

## Linking knowledge management practices and the organizational performance of Pakistan's telecommunication

Syed Muhammad Ali<sup>a\*</sup>, Abdul Qadus<sup>b</sup>, Adnan Waseem<sup>c</sup> and Khalid Zaman<sup>d</sup>

<sup>a</sup>Lecturer, Department of Management Sciences, COMSATS Institute of Information Technology, Abbottabad, Pakistan

<sup>b</sup>Senior Lecturer, Shaheed Zulfiqar Ali Bhutto Institute of Science & Technology SZABIST, Islamabad, Pakistan

<sup>c</sup>Lecturer, Department of Management Sciences, COMSATS Institute of Information Technology, Abbottabad, Pakistan

<sup>d</sup>Assistant Professor, Department of Management Sciences, COMSATS Institute of Information Technology, Abbottabad, Pakistan

### ARTICLE INFO

*Article history:*  
Received June 29, 2012  
Accepted 15 September 2012  
Available online  
17 September 2012

*Keywords:*  
Knowledge management  
Organizational learning  
Organizational Performance  
Telecom sector  
Multiple regression  
Pakistan

### ABSTRACT

The objective of the study is to examine the relationship between knowledge management practices and the organizational performance of Pakistan's telecommunication. The study is based on primary data collected from two hundred and ten (out of three hundred questionnaires) middle level managers of different telecommunications located in Rawalpindi & Islamabad cities of Pakistan. A self designed questionnaire was used for data collection. The data was analyzed using the techniques of multiple regression analysis. All the findings were tested at 0.01 and 0.05 level of significance. The result demonstrates that knowledge management practices have positive and significant impact on organizational performance, which reflects that organizations that prefer knowledge management practices get beneficial outcomes than their competitors. The commencement of the five facets formulates it easier for the management to centre their attentiveness on them, assuring the particular behaviors to bring out to commence them.

© 2012 Growing Science Ltd. All rights reserved.

## 1. Introduction

For years, knowledge management (KM) has become a significance area for the organizations. The growing product adversity, globalization, virtual firms or client orientation are creations that seeks for a more solid and efficient management of knowledge within organization and between some interacting organizations (Staab et al., 2000). Knowledge management is the practice of confining a company's shared expertise where it resides: in databases, papers, in people's minds and allocating it to where it can facilitate to create the major payoff (Hibbard, 1997). Knowledge management is an

\* Corresponding author. Tel: +92-334-8982744  
E-mail addresses: khalidzaman@ciit.net.pk (K. Zaman)

arising discipline, which is obtaining concentration from organizations. The productive intervention of a knowledge management approach is expecting as a necessary and as a precondition of benefit for modern organizations, as they come to the generation of the knowledge economy (Ergazakis et al., 2005). According to Kidwell et al. (2001, p3).

*“Knowledge management is the process of transforming information and intellectual assets into enduring value. It connects people with the knowledge that they need to take action, when they need it. In the corporate sector, managing knowledge is considered key to achieving breakthrough competitive advantage”.*

Organizations are often not aware of great and potential values of business information and quantity of data available in their databases. Hlupic et al. (2002) stated that examination of such quantity of data & information can be transformed into knowledge which in return can be utilize to achieve organizational benefits like competitive improvement, minimization of expenses, enhanced eminence, receptiveness, and better facility to customers.

Organizations that better manage knowledge have the strength to develop important value but only after linking it to overall strategy and strategic decisions of the organization. Knowledge management is the modern approach in attaining organizational competitiveness (Bell & Jackson, 2001). The prologue of knowledge management practices has produced a marvelous amount of concern in various areas of the Pakistani market like, construction, service, manufacturing, production and public organizations. Currently several organizations working in Pakistan is energetically following service advancement to enhance their quality and production performance allow them to contend extra efficiently in corporate world. Recently, in support of these organizations, innovation has inspired to the front line of corporate strategies in the illumination of growing global contest for earnings. Organizations gain greater advantage that creates knowledge assets than those organizations who are dependent more on their tangible resources (Autio et al., 2000). It is the moment to understand that knowledge based practices & innovative activities enhance organization performance. In the developing countries in general and specifically in Pakistan, the understanding of this conception is relatively a feeble area. Telecom industry in Pakistan is playing a vital role to economic advancement. Telecom sector is going competitive each day. Their services in term of Excellence, speediness, innovation and competence are the major objectives on which valuable programs are intended. The associations with knowledge based practices & performance of the organization may certainly be different in a particular extent of organizational principles. Though, the association between different knowledge management practices and organizational performance have rarely been observed. The study examines the linkage of some knowledge management practices with organizational performance. The outcomes and conclusion assist organizations in setting up superior strategies to enhance their performance. The focus of this study is to examine the worth of knowledge management practices as a cause of sustainable advantage of competitiveness for the organizations and to do analysis that how the implementation of KM practices facilitates organization performance and to answer the question that Knowledge management practices have impact on organizational performance.

