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Alex Koohang, Joanna Paliszkievicz, Jerzy Goluchowski,

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The impact of leadership on trust, knowledge management, and organizational performance

The impact of leadership

A research model

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Alex Koohang

Middle Georgia State University, Macon, Georgia, USA

Joanna Paliszkievicz

Department of Economics, Warsaw University of Life Sciences,

Warsaw, Poland, and

Jerzy Goluchowski

University of Economics, Katowice, Poland

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Abstract

Purpose – The purpose of this paper is to build a research model that examines the impact of leadership on trust, knowledge management and organizational performance.

Design/methodology/approach – An instrument containing six constructs (leadership: leading organization; leadership: leading people; leadership: leading self, trust, knowledge management and organizational performance) was designed and administered to subjects from all levels of management in various organizations in nine regions of the USA. Collected data were analyzed using partial least squares path modeling to test the hypotheses.

Findings – The study's findings revealed positive and significant linear connection among leadership (leading organization, leading people and leading self), trust, knowledge management and organizational performance.

Practical implications – The findings imply that effective leadership (leading organization, leading people and leading self) contributes to elevated trust among people, promotes the successful implementation of knowledge management processes, and in turn enhances organizational performance. Therefore, leadership training and development must be a top strategic priority for any organization.

Originality/value – This study enriches the literature by demonstrating that effective leadership stands as the bedrock of the elevated trust, the successful knowledge management processes and the enhanced organizational performance.

Keywords Knowledge management, Leadership, Organizational performance, Trust

Paper type Research paper

1. Introduction

A large body of research has focused on the impact of trust on knowledge management and organizational performance (e.g. Politis, 2003; Lee and Choi, 2003; Choi *et al.*, 2008; Paliszkievicz and Koohang, 2013; Paliszkievicz *et al.*, 2014). These studies have documented a positive relationship among the three variables of trust, knowledge management and organizational performance. Paliszkievicz *et al.* (2015) postulated that within organizations, effective leadership results in increased trust that brings about sound knowledge management and leads to successful organizational performance. There are many studies that have researched the positive impact of leadership on performance, teamwork and/or trust (e.g. Wang *et al.*, 2014; McColl-Kennedy and Anderson, 2002; Lee *et al.*, 2011; Schaubroeck *et al.*, 2011). Additionally, Srivastava *et al.* (2006) investigated the roles of knowledge sharing and team efficacy in relation to empowering leadership and team performance. The authors concluded that empowering leadership was positively related to knowledge sharing and team efficacy that subsequently impacted positive team performance. The motivation to undertake the present study emerges from the need for



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research to include the element of leadership when studying trust, knowledge management and organizational performance. Our aim is to demonstrate whether effective leadership stands as the foundation of the elevated trust, the successful knowledge management processes and the enhanced organizational performance. Therefore, the primary goal of this study is to build a research model proposing that within organizations, effective leadership elevates trust among employees. Subsequently, the elevated trust among employees contributes to the successful implementation of the knowledge management processes. Accordingly, the successful knowledge management processes enhance organizational performance. Consistent with its goal, this paper is organized as follows. First, a review of the literature covers leadership and its characteristics, trust and its vital role among people within organizations, knowledge management definitions and its processes, and organizational performance and its indicators. Next, the research model is presented. The model builds six constructs or latent variables (LVs). Each LV contains several associated characteristics or indicators with their operational definitions. These are leadership: leading organization, leadership: leading people, leadership: leading self, trust, knowledge management and organizational performance. Afterward, we state the study's hypotheses based on the research model. The methodology follows the study's hypotheses and includes an explanation of the instrument, the population sample, study procedure and data analysis techniques used to test the hypotheses. Finally, results, discussion of findings and implications for future research complete the paper.

2. Review of literature

2.1 Leadership

Effective leadership has been the topic of research and scientific discussion for many years (Burns, 1978; Bennis and Nanus, 1985, Bryman, 2007; Hofmeyer *et al.* 2015). Leadership is needed at all levels of the organization. Bennis and Nanus (1985), Burns (1978) and Jong and Hartog (2007) believed that leadership involves relationship building between the leader and the follower to reach desired results. Gill *et al.* (2006) believed that leadership skills such as motivating, encouraging and recognizing people yield productive results. Leadership is the ability to influence and motivate people within organizations (Dorfman and House, 2004; House *et al.*, 1999; Javidan and Carl, 2005). Effective leadership influences job satisfaction, positive relationships, trustful environment, sound knowledge management and improved organizational performance (Avolio *et al.*, 2004, Dasborough, 2006, Mastrangelo *et al.*, 2014; Paliszkievicz *et al.*, 2015).

