

## Profile in Leadership: Adding Definition to Leadership as a Component of KMS Success

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### Abstract

*This study investigated the constructs of Leadership Social Power (LSP) used by organizational leaders to influence Knowledge Management (KM) workers to bring about a successful KM implementation. Researchers have shown organizations wishing to secure, improve, or maintain KM success, should ensure their leaders: 1) are committed to KM, 2) encourage quality knowledge, and 3) promote knowledge use. The goals of this research focused on discovering how different factors of LSP impacted each of the three success factors. The current study was able to empirically demonstrate that LSP is a factor of that success and was able to predict Leadership Commitment to KM, Knowledge Content Quality, and Knowledge Use based upon predominate manner of Leadership Social Power used by the KM manager.*

### 1. Introduction

Knowledge Management (KM) is a discipline that has demonstrated its importance to the success of a knowledge economy [1-3]. This importance is due, in part, to KM's capacity to increase an organization's competitive edge and maximize its value [4-6]. Research has established the significance of KM's impact on organizational success [5, 7] and explored some of the constructs associated with that success [1, 3, 8, 9]. Researchers have developed models that empirically demonstrate factors such as knowledge quality, perceived usefulness of knowledge sharing, system quality, user satisfaction, incentives, and leadership are reliable predictors of KM success [9, 10]. Through empirical research, these constructs have demonstrated their impact on the success of KM. It is not adequate, however, to merely draw those conclusions; an in-depth exploration into each of the constructs in terms of how it is observed, measured, and constituted is necessary [11].

### 1.1. Problem statement

Because organizational success largely depends on its leader's effectiveness [12], it has become increasingly important to understand the subconstructs and measures of leadership that influence this success [13]. Researchers have argued that while research in KMS success has clearly identified leadership as an important component of a successful KMS implementation, there has not been adequate attention paid to defining and describing the aspects of leadership that are most strongly associated with a successful KMS [11, 14, 15]. Lacking a deeper understanding of leadership relegates organizations to designate leaders that may not bring about positive KMS results [16].

### 1.2. Goals

This study sought to extend the understanding of leadership as an influence on KM success by exploring Leadership Social Power (LSP) as a predictor of the success of a KM implementation.

Those who study leadership have noted the importance of understanding influence respective of leader and follower, but cautioned that a laundry list of representative measures (i.e. power) would not provide a guarantee of leadership's ability to promote organizational success [17, 18]. The fundamental goal of this research was to determine to what degree different types of LSP were able to predict KM success by answering the following research questions:

RQ1: How predictive is LSP on Leadership Commitment to KM?

RQ2: How predictive is LSP on Knowledge Content Quality?

RQ3: How predictive is LSP on Knowledge Use?

Based on the literature review and research question, the following hypotheses were tested:

H<sub>0</sub>1: There is not a significant impact on Leadership Commitment to KM by different types of

LSP exercised (as measured by Coercive, Reward, Legitimate, Expert, and Referent powers), as perceived by knowledge workers.

H<sub>02</sub>: There is not a significant impact on Knowledge Content Quality by different types of LSP exercised (as measured by Coercive, Reward, Legitimate, Expert, and Referent powers), as perceived by knowledge workers.

H<sub>03</sub>: There is not a significant impact on Knowledge Use by different types of LSP exercised (as measured by Coercive, Reward, Legitimate, Expert, and Referent powers), as perceived by knowledge workers.

## 2. Literature Review

This review begins with an investigation of the various approaches researchers have used to understand how we manage knowledge. Because the influence of leadership on KM is only a recent area of investigation [19, 20], the construct “leadership” is then reviewed. The review of leadership is then focused on the Leadership Social Power theory.

### 2.1. KM Defined

While the objective of KM has been identified as the ability to create value from an organization’s tangible and intangible assets [21], a clear definition of KM remains elusive. Choi argued the proliferation of KM interpretations made it more difficult to understand [22].