The study divides in to the following sections: after introduction which is carried on section 1 above, Section 2 presents literature review. Data source and methodological framework is explained in Section 3. Results are shown in Section 4. Final section concludes the study.

## **2. Literature Review**

The focus of the potential events of inaugurating knowledge management in the enterprises and companies has concentrated on determining whether it is logical to bring out quantifiable enrichments in the organization. Numerous literatures have been cited on different knowledge management

practices and its relation with outcomes in terms of organizational and individual impacts. As Davenport (1999) figures out, although the association between knowledge management and performance indicators has been consulted at extent, few organizations have been capable to determine an underlying relationship between knowledge management practices and firm performance.

The fresh technological development reveals a beginning decade, in which complete economical closeness has emerged. Conventional organizational management is no longer assessed a suitable approach in this extensively competitive mass market place. Consequently, firms need to compete for their survival by continual advancement as well as by innovation to cover and capture the market benefits. In other terminologies, businesses require creativeness to get chances for continued existence. Disagreement to creativeness is similar to pursue and result in disintegrate organizations (Leavy, 1998).

The making of decisive ideas and novelty in the organization, due to a flourishing utilization of knowledge, could have an influence on the enrichment of processes. In the identical conduct, affluence in processes results in enhancing employees' abilities. In management and in organization the literature demonstrates an extensive determination of the relationship of organizational success and knowledge. Although earlier sensation of the structure (Drucker, 1967) and exhaustive views (Despres & Chauvel, 2000; Earl, 2001) there prevails concise general progress in learning the structure itself (Drucker, 1993; Stewart, 1997). Particular approaches of knowledge towards work have been probed by business professionals (Collison & Parcell, 2001 at BP; Mann et al., 1991 in power utilities), interpreters of management (O'Dell & Grayson, 1998) and by research associates (Carneiro, 2000; Newell et al. 2003).

As organizations become larger knowledge based, success and their progress will incrementally depend on knowledge employees becoming more flourishing at serving to productive decision making and forming advancements. It is not amazing that there is an increasing realization between practitioners and researchers equal for the aspiration to healthier realize what knowledge is, worth of knowledge, and how to manage it. Sometimes it is formalized as Knowledge management and in different situation it termed as the learning organization (DiBella et al., 1996) or organizational memory (Weick, 1979). The transformation in importance from distribution of knowledge to producing resultant application of knowledge is deliberated in the transfer from personal spirit to communities (Wenger, et al., 2002).

Harvey et al. (2004) stated that some of the core organizational abilities are the abilities to learn to acclimatize to the quick altering competitive comprehensive environment. The aim of learning is improving employees' knowledge utilization and application capability in this information era. Ruggles (1997) recommended three forms of knowledge management tools, which are assumed to trace the foundational knowledge movements of the majority organizations: Knowledge longevity, complement of aberrant certitudes, and manifestation of embryonic prototypes, the appraising of new grounds, and the conception of new considerations

The core effort of those engrossed by means of knowledge management is to disinter excellent disciplines to originate, sustain, and use knowledge at personal and organizational levels. Similarly, it urges to assure to acquire the correct knowledge to the accurate people just in time (Snowden, 2002) and assist people share and initiate knowledge into action in disciplines that endeavor to enhance the organizational performance (Dixon, 2000; O'Dell & Grayson, 1998). Jantunen (2005) expressed that knowledge is posited in an organization as a strategic capital which can help the organization affirm its competitive aptitude in feverish locality. In reality, knowledge-based inventories and organizational learning aptitudes are judgmental for a firm's creativeness actions. Knowledge

management is supplicated at cornering employees to innovate, collaborate, and develop brighter alternatives effectively. In simple, it is conducted at gathering employees to function by considering on high-quality knowledge (June, 2005). Knowledge is concluded the best effectual resource in organizations (Choe, 2004), and the features and complexities of knowledge do not altercate due to asymmetric geographic places (Singh et al., 2008). The growth of organizations consequently is conceived upon organizations' along with individuals' accelerating learning. Hence, learning in organization is the real focal for organizations to assure and bring on competitive advantages.