According to Mastrangelo *et al.* (2004), personal leadership is described as the personal attributes of leaders such as expertise, trust, caring, sharing and ethics. Kouzes and Posner (1993) defined expertise as the perceived ability and competence of leaders. Effective leaders delegate authority and share information. They lead ethically and with principle (Mayer *et al.*, 2009; Schaubroeck *et al.*, 2012).

Leaders are considered authentic when they engage in behaviors such as self-awareness, relational transparency, balanced processing information and internalized moral perspective (Gardner *et al.*, 2005; Kernis, 2003; Walumbwa *et al.*, 2008). Self-awareness means the process of understanding personality, behaviors, habits, emotional reactions, motivations and how they may impact others. Authentic leaders are aware of their strengths and weaknesses. Their self-esteem helps them to be truthful in relationships and to achieve relational transparency. They are less likely to look for self-enhancing information thus, process information in a coordinated and balanced manner. They use self-control through internalized standards (Kumar, 2014). The leaders who are perceived as authentic, tend to show increased commitment, satisfaction and superior performance (Walumbwa *et al.*, 2008).

2.2 Trust

Sabel (1993) defined trust as the confidence between two parties with the understanding that no party will exploit the other's vulnerability. Trust creates an opportunity to deal with the complexity of the world (Luhmann, 1979). It represents how much risk we are willing to accept in exchange for benefits from interactions with others. Trust is also viewed as the propensity of an individual who can depend on another person to complete a task without being monitored (Mayer *et al.*, 1995).

Psychologists usually describe trust as a personal trait (e.g. Rotter, 1967), sociologists recognize trust as a social structure (e.g. Lewis and Weigert, 1985). Economists describe it as a rational choice mechanism (e.g. Williamson, 1993). In the context of management, Paliszkievicz (2013) asserted that trust is the prospect that a person acts favorably toward the trusting party, behaving or responding in a predictable and mutually suitable manner.

The focus of trust in the literature has been on conceptualization of trust (e.g. Mayer *et al.*, 1995), building trust (e.g. McKnight *et al.*, 1998), rebuilding trust at interpersonal level (e.g. Kramer and Lewicki, 2010) and organizational trust (e.g. Sankowska and Paliszkievicz, 2016).

Trust has been viewed as an imperative element for organizational success (Meyerson *et al.*, 2006). Gilbert and Tang (1998, p. 322) described trust in organizations as "a feeling of confidence and support in an employer [...] organizational trust refers to employee faith in corporate goal attainment and organizational leaders, and to the belief that ultimately, organizational action will prove beneficial for employees." Bromiley and Cummings (1996) believed that increased trust among employees enhances performance and contributes to organizational profitability.

2.3 Knowledge management

Knowledge is an important asset that provides organizations the ability to embrace, learn and utilize organizational resources (Wong, 2005; Argote and Miron-Spektor, 2011). Within organizations, knowledge management places a critical role in efficiency, competitiveness and productivity (Nonaka, 1991; Kogut and Zander, 1992).

Holsapple and Joshi (2004, p. 596) defined knowledge management as "[...] an entity's systematic and deliberate efforts to expand, cultivate and apply available knowledge in ways that add value to the entity, in the sense of positive results in accomplishing its objectives or fulfilling its purpose." Omotayo (2015) viewed knowledge management as a process where many activities are formed to carry out essential elements of an organization's knowledge management strategy and operations. The aim of knowledge management is to encourage employees to share knowledge (Martinez, 1998).

Horwitch and Armacost (2002) asserted that knowledge management is the creation, extraction, transformation and storage of the correct knowledge and information. It is to design better policy, modify the action and deliver results. Chong and Choi (2005) described knowledge management as the systematic management of organizational knowledge, which involves the process of creating, gathering, organizing, storing, diffusing, using and exploiting of knowledge for creating business value and gaining the competitive advantage. Davenport (1994) believed that knowledge management process includes capturing, distributing and using knowledge. According to Lee *et al.* (2005), knowledge management activities include creation, accumulation, sharing, utilization and internalization of knowledge.