Wiig believed KM was a systematic and deliberate act that focused on the delivery and application of organizational knowledge used to maximize organizational effectiveness [23]. Alavi and Leidner agreed with Wiig adding KM included other factors such as knowledge acquisition, knowledge creation, knowledge sharing, and knowledge application central to a KM framework [4]. Wiig later agreed, contended KM included the systematic processes involved in knowledge creation, organization, deployment, and application [24].

Jennex, et al. [25] surveyed 103 KM researchers, practitioners, and students to understand what constituted KM success. Finding suggested KM success centered on the ability to capture the right knowledge and deliver it to the right person(s). Turban, et al. [26] agreed, contending that while KM typically focus on identifying appropriate knowledge, a detailed explanation of the referent knowledge was necessary for it to be shared in a formal manner [26]. Subjects of [25] believed the capture and transfer of knowledge would have a positive impact on organizational performance. While results of this research were inconclusive, KM

was declared to be a multidimensional concept characterized “... by capturing the right knowledge, getting the right knowledge to the right user, and using this knowledge to improve organizational and/or individual performance. KM success is measured by means of the dimensions: impact on business processes, impact on strategy, leadership, and knowledge content” (p. 186).

Part of the difficulty of establishing a single KM definition also lay in the need for a standard definition applies to different KM environments. The belief that KM may be applied to fundamentally different models adds further complexity to the creation of a single definition of KM.

Wiig suggested three perspectives of the KM environment [21]. The Business Prospective concentrates on the reasoning and motivation for organizations to invest in and take advantage of its organizational knowledge. The Management Prospective concentrates on leadership processes used to monitor KM practices to ensure the achievement of organizational goals. The Hand-on Prospective concentrates on knowledge workers and the necessary tasks used to ensure proper application of knowledge.

Researchers have further suggested a knowledge repository model and a knowledge network model respectively [2, 4]. The knowledge repository model includes factors of knowledge capture, collection, storage, retrieval, and distribution. Tiwana suggested an effective repository model contained explicit knowledge consisting of records of declarative, procedural, and causal knowledge – as well as contextual relative facts [27].

The knowledge network model consists of an environment where knowledge may be freely exchange. This model extends concepts like Nonaka and Konno’s “ba” space and the Community of Practice of Wenger and Snyder that included aspects of communication lines among participants, existing in a social network, where knowledge may be shared [28, 29]. These environments operate in an informal manner and largely depend on trust among its members as well as in the community as a whole [30]. Tsai investigating the social structure of competitions, argued that trust was an important component to achieving synergistic energies necessary for knowledge sharing to occur among competing units in an organization [31].

Another central theme in the literature appears to be the notion that the study of KM should include factors of people, processes, and technology [3]. O’Dell and Hubert focused on the people perspective, believing KM success may be promoted by increasing the number of connections among employees and by encouraging knowledge sharing [32]. The human connection environment, where people freely exchange

knowledge, again is reminiscent of the “ba” space and the Community of Practice.

The people prospective also focused on aspects of culture and trust. The research of Palanisamy demonstrated that organizational culture significantly influenced knowledge creation, knowledge storage, knowledge transfer, and knowledge use [33]. His correlational study investigated the use of KM in the promotion of an ERP implementation. Results indicated that organizational culture was positive and statistically significant on knowledge creation, knowledge storage, knowledge transfer and knowledge use.

The descriptive research of Ai-Busaidi investigated the social factors such as Management, Trust, Reward on Knowledge Contribution, and Knowledge Use [34]. Among the theorized determinants of Knowledge Contribution were Service Quality, Management, Storage Level, Reward, and Trust. The determinants of Knowledge Use included Knowledge Quality, Search/Retrieval Level, System Form, Reward, and Knowledge Trust. Knowledge trust focused on the reliability of knowledge by reducing a person’s fear of using knowledge while peer trust focused on the value of knowledge contributor and their motivation to share knowledge.

