

# Authentic Leadership

## - Empirical Tests of Its Effects on Employees and Mediating Mechanisms -

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### 국문초록

본 연구의 주요목적은 진정성 리더십이 종업원의 태도 (직업 자기 효능감과 종업원간 신뢰), 행동 (업무몰입), 그리고 성과에 미치는 영향을 살펴보고, 또한 진정성 리더십과 종업원의 성과간의 관계에서 태도와 행동의 매개효과를 살펴보는 것이다. 이러한 연구목적을 달성하기 위해 본 연구는 SEM 및 회귀분석과 같은 통계적 기법들을 사용하였다. 실증분석 결과, 진정성 리더십은 종업원의 태도와 행동에 정(+)의 영향을 미치며, 종업원의 태도와 행동은 역할 성과에 정(+)의 영향을 미치는 것으로 나타났다. 또한 종업원의 태도가 진정성 리더십과 종업원의 행동 간의 관계에서 부분매개 역할을 하는 것으로 나타났다. 그리고 종업원의 행동은 종업원의 태도와 역할성과 간의 관계에서 부분 매개역할을 하는 것으로 나타났다.

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이러한 연구결과를 토대로 종업원의 태도와 행동을 긍정적으로 변화시킬 수 있는 방안뿐만 아니라 종업원의 역할 성과 향상을 위해서 리더가 조직 내에서 어떤 역할을 해야 하는지에 대해서도 제시하였다.

**주제어** : 진정성 리더십, 직업 자기 효능감, 종업원간 신뢰, 업무몰입, 역할 성과

## I. Introduction

Employees, the major human resource constituting an organization, contribute to organization development and success by fulfilling their duties and work. 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 performance.

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, 2004).

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 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., 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. Authentic leadership, however, 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).

Even though some studies have been conducted to study the critical role of authentic leadership and the difference between authentic leadership and other leadership styles (e.g., Champy, 2009; Clapp-Smith, Vogelgesang, & Avey, 2009), 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.

Interest in leadership in Korea has gradually increased since the late 1990s, and studies have recently begun to focus on authentic leadership (e.g. Kang, 2013; Koo, 2013); however, none of these studies has focused on the linkage of authentic leadership and followers' performance through their attitude and behavior change within a Korean business context.

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). To this end, this study reviewed the literature and developed research hypotheses based on the literature review. The hypotheses were tested using statistical methods.

## II. Theoretical Foundation

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).

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, 2004, 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 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., 2004; George, 2003). 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).

### III. Literature Review and Hypotheses

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

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 is the "beliefs in one's capabilities to organize and execute the courses of action required to

produce given attainments” (Bandura, 1997, p. 3). 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 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 the workplace, leaders’ confidence in employees’ successful performance improvement helps employees to have high self-efficacy (Eden, 2003). Gardner and Schermerhorn (2004) claimed that authentic leaders who truly know themselves are confident of themselves, and exemplify high moral standards to help their followers find their abilities (efficacy).

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 performance. They found that self-efficacy has the strongest effect on work performance among organizational behavior modification, goal setting, and feedback intervention.

Meanwhile, in the workplace, working together

involves interdependence, and interpersonal trust enables employees to work together more effectively (Mayer, Davis, & Schoorman, 1995). That is, employees’ trust in co-workers and leadership promotes employees’ active participation in communication, information sharing, and their work.

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). 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. Authentic leadership can build trust by showing respect for their followers and providing for their concerns (Avolio et al., 2004). Moreover, authentic leaders’ authenticity and integrity based on their internalized values also increase the level of their followers’ interpersonal trust.

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, Connell, & Travaglione, 2004; Tan & Tan, 2000). 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 performance and low work engagement with high intention to leave (Dirks & Ferrin, 2002).

Previous research has provided much evidence that trust is positively related to employees' behaviors in terms of work engagement (e.g., Dirks & Ferrin, 2002; Korsgaard, Brodt, & Whitener, 2002). And other studies have shown that interpersonal trust is an enabling factor that facilitates and promotes performance improvement (e.g., Mayer et al., 1995; McAllister, 1995). As a result, 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).

Kahn (1990) 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." Thus, engaged employees are more likely to be physically, cognitively, and emotionally present when they are participating in their work activities.

The level of employees' work engagement determines the quality of work performance, 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. 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 duties. Leaders' influence on the degree of individuals' engagement in their work was also reported by Kahn (1990).

