirect effects through two

mediators were .1904 (through occupational self-efficacy) and .0918 (through interpersonal trust).

The z values for both mediators were greater than |1.96| (occupational self-efficacy: $z = 6.4448$, p

$< .01$; interpersonal trust: $z = 3.2414$, $p < .01$), which indicated that occupational self-efficacy and

interpersonal trust played as mediators in the relation between authentic leadership and work

engagement. In addition, the bootstrapped confidence intervals also confirmed the result, because

its 95% confidence intervals (CI) did not contain zero. Thus, hypothesis 7 was supported.

Table 19

Mediation of the Effect of Authentic Leadership on Work Engagement through Occupational Self-efficacy and Interpersonal Trust

| | Point Estimate | Product of Coefficients | | Bootstrapping | | | | | |
| | | | | Percentile 95% CI | | BC 95% CI | | BCa 95% CI | |
		SE	Z	Lower	Upper	Lower	Upper	Lower	Upper
Occupational Self-efficacy	.1904	.0296	6.4448	.1304	.2617	.1300	.2612	.1282	.2596
Interpersonal Trust	.0918	.0283	3.2414	.0214	.1678	.0194	.1654	.0099	.1587
Total	.2823	.0363	7.7786	.1919	.3843	.1885	.3800	.1711	.3665

Note: BC, bias corrected; BCa, bias corrected and accelerated; 5,000 bootstrap samples.

As shown in Table 20, the indirect effect of work engagement was .2152, and the z value

was greater than |1.96| ($z = 7.4399$, $p < .01$), which indicated that work engagement was a

significant mediator in the relation between occupational self-efficacy and role-based

performance. In addition, the bootstrapped confidence intervals also confirmed the result, because

its 95% CI did not contain zero.

Table 20

Mediation of the Effect of Occupational Self-efficacy on Role-based Performance through Work Engagement

	Point Estimate	Product of Coefficients		Bootstrapping					
				Percentile 95% CI		BC 95% CI		BCa 95% CI	
		SE	Z	Lower	Upper	Lower	Upper	Lower	Upper
Work Engagement	.2152	.0289	7.4399	.1512	.2870	.1525	.2903	.1508	.2867

Note: BC, bias corrected; BCa, bias corrected and accelerated; 5,000 bootstrap samples.

Table 21 showed the mediating result of work engagement in linking interpersonal trust and role-based performance. As shown in Table 21, the indirect effect of work engagement was .1962, and the *z* value was greater than |1.96| ($z = 7.6556$, $p < .01$), which indicated that work engagement was a significant mediator in the relation between interpersonal trust and role-based performance. In addition, the bootstrapped confidence intervals also confirmed the result, because zero did not fall into 95% CIs. Therefore, it coud be said that hypothesis 11 was supported.

Table 21

Mediation of the Effect of Interpersonal Trust on Role-based Performance through Work Engagement

	Point Estimate	Product of Coefficients		Bootstrapping					
				Percentile 95% CI		BC 95% CI		BCa 95% CI	
		SE	Z	Lower	Upper	Lower	Upper	Lower	Upper
Work Engagement	.1962	.0256	7.6556	.1402	.2600	.1397	.2598	.1407	.2617

Note: BC, bias corrected; BCa, bias corrected and accelerated; 5,000 bootstrap samples.

Additionally, this study examined SEM direct and indirect standardized path coefficients to further explain the influential relationships among latent variables. As shown in Table 22, authentic leadership had the effect of .65 on work engagement, of which .26 (40 %) was

transmitted via occupational self-efficacy, .18 (27.7%) was transmitted via interpersonal trust, and .21 (32.3%) was unmediated by variables in the model. Occupational self-efficacy had the effect of .44 on role-based performance, of which .12 (27.3%) was transmitted via work engagement, and .32 (72.7%) was unmediated by variables in the model. In addition, interpersonal trust had the effect of .51 on role-based performance, of which .07 (13.7%) was transmitted via work engagement, and .44 (86.3%) was unmediated by variables in the model. Thus, as mediators, occupational self-efficacy and interpersonal trust accounted for 40% and 27.7% of the total effect of authentic leadership on work engagement. Also as a mediator, work engagement accounted for 27.3% of the total effect of occupational self-efficacy and 13.7% of the total effect of interpersonal trust on role-based performance.

Table 22

Decomposition of Effects

Path			Direct Effect	Indirect Effect Via		
				SE	IT	WE
Authentic Leadership	→	Self-efficacy (SE)	.57 (9.20)			
	→	Interpersonal Trust (IT)	.68 (10.53)			
	→	Work Engagement (WE)	.21 (2.86)	.26	.18	
Self-efficacy	→	Work Engagement (WE)	.45 (7.20)			
Interpersonal Trust	→	Work Engagement (WE)	.26 (3.55)			
Self-efficacy	→	Role-based Performance (RBP)	.32 (5.31)			.12
Interpersonal Trust	→	Role-based Performance (RBP)	.44 (7.16)			.07
Work Engagement	→	Role-based Performance (RBP)	.26 (3.77)			

Note: All t-values > |1.96|

Summary

The research model hypothesized that authentic leadership would positively affect employees' attitudes (occupational self-efficacy and interpersonal trust) and behavior (work engagement), which consequently influence performance (role-based performance). Further, the model hypothesized that employees' attitude would intervene in the relationship between authentic leadership and organizational behavior; organizational behavior would intervene in the relationship between employees' attitude and performance.

First of all, this study validated the proposed instruments through confirmatory factor analysis (CFA) and chi-square difference tests. The results indicated that the measurements for measuring the cultural aspects of authentic leadership, occupational self-efficacy, interpersonal trust, work engagement, and role-based performance were valid and reliable measurements in the Korean context.

Structural model analysis supported the hypothesized model, indicating that authentic leadership was a significant direct predictor of occupational self-efficacy (SPC = .57, t = 9.20), interpersonal trust (SPC = .68, t = 10.53), and work engagement (SPC = .21, t = 2.86); occupational self-efficacy was a significant direct predictor of work engagement (SPC = .45, t = 7.20) and role-based performance (SPC = .32, t = 5.31); interpersonal trust was a significant direct predictor of work engagement (SPC = .26, t = 3.55) and role-based performance (SPC = .44, t = 7.16); and work engagement was a significant direct predictor of role-based performance (SPC = .26, t = 3.77). Moreover, bootstrapping results supported the hypotheses positing occupational self-efficacy, interpersonal trust, and work engagement would play as a mediator in the model. These hypotheses were also supported by the analysis of the direct and indirect SEM standardized path coefficients. Table 23 summarizes the hypotheses test results.

Table 23

Summary of the Results

	Hypotheses		Model Fit	Path Coefficients (t-value)	Results
H1	Measurement model		RMSEA = .066 RMR = .042 CFI = .96		Supported
H2	Authentic leadership	→	Occupational self-efficacy	.57 (9.20)	Supported
H3	Authentic leadership	→	Interpersonal trust	.68 (10.53)	Supported
H4	Authentic leadership	→	Work engagement	.21 (2.86)	Supported
H5	Occupational self-efficacy	→	Work engagement	.45 (7.20)	Supported
H6	Interpersonal trust	→	Work engagement	.26 (3.55)	Supported
H7	Mediation model		AL→SE→WE: z = 6.4448 AL→IT→WE: z = 3.2414		Supported
H8	Occupational self-efficacy	→	Role-based performance	.32 (5.31)	Supported
H9	Interpersonal trust	→	Role-based performance	.44 (7.16)	Supported
H10	Work engagement	→	Role-based performance	.26 (3.77)	Supported
H11	Mediation model		SE→WE→RBP: z = 7.4399 IT→WE→RBP: z = 7.6556		Supported

Note: AL: authentic leadership; SE: occupational self-efficacy; WE: work engagement; IT: interpersonal trust; RBP: role-based performance

CHAPTER V

CONCLUSION

Summary of the Study

To date, the importance of leadership within in an organization has been well established

in the field of organizational behavior and performance, and considerable discussion has focused

on the critical impacts of leadership on employees and organizational performances (Bohn &

Grafton, 2002; Kotter & Heskett, 1992). However, little attention has been given to how authentic

leadership influences and changes employees' attitudes, which are ultimately connected to

organizational performance improvement. As a way to encourage employees to have confidence

in themselves and their work and to create a positive organizational environment, many scholars

suggest applying authentic leadership (e.g. Avolio et al., 2004a; Luthans & Avolio, 2003). The

research presented here provides a comprehensive understanding of the concept of authentic

leadership, its role in an organization, and its influences on the formation of employees' attitude

and behavior.

Purpose and Hypotheses

The main purpose of the study was to gain insights into what effects authentic leadership

has on an organization, especially on employees in a Korean business context. Specifically, this

study examined whether authentic leadership could relate positively to change employees'

attitudes toward an organization and the organizational behaviors that eventually have association with employees' outcomes.

To accomplish this study's purpose, first of all, this study reviewed the literature on authentic leadership and its relationship with followers in a business situation, and chose five variables (authentic leadership, occupational self-efficacy, interpersonal trust, work engagement, and role-based performance) to explain how authentic leadership plays a key role in followers' outcome improvement through their attitude and behavior change.

Based on the literature findings, a research model was developed, and the following five variables comprised the research model of this study:

Authentic leadership: An approach to leadership by those who have self-awareness, relational transparency, balanced processing, and internalized moral perspective (Neider & Schriesheim, 2011).

Occupational self-efficacy: Employees' belief in his or her own capabilities to execute and to perform his or her tasks in a job (Rigotti et al., 2008).

Interpersonal trust: Employees' evaluation of their co-workers and leaders that they will be trustworthy and perform a particular action important to employees (Cook & Wall, 1980).

Work engagement: Employees' positive perception of vigor, dedication, and absorption in their work (Schaufeli et al., 2006).

Role-based performance: Employees' performance as an innovator, employee, career preparator, team member, and organization citizen (Welbourne et al., 1998).

Every organization's ultimate goal would be to maximize organizational performances by encouraging and changing employees' attitudes, behaviors, and organizational environment. In designing the research model, authentic leadership was chosen as an input variable because it has

a critical impact on employees in an organization, (Avolio et al., 2004a; Ilies et al., 2005; Luthans & Avolio, 2003) and leadership style determines organizational environment, employees' attitudes, and organizational behaviors (Hartmann, Naranjo-Gil, & Perego, 2009; Jia, Song, Li, Cui, & Chen, 2007; Kuchinke, 1998).

A comprehensive literature review yielded three research questions, the research model, and 11 hypotheses. The first research question inquired about validating the instrument for assessing the five variables in the Korean context. The second research question explored the structural relationship among the five variables, and the last research question inquired as to whether three variables (occupational self-efficacy, interpersonal trust, and work engagement) played a mediating role in the structural relationship. The specific research questions were as follows.

RQ1: Are the hypothesized measurements valid and reliable in the Korean context?

RQ2: What are the structural relationships among authentic leadership, occupational self-efficacy, interpersonal trust, work engagement, and role-based performance?

RQ3: Do occupational self-efficacy and interpersonal trust have a mediating role in the relationship between authentic leadership and work engagement, and do work engagement and occupational self-efficacy, and work engagement and interpersonal trust jointly contribute to role-based performance?

Eleven hypotheses were developed to answer the three research questions, and the following research hypotheses were proposed:

Hypothesis 1: *The measurements of authentic leadership, occupational self-efficacy, interpersonal trust, work engagement, and role-based performance are valid and reliable concepts in the Korean context.*

Hypothesis 2: *Authentic leadership will positively influence employees' occupational self-efficacy.*

Hypothesis 3: *Authentic leadership will positively influence employees' interpersonal trust.*

Hypothesis 4: *Authentic leadership will positively lead to employees' work engagement.*

Hypothesis 5: *Employees' occupational self-efficacy will positively influence work engagement.*

Hypothesis 6: *Employees' interpersonal trust will positively influence work engagement.*

Hypothesis 7: *The influential relationship between authentic leadership and work engagement will be mediated by employees' occupational self-efficacy and interpersonal trust.*

Hypothesis 8: *Employees' occupational self-efficacy will positively influence role-based performance.*

Hypothesis 9: *Employees' interpersonal trust will positively influence role-based performance.*

Hypothesis 10: *Employees' work engagement will positively influence role-based performance.*

Hypothesis 11: *The influential relationship between employees' occupational self-efficacy and role-based performance, and between employees' interpersonal trust and role-based performance will be mediated by work engagement.*

Procedures

The researcher contacted one branch of the Korean Industrial Complex Corp. (KICOX) via email and telephone, and received email addresses of potential survey participants in October 2013. A previously developed and validated 55-item questionnaire along with four items of demographic questions was posted on Survey Monkey from December 20, 2013 to January 25,

2014. Approximately 2,500 individual workers from one industrial complex were included in the potential population for the study, and 365 Korean workers voluntarily participated in the survey. After screening and deleting missing data and an outlier, a total of 336 cases were included as the final research sample. The data were analyzed to test the hypothesized model through various statistical techniques such as descriptive statistics, bootstrapping process, confirmatory factor analysis (CFA), and structural equation modeling (SEM).

Results

Before addressing the research questions, this study assessed correlation coefficients to ensure inter-correlations among the latent variables and internal consistency reliability of the constructs. The results showed that there were acceptable inter-correlations among the latent variables at the $p = .01$ level, and internal consistency reliabilities of the constructs were also obtained (alpha ranges from .87 to .95).

With regard to the first research question, the construct validity of the measurement model was assessed by confirmatory factor analysis (CFA), and the result showed that the measurement model was acceptable fit to the data and showed acceptable item-to-factor scale validity in a Korean context. Also, convergent validity of the construct was tested by assessing factor loadings, composite reliability, and average variance extracted (AVE), and discriminant validity by chi-square difference test was also obtained.

To answer research question 2, this study performed structural equation modeling (SEM) analysis to test 8 hypotheses, and the test results showed that all hypotheses were statistically supported: Authentic leadership had positive and satistically significant influence on employees' occupational self-efficacy (SPC = .57, $t = 9.20$; *H2*), employees' interpersonal trust (SPC = .68, $t = 10.53$; *H3*), and employees' work engagement (SPC = .26, $t = 2.86$; *H4*); employees' occupational self-efficacy had positive and statistically signifiant influence on work engagement

(SPC = .45, $t = 7.20$; *H5*) and role-based performance (SPC= .32, $t = 5.31$; *H8*); employees'

interpersonal trust positively influenced work engagement (SPC = .26, $t = 3.55$; *H6*) and role-

based performance (SPC = .44, $t = 7.16$; *H9*); and employees' work engagement had positivel

influence on role-based performance (SPC = .26, $t = 3.77$; *H10*).