Findings indicated Knowledge Utilization was positively and significantly influenced by Knowledge Quality, Reward, Trust, and Management Support. Consistent with Kulkarni, Ravindran and Freeze [9]. Leadership and reward had a positive and significant influence on the use of knowledge obtained from KMS [9]. Knowledge Contribution was positively and significantly influenced by Management Support, Storage Level, and Reward indicating leadership and reward practices encourage contribution to the knowledge repository.

The process prospective of KM includes factors that transformed knowledge into organizational assets, which in turn enhanced an organization’s ability to compete effectively [35]. Researchers have speculated on different process models that may be used to enhance the understanding of the knowledge evolution process [21, 32, 36-38]. The common thread among these studies were knowledge acquisition, creation, sharing (transfer), and adoption (use) suggesting these dimensions were fundamental to a process model.

The technology prospective of KM includes tools used to enhance the recording and retrieving of explicit knowledge as well as enhance knowledge sharing and use [23]. Ruggles believed the technological aspects of knowledge creation, codification, and transfers were fundamental to KM [39].

## 2.2 Leadership Defined

While the terms leader and manager have often been used interchangeably in the literature [18], researches have suggested these terms may be distinctively characterized according to their respective roles and behavior [40, 41]. A simplistic notion suggests a *leader does the right thing* while a *manager does a thing right* [42]. This distinction seems crude; however, it does provide conceptual boundaries whereby each role may be understood. A leader analyzes the environment and market conditions in which the organization operates and provides visions for its future (doing the right thing). A manager, however, strives to ensure that necessary tasks are consistently performed correctly (doing the thing right). Leaders tend to value flexibility, adoption, and seek to produce organizational change while managers tend to value control, stability, efficiencies, and seek predictability [43]. Leaders work to develop new approaches to problems while managers act to limit choices, thereby reducing organizational risk. Leaders are typically responsible for establishing organizational goals and direction, motivating and inspiring followers, aligning followers to organization goals, and encouraging positive organizational change to foster improvements in organizational effectiveness [18, 40, 41, 43]. Managers typically engage in the processes of planning, organizing, directing, staffing, and controlling [17, 18].

Researchers seem to agree that the social processes occurring between leader and follower enable a leader to enlist the aid and support of followers [18, 44]. It is through the social interactions that influence the behavior or values of the followers [45]. Perhaps better suggested by Burns [46] and said by Baker “Leadership is a rational, collective, and purposeful activity based in the relationship of human motives and physical constraints between the power wielder and the power recipient” [25, p. 63]. For the purpose of this investigation leadership is characterized as the rational and purposeful human, risk taking activity focused on the positive evolution of an organization based on the social constraints between leader and follower [48].

## 2.3. Power Theory

Rahim defined power as the ability of one person to influence or control the behavior and/or attitudes of another [49]. Literature consensus suggests power is the capacity of one agent to change the perceived incentive structure of cost and benefits faced by another agent [50, 51].

Much of the research on power refers back to the seminal research of French and Raven who identified and systematically defined major types of social power in terms of its influencing affect causing psychological

change in behavior, opinion, attitude, goal, need, value, and other aspects of the person's psychological field [52]. The execution of power implies a change in the attitude or perception of a follower. Social power occurs in a dyadic relationship where leader and follower form distinct power relationship. When referring to leadership power, we refer to a leader as the person who exerts the power, L, and the follower, F, the perceiver the exerted power.

While different types of power have been explored, French and Raven were able to summarize power into five power categories they judged especially common and important [52]. Reward power was based on F's belief that L has the ability to mediate some form of reward. The strength of reward power depends on F's belief that L is capable and trustworthy of delivering the reward and will increase with the significance of the reward that F believes L will grant. As reward power increases, so does the attraction of F to L. Reward power may originate via the institution of a positive condition (L providing something desired by F) or the removal of a negative condition (L removing something that was not desired by F).