2.4 Organizational performance

Organizational performance is the measure of an organization's progress and development. It shows how well an organization is accomplishing its goals and objectives. Organizational performance is an analysis of a company's performance as compared to goals and objectives (Otley, 1999).

The indicators of organizational performance are well documented in the literature, i.e. financial (Parmenter, 2015), employee and customer satisfaction (Leong *et al.*, 1990), learning and growth (Parmenter, 2015), information technology (Melville *et al.*, 2004), human resources (Becker and Gerhart, 1996), quality (Gosselin, 2005), reliability (White, 1996), communities of practice (Lesser and Storck, 2001), quality of work life (Rolstadås, 1998) and innovation (Rolstadås, 1998).

Sink and Tuttle (1989) outlines seven indicators that define organizational performance. They are effectiveness, efficiency, quality and productivity, the quality of work life, innovation and profitability. Effectiveness is the ability to produce the desired result; efficiency is the ability to accomplish a job/task with a minimum expenditure of time and effort. Quality refers to the quality of a product as a measure of excellence and state of being free from defects, deficiencies and significant variations. Productivity is the ability to resourcefully generate, create, enhance and/or produce goods and services. The quality of work life means that the opportunity that is given to employees to improve their personal lives through their work environment and experiences can contribute to an organization's competitive advantage. Innovation is the process of transforming an idea/invention into a product or service that creates value is vital to an organization's survival, and profitability is the ability to do more to gain the competitive advantage (c.f. Paliszkievicz *et al.*, 2015).

3. Purpose of the study and hypotheses development

The purpose of this study was to build a research model that examines the impact of leadership (leading organization, leading people and leading self) on trust, knowledge management and organizational performance. Figure 1 shows the research model. The model includes six constructs or LVs. These LVs are LO = leadership (leading organization), LP = leadership (leading people), LS = leadership (leading self), T = trust, KM = knowledge management and OP = organizational performance.

Effective leaders bring out engagement and enthusiasm in people by showing a compelling vision and increasing confidence in achieving goals (Conger and Kanungo, 1987, 1998). In a study conducted by Paliszkievicz *et al.* (2015), the authors delineated 15 characteristics that define effective leadership chosen from the literature. These characteristics are leading organization change; leading innovation; motivating employees; being grounded in values/principles; leading and resolving conflict; listening; empowering; interpersonal communication; influencing and being flexible; being self-aware; seeking feedback; managing time; learning; understanding individual differences/diversity and inclusion; and building/sustaining relationship among people. For the present study,

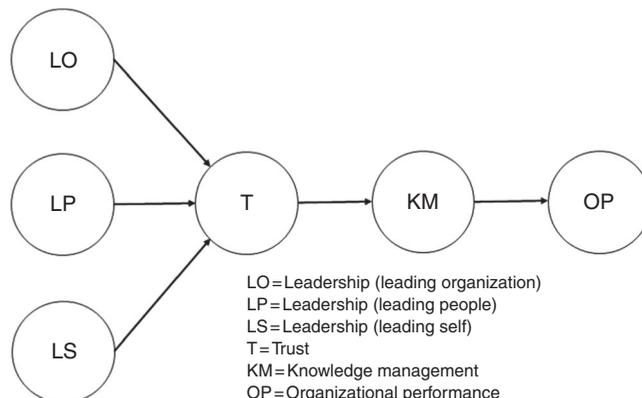


Figure 1.
The research model

we chose the 15 leadership characteristics/indicators outlined by Paliszkievicz *et al.* (2015) and defined three separate leadership constructs: leading organization (LO), leading people (LP) and leading self (LS). The leading organization (LO) construct encompasses the characteristics that a leader possesses to ensure the advancement of an organization. These characteristics are change, innovation, influence and diversity/inclusion. The leading people (LP) construct includes the characteristics that a leader demonstrates to improve productivity among people. These characteristics are motivation, listening, empowerment, interpersonal communication, building relationships and conflict resolution. The Leading self (LS) construct includes the characteristics that enrich a leader's insight, self-development and self-improvement for making sound decisions. These characteristics are being grounded in values and principles; being constantly self-aware of situations; seeking and accepting feedback for self-improvement; efficiently managing time; and willing and open to continuously learn for self-development.