With regard to research question 3, this study performed bootstrapping tests to examine

the mediating role of occupational self-efficacy, interpersonal trust, and work engagement. The

results showed that the influential relationship between authentic leadership and work

engagement was mediated by employees' occupational self-efficacy ($z = 4.3402$, p < .001) and

interpersonal trust ($z = 6.1817$, p < .001). And it turned out that work engagement was a

significant mediator in the relation between occupational self-efficacy and role-based

performance ($z = 7.4075$, p < .001), and work engagement was also a significant mediator in the

relation between interpersonal trust and role-based performance ($z = 7.6217$, p < .001).

Discussion

The analysis results identified that authentic leadership has a positive association with

employees' attitude (occupational self-efficacy and interpersonal trust) and organizational

behavior (work engagement). Employees' attitude and organizational behavior also positively

influence performance (role-based performance). Moreover, a multiple mediation model was

tested using bootstrapping tests, and the results demonstrated that occupational self-efficacy and

interpersonal trust mediate the effect of authentic leadership on work engagement. It was also

shown that work engagement also plays a mediating role in the relationship between occupational

self-efficacy and role-based performance and in the relationship between interpersonal trust and

role-based performance. Detailed discussions are provided in the following sections.

Authentic Leadership in an Organization

Leadership is a continuous research interest in the area of human resource development, leadership, and organizational behavior (Brungardt, 1997). Various empirical studies have been conducted to address the important role of leadership in relation to the followers and its effect on followers' attitude and behavior (e.g., Bass & Avolio, 1990; Song et al., 2012; Ugboro & Obeng, 2000; Walumbwa & Hartnell, 2011; Whittington et al., 2004; Zhang & Bartol, 2010). However, few studies have focused on authentic leadership, which has emerged recently in the literature compared with other leadership types such as transformational leadership, transactional leadership, ethical leadership, and charismatic leadership. Furthermore, little attention has been given to this in the Korean context.

The first notable result in this study is the positive association of authentic leadership and employees' attitudes (occupational self-efficacy and interpersonal trust) and organizational behavior (work engagement). This result confirms that of previous studies (e.g., Dirks & Ferrin, 2002; Gardner & Schermerhorn Jr., 2004; George, 2003; Hassan & Ahmed, 2011; Kahn, 1990) that authentic leadership may promote employees' attitude and behavior changes positively such as increased self-efficacy and enhanced interpersonal trust among employees. Through observing leaders' authenticity such as showing positive psychological capabilities, displaying self-awareness and making decisions based on a balanced process, employees develop authentic followership, which in turn, fosters positive work attitude and behavior. Furthermore, authentic leaders who exemplify high moral standards and have characteristics of honesty, integrity, and openness help their employees find their potential abilities and build interpersonal trust through open communications.

By displaying authentic behavior, transparency, and high level of self-awareness, authentic leaders model for followers. As employees discover their leader's behavior and value such as engaging in transparent decision making and showing self-awareness, they reflect their

leaders' value and behaviors on themselves and understand themselves. Over time, authentic leadership provides a positive work environment, helps the employees find their talents, provides appropriate work roles to employees, and helps employees to build healthy co-worker relations, employees could have confidence in their work and themselves, build trust in leaders and co-workers, and experience highly increased work engagement.

Positive Employees' Attitude, Behavior, and Performance

Employees' attitude and behavior are key factors for a high performance system (Ostroff, 1992). Employees' negative emotions toward their colleagues and themselves hinder the employees from engaging in their work and ultimately lower productivity and performance (Gardner and Schermerhorn Jr., 2004; Luthans, Youssef, & Avolio, 2007). This assertion is also supported by the result of the present study, which shows that occupational self-efficacy (SPC = .32, $t = 5.31$), work engagement (SPC = .26, $t = 3.77$), and interpersonal trust (SPC = .26, $t = 3.55$) have direct positive influences on role-based performance. This result suggests the way to increase organizational performance. For example, organizations can improve employees' role-based performance by promoting employees to have high self-confidence in their work or increasing employees' trust in co-workers and leaders.

The results of bootstrapping and effect decomposition supported the hypotheses, which posit that the effect of authentic leadership on work engagement will be affected by occupational self-efficacy and interpersonal trust, and occupational self-efficacy and interpersonal trust will indirectly influence role-based performance through work engagement. This finding suggests that leaders need to be aware of the importance of employees' positive attitude and their potential connections to role-based performance.

According to Quick and Macik-Frey (2007), a high-performance team has the following characteristics: interpersonal trust and trustworthiness, openness to challenges and to your own

ideas, open dialogue is the norm and is highly valued, and ability to listen and appreciate others' points of view. Considering the results of the study and other researchers' assertions on the importance of employees' positive attitude such as having high self-confidence, trusting each other, and being engaged in the work for organizational success, organizations need to give more attention to ways to boost employees' positive attitude toward the organization, team, and oneself. To this purpose, more practical and theoretical implications are discussed below.

Implications

In this section, both theoretical implications for theory development and research and practical implications for the field of organization behavior and HRD are discussed. Regarding theoretical implications, three theoretical and academic contributions were provided by this study. Practical implications for HRD professionals and leaders for organizational performance improvement are presented as well.

Theoretical Implications

The three theoretical contributions of this study are as follows: (1) it provides theoretical development of authentic leadership, (2) it formulates theoretically and examines empirically the relational process, and (3) it provides measurement validation in a Korean context.

The first contribution of this study lies in providing theoretical development of authentic leadership. Even though some researchers (e.g., Avolio et al., 2004a; Avolio & Gardner, 2005; Cooper, Scandura, & Schriesheim, 2005; Gardner et al., 2011) have proposed that authentic leadership could directly or indirectly contribute to employees' outcomes, this link has not been sufficiently and empirically tested previously. The results provided in this study support the previous researchers' proposition of the positive link of authentic leadership and employees' outcomes in terms of change of attitude, behavior, and performance. This finding provides an

explanation for how authentic leadership produces favorable organizational outcomes, and contributes to the development of authentic leadership by comprehensively reviewing authentic leadership theory and empirically testing this study as well.

Another contribution of this study is that it theoretically develops and empirically examines the relational process as a mechanism that explains the mediating roles of employees' attitude and behavior in the relationship between authentic leadership and employees' performance. The results of this study add to the authentic leadership literature and to knowledge of the importance of authentic leadership and its roles in increasing employees' performance through attitudinal and behavioral changes. In particular, this study draws together occupational self-efficacy, interpersonal trust, and work engagement literatures to jointly help explain how authentic leadership influences the followers' performance. The findings of this study uncover a mediation mechanism through which authentic leadership could impact work engagement and also support previous suggestions that work engagement is an important mediation mechanism through which occupational self-efficacy and interpersonal trust could affect employees' outcomes. By formulating a mediation model, this study accentuates the value of employees' positive attitude and behavior into one theoretical framework in order to contribute to the better understanding of authentic leadership.

The third contribution of this study is that this study obtained all measurement validation in a Korean context. This study used pre-existing instruments, which were developed in English and validated in a non-Korean context because of several advantages of the pre-existing instruments. In this case, this study could have been criticized in terms of measurement validation since a culturally different context needs to use an appropriate instrument. To avoid this issue, this study obtained measurement validation in a Korean context to measure authentic leadership, occupational self-efficacy, interpersonal trust, work engagement, and role-based performance. Especially, this study refines the constructs of authentic leadership inventory (ALI), which was recently developed by Neider and Schriesheim (2011). Since scale development is a serial

95

process, this study adds value to Neider and Schriesheim's (2011) study and guides future authentic leadership studies. This result may be worthwhile for other researchers who will conduct further research on authentic leadership in a Korean context or other settings that share similar cultural or organizational characteristics with Korea and Korean organizations.

Practical Implications

The practical implications of this study are threefold: (1) The study suggests the need of an authentic leadership development program for current leaders and potential leaders; (2) it recommends promoting employees' positive attitude; and (3) it suggests that leaders need to be aware of the importance of having highly engaged employees, which is related to financial issues.

First of all, an organization composed of numerous individuals is being continuously developed by organizational members who communicate and collaborate with each other for their shared organizational goals. Among the organizational members, a leader has a critical role in promoting employees' positive attitude and behavior and in accomplishing high performance.

Organizations and researchers have continuously devoted attention to leadership to find the most effective leadership style according to the organizational culture and employees' characteristics. As a result of these efforts, various leadership styles have been introduced and suggested such as transformational leadership, charismatic leadership, servant leadership, transactional leadership, and authentic leadership. Regardless of the style of leadership, the main implication of these leadership styles is that leadership is important in formation of employees' attitude and behavior (Bass & Avolio, 1990; Herling, 2000; Kotter & heskett, 1922; Walumbwa & Hartnell, 2011; Zhang, 1999; Zhang & Bartol, 2010). This assertion is also supported by the results of the present study.

The power of leadership can be increased when the leaders constantly show credibility and authenticity, and build high-quality leader-follower relationships (Eden, 2003). To have more

effective and powerful leaders in an organization, this study suggests that organizations and leaders should be aware of the need to provide leadership development programs for the current leaders and potential leaders, and to hire leaders who have high self-confidence in their value and ability and are authentic in their behavior.

Many leadership scholars, educators, and researchers have asserted the belief that leadership skill and ability could be learned and taught even though that is also an inherited ability (Avolio & Luthans, 2006; Doh, 2003). Furthermore, many organizations have perceived the potential problem of leadership inadequacies and have then concentrated on training and educational programs to improve and develop leaders' skills and competency (Conger & Benjamin, 1999). To yield the best results from authentic leadership development education/training, organizations first need to understand their current situations and determine what approaches and techniques are needed and what individuals are needed to participate in the training program. In other words, the following questions need to be addressed: "What approaches and techniques are likely to be most effective in teaching leadership and developing leadership skills, what individuals and groups are most likely to benefit from leadership education, and what institutions or individuals are best positioned to deliver effective leadership courses?" (Doh, 2003, p. 54). Also, authentic leadership development programs need to be designed not only to promote and assist the extension of knowledge and skills required for authentic leadership, but also to transform the entire organization (Conger & Benjamin, 1999). Organizations also need to regularly evaluate the results of leadership development interventions, and utilize the results to develop better educational programs.

Second, employees who make up an organization and a team are of great importance because their activity, attitude, and contributions are directly related to organizational performance. Based on employees' positive or negative attitude toward the organization and behaviors, employees' intention to engage in their work and their performance will vary (Butler et al., 1999; Dirks & Ferrin, 2002; Stajkovic & Luthans, 1997). This fact clearly indicates the

97

need for more attention from leaders and organizations to ways to increase and promote their employees' positive attitude in an organization.

Leaders need to note that followers who have worked with authentic leaders share the same values with their leaders, and then are more likely to behave authentically (Gardner et al., 2005), and employees improve their self-efficacy when they receive realistic encouragement from credible persons (Wood & Bandura, 1989). Leaders need to demonstrate how they genuinely care about their employees and how they value ethical and moral standards for their employees and the organization in their working relationships. Also, leaders should take the time to have a conversation about what strengths an employee may have and how he or she makes a difference at work; this dialogue can help an employee build connections with the leaders, resulting in positive organizational performances (Bandura, 2000).

Lastly, the fact that highly engaged employees could yield higher performance, as asserted by Bakker et al. (2012) and supported by the evidence provided in this study, is also a reminder of the importance of promoting employees' work engagement and hiring employees who have a positive and active attitude and personality. Managers and leaders need to clearly state how their employees work well and what contributions they have made for overall organizational goals by providing a supportive organizational environment and by helping them to better fit the work to their employees. This helps employees to have confidence in themselves and to increase their own transparency, resulting in increased work engagement.

Additionally, the result of this study also can be useful for KICOX to provide better supporting services to the companies operating in industrial complexes. Each instition of KICOX helps the local companies in various ways, such as building academia and industry coopertation networks and providing corporate growth programs. KICOX can develop and provide authentic leadership programs for the corporations' leaders, helping local companies' growth, and it can advise local companies about desirable leadership styles and ways to increase employees' positive work attitudes and behavior.

Limitations and Further Research

Even though the research model was developed through a rigorous literature review, this study may have potential limitations that should be considered in the future studies and that may suggest future research directions on authentic leadership and its relationship with followers. The results presented in this study are not final answers to how authentic leadership influences employees' outcomes through employees' attitude and behavior. Research limitations regarding performance measurement, data collections, and research design, along with suggestions for future studies, are discussed below.

One limitation concerns the employees' performance assessment. This study considered role-based performance, which measured employees' multi-functional roles within the organization such as an employee, career developer, innovator, team member, and organizational citizen as an outcome variable. Even though this study examined the association of employees' attitude and performance in various areas, the performance was measured by self-rated performance measures rather than objective measures of performance and thus may have yielded biased responses. Some researchers have argued that subjective performance measures have high possibility for bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). To overcome this potential issue, future studies need to consider measuring employees' performance by their leaders or using objective performance results such as quantitative outcomes.

As with all studies, other variables can be considered as outcome variables such as creativity (Tierney, Farmer, & Graen, 1999), knowledge sharing (Srivastava, Bartol, & Locke, 2006), job satisfaction (Giallonardo, Wong, & Iwasiw, 2010), organizational commitment (Demerouti, Bakker, de Jonge, Janssen, & Schaufeli, 2001), financial return (Xanthopoulou et al., 2009b), and decreased turnover intention (Dirks & Ferrin, 2002). For example, Dirks and Ferrin (2002) suggested job performance, job satisfaction, organizational commitment, and goal commitment as the outcomes of trust in leadership, and they found a positive relationship among

them. Future research needs to consider various outcome variables, which can further explain how authentic leadership contributes to employees' outcomes.

Another potential limitation of this study concerns the generalizability of the results. The sample cases for this study were collected by a purposive data collection procedure in one specific area of Korea and therefore targets a particular group of people rather than a diverse population. To overcome this sampling issue, an important suggestion for future studies is to determine whether the findings presented in this study are applicable to other societal cultures.