Coercive power is F's belief that L has the ability to mediate punishment. This power is based on F's expectation that some sort of punishment will occur for noncompliance to the influence. The strength of coercive power depends on F's belief that L is willing and able to administer punishment. As coercive power increases, the attraction of F to L decreases. An example of this power may be a prisoner's belief that negative behavior would result in increased incarceration time.

Legitimate power is based on F's belief that L has the legitimate right to influence F. French and Raven indicated that legitimate power was the most complex of the five power bases because it included aspects of structural sociology, role-orientation and group-norm social psychology, and clinical psychology [52]. Legitimate power is derived from the internalized values of F (i.e. cultural) that dictates both the legitimacy of L's influence, and F's obligation to accept the influence. Three mediating factors of legitimate power are cultural, social structure, and designation (obligation).

Referent power is based on F's admiration of L, or F's belief they identify, or desire to be identified, with L. If F has a particular fondness for L or the desire to be like L, then F would likely want become closer to L. An example of referent power is the belief that movie stars (L) are able to influence fans (F) simply because fans admire them and will subsequently do what the star requested.

Expert power is based on F's belief that L has some special knowledge or expertise. The strength of

this power is directly related to F's perception of the level of expertise held by L and the mediating effect perceived by F's value of L's expertise. Expert power is limited to the cognitive systems and is therefore limited to very specific areas of expertise. For example, a medical doctor would not normally be view as having expert power in the field of geology.

The objectives of the descriptive research of Rahim [49] were: 1) to develop an instrument containing factorially independent subscales for measuring five bases of leader power: *Coercive*, *Reward*, *Legitimate*, *Expert*, and *Referent*; and 2) determine if the five bases of leader power influenced *Compliance*. Rahim argued the shortcomings of prior research contending inconsistency and unreliability among the scales. Building on these earlier studies he developed and empirically tested the Rahim Leader Power Inventory (RPLI) instrument [53]. To ensure prior shortcomings would not be repeated the RLPI instrument underwent a series of developmental, validity, and reliability testing [54-57]. The instrument has since been successfully used in studies to measure the influences of coercive, reward, legitimate, expert, and referent power [58-61].

We do not argue the exclusivity of the RPLI other researcher have successfully developed other instruments used to measure the same domain of leader power. The research of Hersey, et al. [62] developed a similar instrument used to obtain measures of power obtained from both L and F [62]. Successful results were also obtained using the Hinkin and Schroesheim instrument [63, 64].

The research of Jayasingam, et al. [65] investigated the impact of leadership power (LP) on knowledge acquisition, dissemination, and utilization practices using organization as the unit of analysis. This correlational study explored the potential LP influences on knowledge workers to participate actively in knowledge acquisition, sharing, and usage. The dimensions of LP were derived from the early work of French and Raven [52].

The LP instrument employed a 20-item measure used to assess the five LP subconstructs. KM practices were derived from nine single-statement items drawn from Darroch to measure KM practices employed within the organizations (knowledge acquisition, knowledge dissemination, and knowledge utilization)[66]. Questionnaires distributed to 180 multimedia firms in Malaysia included 650 potential participants. From this sample frame, 402 valid responses received and processes.

Findings indicated LP accounted for 16% of the variances in knowledge acquisition, 7% of the variances in dissemination, and 7% of the variances in utilization. Legitimate power negatively influenced

knowledge acquisition practices and was not significant on knowledge dissemination or utilization practices. This would suggest that a follower's perception of a leader's legitimate power negatively influence the follower to acquire knowledge. Expert power positively influencing knowledge acquisition and dissemination practices and was not significant on knowledge use. Knowledge acquisition and sharing (dissemination) was positively influenced by leader perceived to have expert power. Findings also reported Reward, Referent, and Coercive power was not significant on knowledge acquisition, dissemination, and utilization practices within organizations.

Politis examined the relationship between the measures of credibility, power, and knowledge acquisition [67]. Credibility was measured using five items from Nesler, et al. [68] representing the degree to which followers perceived leader to be honest, competent, and inspiring Power was measured using French and Raven power-based taxonomy: legitimate, referent, coercive, expert, and reward power [52]. Knowledge acquisition was measured using subcategories of communication and problem understanding, personal traits, control, organization, and negotiation [69].