Knowledge intensive organization concentrates on the commercialization of knowledge (Starbuck, 1992; Gibbons et al., 1999), inventiveness and creation (Gerlach & Lincoln, 2000; Brown & Duguid, 2000) or the job of professionals (Albert & Bradley, 1997). Wiig (1999) postulated the determinants and after-effect illustration representing the specific consequences of commencing a KM program. The accrued worth of the model falls in emerging all the consequences obtain from a program that fosters the commencement and transfer of knowledge. Daniel and Simon (2006) exposed how the organizations that prefer knowledge management practices obtain favorable results than their rivals.

Dibella and Nevis (1998) declared that the prologue of KM practices advocates the assumption of emerging knowledge, which will have a persevering on the conception of new instincts and psychological models. Ranft and Lord (2002) apprehend that knowledge give-and-take occurs when knowledge-based inventories are acquired and exerted. Therefore, an organization coordinated towards knowledge development and exchange allows its human resources early and unimpeded elaborate the knowledge (Szulanski, 1996). Additionally, the effect of knowledge as foundational constituent to build competitive advantages is floated in businesses that are consistently innovating (Decarolis & Deeds, 1999). Firestone (2001) considered an intuitive advent to justify the association between KM, corporate endeavors, and successes. He recommended a constructivist model termed benefit global estimation. To appraise the facilitation and prosperity of a KM program, a judgmental perspective is desired, as well as the exertion of tools and applications, rather than the ad hoc function of empirical methods. To match KM practices and firm performance, the former examination of corporate ambitions and business approaches is needed. In this sense, KM subsists business approaches that can tend firms accomplish their plans.

Davenport (1999) stated that enhancement in KM actions influences intervention variables like as project performance assessments, designations of the aptitude of employees to bring vacant activities associated to knowledge, and conclusively, the emergence of thoughts and innovations. Decarolis and Deeds (1999) investigated the charge of organizational knowledge on firm performance. Organizational knowledge is sensationalized through commodities and stream of knowledge (Dierickx & Cool, 1989). Knowledge reserve gathers knowledge resources that are intrinsic to the organization. Streams suggest to all the mechanism proficient to alter the reserves of knowledge. A favorable circumstance for analyzing reserves and stream of organizational knowledge and its association with firm performance is an exciting diligence in expressions of knowledge creation.

According to Holmqvist (2003), gathering of understanding and experience through various actions or practice in organizations is concerned with Organizational Learning. Organizational Learning proposes that the employees lead learning in organizational locale, and utilize what they learn in their profession (Elkjaer, 2003). Neilson (1997) reflects on Organizational Learning as an incessant practice of knowledge formation, gaining, and transformation. Lee and Choi (2003) find that Knowledge management practices are significant factors for organizational creativeness. Organizations can attain tactical and financial benefits of knowledge management practices by using organizational creativeness in a successful manner.

The managerial potential refers to an organization expertise, knowledge, awareness, and familiarity, which are useful to manage complex and complicated responsibilities in management and creation

(Choi & Shepherd, 2004). Potential of Knowledge Management has been recognized as a primary attribute for achieving and supporting a competitive advantage (Corsoa et al., 2006). Organizational performance and knowledge management practices are supposed to be vital for the achievements in the organization. Knowledge management practices influence organizational performance positively, admitted by various results in literatures. Practical facts also support the viewpoint that knowledge management practices influence organizational performance via organizational learning. KM practices are positively linked to organizational performance, explaining that organization with more KM practices illustrate advanced potential in enhancing organizational performance (Liao & Wu, 2009).