Closing Thoughts

Leadership is a topic that has attracted increasing research interest in the areas of general management, human resource management, and organization behavior. No one doubts that leadership is important within an organization. Especially in today's dynamic business world, authentic leadership has more important values to encourage followers and build a high quality leader-follower relationship that are needed for better organizational performance.

Overall, the pattern of the results provided in this study suggests that the more authentic leaders know themselves and their followers, the more successful they can be in terms of influencing positive attitudes and behaviors as a role model for others. Most importantly, authentic leaders should focus on developing positive psychological capital for themselves and their followers, which indicates being optimistic, resilient, and hopeful. In today's work environments, which are highly competitive within and among organizations, positive attitudes and behaviors are powerful driving forces that can keep employees moving and focusing on their tasks.

This researcher believes that this study shows what type of leadership current organizations need and what leaders should do for organizational success and their followers' success. It is suggested that authentic leadership is an ideal leadership style in today's working

environment, as authentic leadership theory holds many promises. More specifically and most importantly, authentic leadership holds a belief in people's potential and an expectation that they can do their best; and it inspires followers to maintain a positive mindset. This can surely have a positive effect on any organization's success.

REFERENCES

Allen, N. J., & Meyer, J. P. (1990). The measurement and antecedents of affective, continuance and normative commitment to the organization. *Journal of Occupational Psychology, 63*(1), 1–18.

Alok, K. & Israel, D. (2012). Authentic leadership & work engagement. *The Indian Journal of Industrial Relations, 47*(3), 498–510.

Anderson, J. C, & Gerbing, D. W. (1984). The effect of sampling error on convergence, improper solutions, and goodness-of-fit indices for maximum likelihood confirmatory factor analysis. *Psychometrika, 49*(2), 155– 173.

Armstrong, M. (2006). *Performance management* (3rd Edition). Philadelphia, PA: Kogan Page.

Aryee, S., Budhwar, P. S., & Chen, Z. X. (2002). Trust as a mediator of the relationship between organizational justice and work outcomes: Test of a social exchange model. *Journal of Organizational Behavior, 23*(3), 267–285.

Avolio, B. J., & Gardner, W. L. (2005). Authentic leadership development: Getting to the root of positive forms of leadership. *The Leadership Quarterly, 16*(3), 315–338.

Avolio, B. J., & Gibbons, T. C. (1988). Developing transformational leaders: A life span approach. In J. A. Conger, & R. N. Kanungo (Eds.), *Charismatic leadership: The elusive factor in organizational effectiveness* (pp. 276–308). San Francisco, CA: Jossey-Bass.

Avolio, B. J., & Luthans, F. (2006). *The high impact leader: Moments matter in accelerating authentic leadership development*. McGraw Hill Professional.

Avolio, B. J., Gardner, W. L., Walumbwa, F. O., Luthans, F., & May, D. R. (2004a). Unlocking the mask: A look at the process by which authentic leaders' impact follower attitudes and behaviors. *The Leadership Quarterly, 15*(6), 801–823. doi: 10.1016/j.leaqua.2004.09.03

Avolio, B. J., Luthans, F., & Walumbwa, F. O. (2004b). Authentic leadership: Theory-building for veritable sustained performance. *Working Paper*, Gallup Leadership Institute, University of Nebraska-Lincoln.

Bagozzi, R. P., Yi, Y., & Phillips, L. W. (1991). Assessing construct validity in organizational research. *Administrative Science Quarterly, 36*(3), 421–458.

Bakker, A. B. (2011). An evidence-based model of work engagement. *Current Directions in Psychological Science*, *20*(4), 265–269.

Bakker, A. B., & Bal, P. M. (2010). Weekly work engagement and performance: A study among starting teachers. *Journal of Occupational and Organizational Psychology, 83*(1), 189–206.

Bakker, A. B., Demerouti, E., & ten Brummelhuis, L. (2012). Work engagement, performance, and active learning: The role of conscientiousness. *Journal of Vocational Behavior, 80*(2), 555–564. doi: 10.1016/j.jvb.2011.08.008

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191–215.

Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist, 37*(2), 122–147.

Bandura, A. (1986). *Social foundation of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Process*, *50*(2), 248–287.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: WH Freeman and Company.

Bandura, A. (2000). Exercise of human agency through collective efficacy. *Current directions in psychological science*, *9*(3), 75–78.

Barnard, C. (1938). *The functions of the executive*. Cambridge, MA: General Learning Press.

Baron, R. & Kenny, D. (1986). The moderator-mediator distinction in social psychological research: Conceptual, strategic, and statistical consideration. *Journal of Personality and Social Psychology, 51*(6), 1171–1182.

Bass, B. M. & Avolio, B. J. (1988). Transformational leadership, charisma, and beyond. In Hunt, J. G., Baliga, B. R., Dachler, H. P., & Schriesheim, C. A. (Eds.). *Emerging Leadership Vistas*. (pp. 29-49). Lexington, MA: Lexington Books.

Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York: Free Press.

Bass, B. M. (1990). *Handbook of leadership*. New York, NY: Free Press.

Bass, B. M., & Avolio, B. J. (1990). *Transformational leadership development: Manual for the multifactor leadership questionnaire*. Palo Alto, CA: Consulting Psychologists Press.

Bass, B. M., & Avolio, B. J. (1990).The implications of transactional and transformational leadership for individual, team, and organizational development. *Research in organizational change and development*, *4*, 231− 272.

Bass, B. M., & Steidlmeier, P. (1999). Ethics, character, and authentic transformational leadership behavior. *The Leadership Quarterly, 10*(2), 181−217.

Bass, B., & Riggio, R. E. (2010).The transformational model of leadership. In G. R. Hickman (Ed.), *Leading organizations: Perspectives for a new era* (2nd ed., pp. 76–86). Thousand Oaks, CA: Sage.

Bentler, P. M., & Bonnet, D. C. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin, 88*(3), 588–606.

Blau, P. (1964). *Exchange and Power*. New York: John Wiley and Sons.

Bohn, J. G., & Grafton, D. (2002). The Relationship of Perceived Leadership Behaviors to

    Organizational Efficacy. *Journal of leadership & Organizational Studies*, *9*(2), 65–80.

Bollen, K. A. (1987). Total, direct, and indirect effects in structural equation models. *Sociological*

    methodology, *17*(1), 37–69.

Borman, W. C., & Motowidlo, S. J. (1997). Task performance and contextual performance: The

    meaning for personnel selection research. *Human Performance, 10*(2), 99–109.

Boyle, R., & Bonacich, P. (1970). The development of trust and mistrust in mixed-motive games.

    Sociometry, *33*, 123–139.

Briggs, N. E. (2006). *Estimation of the standard error and confidence interval of the indirect*

    effect in multiple mediator models. Unpublished doctoral dissertation, The Ohio State

    University, Columbus, OH.

Brislin, R. W., Lonner, W. J., & Thorndike, R. M. (1973). *Cross-cultural research methods*. New

    York: Wiley.

Brungardt, C. (1997). The making of leaders: A review of the research in leadership development

    and education. *Journal of Leadership & Organizational Studies*, *3*(3), 81–95.

Bryman, A. (1992). *Charisma and leadership in organizations*. London: Sage Publications Ltd.

Butler, J. K. (1991). Toward understanding and measuring conditions of trust: Evolution of

    conditions of trust inventory. *Journal of Management*, *17*, 643–663.

Butler, J. K., Cantrell, R. S., & Flick, R. J. (1999). Transformational leadership behaviors,

    upward trust, and satisfaction in self-managed work teams. *Organization Development*

    Journal, 17, 13–28.

Byrne, B. M. (1984). The general/academic self-concept nomological network: A review of

    construct validation research. *Review of Educational Research, 54*(3), 427–456.

Champy, J. (2009). Authentic leadership. *Leader to Leader, 54*, 39–44.

Chen, P. Y., & Spector, P. E. (1992). Relationships of work stressors with aggression,

    withdrawal, theft and substance use: An exploratory study. *Journal of Occupational and*

    Organizational Psychology, 65, 177–184.

Cheong, J., & MacKinnon, D. P. (2012). Model fit and model selection in structural equation

    modeling, In Hoyle, R. H. (Ed.), *Handbook of structural equation modeling* (pp. 417-

    435), New York, NY: The Guilford Press.

Chung, N. G., & Angeline, T. (2010). Does work engagement mediate the relationship between

    job resources and job performance of employees? *African Journal of Business*

    Management, 4(9), 1837–1843.

Clapp-Smith, R., Vogelgesang, G. R., & Avey, J. B. (2009). Authentic leadership analysis.

    Journal of Leadership and Organizational Studies, 15, 227–240.

Cole, D. A. (1987). Utility of confirmatory factor analysis in test validation research. *Journal of*

    Consulting and Clinical Psychology, 55(4), pp. 584–594. doi: 10.1037/0022-

    006X.55.4.584

Conger, J. A., & Benjamin, B. (1999). *Building leaders*. San Francisco: Jossey-Bass.

Conger, J. A., Kanungo, R. N., & Menon, S. T. (2000). Charismatic leadership and follower

    effects. *Journal of Organizational Behavior, 21*, 747–767.

Conlon, E. J., & Mayer, R. C. (1994). *The effect of trust on principal-agent dyads: An empirical*

    investigation of stewardship and agency. Proceedings of the Academy of Management,

    Dallas, TX.

Cook, J., & Wall, T. (1980). New work attitude measures of trust, organizational commitment

    and personal need non-fulfillment. *Journal of Occupational Psychology*, *53*, 39– 52.

Cooper, C. Scandura, TA. & Schriesheim, CA (2005). Looking forward but learning from our

    past: Potential challenges to developing authentic leadership theory and authentic leaders.

    The Leadership Quarterly, *16*(3), 475–494.

Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology, 78*(1), 98–104.

Cunningham, J., & MacGregor, J. (2000). Trust and the design of work: Complementary constructs in satisfaction and performance. *Human Relations, 53*(12), pp. 1575–1591.

Dasgupta, P. 1988. Trust as a commodity. In D. G. Gambetta (Ed.), *Trust* (pp. 49-72). New York: Basil Blackwell.

Deci, E. L., & Ryan, R. M. (2000). "What" and "Why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*(4), 227–268.

Demerouti, E., & Cropanzano, R. (2010). From thought to action: Employee work engagement and job performance. In A. B. Bakker, & M. P. Leiter (Eds.), *Work engagement: A handbook of essential theory and research*. New York: Psychology Press.

Demerouti, E., Bakker, A. B., de Jonge, J., Janssen, P. P. M., & Schaufeli, W. B. (2001). Burnout and engagement at work as a function of demands and control. *Scandinavian Journal of Work Environment and Health, 27*, 279–286.

den Hartog, D. N., Shippers, M. C., & Koopman, P. L. (2002). The impact of leadership behavior on trust in management and co-workers. *SA Journal of Industrial Psychology, 28*(4), 29–34.

Denisi, A. S., Cafferty, T. P., & Meglino, B. M. (1984). A cognitive view of the performance appraisal process: A model and research propositions. *Organizational Behavior and Human Performance, 33*, 360–396.

Deutsch, M. (1960). The effect of motivational orientation upon trust and suspicion. *Human Relations*, *13*, 123–140.

Dionne, S. D., Yammarino, F. J., Atwater, L. E., & Spangler, W. D. (2004). Transformational leadership and team performance. *Journal of Organizational Change, 17*(2), 177–193. doi: 10.1108/09534810410530601

Dirks, K. T., & Ferrin, D. L. (2002). Trust in leadership: Meta-analytic findings and implications for research and practice. *Journal of Applied Psychology, 87*, 611–628.

Doh, J. P. (2003). Can leadership be taught? Perspective from management educators. *Academy of Management Learning & Education, 2*(1), 54–67.

Eden, D. (2003). Self-fulfilling prophecies in organization. In J. Greenberg (Ed.), *Organizational behavior: The state of the science* (2nd ed.) (pp. 91-122). Mahwah, NJ: Erlbaum.

Eisenberger, R., Fasolo, P., & Davis-LaMastro, V. (1990). Perceived organizational support and employee diligence, commitment, and innovation. *Journal of Applied Psychology*, *75*, 51–59.

Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, *71*, 500–507.

Erickson, R. J. (1995). The importance of authenticity for self and society, *Symbolic Interaction, 18*(2), 121–144.

Farris, G., Senner, E., & Butterfield, D. (1973). Trust, culture, and organizational behavior. *Industrial Relations. 12*, 144–157.

Feltz, D. L. (1982). Path analysis of the causal elements m Bandura's theory of self-efficacy and an anxiety-based model of avoidance behavior. *Journal of Personality and Social Psychology, 42,* 764–781.

Ferres, N., Connell, J., & Travaglione, A. (2004). Co-worker trust as a social catalyst for constructive employee attitudes. *Journal of Managerial Psychology, 19*(6), 608–622.

Fornell, C., & Larcker, D.F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50.

Forza, C. & Filippini, R. (1998). TQM impact on quality conformance and customer satisfaction: A causal model. *International Journal of Production Economics, 55*(1), 1–20.

Frost, T., Stimpson, D. V., & Maughan, M. R. C. (1978). Some correlates of trust. *Journal of Psychology, 99*, 103–108.

Gabarro, J. (1978). The development of trust, influence, and expectations. In A. G. Athos & J. J. Gabarro (Eds.), *Interpersonal behavior: Communication and understanding in relationships* (pp. 290-303). Englewood Cliffs, NJ: Prentice Hall.

Gardner, W. L. & Schermerhorn Jr, J. R. (2004). Performance gains through positive organizational behavior and authentic leadership. *Organizational Dynamics, 33*(3), 270–281.

Gardner, W. L., Avolio, B. J., Luthans, F., May, D. R., & Walumbwa, F.O. (2005). Can you see the real me? A self-based model of authentic leader and follower development. *Leadership Quarterly*, *16*(3), 434–372.

Gardner, W. L., Cogliser, C. C., Davis, K. M., & Dickens, M. P. (2011). Authentic leadership: A review of the literature and research agenda. *The Leadership Quarterly, 22*(6), 1120–1145.

George, B. (2003). *Authentic leadership: Rediscovering the secrets of creating lasting value*. San Francisco, CA: Jossey-Bass.