The unit of analysis was a cross-section of the United Arab Emirates industries of various sizes, products, and process types. Questionnaires distributed to 165 employees in seven firms resulted in 130 usable responses.

Findings indicated coercive power was negatively and significantly related to personal traits and negotiation. This suggested the exhibition of leader coercive power is likely to discourage followers from sharing knowledge. The negative impact on personal traits and negotiation suggested a leader's perceived power to punish and threaten employees will have an adverse effect employee's willingness to share knowledge. Further, leaders should avoid using coercive power when they wish to utilize employee knowledge to benefit the organization. Expert power was positively and significantly related to personal traits, control, and negotiation. This indicated leaders who exhibited expert power encouraged followers to subscribe to the importance of knowledge acquisitions and sharing. Further, leaders who wish to promote effective knowledge acquisition and knowledge sharing were viewed as experts by followers. Referent power had a strong negative and significant effect on negotiation. This suggested referent power does not facilitate negotiation between leader and follower. In other words, the ability of leaders to develop followers from the strength of their own referent power does not encourage knowledge sharing.

### 3. Methodology

Two research instruments were needed to provide adequate measures for this study. One provided insight into the three factors of KM success (leadership commitment, knowledge quality, and knowledge use). Because of the success of the research of Kulkarni, Ravindran and Freeze [9], it was decided to use their instrument to measure these factors.

The second instrument measured leadership power. The RLPI instrument was also incorporated into this study to provide measures of expert, reward, coercive, referent, and legitimate powers.

Potential subjects, drawn from manufacturing, included those KM workers with at least six months of KM experience. The KMLSP instrument was distributed to 900 potential survey participants (350 postal, 550 email). The active survey period began on October 15, 2012 and concluded business 45 days later. The survey process returned 145 responses resulting in a 16% response rate. It was necessary to eliminate 34 cases from the survey responses due to systematic omissions. Of the remaining 111 survey responses, 15 incomplete responses were tested using Little's MCAR statistic. Results from EM Estimated Correlation confirmed MCAR ( $Chi-Square = 175.042$ ,  $df = 166$ ,  $p = .300$ ). Of the 111 responses, 13 cases had a low average of 7.7% missing and two remaining cases 14.5% missing.

Multiple Imputation (MI) was used to generate appropriate missing values [70]. Researchers have suggested from three to ten imputations should drive the MI algorithm [71]. The number of imputations ( $m$ ) and the rate of missing data ( $\gamma$ ) influence the percent efficiency [71] of the MI model. When  $m$  is set to ten, 99.24% efficiency was achieved using the 7.7% missing and 98.48% efficiency was achieved using the 14.5% missing.

Principle Component Analysis (PCA) is a formative type of factor analysis used to minimize the number of items used to reflect a given scale by reducing the number of lower uncorrelated items [70, 72]. This research performed PCA to test construct validity of the representative items to constructs relationship. VARIMAX orthogonal rotation was appropriate, as it was believed that any item, within a given construct, should be unique.

Researchers have not agreed on an appropriate value as a token of the strength of the correlated relationship [73], therefore it was logical to divide the absolute scale of 0 to 1 by factors of .20 with each increment indicating an increase in the previous strength (poor, fair, moderate, strong, and very strong) [72]. Tabachnick and Fidell [70] indicated factor loading below .30 should be considered questionable.

Acock [72] suggested a .40 cutoff while Halawi [74] and Hair [75] suggested factor loadings above .50 should be considered acceptable. This research used a component-loading cutoff of .40 as it is believed to represent a fair average among the researchers' recommendations.

An iterative approach was used when conducting PCA and continued until meaningful structure was found [74]. Remaining items were resubmitted into another cycle of PCA.