Meanwhile, authentic leadership could affect work engagement indirectly, through occupational self-efficacy and interpersonal trust. According to social learning theory, leaders' behavior serves as a guide to followers' behavior by role modeling. When leaders are more attractive and credible, the effect of their role modeling becomes more critical on changes of followers' behavior (Bandura, 1997). As discussed earlier, authentic leadership affects followers' behavior (e.g., level of work engagement) because leaders serve as role models through whom followers can build interpersonal trust and expand their knowledge and ability. Avolio et al. (2004) asserted that authentic leadership can improve followers' engagement through employees' trust and positive emotions. Therefore, this study expected employees' self-efficacy and interpersonal trust to act as mediators for the relationship between authentic leadership and work engagement.

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; Schaufeli &

Bakker, 2004). With regard to the mediation role of work engagement in the relationship between employees' attitude (occupational self-efficacy and interpersonal trust) and role-based performance, this study used work engagement as an indicator of intrinsic motivation. Unlike extrinsic motivation, which comes from external factors such as money and compensation, intrinsic motivation comes from inside an individual, such as the sense of satisfaction in completing or even working on a job, and is linked to high quality work performance and job satisfaction. Since work engagement refers to a high level of vigor, dedication, and absorption to work, it can be expected that a high level of work engagement is positively associated with job performance, thus playing a mediating role between employees' attitude variables (occupational self-efficacy and interpersonal trust) and role-based performance.

These aforementioned studies emphasize the important influence of leadership on employee attitudes and behaviors that eventually affect employees' organizational performance. Based on the discussions above, the following hypotheses were developed:

Hypothesis 1: Authentic leadership will positively influence employees' occupational self-efficacy.

Hypothesis 2: Authentic leadership will positively influence employees' interpersonal trust.

Hypothesis 3: Authentic leadership will positively lead to employees' work engagement.

Hypothesis 4: Employees' occupational self-efficacy will positively influence work engagement.

Hypothesis 5: Employees' interpersonal trust will positively influence work engagement.

Hypothesis 6: Employees' occupational self-

efficacy will positively influence role-based performance.

Hypothesis 7: Employees' interpersonal trust will positively influence role-based performance.

Hypothesis 8: Employees' work engagement will positively influence role-based performance.

Hypothesis 9: The influential relationship between authentic leadership and work engagement will be partially mediated by employees' occupational self-efficacy and interpersonal trust.

Hypothesis 10: The influential relationship between employees' occupational self-efficacy and role-based performance, and between employees' interpersonal trust and role-based performance will be partially mediated by work engagement.

## IV. Method

### 1. Data Collection and Research Samples

To obtain sample cases, this study first considered contacting Korean Industrial Complex Corp. (KICOX), which has six institutions across the country. 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. The potential participants of the survey were asked to respond to each of the questions that measured their perceptions of the following items: authentic leadership, occupational self-efficacy, interpersonal trust, work engagement, and role-based performance.

Approximately 2,500 Korean employees were selected as potential survey participants, and 365 participated in the 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.

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).

## 2. Measures

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 the role-based performance questionnaire, whose developers required permission. This study obtained permission from the first author via email. First, to measure authentic leadership, the Authentic Leadership Inventory (ALI), which was recently developed and validated by Neider and Schriesheim (2011), was used. The 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). 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 datasets (McCain and Obama) ranged from .74 to .85, indicating acceptable internal consistency reliabilities ( $\geq .70$ ; Nunnally & Bernstein, 1994). This four-dimensional ALI was empirically validated in various studies in terms of internal consistency reliability (e.g., Cerne et al., 2013). In this study, the ALI scales had an internal consistency reliability of  $\alpha=.93$ . Second, a short version of the occupational self-efficacy scale (Rigotti, Schyns, & Mohr., 2008) was used to measure employees’ occupational self-efficacy. In their study to validate the short version of the occupational self-efficacy scale containing 6 items across five countries (Germany, Sweden, Belgium, Britain, and Spain), Rigotti, Schyns, and Mohr (2008) showed that reliability of the occupational self-efficacy scale was between .85 (Belgium) and .90 (Britain), indicating a high reliability of construct. In this study, the occupational self-efficacy scale showed good reliability ( $\alpha=.87$ ). Third, the Interpersonal Trust at Work Scale (ITWC), which was developed by Cook and Wall (1980), was used to measure interpersonal trust in the workplace. The ITWC is comprised of 6 items and has two dimensions, trust in peers (3 items) and trust in management (3 items). In this study, ITWC had an internal consistency reliability of  $\alpha=.87$  for whole items. Fourth, the Utrecht Work Engagement Scale-9