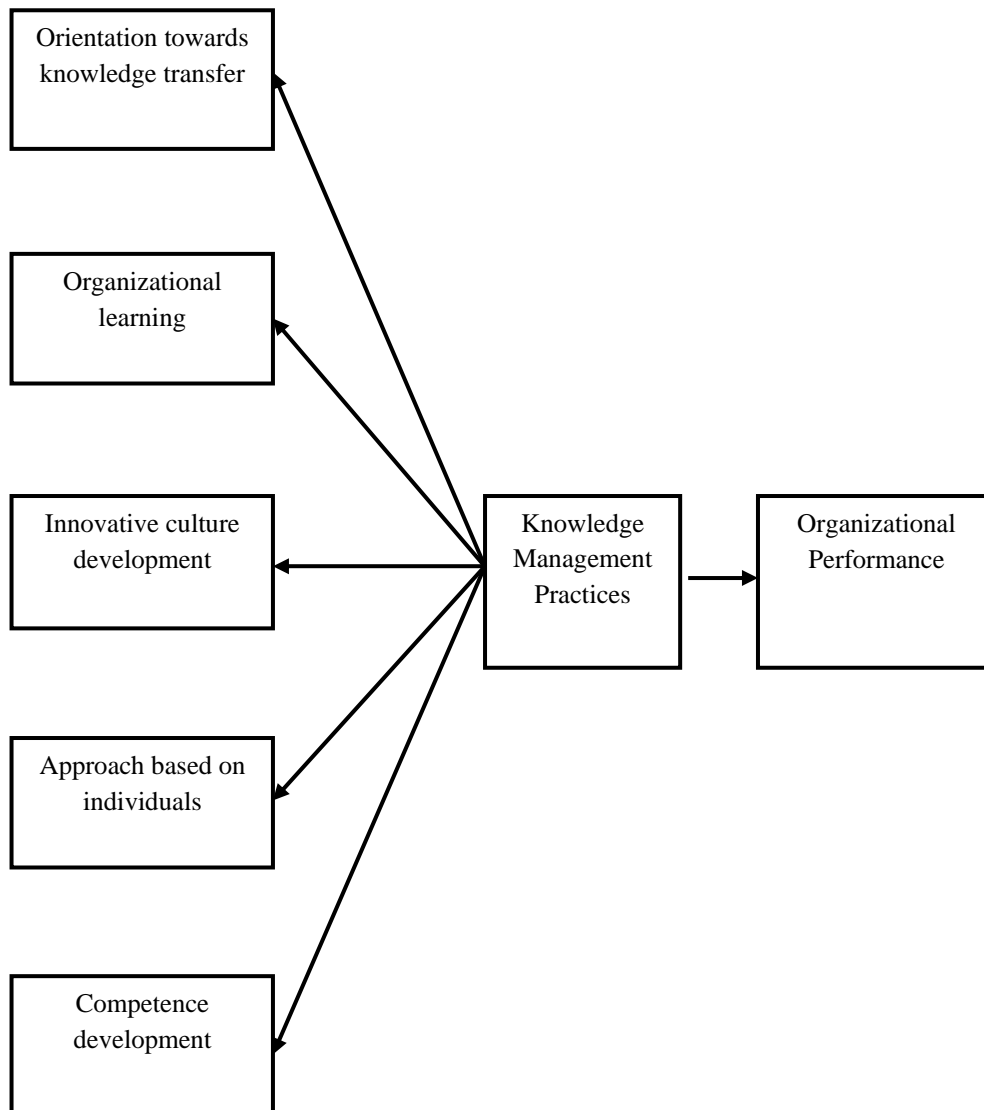
An indication, which evaluates how healthy an enterprise attains its goal, is organizational performance (Venkatraman & Ramanujam, 1986; Hamon, 2003). Evaluation of Organizational Performance can be done by an organization's competence and success of goal attainment (Robbins & Coulter, 2002). Andersen (2006) declared that the idea of success is a proportion, meaning that when explaining and assessing effectiveness two things are needed (e.g. return on resources). He also declared that as effectiveness is conceptualized as an extent of purpose realization, that is, of profitability objective and goals. Schermerhorn et al. (2002) figure out that the performance refers to the brilliance and aptitude of individual or teamwork accomplishment. Recently, Organizational Performance, efficiency, and effectiveness are exchangeable (Hancott, 2005).