All dependent variables (DV) items loaded well above the .40 cutoff. The scale items explained 78% of the total variance in Leadership Commitment to KM, 73% of the total variance in Knowledge Content Quality, and 67% of the total variance in Knowledge Use. All independent variables (IV) items loaded well above the .40 cutoff as well. The scale items explained 62% of the total variance in Expert power, 74% of the total variance in Referent power, 70% of the total variance in Coercive power, 65% of the total variance in Reward power, and 73% of the total variance in Legitimate power.

Cronbach's coefficient alpha ( $\alpha$ ) was used to test internal consistency of the items used to represent the related construct. Researchers indicated an acceptable correlation should be at least .70 at a significance of at least  $p < .05$  [72, 76]. Nunnally argued that  $\alpha$  may be considered acceptable at the .60 level [77]. This research therefore adopted a  $\alpha$  cutoff of .65 at a significance level of at most  $p = .05$ . Any item/construct that did not meet  $\alpha$  at the .65 level, at most  $p = .05$ , was removed from further analysis. Alpha testing was repeated until only  $\alpha$  above the .65 level ( $p < .05$ ) remained. To achieve high reliability and parsimony, any item whose removal would produce a higher  $\alpha$  score was also removed from further analysis. Another round of  $\alpha$  testing followed item removal. This process continued until  $\alpha$  reported the highest possible score for a given scale.

The  $\alpha$  reliability of the KM instrument indicated: 1) Leadership Commitment to KM was 90%, Knowledge Content Quality was 89%, and Knowledge Use instrument was 82%. The  $\alpha$  reliability of the LSP instrument indicated: 1) Expert power was 84%, 2) Referent power was 87%, 3) Coercive power was 85%, 4) Reward power was 86%, and 5) Legitimate power was 78%. Each of the measures was positive for the 1221 observations.

Correlational analysis is a statistical process used to measure how close the observations are to a regression line [72]. The correlation analysis results of the KM scales are shown in Table 1. Finding suggests Leadership Commitment is instrumental to the use of knowledge accounted for 18.86% of its variance and

22.65% of the variance in knowledge quality. Knowledge Use was responsible for 35% of the variance of Knowledge Quality.

**Table 1. KM Correlations, \*N(1221),  $p < .00005$**

	Leader Commitment	Knowledge Use
Knowledge Use	0.4343*	1
Knowledge Quality	0.4760*	0.5942*

The correlation analysis results of the LSP scales are shown in Table 2. A number of curious conditions arise from our findings. First, Expert power accounts for almost 50% of the variance in Referent power. This suggests that those that are perceived to be expert are held in esteem. Expert power also accounts for 21% of the variance in Reward power and 27% of the variance in Legitimate power. This suggests that experts are believed to be inherently hold a leadership position and have the authority to provide reward for compliance.

**Table 2. LSP Correlations, N(1221),  $p < .00005$**

	Expert power	Coercive power	Reward power	Referent power
Coercive power	0.2727*	1		
Reward power	0.4685*	0.4556*	1	
Referent power	0.7202*	0.0743*	0.5195*	1
Legitimate power	0.5228*	0.4386*	0.5066*	0.4023*

Multicollinearity occurs when a combination of variables makes one or more variables largely redundant [78]. Acock [78] recommended checking for multicollinearity using the variance inflation factor (VIF) and suggested any IV that is greater than ten, or had a  $1/VIF$  less than .10 indicated a multicollinearity condition. No VIF was above ten nor was any of the inverted VIF less than .10 thus we conclude multicollinearity did not present a problem in this study.

Multiple Regression Analysis (MRA) was selected as the primary statistical tool for its ability to provide causal influence of multiple IVs on a single DV. MRA statistics hold all but one of the IVs constant while testing the measured IV against the DV. Because of this limitation, Path Analysis (PA) was also selected for its ability to overcome this limitation allowing for the testing of multiple IVs simultaneous on

a given DV. This technique provides the additional advantage of controlling for non-causal and spurious effects. While we recognize there is a controversy among researchers about the use of PA as a viable statistical tool (citation), other researchers continue to use PA as an important facility used to provide viable causal indications (citation).