(UWES-9), developed by Schaufeli, Bakker, and Salanova, (2006), was employed to measure work engagement. The scale is comprised of 9 items with three dimensions: vigor, dedication, and absorption. Schaufeli et al. (2006) showed that Cronbach's alpha of the total 9-item scale exceeded the value of .70, indicating reliability of construct. In this study, UWES-9 had an internal consistency reliability of  $\alpha=.91$ . Finally, to measure role-based performance, this study employed the Role-based Performance Scale (RBPS), developed and validated by Welbourne, Johnson, and Erez (1998). This scale was designed to measure multidimensional aspects of employees' performance 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 were both satisfied. In this study, RBPS had an internal consistency reliability of  $\alpha=.94$ .

### 3. 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 in this kind of study that relies on questionnaires 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: 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.

## V. Result

### 1. Basic Assumption

Correlation analysis indicated acceptable inter-correlations among the latent variables at the  $p = 0.01$  level, as shown in Table 1. However, the higher level of correlation coefficients among the latent variables could result in multicollinearity issues, which could 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,

〈Table 1〉 Descriptive Analysis, Inter-item Correlations, and Internal Consistency Estimates

Variables	M	SD	1	2	3	4	5
1. Authentic leadership	3.50	.59	1				
2. Occupational self-efficacy	3.47	.61	.50**	1			
3. Interpersonal trust	3.51	.60	.55**	.53**	1		
4. Work engagement	3.52	.56	.58**	.63**	.55**	1	
5. Role-based performance	3.56	.52	.59**	.67**	.66**	.68**	1

Notes: \*\*Correlation is significant at the .01 level.

tolerance should be greater than .20 (or .10) (O'Brien, 2007) and VIF should be less than 4 (Miles & Shevlin, 2001). 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 a problem in this study.

## 2. Measurement Model Assessment

The overall confirmatory factor analysis (CFA) for the whole hypothesized model was conducted. This study considered a variety of fit indices 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  $\chi^2/df$  ratio be considered to assess model fit (Bentler & Bonnet, 1980).

The  $\chi^2/df$  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), NFI (.93), GFI (.89), and AGFI (.86) were indicative of a good fit to the data.

## 3. Hypotheses Testings

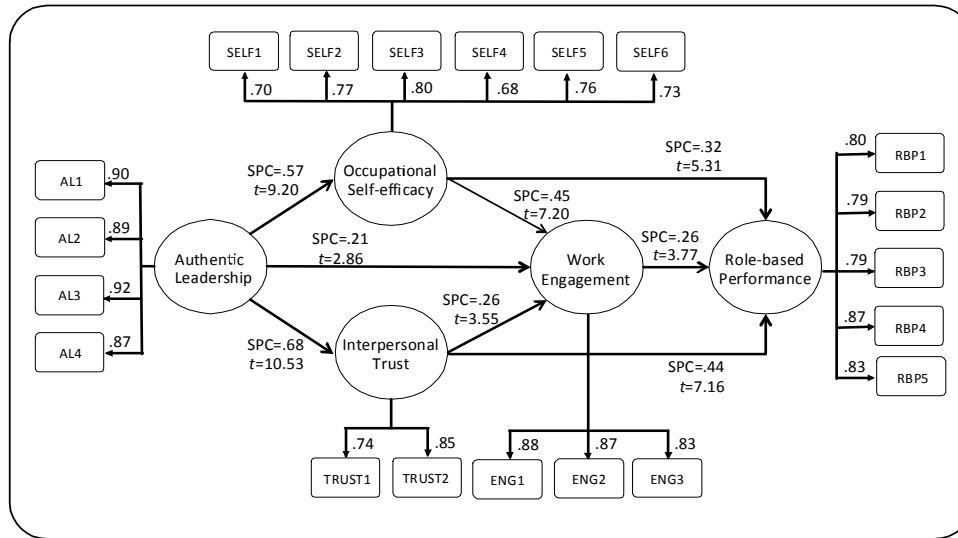
The structural relationships among the five variables were tested by structural equation modeling (SEM) using the Lisrel 8.8 statistical package (Jöreskog & Sörbom, 2001). SEM allows researchers to examine measurement errors and both direct and indirect structural relationships among variables. Various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

As shown in Table 2, the hypothesized model provided an overall adequate fit to the data except for the chi-square statistic [ $\chi^2$  (162) =

〈Table 2〉 Model Fit Indices for Hypothesized Model

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

Note: \*p < .001



(Figure 1) SEM Results with SPC Estimates

429.66,  $p = <.001$ ,  $\chi^2/df = 2.65$ , RMSEA = .07, SRMR = .06, RMR = .06, GFI = .89, AGFI = .85, CFI = .95, NFI = .92].