This study explored different potential knowledge management practices with the citation of above context, which enhance organizational performance and accordingly plan success strategies for effective functioning of knowledge management practices for organizations who have implemented these practices or for those who have objective to implement it in future. Those practices are envisioned in proceeding section of conceptual model. This study is distinctive in numeral characteristics. Previous studies on knowledge management practices have been carried out for developed countries whereas; this study is carry out for rising market with special centre on Pakistani diligence. There are some practices, which lie within the organization but the management cannot consider those to improve their performance because they do not know that this will help them. Increasing fragments at the active period has been come into view to accept those assessments and planned circumstances of executing similar approaches, whereas this study focuses on finding and confirming the success features for the managers before getting on the decision making and strategic planning of executing related approaches. The core objectives of this study is to find out possible relationship of knowledge management practices with organizational performance and to comprehend gateway to the top management for knowledge management practices considerations before and after decision making, to make sure that organizational performance can be improved.

### **3. Data Source and Research Framework**

This study is constituted purely through primary data source. Different scales of prospective knowledge management practices and organizational performance were adopted from the research study of Daniel and Simon (2006) and from Daniel and Juan (2006). The survey instruments consisted of five constructs of knowledge management practices. These five constructs includes Orientation towards knowledge transfer, Organizational learning, Innovative culture development, Approach based on individuals, and Competence development of knowledge management practices. Five point Likert scale of 1 for strongly disagree and 5 for strongly agree was used to capture the responses of employees about knowledge management practices and organizational performance in their respective organizations. Target population for this study was middle level management of telecom sector located in Rawalpindi & Islamabad region of Pakistan. Telecom sector is selected because of drastic changes in their services and innovations in the technology and this is vital to respond to these issues and challenges by specialized knowledge management practices. Three

hundred questionnaires were distributed to the target population. Of those questionnaires, two hundred and ten questionnaires were collected back. Questionnaires were distributed randomly to middle level managers. Questionnaire consisted of two Parts. First section comprises of demographic information of respondents and second part comprises of dimensions of knowledge management practices and organizational performance items. Fig. 1 for thriving framework of knowledge management practices is developed based on extensive theoretical underpinning. This model comprises of five dimensions of knowledge management practices. These facets include orientation towards knowledge transfer, organizational learning, innovative culture development, approach based on individuals, competence development proposed by Daniel and Simon (2006). Combining these facets create core concept of knowledge management.



**Fig. 1.** Research Framework Source: Daniel and Simon (2006)

#### 4. Results and Discussion

In the beginning, the reliability and internal consistency of the constructs were checked by means of Cronbach's alpha. The Cronbach's Alpha for the sample are given in Table 1. The response rate of seventy percent was reported out of total distributed questionnaires two hundred and ten questionnaires were collected back. The data gives information about Gender, Qualification and Work Experiences of the respondents.

**Table 1**  
Cronbach's Alpha Reliability Coefficients

Items	Cronbach's Alfa (r)
Organization towards knowledge transfer	0.74
Organizational learning	0.81
Innovative culture development	0.78
Approach based on individuals	0.83
Competence development	0.86

The demographic statistics presented in Table 2 exposed that only 21.4% of Female and 78.6% Males employees are belong to middle level management. The table further exposed that majority of the employees qualifications are reported as Bachelors and Masters Degree. Similarly on average work experiences of employees are reported between 1-2 years i.e., 40.4%, between 3-4 years i.e., 21.9% and 5-6 years i.e., 28.09 percent and 7-above represents 9.5% respectively.

**Table 2**  
Demographic Statistics

		Frequency	Percent
Gender	Male	165	78.57
	Female	45	21.43
Education level	Bachelor	125	59.52
	Master	63	40.48
	Specialized education	22	10.48
	1-2 years	85	40.4
Work Experiences	3-4 years	46	21.9
	5-6 years	59	28.09
	7 years and above	20	9.52

Table 3 reveals respondent's preferences in terms of agreement and disagreement toward particulars knowledge management practices and organizational performance.