Effective leadership empowers and cultivates trust in people. As a result, people are motivated to assume more responsibilities (Yukl, 2002). Trust enables cooperative, altruistic and extra-role behavior (Fukuyama, 1995). Trust fosters a high level of information exchange (Li *et al.*, 2010; Malhotra and Murnighan, 2002; Casimir *et al.*, 2012). Trust is an essential component of successful and efficient teamwork (Moreland and Levine, 2002; Salas *et al.*, 2008; Berry, 2011; Driskell and Salas, 1992; Erdem and Ozen, 2003; Gibson and Cohen, 2003). For the present study, we adopted and modified the ten characteristics of trust from Paliszkievicz *et al.* (2015) and placed them in the trust (T) construct. They are ability/competence, benevolence, communication, congruency, consistency, dependability, integrity, openness, reliability and transparency.

Gardner (1989) asserted that effective leadership develops trust among people. Paliszkievicz *et al.* (2015) believed that effective leadership is a prerequisite for the creation of trust within organizations. Therefore, we theorize that effective leadership (leading organization, leading people and leading self) can positively influence the elevated trust among employees within organizations and develop the following three hypotheses:

- H1. The effective leadership (leading organization) positively and significantly contributes to the elevated trust.
- H2. The effective leadership (leading people) positively and significantly contributes to the elevated trust.
- H3. The effective leadership (leading self) positively and significantly contributes to the elevated trust.

Trust is particularly vital in the process of knowledge management (Politis, 2003; Sankowska, 2013; Zuo and Panda, 2013; Berraies *et al.*, 2015). Holste and Fields (2010) believed that without trust, people would not be able to share and manage knowledge. For the present study, we adopted the five characteristics of knowledge management advanced by Paliszkievicz (2007) and placed them in the knowledge management (KM) construct. They are localization; usage of knowledge; knowledge acquisition and development; knowledge codification; and knowledge transfer.

Kuo (2013) asserted that trust is the basis of generating commitment among members of an organization for managing knowledge. Therefore, we theorize that the elevated trust based on effective leadership (leading organization, leading people and leading self) can positively contribute to the successful implementation of knowledge management processes within organizations. We then develop the following hypothesis:

- H4. The elevated trust within organizations (as a result of effective leadership) positively and significantly contributes to the successful implementation of knowledge management processes.

Paliszkievicz *et al.* (2015) stated that the knowledge management processes can contribute to the organizational performance. Organizational performance is the measure of an organization's growth (Simonin, 1997). For the present study, we selected the seven characteristics of organizational performance advanced by Sink and Tuttle (1989) and placed them in the organizational performance (OP) construct. These characteristics are effectiveness, efficiency, productivity, quality, quality of work life, innovation and profitability.

Zack *et al.* (2009) found that knowledge management is directly related to organizational performance, and Simonin (1997) suggested that knowledge management improves organizational performance. Therefore, we theorize that the successful knowledge management processes (as a result of elevated trust entrenched from effective leadership) can enhance organizational performance within organizations. We then develop the following hypothesis:

- H5. The successful knowledge management processes (as a result of elevated trust that is rooted in effective leadership) significantly and positively contribute to the organizational performance.

4. Methodology

4.1 Survey Instrument

The survey instrument was first developed by Paliszkievicz *et al.* (2015). Based on the research model, we refined the instrument to include six constructs. The constructs are leadership: leading organization, leadership: leading people, leadership: leading self, trust, knowledge management and organizational performance. The items of each construct are as follows.

Leadership: leading organization construct:

- (1) Change: a leader must lead change within an organization.
- (2) Innovation: it is necessary for a leader to lead innovation within an organization.
- (3) Influence: the ability of a leader to positively shape the organization, people and self by setting a vision, translating it into realistic business strategies and expecting outcomes.
- (4) Diversity and Inclusion: a leader values and respects diversity and inclusion within an organization. Diversity brings about innovation. Inclusion ensures the right conditions for all, working together to enhance organizational effectiveness.