As depicted in Figure 1, 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 a 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 were greater than .50 (Hair, Black, Babin, Anderson, & Tatham, 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: When t-value is higher than |1.96| (Kline, 2011), SPC estimates are statistically significant.

SPCs with t-value for each influential relationship are depicted near the single arrow lines in Figure 1. The results showed that all hypothesized structural relationships among the five latent variables were statistically supported. Authentic leadership had a positive and statistically significant influence on employees' occupational self-efficacy (SPC = .57,  $t = 9.20$ ; H1), employees' interpersonal trust (SPC = .68,  $t = 10.53$ ; H2), and employees' work engagement (SPC = .26,  $t = 2.86$ ; H3). Employees' occupational self-efficacy positively influenced work engagement (SPC =

.45,  $t = 7.20$ ; H4) and role-based performance (SPC = .32,  $t = 5.31$ ; H6), and employees' interpersonal trust positively influenced work engagement (SPC = .26,  $t = 3.55$ ; H5) and role-based performance (SPC = .44,  $t = 7.16$ ; H7). Also, employees' work engagement positively influenced role-based performance (SPC = .26,  $t = 3.77$ ; H8).

Using SPSS, this study conducted a series of three regression proposed by Baron and Kenny (1986) to test the mediation effects of occupational self-efficacy, interpersonal trust, and work engagement. Baron and Kenny (1986) defined the following three conditions necessary for full mediation:

1. The independent variable significantly predicts the mediator.
2. The independent variable significantly predicts the dependent variable.
3. The relationship between the independent and dependent variables becomes non-significant when the mediator is entered into the model.

However, in the third conditions, if the relationship between the independent and dependent variables is still significant and the direct effect of the independent variable on the dependent

variable become less than the direct effect provided in the second condition, there is a significant partial effect of the mediator (Baron & Kenny, 1986).

With regard to H9 and H10, this study conducted a series of three regression and the results are shown in Table 3 and Table 4. As shown in Table 3, the first two conditions for the mediation effect of occupational self-efficacy and interpersonal trust were met. And in the last model, when occupational self-efficacy and interpersonal trust were entered in Model 3, the relationships between authentic leadership and work engagement was still significant, but both beta values became less than the values provided in model 2. Thus, the influential relationship between authentic leadership and work engagement was partially mediated by employees' occupational self-efficacy and interpersonal trust, supporting H9.

<Table 4> shows the results of H10 testing. The first two conditions for mediation effect of work engagement were met. And in the last model, when work engagement was entered in Model 3, the relationship between occupational self-efficacy and role-based performance and the

<Table 3> Mediation of the Effect of Authentic Leadership on Work Engagement through Occupational Self-efficacy and Interpersonal Trust

AL-SE-WE						AL-IT-WE					
Model	IV	DV	$\beta$	$R^2$	F	Model	IV	DV	$\beta$	$R^2$	F
1	AL	SE	.52**	.268	134.5**	1	AL	IT	.56**	.315	168.6**
2	AL	WE	.58**	.335	184.6**	2	AL	WE	.58**	.335	184.6**
3	AL	WE	.36**	.465	159.0**	3	AL	WE	.39**	.409	126.7**
	SE	WE	.42**				IT	WE	.33**		

Note: \*\*  $p < .001$

AL, SE, and WE stand for authentic leadership, occupational self-efficacy, and work engagement respectively.

(Table 4) Mediation of the Effect of Occupational Self-efficacy and Interpersonal Trust on Role-based Performance through Work Engagement

SE-WE-RBP						IT-WE-RBPS					
Model	IV	DV	$\beta$	R <sup>2</sup>	F	Model	IV	DV	$\beta$	R <sup>2</sup>	F
1	SE	WE	.61**	.371	215.7**	1	IT	WE	.55**	.304	159.8**
2	SE	RBP	.68**	.460	310.6**	2	IT	RBP	.68**	.461	312.8**
3	SE	RBP	.41**	.577	249.6**	3	IT	RBP	.43**	.600	274.0**
	WE	RBP	.43**				WE	RBP	.45**		

Note: \*\* p<.001

SE, WE, and RBP stand for occupational self-efficacy, work engagement, and role-based performance respectively.

relationship between interpersonal trust and role-based performance were still significant, but both beta values became less than the values provided in the Model 2. Thus, the influential relationship between employees' occupational self-efficacy and role-based performance, and between employees' interpersonal trust and role-based performance were partially mediated by work engagement, supporting H10.