**Table 3**  
Descriptive Statistics of Knowledge Management Practices & Organizational Performance Measurements (N= 210)

Variables	Mean	SD
Orientation towards knowledge transfer	3.8123	0.6 63
Organizational learning	4.0126	0.712
Innovative culture development	3.5807	0.421
Approach based on individuals	4.3263	0.534
Competence development	3.7956	0.567
Organizational performance	4.7667	0.688

Table 3 further demonstrates that majority of the study participants are tends towards agreement regarding orientation towards knowledge transfer, organizational learning, innovative culture development; approach based on individuals, and competence development. The table further demonstrates that study respondents profess orientation towards knowledge transfer, organizational learning and approach based on individuals more as compared to other practices of knowledge management. Table 4 demonstrates simple regression analysis of Knowledge management practices with organizational performance. The empirical results, given in Table 4, appear to be very good in terms of the usual diagnostic statistics. The value of R-square adjusted indicates that 69.5% variation in dependent variable has been explained by variations in independent variable. F value is higher than its critical value suggesting a good overall significance of the estimated model. Therefore, fitness of the model is acceptable empirically. Regression results show that there is a significant and positive relationship between knowledge management and organizational performance as their coefficient value indicates of 0.430, which is significant at 0.01 percent significance level.

**Table 4**

Regression Analysis of Knowledge Management (KM) practices and Organizational Performance  
(level of Significance = 0.01 percent, Adjusted R-square 0.695, F-statistics 74.26\*)

	Constant	KM Practices
Coefficient	2.123*	0.430*
t-statistics	14.213	8.234
Prob. value	0.000	0.000

Dependent Variable: Organization Performance

\* represent significance at 0.01 level.

This significant relationship indicates that KM practices are linearly related to organizational performance. The results of this study are in line with findings of Liao and Wu (2009) and Lee and Choi (2003). Both studies assured that knowledge management practices are significant predictors of economic and strategic benefits of the organizations.

## 5. Conclusion and Recommendations

This study depicted an incorporated empirical research model and clarifies the outcomes of the linkage between knowledge management practices and organizational performance. The affiliation between knowledge management practices and organizational performance is entreated. This study aims to determine the associations among knowledge management practices and organizational performance. Five potential knowledge management practices based on comprehensive theoretical support were extracted. These practices are modeled for influential productiveness with organizational performance. The commencement of the five facets formulates it easier for the management to centre their attentiveness on them, assuring the particular behaviors to bring out to commence them. The analytical judgments of the contemporary study ascribe an instinct into the embedding of knowledge management practices into a knowledge intensive organization. The study concludes that knowledge management practices have significant impact on organizational performance. The studied outcomes determine the broad classification of consciousness of significance with a compact level of exact implementation. From the outcomes demonstrated in this study, one may affirm that knowledge management practices are significant aspect of organizational successfulness that urges to be cautiously accounted. The high classification of attentiveness of its eminence determined in this research is a motivating finding. If considered and carried out intently, in alignment with organizational goals and main competencies, it may allow the liberation of the organizational knowledge assets that will induces ultimate success.

The current study has some limitations that need to be considered when taking into account the study and its significance but some of the limitations can be seen as successful opportunity for future research on the similar idea. This study is conducted in Pakistan with special focused on Telecom sector. Some other sectors of the country have also implemented knowledge management practices in their respective organizations, but due to resources constraints other sectors have not been included in this study. Hence, the outcomes of this study may have to be carefully interpreted. Researchers and academicians have to conduct the same study on other sectors of the country to fill up the gap by considering some other significant knowledge management practices impact on organizational performance.

## References

- Albert, S., & Bradley, K. (1997). *Managing knowledge: Experts, agencies and organizations*. Cambridge University Press, Cambridge.
- Andersen, J.A. (2006). Leadership, personality, and effectiveness. *Journal of Socio Economics*, 35 (6), 1078-1091.
- Autio, E., Sapienza, H.J., & Almeida, J.G. (2000). Effects of age at entry, knowledge intensity, and imitability on international growth. *Academy of Management Journal*, 43(5), 909-24.
- Bell, D.K., & Jackson, L.A. (2001). Knowledge management: understanding theory.