#### 4. Results and Summary

This study provided evidence that the subconstructs of LSP were predictive of factors of KM success: Leadership Commitment to KM, Knowledge Content Quality, and Knowledge Use. **Appendix A** provides detailed statistical results.

The MRA indicated a positive and significant causal effect on Leadership Commitment to KM by LSP ( $f = 67.01$ ,  $df(1221)$ ,  $p < .00005$ ). LSP  $R^2$  was .2182 indicating LSP accounted for 21% of the variance on Leadership Commitment to KM. Expert and Reward powers were positive and significant on Leadership Commitment to KM. Coercive power was negative and significant on Leadership Commitment to KM. Neither Referent nor Legitimate powers were significant.

The MRA of LSP also indicated a causal effect on Knowledge Use ( $f = 28.53$ ,  $df(1221)$ ,  $p < .00005$ ). LSP  $R^2$  was .1051 indicating LSP accounts for 10% of the variance on Knowledge Use. Expert and Reward powers were positive and significant on Knowledge Use. Referent power was negative and significant on Knowledge Use. Neither Coercive nor Legitimate powers were significant.

Finally, MRA of LSP indicated a causal effect on Knowledge Quality ( $f = 61.74$ ,  $df(1221)$ ,  $p < .00005$ ). LSP  $R^2$  was .2026 indicating LSP accounts for 20% of the variance on Knowledge Quality. Expert and Legitimate powers were positive and significant on Knowledge Quality. Referent power was negative and significant on Knowledge Quality. Neither Coercive nor Reward powers were significant.

The Goodness of Fit for the Leadership Commitment, Knowledge Content Quality, and Knowledge Use were .22, .21, and .11 respectively. **Appendix A** illustrates the combined MRA/PA for each of the three models tested.

Results confirmed the causal relationship between LSP and Leadership Commitment to KM. The null hypothesis “H<sub>01</sub>: There is not a significant impact on Leadership Commitment to KM by different types of LSP exercised, as perceived by knowledge workers” was rejected, leading to the answer for the first research question that Expert and Reward powers had a positive and significant effect on Leadership Commitment to KM, while Coercive power had a negative

and significant effect on Leadership Commitment to KM.

Additionally null hypotheses “H<sub>02</sub>: There is not a significant impact on Knowledge Use by different types of LSP exercised, as perceived by knowledge workers” and “H<sub>03</sub>: There is not a significant impact on Knowledge Use by different types of LSP exercised, as perceived by knowledge workers” were rejected, leading to the conclusion that LSP had a causal effect on Knowledge Quality and Knowledge Use. The second research question is answered that Expert and Legitimate powers had a positive and significant effect on Knowledge Content Quality, while Referent power had a negative and significant effect on Knowledge Content Quality. Finally, the third research question is answered that Expert and Reward powers had a positive and significant effect on Knowledge Use, while Referent power had a negative and significant effect on Knowledge Use.

#### 5. Conclusions

Researchers have provided empirical evidence that leadership is an influence on KM success [1, 2, 9]. This research expanded that understanding by empirically establishing the impact the constructs of LSP have on KM success, providing a better understanding of the factors of leadership that influence that success.

Organizations may use this study to select leaders for KM initiatives according to the appropriate mix of LSP that offers a high probability of success. This research indicated manufacturing organizations wishing to secure, improve, or maintain KM success, should ensure their leaders are committed to KM, thereby offering a high probability of organizational success. Further, organizations wishing to hire leaders of KM initiatives should seek leaders whose LSP will positively contribute to that success. Those organizations wishing to promote the effectiveness of those engaged in KM activities should encourage those leaders to acquire those LSPs necessary and relinquish those LSPs that are a detriment.