Leadership: leading people construct:

- (1) Motivation: a leader must motivate and bring out the best in people.
- (2) listening: a leader must empower others to do their jobs;
- (3) empowerment: a leader must be a good listener and put people at ease;
- (4) interpersonal communication: a leader's interpersonal communication is necessary to bring people together to work effectively;
- (5) building relationship: a leader must build and maintain relationships with subordinates; and
- (6) conflict: a leader should not be afraid of conflict (a leader's attitude should be that conflict is "good" and should not be avoided).

Leadership: leading self-construct:

- (1) Values/principles: in making decisions, a leader must be grounded in values and principles;

- (2) self-awareness: a leader must be self-aware (knows his or her strengths and weaknesses and is willing to improve);
- (3) feedback: a leader must seek and use feedback from others;
- (4) managing time: a leader must know how to manage time efficiently; and
- (5) learning: a leader must seek the opportunity to learn continuously.

Trust construct:

- (1) Competence: a leader's ability and competence lead to improved trust among people;
- (2) benevolence: compassion and empathy demonstrated by a leader, build trust among people;
- (3) communication: a leader's sound and constant communication (verbal, non-verbal, written and visual) improve trust among people;
- (4) congruency: the attitude of partnership and association demonstrated by a leader build trust among people;
- (5) consistency: consistency in doing things by a leader brings about trust among people;
- (6) dependability: exhibiting dependability by a leader develops and creates trust among people;
- (7) integrity: a leader's honesty and principle contribute to elevated trust among people;
- (8) openness: acceptance and broad-mindedness demonstrated by a leader contribute to increased trust among people;
- (9) reliability: exhibiting reliability by a leader develops and creates trust among people; and
- (10) transparency: a leader's transparency is central to building trust among people.

Knowledge management construct:

- (1) Localization: In any organization, knowledge must be localized to include all activities that indicate where knowledge exists;
- (2) usage of knowledge: successful usage of knowledge depends on creating a set of roles and skills in organizations that encourage efficient use of knowledge;
- (3) knowledge acquisition and development: the culture of embracing the knowledge that is acquired and developed is important in gaining the competitive advantage;
- (4) knowledge codification: organizations must be able to successfully and continuously re-use the knowledge they capture; and
- (5) knowledge transfer: transmission of knowledge and use of the transmitted knowledge in any organization is vital to gaining the competitive advantage.

Organizational performance construct:

- (1) Effectiveness: the ability to produce the desired result should be an important part of any organization;
- (2) efficiency: the ability to accomplish a job/task with a minimum expenditure of time and effort should be central to any organizations;

- (3) quality: the quality of a product (as a measure of excellence and state of being free from defects, deficiencies and significant variations) brings about the competitive advantage to any organization;
- (4) productivity: the ability to resourcefully generate, create, enhance and/or produce goods and services is vital;
- (5) the quality of work life: the opportunity that is given to employees to improve their personal lives through their work environment and experiences can contribute to an organization's competitive advantage;
- (6) innovation: the process of transforming an idea/invention into a product or service that creates value is vital to an organization's survival; and
- (7) profitability: a financial profit or gain gives an organization the ability to do more to gain the competitive advantage.

The survey instrument used the following measuring scale: 7 = Completely Agree, 6 = Mostly Agree, 5 = Somewhat Agree, 4 = Neither Agree nor Disagree, 3 = Somewhat Disagree, 2 = Mostly Disagree, 1 = Completely Disagree.

4.2 Subjects and procedure

The survey instrument was administered electronically via a professional internet survey site to 2,161 subjects from all levels of management in various organizations in nine regions of the USA. They were from public, private and not-for-profit organizations. Of the 2,161 subjects, 223 completed the survey. Six of the 223 surveys were eliminated because of the missing data yielding a final population sample of 217.

The subjects were male (47.5 percent, $n = 103$) and female (52.5 percent, $n = 114$). The subjects' highest degree earned were bachelor's (63.1 percent, $n = 137$), master's (26.7 percent, $n = 58$) and doctorate (10.1 percent, $n = 22$). Their job function included senior/top level management (24.9 percent, $n = 54$), middle level management (44.7 percent, $n = 97$) and supervisory/lower level management (30.4 percent, $n = 66$). Subjects were told that their participation in the study was voluntary. All subjects were over the age of 18. The subjects were assured confidentiality and anonymity.