George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference*. 11.0 update (4th Ed.). Boston: Allyn & Bacon.

Ghafoor, A., Qureshi, T. M., Azeemi, H. R., & Hijazi, T. (2011). Mediating role of creative self-efficacy. *African Journal of Business Management*, *5*, 11093–11103. doi: 10.5897/AJBM11.876

Giallonardo, L. M., Wong, C. A., & Iwasiw, C. L. (2010). Authentic leadership of preceptors: Predictor of new graduate nurses' work engagement and job satisfaction. *Journal of Nursing Management*, *18*(8), 993–1003. doi: 10.1111/j.1365-2834.2010.01126x

Giffin, K. (1967). The contribution of studies of source credibility to a theory of interpersonal trust in the communication department. *Psychological Bulletin*, 68, 104–120.

Goldman, B. M. & Kernis, M. H. (2002). The role of authenticity in healthy psychological

    functioning and subjective well-being. *Annals of the American Psychotherapy*

    Association, *5*(6), 18–20.

Good, D. 1988. Individuals, interpersonal relations, and trust. In D. G. Gambetta (Ed.), *Trust* (pp.

    131-185). New York: Basil Blackwell.

Gouldner, A. W. (1960). The norm of reciprocity: A preliminary statement. *American*

    Sociological Review, 25(2), 161–178.

Graen, G. B. & Scandura, T. A. (1987). Toward a psychology of dyadic organizing. *Research in*

    Organizational Behavior, 9, 175–208.

Greenleaf, R. K. (1977). *Servant leadership: A journey into the nature of legitimate power and*

    greatness. Mahwah, NJ: Paulist Press.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate*

    data analysis (6th ed.). Upper Saddle River, NJ: Prentice Hall

Halbesleben, J. R. B. (2010). A meta-analysis of work engagement: Relationships with burnout,

    demands, resources, and consequences. In: Bakker, A. B. and Leiter, M.P. (Eds.), *Work*

    engagement: A handbook of essential theory and research. New York, NY: Psychology

    Press, pp. 102–117

Hallberg, U., & Schaufeli, W. B. (2006). "Same same" but different: Can work engagement be

    discriminated from job involvement and organizational commitment? *European Journal*

    of Psychology, 11(2)*,* 119–127. doi: 10.1027/1016-9040.11.2.119

Hameed, A., & Waheed, A. (2011). Employee development and its affect on employee

    performance: A conceptual framework. *International Journal of Business and Social*

    Science, 2(13), 224–229.

Hannah, S. T., Avolio, B. J., & Walumbwa, F. O. (2011). Relationship between authentic

    leadership, moral courage, and ethical and pro-social behaviors. *Business Ethics*

    Quarterly, 24(4), 555–578.

Harris, K. J., Harvey, P., & Booth, S. L. (2010). Who abuses their coworkers? An examination of personality and situational variables. *The Journal of Social Psychology, 150*(6), 608–627.

Hart, K. M., Capps, H. R., Cangemi, J. P., & Caillouet, L. M. (1986). Exploring organizational trust and its multiple dimensions: A case study of General Motors. *Organization Development Journal, 4*(2), 31–39.

Harter, J. K., Schmidt, F. L., Hayes, T. L. (2002). Business-unit level relationship between employee satisfaction, employee engagement, and business outcomes: a meta-analysis. *Journal of Applied Psychology*, *87*(2), 268–279.

Harter, S. (2002). Authenticity. In C. R. Snyder, & S. Lopez (Eds.), *Handbook of positive psychology* (pp. 382–394). Oxford, UK7 Oxford University Press.

Hartmann, F., Naranjo-Gil, D., & Perego, P. (2010). The effects of leadership styles and use of performance measures on managerial work-related attitudes. *European accounting review*, *19*(2), 275–310.

Hassan, A., & Ahmed, F. (2011). Authentic leadership, trust and work engagement. *International Journal of Human and Social Science, 6*(3), 164–170.

Henderson, J. E., & Hoy, W. K. (1983). Leader authenticity: The development and test of an operational measure. *Educational and Psychological Research, 3*(2), 63–75.

Henry, J. W., & Stone, R. W. (1994). A structural equation model of end-user satisfaction with a computer-based medical information system. *Information Resources Management Journal (IRMJ)*, *7*(3), 21–33.

Herling, R. W. (2000). Operational definitions of expertise and competence. In R. W. Herling & J. Provo (Eds.), *Strategic perspectives of knowledge, competence, and expertise* (pp. 8–21). San Francisco: Berrett-Koehler.

Hmieleski, K. M., Cole, M. S., & Baron, R. A. (2011). Shared authentic leadership and new venture performance. *Journal of Management*, *38*(5), 1476–1499, doi: 10.1177/0149206311415419

Homans, G. (1961). *Social Behavior*. New York: Harcourt, Brace & World.

Hovland, C. I., Janis, I. L., & Kelley, H. H. (1953). *Communication and persuasion*. New Haven, CT: Yale University Press.

Hoyle, R. H. (2012). Introduction and overview. In R. H. Hoyle (Ed.), *Handbook of structural equation modeling*. New York, NY: The Guilford Press, pp. 3–16.

Huber, V. L. (1983). An analysis of performance appraisal practices in the public sector: A review and recommendation. *Public Personnel Management*, *12*, 258– 267.

Hyman, L., Lamb, J., & Bulmer, M. (2006). *The use of pre-existing survey questions: Implications for data quality*. In: The conferences on European conference on Quality in Survey Statistics.

Ilies, R., Morgeson, F. P., & Nahrgang, J. D. (2005). Authentic leadership and eudaemonic well-being: Understanding leader-follower outcomes. *Leadership Quarterly, 16*(3), 373–394.

Jia, L., Song, J., Li, C., Cui, R., & Chen, Y. (2007). Leadership styles and employees' job-related attitudes: An empirical study on the mediating effects of reciprocity and trust. *Frontiers of Business Research in China*, *1*(4), 574-605.

Johnson-George, C., & Swap, W. C. (1982). Measurement of specific interpersonal trust: Construction and validation of a scale to assess trust in a specific other. *Journal of Personality and Social Psychology*, *43*(6), 1306–1317.

Jones, A. P., James, L. R., & Bruni, J. R. (1975). Perceived leadership behavior and employee confidence in the leader as moderated by job involvement. *Journal of Applied Psychology*, *60*(1), 146–149.

Jones, G. R., & George, J. M. (1998). The experience and evolution of trust: Implications for cooperation and teamwork. *Academy of Management Review, 23*(3), 531–546.

Jöreskog, K. G., & Sörbom, D. (1996). *LISREL 8: User's reference guide.* Chicago: Scientific Software International.

Jöreskog, K. G., Sörbom, D., (2001). *LISREL 8: User's Reference Guide*. Lincolnwood, IL: Scientific International.

Judge, T. A., Jackson, C. L., Shaw, J. C., Scott, B. A., & Rich, B. L. (2007). Self-efficacy and work-related performance: The integral role of individual differences. *Journal of Applied Psychology, 92*(1), 107–127. doi: 10.1037/0021-9010.92.1.107

Jöreskog, K., & Sörbom, D. (2001). *LISREL 8: User's reference guide* (2nd ed). Lincolnwood, IL: Scientific Software International.

Kahn, W. A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal, 33*(4), 692–724.

Kang, H.-C. (2013). *The effect of the authentic leadership of the chief of local government on organizational performance-the case of Gyeongsangnam-do*. Unpublished doctoral dissertation, Inje University, Gimhae, Korea.

Karatepe, M. O., & Olugbade, A. O. (2009). The effects of job and personal resources on hotel employees' work engagement. *International Journal of Hospitality Management, 28*, 504–512.

Kee, H. W., & Knox, R. E. (1970). Conceptual and methodological considerations in the study of trust and suspicion. *Journal of Conflict Resolution*, *14*, 357–366.

Kernis, M. H. (2003). Toward a conceptualization of optimal self-esteem, *Psychological Inquiry, 14*(1), 1–26.

Khan, S. N. (2010). Impact of authentic leaders on organization performance. International *Journal of Business and Management, 5*(2), 167–172.

Kline, R. (2011). *Principles and practice of structural equation modeling*. New York: Guilford Press.

Kline, R. B. (2005). *Principles and Practice of Structural Equation Modeling*. New York, NY: The Guilford Press.

Koo, D. W. (2013). *The effects of leader trust and organization trust by general manager's authentic leadership on affective commitment and turnover intention in hotel. Unpublished doctoral dissertation*, Sejong University, Seoul, Korea.

Korsgaard, M. A., Brodt, S. E., & Whitener, E. M. (2002). Trust in the face of conflict: The role of managerial trustworthy behavior and organizational context. *Journal of Applied Psychology, 87*(2), 312–319.

Kotter, J. P., & Heskett, J. L. (1992). *Corporate culture and performance*. New York: The Free Press.

Kuchinke, K. P. (1998). The influence of leadership styles on subordinates' attitudes towards their leaders and towards performance: A comparison of US and German manufacturing employees. *Human Resource Development International*, *1*(3), 291-308.

Larsson, S., & Rönnmark, L. (1996). The concept of charismatic leadership. *International Journal of Public Sector Management, 9*(7), 32–44.

Larzelere, R., & Huston, T. (1980). The dyadic trust scale: Toward understanding interpersonal trust in close relationships. *Journal of Marriage and the Family, 42*, 595–604.

Laub, J. A. (1999). Assessing the servant organization: Development of the servant organizational leadership assessment (SOLA) instrument. Unpublished doctoral dissertation. Florida Atlantic University.

Lawler, E. E. (1994). From job-based to competency-based organizations. *Journal of Organizational Behavior, 15*(1), 3–15.

Lawler, E. E., Mohrman, S. A., & Ledford, G. E. (1992). *Employee involvement and total quality management: Practices and results in Fortune 1000 companies*. San Francisco: Jossey-Bass.

Lee, D., Stajkovic, A. D., & Cho, B. (2011). Interpersonal trust and emotion as antecedents of cooperation: Evidence from Korea. *Journal of Applied Psychology, 41*(7), 1603–1631.

Lester, P. B., Vogelgesang, G., Hannah, S. T., & Kimmey, T. (2010). Developing courage in

    followers: Theoretical and applied perspectives. In C. Pury & S. Lopez (Eds.), *The*

    psychology of courage: Modern research on an ancient virtue (pp. 210–245).

    Washington, DC: American Psychological Association

Levinson, H. (1963). *Men, management and mental health*. Cambridge, MA: Harvard University

    Press.

Lieberman, J. K. (1981). *The litigious society*. New York: Basic Books.

Llorens, S., Schaufeli, W., Bakker, A., & Salanova, M. (2007). Does a positive gain spiral of

    resources, efficacy beliefs and engagement exist? *Computers in Human Behavior, 23*(1),

    825–841. doi: 10.1016/j.chb.2004.11.012

Locke, E. A., Frederick, E., Lee, C., & Bobko, P. (1984). Effect of self-efficacy, goals, and task

    strategies on task performance. *Journal of Applied Psychology, 69*(2), 241–251.

Lunenburg, F. C. (2011). Self-efficacy in the workplace: Implications for motivation and

    performance. *International Journal of Management, Business, and Administration, 14*(1),

    1–6.

Luthans, F., & Avolio, B. (2003). Authentic leadership: A positive development approach. In K.

    S. Cameron, J. E. Dutton, & R.E. Quinn (Eds.), *Positive organizational scholarship* (pp.

    241–258). San Francisco, CA; Berrett-Koehler.

Luthans, F., Youssef, C. M., & Avolio, B. J. (2007), Psychological capital: Investing and

    developing positive organization behavior. In D. L. Nelson, & C. L. Cooper (Eds.),

    Positive organizational behavior (pp. 9–24). Thousand Oaks, CA: Sage.

Macik-Frey, M., Quick, J. C., & Cooper, C. L. (2009). Authentic leadership as a pathway to

    positive health. *Journal of Organizational Behavior, 30*, 453–458.

MacKinnon, D. P., Krull, J. L., & Lockwood, C. M. (2000). Equivalence of the mediation,

    confounding and suppression effect. *Prevention Science*, *1*(4), 173–181.

Marsh, H. W, Balla, J. R, & McDonald, R. P. (1988). Goodness-of-fit indexes in confirmatory factor analysis: The effect of sample size. *Psychological Bulletin, 103*(3), pp. 391–410.

Maslach, C., & Leiter, M. P. (1997). *The truth about burnout*. San Francisco, CA: Jossey Bass.

Maslach, C., Schaufelli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology, 52*, 397–422.

May, D. R., Chan, A. Y., Hodges, T. D., & Avolio, B. J. (2003). Developing the moral component of authentic leadership. *Organizational Dynamics*, *32*(3), 247–260.

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review, 20*(3), 709–734.

McAllister, D. J. (1995). Affect-and cognition-based trust as foundations for interpersonal cooperation in organizations. *Academy of management journal*, *38*(1), 24−59.

McDonald, R. P., & Ho, M.-H. R. (2002). Principles and practice in reporting structural equation analyses. *Psychological Methods, 7*, 64–82. doi: 10.1037/1082-989X.7.1.64

Meichenbaum, D. H. (1977). *Cognitive-behavior modification: An integrative approach*. New York: Plenum Press.

Mester, C., Visser, D., & Roodt, G. (2003). Leadership style and its relation to employee attitudes and behavior. *SA Journal of Industrial Psychology, 29*(2), 72–82.

Miles, J.N.V., & Shevlin, M.E. (2001). *Applying regression and correlation: A guide for students and researchers*. London: Sage.

Milkovich, G. T., & Boudreau, J. W. (1997). *Human resource management* (8th ed.). Chicago: Irwin.

Mishra, A. (1996). Organizational Responses to Crisis: The Centrality of Trust. In R. Kramer & T. Tyler (Eds.), *Trust in Organizations: Frontiers of Theory and Research* (pp. 261–287). Thousand Oaks, CA: Sage.

Mooradian, T., Renzi, B., & Matzler, K. (2006). Who trusts? Personality, trust and knowledge sharing. *Management Learning, 37*(4), 523–540. doi: 10.1177/1350507606073424

Moorman, R. H., Blakely, G. L., & Niehoff, B. P. (1998). Does perceived organizational support mediate the relationship between procedural justice and organizational citizenship behavior? *Academy of Management Journal*, *41*(3), 351–357.