- Brown, J. S., & Duguid, P. (2000). *The social life of information*. Harvard Business School Press, Boston, Massachusetts.
- Carneiro, A. (2000). How does knowledge management influence innovation and competitiveness. *Journal of Knowledge Management*, 4 (2), 87-98.
- Choe, J. (2004). The consideration of cultural differences in the design of information systems. *Journal of Information and Management*, 41(5), 669-688.
- Choi, Y.R., & Shepherd, D.A. (2004). Entrepreneurs' decisions to exploit opportunities. *Journal of Management*, 30(3), 377-395.
- Collison, C., & Parcell, G. (2001). *Learning to fly: Practical lessons from one of the world's leading knowledge companies*. Capstone, Oxford.
- Corsoa, M., Martinib, A., Pellegrinib, L., Massac, S., & Testac, S. (2006). Managing dispersed workers: the new challenge in knowledge management. *Technovation*, 26(5/6), 583-594.
- Davenport, T. (1999). Knowledge management and the broader firm: strategy, advantage, and performance in Liebowitz, J. (Ed.), *Knowledge Management Handbook*, CRC Press, Boca Raton, FL, 1-11.
- Decarolis, D.M., & Deeds, D.L. (1999). The impact of stocks and flows of organizational knowledge on firm performance: an empirical investigation of the biotechnology industry. *Strategic Management Journal*, 20, 953-968.
- Despres, C., & Chauvel, D. (2000). *A thematic analysis of the thinking in knowledge management in* (Eds) Despres, C. and Chauvel, D. *Knowledge horizons: The present and the promise of knowledge management*. Butterworth-Heinemann, London, 55-86.
- Dibella, A., & Nevis, E. (1998). *How Organizations Learn: An Integrated Strategy for Building Learning Capacity*. Jossey-Bass, San Francisco, CA.
- DiBella, A. J., Nevis, E. C., & Gojuld, J. M. (1996). *Organizational learning style as a core capability in* (Eds) Moingeon, B. and A. Edmondson, *Organizational learning and competitive advantage*. Sage Publications, London, 38-55.
- Dierickx, I., & Cool, K. (1989). Asset stock accumulation and sustainability of competitive advantage. *Management Science*, 35(12), 1504-1513.
- Dixon, N. M. (2000). *Common knowledge: How companies thrive by sharing what they know*. Harvard Business School Press, Boston, Massachusetts.
- Drucker, P. F. (1967). *The effective executive*, William Heinemann, London.
- Drucker, P. F. (1993). *Post-Capitalist Society*. Harper Business, New York.
- Earl, M. J. (2001). Knowledge management strategies: Towards a taxonomy. *Journal of Management Information Systems*, 18(5), 218-233.
- Elkjaer, B. (2003). Organizational learning with a pragmatic slant. *International Journal of Lifelong Education*, 22 (5), 481-494.
- Ergazakis, K.K, Metaxiotis, K., & Ioannis, P. (2005). Knowledge Management in enterprises: a research agenda. *Intelligence System Accounting Financial Management, Published online in Wiley InterScience*, 13, 17-26.
- Firestone, J.M. (2001). Estimating benefits of knowledge management initiatives: concepts, methodology, and tools. *Journal of Knowledge and Innovation*, 1(3), 13-27.
- Gerlach, M. L., & Lincoln, J. R. (2000). Economic organization and innovation in Japan: Network spin-offs and the creation of enterprise, in (Ed) von Krog, G; I. Nonaka and T. Nishiguchi. *Knowledge creation: A source of value*, Macmillan Press, London, 151-196.
- Gibbons, M, Limoges, C., Nowotny, H. Schwartzman, S., Scott, P., & Trow, M. (1999). *New production of knowledge*. Sage Publications, London.
- Hamon, T.T. (2003). *Organizational effectiveness as explained by social structure in a faith-based business network organization*. unpublished doctoral dissertation, Regent University, Virginia Beach, VA.
- Hancott, D.E. (2005). *The relationship between transformational leadership and organizational performance in the largest public companies in Canada*. unpublished doctoral dissertation. Capella University, Minneapolis, MN.
- Harvey, M., Novicevic, M.M., & Garrison, G. (2004). Challenges to staffing global virtual teams. *Human Resource Management Review*, 14, 275-294.
- Hibbard, J. (1997). Knowing what we know. *Information Week*, 51-65.
- Holmqvist, M. (2003). A dynamic model of intra- and inter-organization learning. *Organization Studies*, 24(1), 95-123.