4.3 Data analysis

Partial least squares (PLS) path modeling, a variance-based structural equation modeling (SEM) was used to analyze the data. The PLS path modeling performs three essential analyses before testing for hypotheses (Ringle *et al.*, 2005). These analyses are establishing convergence validity, establishing discriminant validity and examining the structural model.

To establish convergent validity, the following must be met: indicators' loadings for each LV should be significant and greater than 0.70; the average variance extracted (AVE) for each LV should be greater than 0.50; and the composite reliability (CR) for each LV should be greater than 0.80.

To establish the discriminant validity, the square root of AVE of a LV should be greater than its correlations with all other LVs.

Once the convergence validity and discriminant validity are established, the structural model is used to evaluate the R^2 values of the dependent variable. The R^2 values determine the predictiveness of the research model. Falk and Miller (1992) assert that for any meaningful interpretation of data, R^2 values must be at the minimum 10 percent.

Finally, the hypotheses are tested for acceptance or rejection. According to Chin (1998), the strength of the contribution of the independent variable on the dependent variable is determined by the standardized path coefficients. Consequently, the t -value determines the acceptance or rejection of the hypotheses.

5. Results

5.1 Establishing convergence validity

To establish the convergence validity, we look at the results of each LV for the indicators' loadings, the AVE and the CR. First, all indicators' loadings for each LV must be greater than 0.70. The "conflict" indicator from the LV_2: (leadership – leading people) the "managing time" indicator from the LV_3: (leadership – leading self) and the "transparency" indicator from the LV_4: (trust) were removed from the model because the loadings of these indicators were less than 0.70. After removal of these three indicators from the model, the indicators' loadings for each LV yielded values greater than 0.70. Second, the AVE for each LV must be greater than 0.50. The results of AVEs for all six LVs yielded values greater than 0.50. Third, the CR index for each LV was greater than 0.80. These results successfully established the convergence validity of the research model (see Table I).

5.2 Establishing discriminant validity

To establish the discriminant validity, the results of the square root of AVE of each LV must be greater than its correlations with all other LVs. As can be seen in Table II, the sufficient discriminant validity was established for the research model.

5.3 The structural model

The R^2 values for the Trust (T), knowledge management (KM) and organizational performance (OP) were 0.74, 0.48 and 0.48, respectively. Therefore; the model's R^2 values have established a substantial and meaningful interpretation of the data.

5.4 Accepting/rejecting the hypotheses

Table III shows the standardized path coefficients results and the t -value for determining the acceptance or rejection of the study's hypotheses.

H1 that stated "the effective leadership (leading organization) positively and significantly contributes to the elevated trust" was accepted ($\beta = 0.19$, $t = 2.22$, $p = < 0.01$).

H2 that stated "the effective leadership (leading people) positively and significantly contributes to the elevated trust" was accepted ($\beta = 0.34$, $t = 2.38$, $p = < 0.01$). *H3* that stated "the effective leadership (leading self) positively and significantly contributes to the elevated trust" was accepted ($\beta = 0.40$, $t = 2.70$, $p = < 0.01$). *H4* that stated "the elevated trust within organizations (as a result of effective leadership) positively and significantly contributes to the successful implementation of knowledge management processes" was accepted ($\beta = 0.69$, $t = 10.35$, $p = < 0.001$). *H5* that stated "the successful knowledge management processes (as a result of elevated trust that is rooted in effective leadership) significantly and positively contribute to the organizational performance" was accepted ($\beta = 0.68$, $t = 9.38$, $p = < 0.001$).

6. Discussion

This study was undertaken to build a research model that included six constructs or LVs. The constructs were leadership (leading organization, leading people and leading self), trust, knowledge management and organizational performance. Through path analysis, the study endeavored to test five hypotheses. *H1-H3* included three leadership constructs and the trust construct, stating that the effective leadership, i.e. leading organization, leading people and leading self (each separately) positively and significantly contributes to the elevated trust within organizations. *H4* stated that the elevated trust within organizations positively and significantly contributes to the successful knowledge management processes. *H5* stated that the successful knowledge management processes positively and significantly contribute to the enhanced organizational performance. The five hypotheses were tested using PLS path modeling technique.