Motowidlo, S. J., & van Schotter, J. R. (1994). Evidence that task performance should be distinguished from contextual performance. *Journal of Applied Psychology, 79*, 475–480.

Mowday, R. T., Porter, L. W., & Steers, R. M. (1982). *Employee-organization linkages: The psychology of commitment, absenteeism and turnover*. New York: Academic Press.

Neider, L. L, & Schriesheim, C. A. (2011). The authentic leadership inventory (ALI): Development and empirical tests. *The Leadership Quarterly, 22*, 1146–1164. doi: 10.1016/j.leaqua.2011.09.008

Nunnally, J. C. (1967). *Psychometric theory* (1st ed.). New York: McGraw-Hill.

Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw-Hill.

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). New York: McGraw-Hill.

O'Brien, R. M. (2007). A caution regarding rules of thumb for variance inflation factors. *Quality & Quantity, 41*(5), 673–690. doi: 10.1007/s11135-006-9018-6

Organ, D. W. (1990). The motivational basis of organizational citizenship behavior. *Research in organizational behavior*, *12*(1), 43–72.

Organ, D. W. (1997). Organizational citizenship behavior: It's construct clean-up time. *Human Performance, 10*(2), 85–98.

Ostroff, C. (1992). The relationship between satisfaction, attitudes, and performance: An organizational level analysis. *Journal of applied psychology*, *77*(6), 963–974.

Ozer, E. M., & Bandura, A. (1990). Mechanisms governing empowerment effects: a self-efficacy analysis. *Journal of personality and social psychology*, *58*(3), 472–486. doi: 10.1037/0022-3514.58.3.472

Pajares, F., & Miller, M. D. (1994). Role of self-efficacy and self-concept beliefs in mathematical

problem solving: A path analysis. *Journal of Educational Psychology, 86*(2), 193–203. doi: 10.1037/0022-0663.86.2.193

Pati, S. P., & Kumar, P. (2010). Employee engagement: Role of self-efficacy, organizational support & supervisor support. *The Indian Journal of Industrial Relations, 46*(1), 126–137.

Peter, J. P. (1979). Reliability: A review of psychometric basics and recent marketing practices. *Journal of Marketing Research*, *16*(1), 6–17.

Peterson, S. J., Walumbwa, F. O., Avolio, B. J., & Hannah, S. T. (2012). The relationship between authentic leadership and follower job performance: The mediating role of follower positivity in extreme contexts. *The Leadership Quarterly*, *23*(3), 502–516.

Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology, 88*(5), 879–903.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior research methods*, *40*(3), 879–891.

Quick, J. C., & Macik-Frey, M. (2007). Healthy, productive work: Positive strength through communication competence and interpersonal interdependence. In D. L. Nelson, & C. L. Cooper (Eds.), *Positive organizational behavior: Accentuating the positive at work* (pp. 25-39). Thousand Oaks, California: Sage Publications.

Randhawa, G. (2004). Self-efficacy and work performance: An empirical study. *Indian Journal of Industrial Relations*, *39*(3), 336–346.

Rich, B. L., Lepine, J. A., & Crawford, E. R. (2010). Job engagement: Antecedents and effects on job performance. *Academy of Management Journal, 53*(3), 617–635.

Rich, G. (1997). The sales manager as a role model: Effects of trust, job satisfaction and performance of salespeople. *Journal of the Academy of Marketing Science, 25*(4), 319–

328.

Richman, A. (2006). Everyone wants an engaged workforce how can you create it? *Workspan*, *49*(1), 36–39.

Rigotti, T., Schyns, B., & Mohr, G. (2008). A short version of the occupational self-efficacy scale: Structural and construct validity across five countries. *Journal of Career Assessment, 16*(2), 238–255.

Ring, P. S., & Van de Ven, A. H. (1992). Structuring cooperative relationships between organizations. *Strategic management journal*, *13*(7), 483–498.

Romzek, B. (1990). Employee investment and commitment: The ties that bind. *Public Administration Review, 50*, 374–382.

Rosen, B., & Jerdee, T. H. (1977). Influence of subordinate characteristics on trust and use of participative decision strategies in a management simulation. *Journal of Applied Psychology*, *62*(5), 628–631.

Rosenberg, M., & Kapland, H. B. (1982). *Social psychology of the self-concept*. Arlington Heights, IL: Harlan Davidson.

Rosenthal, R., & Jacobson, L. (1968). *Pygmalion in the classroom*. New York: Holt, Rinehart & Winston.

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs, 80*(1), 148–154.

Rousseau, D. M. (1989). Psychological and implied contracts in organizations. *Employee Responsibilities and Rights Journal, 2*(2), 121–139.

Rousseau, D. M., & Parks, J. M. (1992). The contracts of individuals and organizations. *Research in organizational behavior*, *15*, 1–43.

Rousseau, D. M., Sitkin, S. B., Burt, R. S., & Camerer, C. (1998). Not so different after all: A cross-discipline view of trust. *Academy of Management Review, 23*(3), 393–404.

Ryan, R. M., & Deci, E. L. (2003). On assimilating identities to the self: A self-determination

theory perspective on internalization and integrity within cultures. In M. R. Leary & J. P.

Tangney (Eds.), *Handbook of self and identity* (pp. 255–273). New York: Guilford Press.

Saks, A. M. (2006). Antecedents and consequences of employee engagement. *Journal of*

Managerial Psychology, 21(7), 600–619.

Salanova, M., Lorente, L., Chambel, M. J., & Martínez, I. M. (2011). Linking transformational

leadership to nurses' extra-role performance: the mediating role of self-efficacy and work

engagement. *Journal of Advanced Nursing*, *67*(10), 2256–2266.

Schaufeli, W. B. (2012). Work engagement. What do we know and where do we go? *Romanian*

Journal of Applied Psychology, 14(1), 3–10.

Schaufeli, W. B., & Bakker, A. B. (2003). *UWES—Utrecht work engagement scale: Test manual*.

Utrecht, the Netherlands: Department of Psychology, Utrecht University.

Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with

burnout and engagement: A multi-sample study. *Journal of Organizational Behavior,*

25(3), 293–315.

Schaufeli, W. B., & Salanova, M. (2008). Enhancing work engagement through the management

of human resources. In K. Näswall, J. Hellgren, & M. Sverke (Eds.), *The individual in the*

changing working life (pp. 380−402). New York: Cambridge University Press.

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement

with a short questionnaire: A cross-national study. *Educational and Psychological*

Measurement, 66(4), 701–716. doi: 10.1177/0013164405282471

Schaufeli, W.B., Salanova, M., Gonzalez-Roma, V., & Bakker, A. B. (2002). The measurement

of burnout and engagement: A confirmatory factor analytic approach. *Journal of*

Happiness Studies, 3(1), 71–92.

Schumacker, R. E., & Lomax, R. G. (2010). *A beginner's guide to structural equation modeling*

(3rd ed.). New York: Routledge.

Schunk, D. H. (1991). Self-efficacy and academic motivation. *Educational psychologist, 26*(3 & 4), 207–231.

Schwab, D. P. (1980). Construct validity in organizational behavior. *Research in Organizational Behavior, 2*(1), 3–43.

Schyns, B., & von Collani, G. (2002). A new occupational self-efficacy scale and its relation to personality constructs and organizational variables. *European Journal of Work and Organizational Psychology, 11*(2), 219–241.

Shamir, B., & Eilam, G. (2005). "What's your story?" A life-stories approach to authentic leadership development. *The Leadership Quarterly*, *16*(3), 395–417.

Sharma, S., Mukherjee, S., Kumar, A., & Dillon, W. R. (2005). A simulation study to investigate the use of cutoff values for assessing model fit in covariance structure models. *Journal of Business Research, 58*(1), 935–943.

Shell, D. F., Murphy, C. C., & Bruning, R. H. (1989). Self-efficacy and outcome expectancy mechanisms in reading and writing achievement. *Journal of Educational Psychology*, *81(1),* 91–100.

Shore, L. M., & Tetrick, L. E. (1994). The psychological contracts as an explanatory framework in the employment relationship. In C. L. Cooper & D. M. Rousseau (Eds.), *Trends in Organizational Behavior*, Vol. 1, 92–109, Chichester: John Wiley & Sons Ltd.

Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: new procedures and recommendations. *Psychological methods*, *7*(4), 422–445.

Sitkin, S. B., & Roth, N. L. (1993). Explaining the limited effectiveness of legalistic "remedies" for trust/distrust. *Organization science*, *4*(3), 367–392.

Smith, B. N., Montagno, R. V., & Kuzmenko, T. N. (2004). Transformational and servant leadership: Content and contextual comparisons. *Journal of Leadership and Organizational Studies, 10*(4), 80–91.

Smith, C. A., Organ, D. W., & Near, J. P. (1983). Organizational citizenship behavior: Its nature and antecedents. *Journal of Applied Psychology, 68*(4), 653–663.

Sobel, M. E. (1982). Asymptotic confidence intervals for indirect effects in structural equation models. *Sociological methodology*, *13*, 290–312.

Solomon, L. (1960). The influence of some types of power relationships and game strategies upon the development of interpersonal trust. *The Journal of Abnormal and Social Psychology*, *61*(2), 223–230.

Song, J. H., Kolb, J. A., Lee, U. H, & Kim, H. K. (2012). Role of transformational leadership in effective organizational knowledge creation practices: Mediating effects of employees' work engagement. *Human Resource Development Quarterly*, *23*(1), 65–101.

Srivastava, A., Bartol, K. M., & Locke, E. A. (2006). Empowering leadership in management teams: Effects on knowledge sharing, efficacy, and performance. *Academy of Management Journal, 49*(6), 1239–1251. doi: 10.5465/AMJ.2006.23478718

Stajkovic, A. D., & Luthans, F. (1998). Self-efficacy and work-related performance: A meta-analysis. *Psychological Bulletin, 124*(2), 240–261.

Storm, K., & Rothman, I. (2003). A psychometric analysis of the Utrecht Work Engagement Scale in the South African police service. *South African Journal of Industrial Psychology, 29*(4)*, 62–70.

Strickland, L. H. (1958). Surveillance and trust. *Journal of Personality, 26*, 200–215.

Tan, H., & Tan, C. S. (2000). Toward the differentiation of trust in supervisor and trust in organization. *Genetic, Social, and General Psychology Monographs, 126*(2), 241–260.

Thoits, P. A. (1991). On merging identity theory and stress research. *Social Psychology Quarterly, 54*(2), 101–112.

Tierney, P., Farmer, S. M., & Graen, G. B. (1999). An examination of leadership and employee creativity: The relevance of transits and relationships. *Personnel Psychology*, *52*(3), 591–620. doi: 10.1111/j.1744-6570.1999.tb00173.x

Ugboro, I. O., & Obeng, K. (2000). Top management leadership, employee empowerment, job

    satisfaction, and customer satisfaction in TQM organizations: an empirical study. *Journal*

    of Quality Management, *5*(2), 247–272.

Ullman, J. B. & Bentler, P. M. (2012). Structural Equation Modeling. In I. B. Weiner (Ed.),

    Handbook of Psychology (2nd ed.), 661-690, John Wiley and Sons, Inc.

Walker, L. J., & Henning, K. H. (2004). Differing conceptions of moral exemplarity: Just, brave,

    and caring. *Journal of Personality and Social Psychology*, *86*(4), 629–647.

Walumbwa, F. O., & Hartnell, C. A. (2011). Understanding transformational leadership-

    employee performance links: The role of relational identification and self-efficacy.

    Journal of Occupational and Organizational Psychology, *84*(1), 153–172. doi;

    10.1348/096317910X485818

Walumbwa, F. O., Avolio, B. J., Gardner, W. L., Wernsing, T. S., & Peterson, S. J. (2008).

    Authentic Leadership: Development and validation of a theory-based measure. *Journal of*

    Management, 34(1), 89–126.

Walumbwa, F. O., Wang, P., Wang, H., Schaubroeck, J., & Avolio, B. J. (2010). Psychological

    Processes Linking Authentic Leadership to Follower Behaviors. *Leadership Quarterly,*

    21(5), 901–914.

Wang, H., Law, K. S., Hackett, R. D., Wang, D., & Chen Z. X. (2005). Leader-member exchange

    as a mediator of the relationship between transformational leadership and followers'

    performance and organizational citizenship behavior. *Academy of Management, 48*(3),

    420–432.

Weber, M. (1968). *Economy and society: An outline of interpretive sociology*. New York:

    Bedminster Press.

Welbourne, T. M., Johnson, D. & Erez, A. (1998). The role-based performance scale: Validity

    analysis of a theory-based measure of performance. *Academy of Management Journal,*

    41(5), 540–555.

West, S. G., Taylor, A. B., & Wu, W. (2012). Model fit and model selection in structural equation modeling, In Hoyle, R. H. (Ed.), *Handbook of structural equation modeling* (pp. 209-231), New York, NY: The Guilford Press.

Wheaton, B., Muthen, B., Alwin, D. F., & Summers, G. (1977). Assessing reliability and stability in panel models. *Sociological Methodology, 8*(1), 84–136.

Whittington, j. L., Goodwin, V. L. & Murray, B. (2004). Transformational leadership, goal difficulty, and job design: Independent and interactive effects on employee outcomes. *Leadership Quarterly*, *15*(5), 593–606. doi: 10.1016/j.leaqua.2004.07.001

Williams, J. (2004). *Resampling and distribution of the product methods for testing indirect effects in complex models*. Unpublished doctoral dissertation, Arizona State University, Tempe, AZ.

Wood, R., & Bandura, A. (1989). Social cognitive theory of organizational management. *Academy of Management Review, 14*(3), 361–384.

Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2009a). Reciprocal relationships between job resources, personal resources, and work engagement. *Journal of vocational Behavior, 74*(3), 235–244.

Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2009b). Work engagement and financial returns: A diary study on the role of job and personal resources. *Journal of Occupational and Organizational Psychology, 82*(1), 183–200.

Xanthopoulou, D., Bakker, A. B., Heuven, E. Demerouti, E., & Schaufeli, W. B. (2008). Working in the sky: A diary study on work engagement among flight attendants. *Journal of Occupational Health Psychology, 13*(4), 345–356.