This study conducted the Sobel test to provide statistical significance for partial mediation effects of occupational self-efficacy, interpersonal trust, and work engagement. The results showed that z values for occupational self-efficacy and interpersonal trust were 7.29 (p<.001) and 5.99 (p<.001), respectively, which satisfy the recommended value of 1.96. Therefore, the statistical significance of the indirect effect of authentic leadership on work engagement through occupational self-efficacy, and the indirect effect of authentic leadership on work engagement through interpersonal trust were supported. Moreover, the results of the Sobel test showed that the association between occupational self-efficacy and role-based performance

(z = 8.31, p<.001), and the association between interpersonal trust and role-based performance (z = 8.39, p <.001) were significantly mediated by work engagement.

## VI. Conclusions

### 1. Discussions and Implications

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, this study performed a series of three regression to test the mediation effect, and the results demonstrated that occupational self-efficacy and interpersonal trust partially mediate the effect of authentic leadership on work engagement. It was also shown that work

engagement partially 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. Based on the findings of this study, implications and limitations are addressed below.

The 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, 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 skills and ability could be learned and taught even though such ability can also be inherited (Avolio & Luthans, 2006; Doh, 2003). 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). Furthermore, 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 should help their leaders develop authentic leadership by supporting them. For example, organizations can help by assisting them to buy books on the subjects, providing executive coaching programs, and encouraging them to participate in certificate programs. Also, organizations need to develop practical guides that can help current and potential leaders better understand authentic leadership. 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 and indirectly 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 (Dirks & Ferrin, 2002). This fact clearly indicates the need for more attention from leaders and organizations to ways to increase and promote their employees'

positive attitude in an organization.

Leaders should 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 that 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 performance (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 employees have made for overall organizational goals by providing a supportive organizational environment. This helps employees to have confidence in themselves and to increase their own transparency, resulting in increased work engagement.

## 2. 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 and measurement of perception of leadership. This study considered role-based performance, which measured employees' multi-functional roles within the organization. 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 a high possibility for bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). To overcome this potential issue, future studies need to consider a more objective measurement of employees' performance by their leaders or using objective performance results such as quantitative outcomes. Moreover, more accurate measurement of leaders' leadership style could be accomplished by measuring the leaders' self-perception. However, in their empirical study to explore the congruence of leader self-perceptions and follower perceptions of

authentic leadership, Cerne et al. (2013) showed that both perceptions of authentic leadership predict employees' job satisfaction, supporting the congruence of leader self-perception and follower perception of leadership.

This study is limited with the possible problem of common method bias, which could be caused by using the same method to measure each variable and which can inflate relationships among variables. To minimize the problem in this study, this study separated questions for every variable into different sections with explanations about what the questions are intended to measure (Seibert, Kraimer, & Liden, 2001).

As with all studies, other variables can be considered as outcome variables such as creativity, knowledge sharing, job satisfaction, organizational commitment, financial return, and decreased turnover intention. 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, thus targeting a particular group of people rather than a diverse population. Also, with regard to demographic characteristics, this study also failed to include various factors, such as unit of business, that could affect the perception

of attitudes and behavior. 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.

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<Abstract>

## Authentic Leadership

– Empirical Tests of Its Effects on Employees and Mediating Mechanisms –

*Kim, Hye Kyoung*

The main purposes of this study were to investigate the effect of authentic leadership and to describe its potential linkage to occupational self-efficacy, interpersonal trust, work engagement, and role-based performance. The unit of analysis was at the level of employees. To achieve research goals, this study employed several statistical techniques such as a series of three regression proposed by Baron & Kenny (1986) 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 survey. After screening and deleting missing data and an outlier, a total of 336 cases were included as the final research sample.

Through comprehensive literature review this study found that there could be influential and positive relationships among the five variables previously stated. The first finding was that authentic leadership had a positive and statistically significant influence on employees' attitudes in terms of their occupational self-efficacy and interpersonal trust, and on employees' behavior in terms of work engagement. Another finding was that employees' attitudes and organizational behavior positively influenced role-based performance. Moreover, the results demonstrated that occupational self-efficacy and interpersonal trust partially mediated the effect of authentic leadership on work engagement. Work engagement also partially 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.

**Keywords** : authentic leadership, interpersonal trust, occupational self-efficacy, work engagement, and role-based performance