IMDS 117,3		Loadings	AVE	Composite reliability	Cronbach's α
530	<i>LO (leadership – leading organization)</i>				
	Change	0.71	0.55	0.83	0.73
	Innovation	0.75			
	Influence/flexibility	0.77			
	Diversity and inclusion	0.71			
	<i>LP (leadership – leading people)</i>				
	Motivation	0.74	0.62	0.89	0.85
	Empowerment	0.80			
	Listening	0.80			
	Interpersonal communication	0.81			
	Build relationship	0.79			
	<i>LS (leadership – leading self)</i>				
	Values/principles	0.84	0.68	0.89	0.84
	Self-awareness	0.85			
	Feedback	0.85			
	Learning	0.74			
	<i>T (trust management)</i>				
	Competence	0.81	0.69	0.95	0.94
	Benevolence	0.82			
	Communication	0.81			
	Congruency	0.85			
	Consistency	0.79			
	Dependability	0.85			
	Integrity	0.83			
	Openness	0.83			
	Reliability	0.88			
	<i>KM (knowledge management)</i>				
	Localization	0.71	0.70	0.92	0.89
	Usage of knowledge	0.87			
	Knowledge acquisition and development	0.87			
	Knowledge codification	0.85			
	Knowledge transfer	0.88			
<i>OP (organizational performance)</i>					
Effectiveness	0.72	0.58	0.91	0.88	
Efficiency	0.86				
Productivity	0.71				
Quality	0.82				
Quality of work life	0.73				
Innovation	0.78				
Profitability	0.71				

Table I.
Reliability and
validity measures of
the research model

	LV_1	LV_2	LV_3	LV_4	LV_5	LV_6
LO	<i>0.74</i>					
LP	0.72	<i>0.79</i>				
LS	0.78	0.81	<i>0.82</i>			
T	0.74	0.80	0.82	<i>0.83</i>		
KM	0.66	0.62	0.68	0.69	<i>0.84</i>	
OP	0.59	0.67	0.65	0.69	0.68	<i>0.76</i>

Table II.
Correlations between
latent variables and
square roots of AVEs

Notes: LO, leadership (leading organization); LP, leadership (leading people); LS, leadership (leading self); T, trust; KM, knowledge management; OP, organizational performance. The values in italic indicate square roots of AVEs

The study's findings revealed positive and significant linear connection among leadership (leading organization (LO), leading people (LP) and leading self (LS)), trust (T), knowledge management (KM) and organizational performance (OP). Specifically, these findings imply that effective leadership (leading organization, leading people and leading self) contributes positively to the elevation of trust among employees. The elevation of trust among employees (as a result of the effective leadership) contributes positively to the successful implementation of knowledge management processes. The successful implementation of knowledge management processes (as a result of the elevation of trust that is based on the effective leadership) contributes positively to the enhanced organizational performance. These findings confirm previous studies that effective leadership is a required element for developing trust among people within organizations (Gardner, 1989; Paliszkievicz *et al.*, 2015); the presence of trust is imperative to the process of knowledge management (Politis, 2003; Sankowska, 2013; Zuo and Panda, 2013; Berraies *et al.*, 2015); and the sound knowledge management processes enhances organizational performance (Simonin, 1997; Zack *et al.*, 2009).

6.1 Theoretical contributions

Through PLS path modeling, a variance-based SEM, this study's research model was tested for convergence validity to ensure the significance of all indicators belonging to each construct. Three indicators were eliminated because they did not yield significant loading. The eliminated indicators were "conflict" indicator from the leadership (leading people (LP)) construct, "managing time" indicator from the leadership (leading self (LS)) construct and "transparency" indicator from the trust (T) construct. After eliminating these indicators, the model showed a significant convergence validity that included the acceptable AVE and the CR for each construct. Accordingly, the LO construct yielded four of the five original indicators (change, innovation, influence and diversity/inclusion). The LP construct included the original five indicators (motivation, listening, empowerment, interpersonal communication and building relationship). The LS construct yielded four of the five original indicators (values/principles, self-awareness, feedback and learning). The *t*-construct included nine of the ten original indicators (competence, benevolence, communication, congruency, consistency, dependability, integrity, openness and reliability). The KM construct included the original five indicators (localization, usage of knowledge, knowledge acquisition/development, knowledge, codification and knowledge transfer). Finally, the OP construct included the original seven indicators (effectiveness, efficiency and productivity, and quality, quality of work life, innovation and profitability).