Yammarino, F. J., Dionne, S. D., Schriesheim, C. A., & Dansereau, F. (2008). Authentic leadership and positive organizational behavior: A meso, multi-level perspective. *The Leadership Quarterly, 19*(6), 693–707.

Yi-Wen, Z., & Yi-Qun, C. (2005). The Chinese version of the Utrecht work engagement scale: An examination of reliability and validity. *Chinese Journal of Clinical Psychology, 13*(3), 268–270.

Zamahani, M., Ghorbani, V., & Rezaei, F. (2011). Impact of authentic leadership and psychological capital on followers' trust and performance. *Australian Journal of Basic and Applied Sciences, 5*(1), 658–667.

Zhang, J. (1999). *Effects of management training on trainees' learning, job performance, and organization results: A meta-analysis of evaluation studies from 1983–1997.* Unpublished doctoral dissertation, Oklahoma State University.

Zhang, X., & Bartol, K. M. (2010). Linking empowering leadership and employee creativity: The influence of psychological empowerment, intrinsic motivation, and creative process engagement. *Academy of Management Journal, 53*(1), 107–128.

APPPENDICES

Appendix A   Questionnaires for Survey (English and Korean Versions)

Thank you for your participation. I am Hye Kyoung Kim, a doctoral candidate at Oklahoma State University, majoring Occupational Education with emphasis in Workplace Education and Development.

This survey is a part of doctoral dissertation research for the data collection procedures in your organization. The purpose of this dissertation is to identify t*he effect of authentic leadership on organizational behaviors, employees' attitude, and performances* in your organization. Your information that you provide will be kept confidentially, and the results and summary of the results will be used only for academic research purpose.

The questionnaire should take approximately 15 minutes to complete. Before, during and after the participation if you have any questions or comments, please feel free to contact the researcher at hye.kim@okstate.edu or USA (405)762.2738. Thank you again for your participation.

Sincerely,

Hye Kyoung Kim

To indicate you have read the consent information that was sent to you in your emailed invitation to participate, please click to begin the survey. Completing the survey gives your participation consent.

Survey Introduction:
This questionnaire is designed to assess your perceptions of leadership style of your leaders', and their impact on employees' attitudes, behaviors, and performance. It is very important that you answer each question as thoughtfully and frankly as possible to reflect your accurate opinion.

Overview of Questionnaire:
This questionnaire has five major sections. The first section asks about leadership style of leaders. The second part asks your perception on interpersonal trust and occupational trust (attitude). The third and fourth parts ask about work engagement (organizational behavior) and performance. The final part of this questionnaire asks general information about you.

Confidentiality:
All records of this study will be kept private. Research records will be stored securely and only the researcher and individuals responsible for research oversight will have access to the records. It is possible that the consent process and data collection will be observed by research oversight staff responsible for safeguarding the rights and wellbeing of people who participate in research.
Once the researcher finishes all the survey, data entering process into statistical software will be conducted and the data sets will be stored in the researcher's personal laptop, which has password locking system. This data will be stored in here personal laptop for 6 months until completing the analysis, and then deleted.

Instructions:
This is a general survey asking your perceptions. It is not a test; thus there are no right or wrong answers. Please check the one response on each survey item that best reflects your perception.

Example:
Question: My leader clearly states what he/she means. 1 2 3 4 5
In this example, if you believe that leaders always state clearly what he/she means, you might score this as a five [5]; and if you believe that leaders never do this, you might score this as a [1]

Contact:
During or/and after your survey, if you have any questions please contact one of the researchers through following contact information:
Hye Kyoung Kim (USA), email: hye.kim@okstate.edu (Researcher)
Dr. Lynna Ausburn: 405-744-8322 (USA), email: Lynna.ausburn@okstate.edu (Faculty advisor)

If you have questions about your rights as a research volunteer, you may contact the IRB Chair, at Oklahoma State University, 219 Cordell North, Stillwater, OK 74078, 405-744-3377 or irb@okstate.edu.

Participant Rights:
Participation in this survey is voluntary and participants may discontinue the research activity at any time before submitting the online survey without reprisal or penalty. There are no risks to an individual participant for deciding to discontinue participation. Please note that once the survey is submitted, it is confidential and cannot be identified or withdrawn.

<table>
<thead>
<tr><th></th><th>**Authentic leadership**</th><th>Strongly disagree</th><th>Disagree</th><th>Neutral</th><th>Agree</th><th>Strongly agree</th></tr>
</thead>
<tbody>
<tr><td>1</td><td>My leader clearly states what he/she means</td><td>①</td><td>①</td><td>③</td><td>④</td><td>⑤</td></tr>
<tr><td>2</td><td>My leader shows consistency between his/her beliefs and actions</td><td>①</td><td>①</td><td>③</td><td>④</td><td>⑤</td></tr>
<tr><td>3</td><td>My leader asks for ideas that challenge his/her core beliefs</td><td>①</td><td>①</td><td>③</td><td>④</td><td>⑤</td></tr>
<tr><td>4</td><td>My leader describes accurately the way that others view his/her abilities</td><td>①</td><td>①</td><td>③</td><td>④</td><td>⑤</td></tr>
<tr><td>5</td><td>My leader uses his/her core beliefs to make decisions</td><td>①</td><td>①</td><td>③</td><td>④</td><td>⑤</td></tr>
<tr><td>6</td><td>My leader carefully listens to alternative perspectives before reaching a conclusion</td><td>①</td><td>①</td><td>③</td><td>④</td><td>⑤</td></tr>
<tr><td>7</td><td>My leader shows that he/she understands his/her strengths and weaknesses</td><td>①</td><td>①</td><td>③</td><td>④</td><td>⑤</td></tr>
<tr><td>8</td><td>My leader openly shares information with others</td><td>①</td><td>①</td><td>③</td><td>④</td><td>⑤</td></tr>
<tr><td>9</td><td>My leader resists pressures on him/her to do things contrary to his/her beliefs</td><td>①</td><td>①</td><td>③</td><td>④</td><td>⑤</td></tr>
<tr><td>10</td><td>My leader objectively analyzes relevant data before making a decision</td><td>①</td><td>①</td><td>③</td><td>④</td><td>⑤</td></tr>
<tr><td>11</td><td>My leader is clearly aware of the impact he/she has on others</td><td>①</td><td>①</td><td>③</td><td>④</td><td>⑤</td></tr>
<tr><td>12</td><td>My leader expresses his/her ideas and thoughts clearly to others</td><td>①</td><td>①</td><td>③</td><td>④</td><td>⑤</td></tr>
<tr><td>13</td><td>My leader is guided in his/her actions by internal moral standards</td><td>①</td><td>①</td><td>③</td><td>④</td><td>⑤</td></tr>
<tr><td>14</td><td>My leader encourages others to voice opposing points of view</td><td>①</td><td>①</td><td>③</td><td>④</td><td>⑤</td></tr>
</tbody>
</table>

PART 1 Leadership Style

PART 2 Employees' Attitudes

	Trust in peers and management	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	If I got into difficulties at work I know my colleagues would try and help me out	①	①	③	④	⑤
2	I can trust the people I work with to lend me a hand if I needed it	①	①	③	④	⑤
3	Most of my colleagues can be relied upon to do as they say they will do	①	①	③	④	⑤
4	Management at my firm is sincere in its attempts to meet the employees' point of view	①	①	③	④	⑤
5	I feel quite confident that the firm will always try to treat me fairly	①	①	③	④	⑤
6	Our management would be quite prepared to gain advantage by deceiving the employee (R)	①	①	③	④	⑤

	Occupational self-efficacy	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	I can remain calm when facing difficulties in my job because I can rely on my abilities	①	①	③	④	⑤
2	When I am confronted with a problem in my job, I can usually find several solutions	①	①	③	④	⑤
3	Whatever comes my way in my job, I can usually handle it.	①	①	③	④	⑤
4	My past experiences in my job have prepared my well for my occupational future	①	①	③	④	⑤
5	I meet the goals that I set for myself in my job	①	①	③	④	⑤
6	I feel prepared for most of the demands in my job	①	①	③	④	⑤

PART 3 Performances

	Role-based performance	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	I satify the criteria of quantity of work output that is officially required.	①	①	③	④	⑤
2	I satify the criteria of quality of work output that is officially required.	①	①	③	④	⑤
3	I perform my work accurately.	①	①	③	④	⑤
4	I provide good customer service (internal & external customers).	①	①	③	④	⑤
5	I come up with new ideas.	①	①	③	④	⑤
6	I work to implement new ideas.	①	①	③	④	⑤
7	I try to find improved ways to do things.	①	①	③	④	⑤
8	I create better processes and routines.	①	①	③	④	⑤
9	I make progress in my career.	①	①	③	④	⑤
10	I continuously seek out career opportunities.	①	①	③	④	⑤
11	I have career goals.	①	①	③	④	⑤
12	I develop skills needed in my future career.	①	①	③	④	⑤
13	I work as part of a team or group.	①	①	③	④	⑤
14	I seek information from others in my work group.	①	①	③	④	⑤
15	I make sure that my work group succeeds.	①	①	③	④	⑤
16	I respond to the needs of others in my work group.	①	①	③	④	⑤
17	I do things that help others when it's not part of my job.	①	①	③	④	⑤
18	I work for the overall good of my company	①	①	③	④	⑤
19	I do things that promote my company	①	①	③	④	⑤
20	I help out so that my company is a desireable workplace.	①	①	③	④	⑤

PART 4 Organizational Behaviors

	Work engagement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	At my work, I feel bursting with energy	①	①	③	④	⑤
2	At my job, I feel strong and vigorous	①	①	③	④	⑤
3	I am enthusiastic about my job	①	①	③	④	⑤
4	My job inspires me	①	①	③	④	⑤
5	When I get up in the morning, I feel like going to work	①	①	③	④	⑤
6	I feel happy when I am working intensely	①	①	③	④	⑤
7	I am proud of the work that I do	①	①	③	④	⑤
8	I am immersed in my work	①	①	③	④	⑤
9	I get carried away when I am working	①	①	③	④	⑤

PART 5 General Demographic Questions

1. Gender

① Male ② Female

2. Age

① Under 20 years old ② 21~29 years old ③ 30~39 years old

④ 40~49 years old ⑤ 50~59 years old ⑥ over 60 years old

3. Job duration in current company:

① Less than 1 year ② More than 1 but less than 3 years ③ More than 3 but less than 5 years

④ More than 5 but less than 10 years ⑤ More than 10 but less than 20 years ⑥ More than 20 years

4. Classification of corporate?

① Small medium sized enterprise (less than 300 employees) ② Conglomerate (more than 300 employees)

안녕하세요?

저는 미국 오클라호마 주립대학에서 직업교육전공 박사 과정 중에 있는

김혜경 입니다. 본 설문조사는 본인의 박사 학위 논문을 위해 실시되고 있습니다.

본 연구는 **"리더의 리더십 스타일과 종업원의 행동 및 성과에 관한 연구"**로 리더의 진정성

리더십(Authentic Leadership)과 종업원의 업무 몰입 및 역할 성과의 관계에 대해

연구하고자 합니다. 모든 질문에는 맞고 그름이 없으며, 귀하가 평소 회사 생활을 하면서

느끼시는 점을 기준으로 응답하여 주시면 됩니다.

설문조사는 약 10분정도 소요될 것으로 예상됩니다. 바쁘시겠지만, 잠시 시간을 내셔서

설문에 응해주시면 감사하겠습니다. 설문조사와 관련하여 질문이 있으시거나, 혹은

설문분석 결과를 받고 싶으시면 hye.kim@okstate.edu 으로 연락주시면 성심껏

답변해드리겠습니다.

연구자: 김 혜 경

오클라호마 주립대학교, 직업교육 전공

2013 년 12 월

김 혜 경 드림

1. 다음은 **귀하의 자기 효능감 (occupational self-efficacy)** 에 관한 문항입니다. 아래 항목들에 대하여 평소 느끼시는 대로 솔직하게 답변해 주세요.

	직업 자아효능감	전혀 아니다	그렇지 않다	보통 이다	그런 편이다	매우 그렇다
1	나는 어려움에 부딪히더라도 그것을 해결할 능력이 있기 때문에 평온한 상태를 유지할 수 있다.	1	2	3	4	5
2	나는 일하면서 문제에 직면할 때, 일반적으로 여러 가지 해결책을 찾을 수 있다.	1	2	3	4	5
3	일반적으로 나는 일하면서 어떤 상황이 닥치더라도 그것을 처리할 수 있다.	1	2	3	4	5
4	나의 과거 직업경험은 내가 미래 직업을 준비하는데 많은 도움이 된다.	1	2	3	4	5
5	나는 내가 정한 업무관련 목표를 달성한다.	1	2	3	4	5
6	나는 내 업무와 관련하여 요구되는 대부분의 조건들을 잘 갖추고 있다고 생각한다.	1	2	3	4	5

2. 다음은 **귀하의 리더 (authentic leadership)** 에 관한 문항입니다. 아래 항목들에 대하여 평소 느끼시는 대로 솔직하게 답변해 주세요.

	진정성 리더십	전혀 아니다	그렇지 않다	보통 이다	그런 편이다	매우 그렇다
1	나의 리더는 전달하고자 하는 내용을 명확하게 표현한다.	1	2	3	4	5
2	나의 리더는 생각과 행동이 일치한다.	1	2	3	4	5
3	나의 리더는 자신의 믿음과 부합하지 않는 상황에 직면하면 해결방법을 찾기 위해 의견을 구한다.	1	2	3	4	5
4	나의 리더는 자신의 능력에 대해 다른 사람들이 어떻게 생각하는지를 정확하게 알고 있다.	1	2	3	4	5
5	나의 리더는 자신의 핵심 신념을 반영하여 의사결정을 한다.	1	2	3	4	5
6	나의 리더는 최종 결정을 하기 전에 다른 대안을 주의 깊게 듣는다.	1	2	3	4	5
7	나의 리더는 자신의 장점과 단점을 명확하게 알고 있다.	1	2	3	4	5
8	나의 리더는 정보를 솔직하게 다른 사람과 공유한다.	1	2	3	4	5
9	나의 리더는 자신의 신념과 반대되는 일을 하게 될 때 저항한다.	1	2	3	4	5
10	나의 리더는 의사결정을 하기 전에 관련정보를 객관적으로 분석한다.	1	2	3	4	5
11	나의 리더는 다른 사람에 대한 자신의 영향력을 명확하게 알고 있다.	1	2	3	4	5
12	나의 리더는 자신의 아이디어와 생각을 다른 사람에게 명확하게 표현한다.	1	2	3	4	5
13	나의 리더는 자신의 도덕적 판단기준에 따라 행동한다.	1	2	3	4	5

3. 다음은 **귀하의 역할 성과를** 측정하기 위한 문항입니다. 아래 항목들에 대하여 평소 생각하는 대로 솔직하게 답변해 주십시오.