#### 6. Limitations and Future Research

A limitation of this study lay in its sole focus on three KM success factors (Leadership Commitment, Knowledge Content Quality, and Knowledge Use); other KM success factors (i.e. System Quality, User Satisfaction, and Knowledge Sharing) were not explored. Additionally, because this study was delimited to manufacturing organizations based in the continental United States, the results of this study may not be representative of other organizational types (i.e. edu-

cation, pharmaceutical, and insurance) or different types of international organizations.

The reader is further cautioned, this study does not provide a set of complete answers to all the leadership factors that influence KM success. Earlier researchers indicated the multidimensions of leadership and subsequently additional factors that need to be considered before a complete understanding of the impact of leadership on KM success. There are a number of additional dimensions of leadership (i.e. traits, skills, behavior, styles) which may also influence KM [11, 16]. If future studies determine the impact of these dimensions on KM, a taxonomy of the predictive qualities of leadership on KM success would significantly add to the body of knowledge.

Because this study concentrated on manufacturing organizations based in the continental United States, the results are generalizable solely to that domain. It would be interesting to learn of the influences LSP may have on other types of U.S. organizations and institutions (i.e. education, pharmaceutical, insurance, etc.). For example, it may be of interest to determine if the constructs of LSP influence student satisfaction or outcomes within academic institutions.

It may also be interesting to study the constructs of LSP and KM using international organizations as the unit of analysis. It is of interest to learn if other factors such as gender, age, educational level, and years engaged in KM are mediating factors.

## 7. Appendix A

Multiple Regression Analysis						
F	5, 1221					
Prob > F	0					
R <sup>2</sup>	0.2182					
Adj. R <sup>2</sup>	0.215					
	Expert power	Coercive power	Reward power	Referent power	Legitimate power	_Const
Coef.	0.533	-0.165977	0.252584	0.046848	-0.1123	1.282
t	9.51	-0.129651	5.33	0.98	-1.74	6.01
p >  t	0	0	0	0.329	0.081	0
Path Analysis						
Residual	0.78182					
_constant	1.1854					
	Expert power	Coercive power	Reward power	Referent power	Legitimate power	_Const
Coef.	0.38071	-0.129651	0.185602	0.039724	-0.05738	1.1853
z	9.81	-4.16	5.38	0.98	-1.75	5.78
p >  z	0	0	0	0.328	0.08	0

Multiple Regression Analysis						
F	5, 1221					
Prob > F	0					
R <sup>2</sup>	0.2026					
Adj. R <sup>2</sup>	0.1993					
	Expert power	Coercive power	Reward power	Referent power	Legitimate power	_const
Coef.	0.29525	-0.031925	-0.01354	-0.127217	0.330974	1.8074
t	9.09	-1.37	-0.49	-4.57	8.87	6.01
p >  t	0	0.171	0.622	0	0	0
Path Analysis						
Residual	0.78182					
_constant	1.1854					
	Expert power	Coercive power	Reward power	Referent power	Legitimate power	_const
Coef.	0.36742	-0.043446	-0.01734	-0.187936	0.294527	1.1853
z	9.34	-1.37	-0.49	-4.61	9.11	5.78
p >  z	0	0.169	0.621	0	0	0

Multiple Regression Analysis						
F	5, 1221					
Prob > F	0					
R <sup>2</sup>	0.1051					
Adj. R <sup>2</sup>	0.1014					
	Expert power	Coercive power	Reward power	Referent power	Legitimate power	_const
Coef.	0.31168	0.061382	0.147853	-0.165652	0.036646	1.6915
t	6.87	1.89	3.85	-4.26	0.7	9.79
p >  t	0	0.06	0	0	0.482	0
Path Analysis						
Residual	0.78182					
_constant	1.1854					
	Expert power	Coercive power	Reward power	Referent power	Legitimate power	_const
Coef.	0.29419	0.06336	0.143567	-0.185612	0.024735	1.1853
z	7	1.89	3.88	-4.3	0.7	9.11
p >  z	0	0.058	0	0	0.481	0

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