The discriminant validity was then established, and the structural model that evaluated the R^2 values of the dependent variable successfully confirmed the predictiveness of the research model. This indicated that the theoretical research model is strong enough to test for a linear connection among leadership (leading organization (LO), leading people (LP) and leading self (LS)), trust (T), knowledge management (KM) and organizational performance (OP).

	Standardized path coefficient	<i>t</i> -value	<i>p</i> -value	Hypothesis accepted or rejected
LO→T	$\beta = 0.19$	2.22	< 0.01	Accepted
LP→T	$\beta = 0.34$	2.38	< 0.01	Accepted
LS→T	$\beta = 0.40$	2.70	< 0.01	Accepted
T→KM	$\beta = 0.69$	10.35	< 0.001	Accepted
KM→OP	$\beta = 0.68$	9.38	< 0.001	Accepted

Notes: LO, leadership (leading organization); LP, leadership (leading people); LS, leadership (leading self); T, trust, KM, knowledge management; OP, organizational performance

Table III.
Path coefficients
and *t*-values

Furthermore, the inclusion of the three leadership constructs in the research model implies that effective leadership (leading organization, leading people and leading self) stands as the foundation of the elevated trust, the successful knowledge management processes, and the enhanced organizational performance. In addition, the three leadership constructs in the research model can be embraced for further studies in future to verify the results of the present study.

6.2. *Practical implications*

As documented in the literature, scholars such as Mintzberg and Waters (1982), Waldman *et al.* (2001), Peterson *et al.* (2003) and Peterson *et al.* (2009) agree that leadership is one of the most significant predictors that determines the success of organizations. The major implication of the findings of this study is that leadership (leading organization, leading people and leading self) stands as the bedrock of elevated trust, the successful knowledge management processes, and in turn the enhanced organizational performance. This implication guides a major imperative recommendation for practice, i.e. leadership training and development must be a top strategic priority for all organizations.

Rothwell (2002) stated that organizations are constantly faced with the challenge of leadership training and development. However, highly successful organizations rise above this challenge by sound planning for leadership training and development (Conger and Fulmer, 2003). Therefore, organizations must include leadership training and development in the planning to produce leaders that possess skills in leading organization, leading people and leading self.

Furthermore, leadership is the process of defining and refining skills. It involves continuous development, growth and improvement. The leadership skills (leading organization, leading people and leading self) can be sharpened through mentoring, coaching, guidance, practice and continuous leadership assessment (Day, 2001).

The findings further imply that in leading organization, leaders can positively lead change and advance innovation. They set a clear vision and translate it into business strategies with expected outcomes. They give close attention to diversity and inclusion. In leading people, leaders should motivate, listen, empower and bring people together. They should demonstrate good interpersonal communication skills to build and sustain relationships. In leading self, leaders must lead based on values and principles. They are aware of their strengths and weaknesses. Leaders ask for feedback and use the feedback for self-improvement. Leaders continuously seek the opportunity to learn.

6.3 *Conclusion, limitations and future research*

This study built a research model to examine the impact of leadership on trust, knowledge management and organizational performance. The findings showed a positive and significant linear connection among leadership (leading organization, leading people and leading self), trust, knowledge management and organizational performance. The findings imply that effective leadership contributes to the elevation of trust among employees. The elevation of trust, therefore, contributes to the successful implementation of knowledge management processes. Consequently, the successful implementation of knowledge management processes contributes positively to the enhanced organizational performance. In conclusion, effective leadership stands as the bedrock of the elevated trust, the successful knowledge management processes, and the enhanced organizational performance.

This study is not without limitations. The collected data were self-reported. This may contain potential sources of bias that can limit the generalizability of the findings. Furthermore, while the population sample for the present study was fairly balanced among the regions of the USA, a larger sample may have yielded better generalizability of results. Future studies should focus on a different and larger population sample.

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Corresponding author

Alex Koohang can be contacted at: alex.koohang@mga.edu

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