	역할 성과	전혀 아니다	그렇지 않다	보통 이다	그런 편이다	매우 그렇다
1	나는 내게 공식적으로 요구되는 성과의 양적 기준을 충족시킨다.	1	2	3	4	5
2	나는 내게 공식적으로 요구되는 성과의 질적 기준을 충족시킨다.	1	2	3	4	5
3	나는 내게 공식적으로 요구되는 업무를 정확하게 수행한다.	1	2	3	4	5
4	나는 우리 회사의 내/외부 고객들에게 좋은 서비스를 제공하고 있다.	1	2	3	4	5
5	나는 우리 회사에서 일하면서 개인적인 경력 목표를 달성하고 있다.	1	2	3	4	5
6	나는 우리 회사에서 일하면서 미래 경력(직업)에 필요한 기술 및 능력을 개발하고 있다.	1	2	3	4	5
7	나는 우리 회사에서 일하면서 나의 경력을 발전시키고 있다.	1	2	3	4	5
8	나는 우리 회사에서 일하면서 경력 개발 기회를 찾고 있다.	1	2	3	4	5
9	나는 내 업무뿐만 아니라 조직 전체를 위해 새로운 아이디어를 개발 한다.	1	2	3	4	5
10	나는 새로운 아이디어를 내 업무 등에 적용하고 실행한다.	1	2	3	4	5
11	나는 일을 효율적으로 하기 위해 더 나은 방법을 찾는다.	1	2	3	4	5
12	나는 일을 할 때 더 나은 진행방법과 절차를 만들어서 한다.	1	2	3	4	5
13	나는 우리 회사에서 팀원(직원)으로써 회사의 발전을 위해 일하고 있다.	1	2	3	4	5
14	나는 회사 내에서 다른 사람들로부터 여러 정보를 얻는다.	1	2	3	4	5
15	나는 우리 팀(작업그룹)이 성과를 달성하도록 노력한다.	1	2	3	4	5
16	나는 우리 팀원(직원)들이 도움을 요청하면 도와준다.	1	2	3	4	5
17	나는 내 업무와 관련된 것이 아니더라도 다른 직원들을 돕는다.	1	2	3	4	5
18	나는 회사의 전체적인 안녕을 위해 일한다.	1	2	3	4	5
19	나는 회사의 발전을 위한 것들을 한다.	1	2	3	4	5
20	나는 회사의 발전을 위해 돕고 있으며, 이것은 우리 회사가 더 좋은 회사가 되게끔 한다.	1	2	3	4	5

4. 다음은 **귀하의 업무몰입 (work engagement)** 에 관한 문항입니다. 아래 항목들에 대하여 평소 느끼시는 대로 솔직하게 답변해 주세요.

	업무 몰입	전혀 아니다	그렇지 않다	보통 이다	그런 편이다	매우 그렇다
1	직장에서 나는 의욕이 충만하다고 느낀다.	1	2	3	4	5
2	내 업무에 대해 나는 활력을 느낀다.	1	2	3	4	5
3	아침에 일어났을 때, 나는 회사에 출근하고 싶다고 느낀다.	1	2	3	4	5
4	나는 내 업무에 대해 열정적이다.	1	2	3	4	5
5	내 업무는 나를 고무 시킨다.	1	2	3	4	5
6	나는 내가 하고 있는 업무가 자랑스럽다.	1	2	3	4	5
7	업무에 몰두하고 있을 때 나는 행복하다.	1	2	3	4	5
8	나는 내 업무에 집중한다.	1	2	3	4	5
9	나는 일을 할 때 집중한다.	1	2	3	4	5

5. 다음은 **귀하와 동료 및 관리자 간의 신뢰**에 관한 문항입니다. 아래 항목들에 대하여 평소 느끼시는 대로 솔직하게 답변해 주세요.

	동료 및 관리자 간의 신뢰	전혀 아니다	그렇지 않다	보통 이다	그런 편이다	매우 그렇다
1	만약 내가 어려움에 직면하게 되면, 나의 동료들이 나를 도와주려고 할 것이다.	1	2	3	4	5
2	내가 도움이 필요할 때, 나는 나를 도와주는 동료들을 믿을 수 있다.	1	2	3	4	5
3	대부분의 나의 동료들은 그들이 말한 대로 실천을 할 것이기 때문에 그들을 신뢰할 수 있다.	1	2	3	4	5
4	우리 회사의 관리자들이 직원들의 요구를 충족시키고자 하는 노력에 진실성이 있다.	1	2	3	4	5
5	나는 우리 회사가 항상 나를 공정하게 대우해 줄 것이라 믿는다.	1	2	3	4	5
6	우리 관리자들은 직원들을 기만하여 이용하지 않는다.	1	2	3	4	5
7	나의 동료들은 자신의 업무 노하우를 기꺼이 서로 공유한다.	1	2	3	4	5
8	나의 동료들은 다른 동료가 업무에 뒤쳐져 있을 때 서로 도와준다.	1	2	3	4	5
9	나의 동료들은 다른 사람이 다운되어 있을 때 서로 격려해 준다.	1	2	3	4	5
10	나의 동료들은 동료 간 의견충돌이 발생했을 때 중재하려고 노력한다.	1	2	3	4	5

※ 다음은 귀하에 대한 질문입니다. 성실히 답변하여 주시면 감사하겠습니다.

1. 귀하의 성별:
   ① 남   ② 여

2. 귀하의 연령:
   ① 20 세 이하   ② 21~29 세   ③ 30~39 세
   ④ 40~49 세   ⑤ 50~59 세   ⑥ 60 세 이상

3. 현 직장에서의 근속년수:
   ① 1 년 미만   ② 1 년~3 년 미만   ③ 3~5 년 미만
   ④ 5~10 년 미만   ⑤ 10 년 이상~20 년 미만   ⑥ 20 년 이상

4. 귀사의 기업유형은?
   ① 중소기업(근로자 300 인 미만)   ② 대기업(근로자 300 인 이상)

※ 설문에 성실히 응해 주셔서 다시 한 번 감사드립니다.

Appendix B   Invitation Letters (English and Korean Versions)

Dear Individual workers:

As an OSU graduate student, I am conducting a confidential survey that will give you the opportunity to voice your opinion about word of mouth. The purpose of the research is to identify the effects of authentic leadership on employees' attitudes, behaviors, and performance in a Korean context.

While your opinions are very important to me, your personal participation is completely voluntary. All answers will be kept secure and confidential and will be coded into patterns of meanings developed for educational purposes only. You may decline or withdraw at any time. Consent information is attached to this email to help you decide if you want to participate. Please read this consent information carefully. Once you agree to participate in this research study, please visit the following link: http://www.surveymonkey.com/s/RDJYW7N and complete the survey as soon as possible.

Participation in this survey is voluntary and has no known risks, and participants may discontinue the research activity at any time without reprisal or penalty. There are no risks to any individual for choosing not to participate or for deciding to discontinue participation.

All data will be kept in a locked password laptop computer controlled by the researchers. Employers will NOT have access to any individual responses. In the completed report, no information will be included that will make it possible to identify you or any of your individual responses.

Once again, I would like to remind you that your participation is strictly voluntary and will be kept confidential. The results will be reported in summary format only with the hopes of improving customers' satisfaction and organizational performances.

Thank you for your consideration. I will be happy to answer any questions that you may have by calling me at 405-744-8488 or e-mailing hye.kim@okstate.edu. You may also call my faculty advisor, at Dr. Ausburn 405-744-8322, lynna.ausburn@okstate.edu.

Consent Information (attached to email invitation to participation)
Project Title: The effect of authentic leadership on employees' attitudes, behaviors, and performance in a Korean context.

You are invited to take part in a research study being conducted by Hye Kyoung Kim, a researcher from Oklahoma State University. The information in this form is provided to help you decide whether or not to take part. If you decide you do not want to participate, there will be no penalty to you, and you will not lose any benefits you normally would have.

Why Is This Research Study Being Done?
The purpose of this study is to identify the effect of authentic leadership on employees' attitudes, behaviors, and performance in a Korean context.

Why Am I Being Asked To Be In This Research Study?
You are being asked to be in this study because your opinion/perception on your leaders will be used to determine the way to increase employees' performance and organizational performances.

What Will I Be Asked To Do In This Research Study?
You will be asked to answer to 55 questions. Your participation in this study will last about 15 minutes.

Example template:
Question: My leader clearly states what he/she means. 1 2 3 4 5
In this example, if you believe that leaders always state clearly what he/she means, you might score this as a five [5]; and if you believe that leaders never do this, you might score this as a [1]

Are There Any Risks To Me?
Participation in this survey is voluntary and participants may discontinue the research activity at any time by not finishing and submitting the online survey without reprisal or penalty. There are no risks to an individual participant for deciding to discontinue participation.

Will There Be Any Costs To Me?
Aside from your time, there are no costs for taking part in the study.

Will I Be Paid To Be In This Study?
You will not be paid for being in this study.

Will Information From This Research Study Be Kept Private?
The records of this study will be kept private. No identifiers linking you to this study will be included in any sort of report that might be published. Research records will be stored securely and only researcher will have access to the records. All records will be deleted after 6 months.

Information you provide will be stored in computer files protected with a password.

Who may I Contact for More Information?
 You may contact the Principal Investigator, Hye Kyoung Kim, by calling 405-762-2738 or e-mailing hye.kim@okstate.edu. You may also call my advisor, Dr. Ausburn 405-744-8322, lynna.ausburn@okstate.edu. If you have questions about your rights as a research volunteer, you may contact the Oklahoma State University Institutional Review Board (IRB) at 219 Cordell North, Stillwater, OK 74078, 405-744-3377 or irb@okstate.edu.

What if I Change My Mind About Participating?
This research is voluntary and you have the choice whether or not to participate in this research study. You may decide to not begin or to stop participating at any time. If you choose not to be in this study or stop being in the study, there will be no effect on your work. You may stop your participation by not submitting your online survey. NOTE: After you submit your survey online, it will be impossible to withdraw your information because no individual's response can be identified.

Thank you.

Hye Kyoung Kim

Email Letter to Complete Survey (follow up email)

Dear Individual workers:
You were recently sent an email inviting you to participate in a survey, which is titled as "The effect of authentic leadership on employees' attitudes, behaviors, and performance in a Korean context".

This is a follow up email to once again invite your participation in the survey. The link to the survey is included in the body of this email. Permission to participate is indicated by clicking on the link. (http://www.surveymonkey.com/s/RDJYW7N).

Once again, your opinions are very important to me but your personal participation is voluntary. Thus, you are free to decline at any time.

Thank you for your consideration. I will be happy to answer any questions that you may have by calling me at 405-744-8488 (U.S.A) or e-mailing hye.kim@okstate.edu. You may also call my faculty advisor, Dr. Ausburn at 405-744-8322, lynna.ausburn@okstate.edu.

설문조사 개요

연구자:

김혜경, 오클라호마 주립대, 직업교육전공 박사과정

연구주제:

진정성 리더십이 종업원의 태도, 행동 및 성과에 미치는 영향에 관한 연구

연구목적:

리더십 스타일 (진성성 리더십)이 종업에 미치는 영향을 연구하고자 함

연구방법:

연구목적을 달성하기 위해 실증적 분석 방법 즉, 다변량 구조분석 방법을 사용하여 변수들 간의
상관관계를 분석할 것임

연구변수:

진정성 리더십, 자기 효능감, 종업원간 신뢰, 업무 몰입, 역할 성과

기대되는 성과:

본 연구 결과는 왜 리더십이 중요한지를 보여줄 것이며, 이러한 연구결과는 리더십 향향
프로그램의 필요성과 리더 선택시 고려해야 요소가 무엇인지를 보여줄 것으로 기대됨

설문조사 참여 안내 메일 (1 차)

근로자분들께:

안녕하세요? 저는 오클라호마 주립대에서 인적자원관리를 전공하고 있는 김혜경입니다.
저는 현재 진성성 리더십이 종업원의 태도, 행동 및 성과에 미치는 영향에 관한 연구를 수행하고
있습니다. 이 연구와 관련하여 여러분의 의견을 듣고자 합니다.

여러분의 의견이 본 연구자의 연구에 매우 중요합니다만, 연구참여는 귀하의 자유로운 의사결정에
따라 결정됩니다. 또한 귀하께서 설문조사에 참여로 인해 어떠한 개인정보도 유출되지 않을
것이며, 귀하의 의견은 오로지 본인의 연구에만 사용될 것임을 알려드립니다.

본 연구와 관련된 자세한 정보는 첨부 파일을 참조 해주길 바라며, 본 연구 참여를 원하시면,
아래의 설문조사 사이트를 클릭하시면 바로 참여 하실 수 있습니다.
http://www.surveymonkey.com/s/RDJYW7N

본 설문조사와 관련하여 질문이 있으시면, 전화 (미국) 405-744-8488, (한국) 010-4526-4536 혹은
이메일 hye.kim@okstate.edu 로 연락해주실 바랍니다.

설문조사 참여 안내 메일 (2 차)

근로자분들께:

최근에 설문조사와 관련하여 참여를 부탁드리는 메일을 보내드렸습니다만, 다시 한번 설문참여를 부탁드리고자 연락드립니다. 설문조사 참여를 원하시면 아래의 링크를 클릭해주십시오.
http://www.surveymonkey.com/s/RDJYW7N

다시 한번 말씀드리면, 여러분의 의견이 본 연구자의 연구에 매우 중요합니다만, 연구참여는 귀하의 자유로운 의사결정에 따라 결정됩니다.설문조사에 참여하는 도중 원치 않으시면 언제든지 중단 하실 수 있습니다.

또한 귀하께서 설문조사에 참여로 인해 어떠한 개인정보도 유출되지 않을 것이며, 귀하의 의견은 오로지 본인의 연구에만 사용될 것임을 알려드립니다.