- Hlupic, V., Pouloudi, A., & Rzevski, G. (2002). Towards an Integrated Approach to Knowledge Management: 'Hard', 'Soft', and 'Abstract' Issues. *Knowledge and Process Management*, 9(2), 90–102.
- Jantunen, A. (2005). Knowledge-processing capabilities and innovative performance: an empirical study. *European Journal of Innovation Management*, 8 (3), 336-349.
- Jimenez, D.J., & Navarro, J.G.C. (2006). The performance effect of organizational learning and market orientation. *Industrial Marketing Management*, 36, 694-708.
- June (2005). Drivers of knowledge management in the corporate environment. *International Journal of Information Management*, 25(3), 193-202.
- Kidwell, J. J., Vander Linde, Karen, M., & Johnson, S.L. (2001). Applying Corporate Knowledge Management Practices in Higher Education. In Bernbom, Gerald, editor, *Information Alchemy: The Art and Science of Knowledge Management. EDUCAUSE Leadership Series #3*. San Francisco: Jossey-Bass, 1-24.
- Leavy, B. (1998). The concept of learning in the strategy field: review and outlook. *Journal of Management Learning*, 29(4), 447-466.
- Lee, H., & Choi, B. (2003). Knowledge Management Enablers, Processes, and Organizational Performance: An Integrative View and Empirical Examination. *Journal of Management Information System*, 20, 179-288.
- Mann, M. M., Rudman, R. M., Jenckes, T. A., & McNurlin, B. C. (1991). *Eprinet: Leveraging knowledge in the electric utility industry in (Ed) Prusak, L. (1997). Knowledge in organizations*. Butterworth-Heinemann, London, 73-97
- Marques, D. P., & Simon, F.J.G. (2006). The effect of knowledge management practices on firm performance. *Journal of Knowledge Management*, 10(3), 143-156
- Neilson, R. (1997). *Collaborative Technologies & Organizational Learning*. Idea Group Publishing, Hersey, PA.
- Newell, S, Huang, J.C., Galliers, R., & Pan, S.L. (2002). Implementing enterprise resource planning and knowledge management systems in tandem: Fostering efficiency and innovation complementarily. *Information and Organization*, 13(1), 25-52.
- O'Dell, C., & Grayson, C.J. (1998). *If Only we knew what we know*. Free Press, NY.
- Ranft, A. L., & Lord, M. D. (2002). Acquiring New Technologies and Capabilities: A Grounded Model of Acquisition Implementation. *Organization Science: A Journal of the Institute of Management Sciences*, 13(4), 420-442.
- Robbins, P.S., & Coulter, M. (2002). *Management, Prentice-Hall*. Upper Saddle River, NJ.
- Ruggles R. (1997). Knowledge tools: using technology to manage knowledge better. *Ernst and Young Center for Business Innovation Working Paper*, April.
- Stewart, T. A. (1997). *Intellectual Capital: The New Wealth of Organizations*, New York, Doubleday.
- Schermerhorn, J.R. Jr, Hunt, J.M., & Osborn, R.N. (2002). *Organizational Behavior*. 7th ed., Wiley, New York, NY.
- Liao, S.H. & Wu, C.C. (2009). The Relationship among Knowledge Management, Organizational Learning, and Organizational Performance. *International Journal of Business and Management*, 4(4), 64-76.
- Singh, M.D., Kant, R., & Narain, R. (2008). Knowledge management practices: a sectorial analysis. *International Journal of Innovation and Learning*, 5(6), 683-710.
- Snowden D. (1998). *A framework for creating a sustainable knowledge management program*. In *The Knowledge Management Yearbook 1999–2000*, Cortada JW, Woods JA (eds). Butterworth-Heinemann: Boston, MA.
- Staab, S, H.S., R.S., & York, S. (2000). Knowledge Processes and Ontologies. Institute AIFB, University of Karlsruhe, D-76128 Karlsruhe, Germany.
- Starbuck, (1992). Learning by Knowledge-Intensive Firms. *Journal of Management Studies*, 29, 713-740.
- Szulanski, G. (1996). Exploring internal stickiness: Impediments to the transfer of best practice within the firm. *Strategic Management Journal*, 17, 27-43.
- Venkatraman, N., & Ramanujam, V. (1986). Measurement of business economic performance: an examination of method convergence. *Journal of Management Development*, 13(1), 109-122.
- Weick, K. E. (1979). *The social psychology of organizing*. 2<sup>nd</sup> ed., Addison- Wesley, Reading, Massachusetts.
- Wenger, E., McDermott, R., & Snyder, W. M. (2002). *Cultivating communities of practice*. Harvard Business School Press, Boston, Massachusetts.
- Wiig, K. M. (1995). *Knowledge management: The central management focus for intelligent-acting organizations*. Schema Press, Arlington, Texas.