본 설문조사와 관련하여 질문이 있으시면, 전화 (미국) 405-744-8488, (한국) 010-4526-4536 혹은 이메일 hye.kim@okstate.edu 로 연락해주실 바랍니다.

설문조사 조사와 관련된 세부 정보

연구주제: 진정성 리더십이 종업업의 태도, 행동 및 성과에 미치는 영향에 관한 연구

안녕하세요. 저는 미국 오클라호마주립대에서 직업교육을 전공하고 있는 김혜경입니다. 저는 현재 논문작성을 위한 설문조사를 실시하고 있습니다. 본 설문조사와 관련된 상세 정보를 알려드리고, 설문조사 참여를 요청드리고 싶습니다.

1) 본 설문조사 필요한 이유?
   본 설문조사의 목적은 진정성 리더십이 종업원의 태도, 행동 및 성과에 미치는 영향을 살펴보고자 하는 것입니다.

2) 왜 내가 본 설문조사에 참여해야 하는가?
   리더의 진성성 리더십에 관한 귀하의 의견이 성과 향상 방안을 찾는데 유용하게 활용될 것입니다.

3) 이 연구에서 나의 역할은 무엇인가?
   총 55 문항의 설문문항에 참여를 부탁드리며, 설문조사를 완료하는데 최대 10 분정도가 소요될 것으로 예상됩니다.

   샘플 질문: 나의 리더는 자신이 의미하는 바를 정확하게 표현한다. 1 2 3 4 5
   이 질문에서, 귀하의 리더가 항상 자신의 의견을 정확하게 표현을 한다면, 귀하께서는 5 점을 선택하시고, 귀하의 리더가 그렇게 한 적이 전혀 없다고 생각이 드시면, 1 점을 선택하시면 됩니다.

4) 본 설문조사와 관련된 잠재적인 위험이 있나요?
   본 설문조사는 100% 귀하의 자발적인 의사결정에 의해 진행될 것이며, 혹시 참여를 하지 않더라도 어떠한 불이익이 돌아가지 않을 것입니다. 또한 설문조사에 참여하시더라도 귀하의 정보는 절대 누출되지 않을 것입니다.

5) 설문조사 참여에 소요되는 비용은?
   설문조사에 소요되는 시간을 제외한다면, 어떠한 비용도 들지 않습니다.

6) 설문조사 참여 시 어떤 금전적인 혜택을 받나요?
   아니요.

7) 개인정보는 어떻게 관리하나요?
   본 설문조사를 통해 얻게되는 귀하의 의견을 절처하게 보관할 것이며, 절대 연구목적 이외에서는 사용되지 않을 것입니다. 또한 귀하의 신분을 확인할 수 있는 개인 정보는 설문조사에 포함되지 않을 것입니다.

8) 본 설문조사와 관련하여 더 많은 정보를 얻고 싶으면 어떻게 해야 하나요?
   좀 더 자세한 얻고 싶으시면, 연구책임자 (김혜경)에게 전화 (미국: 405-762-2738, 한국:
   010-4526-4536) 혹은 이메일(hye.kim@okstate.edu)로 연락하시길 바랍니다. 만약
   설문조사 참여와 관련하여 귀하여 권리에 대하여 좀 더 자세히 알고 싶으시면, 오클라호마
   주립대 내의 IRB 담당자, Dr. Shelia Kennison 에게 문의 하시길 바랍니다. (전화: 405-744-
   3377, 이메일:irb@okstate.edu)

9) 설문 조사 참여의사를 취소하게 되면 어떻게 되나요?
   본 설문조사는 전적으로 귀하의 자발적인 의사에 의해 진행될 것이기 때문에 언제든지
   참여의사를 취소할 수 있으며, 그에 따른 불이익이 귀하에게 절대 가해지지 않을 것입니다.
   또한 귀하께서 하고 계시는 일에 절대 어떠한 영향도 미치지 않을 것입니다.

   연구책임자: 김혜경 드림

설문조사 관련 정보

본 설문조사는 귀하의 리더에 대하여 평소 귀하가 느끼는 점 등에 대한 의견을 들어보고자 하는 것입니다. 각 설문항목에 대한 귀하의 솔직한 응답이 본 설문조사의 성공적 수행에 아주 중요하므로 성실한 답변 부탁드립니다.

설문지 개요

본 설문조사는 크게 6개의 질문으로 구성되어 있습니다. 첫번째는 귀하의 리더에에 관한 것이며, 두번째 질문은 귀하의 업무관련 자기 효능감에 관한 것이며, 세번째는 종업원 간의 신뢰에 관한 것입니다. 네 번째는 귀하의 업무 몰입에 관한 것이며, 다섯번재는 역할 성과에 관한 것입니다. 마지막은 귀하에 관한 일반적인 정보를 묻는 문항들로 구성되어 있습니다.

보안 (비밀유지)

본 설문조사는 결과는 철저하게 보안이 유지되는 곳에 저장할 것입니다. 또한 본 설문조사 완료되면, 설문조사 결과는 통계처리를 위한 코드 형태로 연구책임자의 개인용 노트북에 약 6개월정도 보관할 것이며, 그 이후에는 파기할 것입니다.

연락처

설문조사에 참여하는 동안 혹은 완료한 후에 질문이 있으시면, 아래 연락처로 연락하시길 바랍니다.

김혜경: hye.kim@okstate.edu

Lynna Ausburn (연구자의 지도교수): lynna.ausburn@okstate.edu

만약 설문조사 참여와 관련하여 귀하여 권리에 대하여 좀 더 자세히 알고 싶으시면, 오클라호마 주립대 내의 IRB 담당자, Dr. Shelia Kennison 에게 문의 하시길 바랍니다. (전화: 405-744-3377, 이메일:irb@okstate.edu)

설문조사 참여자의 권리

귀하의 자발적인 의사에 의해 진행 될 본 설문조사는 언제든지 참여를 중단할 수 있으며, 참여중단에 따른 불이익은 절대 없습니다.

Appendix C   IRB Approval and Approval of IRB Modification

Oklahoma State University Institutional Review Board

Date: Thursday, November 14, 2013

IRB Application No   ED13177

Proposal Title: The effect of authentic leadership on employees' attitudes, behaviors, and
                               performance in a Korean context.

Reviewed and   Exempt
Processed as:

Status Recommended by Reviewer(s): Approved   Protocol Expires: 11/13/2016

Principal
Investigator(s):

Hye Kyoung Kim   Lynna Ausburn
259 Willard   257 Willard
Stillwater, OK 74078   Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the
rights and welfare of individuals who may be asked to participate in this study will be respected, and that
the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45
CFR 46.

☒ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval
stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol
   must be submitted with the appropriate signatures for IRB approval. Protocol modifications requiring
   approval may include changes to the title, PI, advisor, funding status or sponsor, subject population
   composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and
   consent/assent process or forms.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar
   year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are
   unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the
authority to inspect research records associated with this protocol at any time. If you have questions about the
IRB procedures or need any assistance from the Board, please contact Dawnett Watkins 219 Cordell North
(phone: 405-744-5700, dawnett.watkins@okstate.edu).

Sincerely,

Shelia Kennison, Chair
Institutional Review Board

Oklahoma State University Institutional Review Board

Date:	Wednesday, December 18, 2013 **Protocol Expires:** 11/13/2016
IRB Application No:	ED13177
Proposal Title:	The effect of authentic leadership on employees' attitudes, behaviors, and performance in a Korean context.
Reviewed and Processed as:	Exempt **Modification**

Status Recommended by Reviewer(s)   **Approved**

Principal Investigator(s):

Hye Kyoung Kim   Lynna Ausburn
259 Willard   257 Willard
Stillwater, OK 74078   Stillwater, OK 74078

The requested modification to this IRB protocol has been approved. Please note that the original expiration date of the protocol has not changed. The IRB office MUST be notified in writing when a project is complete. All approved projects are subject to monitoring by the IRB.

☐ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

The reviewer(s) had these comments:

Modification to Korean version of the two measures of authentic leadership – question numbers 4 & 7. Change necessary for readability/understandability in Korean.

Signature :

Shelia K

Shelia Kennison, Chair, Institutional Review Board

Wednesday, December 18, 2013
Date

Appendix D   Questionnaire Items and Origin

<div align="center">

Authentic Leadership Scale

</div>

Response scale: 1 = strongly disagree   2 = somewhat disagree   3 = Neutral   4 = somewhat agree
5 = strongly agree

Self-awareness

    1. My leader describes accurately the way that others view his/her abilities

    2. My leader shows that he/she understands his/her strengths and weaknesses

    3. My leader is clearly aware of the impact he/she has on others

Relational transparency

    1. My leader clearly states what he/she means

    2. My leader openly shares information with others

    3. My leader expresses his/her ideas and thoughts clearly to others

Balanced processing

    1. My leader asks for ideas that challenge his/her core beliefs

    2. My leader carefully listens to alternative perspectives before reaching a conclusion

    3. My leader objectively analyzes relevant data before making a decision

    4. My leader encourages others to voice opposing points of view

Internalized moral perspective

    1. My leader shows consistency between his/her beliefs and actions

    2. My leader uses his/her core beliefs to make decisions

    3. My leader resists pressures on him/her to do things contrary to his/her beliefs

    4. My leader is guided in his/her actions by internal moral standards

Adapted from:

Neider, L. L, & Schriesheim, C. A. (2011). The authentic leadership inventory (ALI):

    Development and empirical tests. *The Leadership Quarterly, 22*, 1146–1164. doi:

    10.1016/j.leaqua.2011.09.008

Occupational Self-efficacy Scale

Response scale: 1 = strongly disagree   2 = somewhat disagree   3 = Neutral   4 = somewhat agree
5 = strongly agree

1. I can remain calm when facing difficulties in my job because I can rely on my abilities

2. When I am confronted with a problem in my job, I can usually find several solutions

3. Whatever comes my way in my job, I can usually handle it.

4. My past experiences in my job have prepared my well for my occupational future

5. I meet the goals that I set for myself in my job

6. I feel prepared for most of the demands in my job

Adapted from:

Rigotti, T., Schyns, B., & Mohr, G. (2008). A short version of the occupational self-efficacy

scale: Structural and construct validity across five countries. *Journal of Career

Assessment, 16*(2), 238–255.

Interpersonal Trust Scale

Response scale: 1 = strongly disagree   2 = somewhat disagree   3 = Neutral   4 = somewhat agree
5 = strongly agree

Trust in Peers

    1. If I got into difficulties at work I know my colleagues would try and help me out

    2. I can trust the people I work with to lend me a hand if I needed it

    3. Most of my colleagues can be relied upon to do as they say they will do

Trust in Management

    1. Management at my firm is sincere in its attempts to meet the employees' point of view

    2. I feel quite confident that the firm will always try to treat me fairly

    3. Our management would be quite prepared to gain advantage by deceiving the employee (R)

Adapted from:

Cook, J., & Wall, T. (1980). New work attitude measures of trust, organizational commitment

      and personal need non-fulfillment. *Journal of Occupational Psychology*, *53*, 39– 52.

Work Engagement Scale

Response scale: 1 = strongly disagree   2 = somewhat disagree   3 = Neutral   4 = somewhat agree
5 = strongly agree

Vigor

   1. At my work, I feel bursting with energy

   2. At my job, I feel strong and vigorous

   3. When I get up in the morning, I feel like going to work

Dedication

   1. I am enthusiastic about my job

   2. My job inspires me

   3. I am proud of the work that I do

Absorption

   1. I feel happy when I am working intensely

   2. I am immersed in my work

   3. I get carried away when I am working

Adapted from:

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement

   with a short questionnaire: A cross-national study. *Educational and Psychological*

   Measurement, 66(4), 701–716. doi: 10.1177/0013164405282471

Role-based Performance Scale (RBPS)[*]

Response scale: 1 = strongly disagree   2 = somewhat disagree   3 = Neutral   4 = somewhat agree
5 = strongly agree

Job
1. Quantity of work output
2. Quality of work output
3. Accuracy of work
4. Customer service provided (internal & external customers)

Career
1. Making progress in his/her career
2. Seeking out career opportunities
3. Obtaining career goals
4. Developing skills needed in future career

Innovator
1. Coming up with new ideas
2. Working to implement new ideas
3. Finding improved ways to do things
4. Creating better processes and routines

Team
1. Working as part of a team or group
2. Seeking information from others in his/her work group
3. Making sure that his/her work group succeeds
4. Responding to the needs of others in his/her work group

Organization
1. Doing things that help others when it's not part of the job
2. Working for the overall good of my company
3. Doing things that promote my company
4. Helping out so that my company is a good place to be

Adapted from:

Welbourne, T. M., Johnson, D. & Erez, A. (1998). The role-based performance scale: Validity

analysis of a theory-based measure of performance. *Academy of Management Journal,*

41(5), 540–555.

*Use of the RBPS requires written permission from the first author—this study obtained the
permission from the first author via e-mail.

VITA

Hye Kyoung Kim

Candidate for the Degree of

Doctor of Philosophy

Dissertation: THE EFFECT OF AUTHENTIC LEADERSHIP ON EMPLOYEES' ATTITUDES, BEHAVIORS, AND PERFORMANCES IN A KOREAN CONTEXT

Major Field: Education (Occupational Education)

Biographical:

Education:
Completed the requirements for the Doctor of Philosophy in Education (Occupational Education) at Oklahoma State University, Stillwater, Oklahoma in May, 2014.

Completed the requirements for the Doctor of Philosophy in Industrial Management (Marketing) at Kumoh National Institute of Technology, S. Korea in February, 2008.

Completed the requirements for the Master of Education in Education at Kyoungpook National University, S. Korea in February 2003.

Completed the requirements for the Bachelor of Techology in Industrial Management at Kumoh National Institute of Technology, S. Korea in February, 2000.

Experience:
Kumoh National Institute of Technology, Lecturer, 2005-2008.
Kimcheon Uinversity, Lecturer, 2007-2009.
Samsung Elctronics Company Campus, Lecturer, 2007-2009.
Samsung SDS Multi Campus, Tutor, 2008-2009.
Kumoh National Institute of Technology, Research professor, 2008-2009.
Oklahoma State University, Visiting research scholar, 2010-2011. 7.

Professional Memberships:
Academy of Human Resource Development,
The Journal of Digital Policy Management.