A Role of Knowledge Management in Organizational Performance

Neha Yadav, Prof. S.P.Singh

Abstract - In rapidly changing business environment and increasing competitive advantage, where only uncertainty is certainty, corporate success come from consistently creating, disseminating and using new knowledge. Within the current economic scenario, organizations are experiencing difficulties and challenges due to a multiplicity of factors and the intensifying competition among various organizations. Moreover, some industries have been affected more acutely than others in the transition to a knowledge-based economy. This study aims at investigating the role of Knowledge Management in Organizational Performance. Through an analysis of the available studies we have found out a direct impact of Knowledge Management in Organizational Performance.

Keywords: Knowledge management, Knowledge management processes, Organizational performance.

1 INTRODUCTION

Knowledge Management has become a buzz word and has occupied a central place in all sorts of business organizations. Organizations are realizing that knowledge management is a valuable instrument in improving their performance. Liang *et. al.* (2007) found that implementation knowledge management programs enhance an organization competitive advantage and increase productivity. An organization's ability to effectively implement knowledge-based activities becomes increasingly important for the development and sustenance of a competitive advantage (De Carolis, 2003; Grant, 1996). Knowledge activities include the creation and integration, accumulation and utilization and the learning and sharing of knowledge (Shieh-Chieh *et. al.*, 2005).

Several studies found a positive relationship between knowledge management and organizational performance (Chadha *et. al.*, 2010; Fugate *et. al.*, 2009; Wang *et. al.*, 2009; Ibrahim *et. al.*, 2009; Zack *et. al.*, 2009; Kasim, 2008; Boumarafi *et. al.*, 2008. Radwan Kharabsheh, Ihab Magableh, Sukina Sawadha (2012) found a positive and direct relationship between knowledge management and organization performance. Specifically; the results showed that knowledge management had the highest impact on new product success followed by financial performance. Daniel Palacios Marques et.al (2006) studied the connection between knowledge management practices and firm performance. Theoretical relations are tested through an empirical study carried out on 222 Spanish firms in the biotechnology and telecommunications industries. This research shows that adopt knowledge management practices in the firms obtain better results than their competitors.

Hasan and Al- Hawari (2003) indicate that there is a positive relationship between an efficient and effective application of knowledge management and organizational performance. Knowledge management has been linked positively to financial performance measures such as profitability (Marque´s and Simo´n, 2006; Choi and Lee, 2003; Choi *et. al.*, 2008 ; Fugate *et. al.*, 2009), and growth (Marque´s and Simo´n, 2006), and non-financial performance measures such as innovation and new product success (Kiessling, 2009; Lundvall and Nielsen, 2007; Gloet and Terziovski, 2004; Kremp *et. al.*, 2003; Almashari *et. al.*, 2002), competitive advantage (Massa *et. al.*, 2009; Kumarawadu, 2008; Gupta, 2002), and stakeholder satisfaction (Marque´s and Simo´n, 2006). This study aims to explore the extent of adoption of knowledge management processes in organizations and examine the relationship between knowledge management and organizational performance.

2 KNOWLEDGE MANAGEMENT

Knowledge management is a group of clearly defined process or methods used to search important knowledge among different knowledge management operations (Wiig K., 1995). Further it is a process that helps organizations to find, select, organize, disseminate, and transfer important information and expertise necessary for activities (Gupta et al., 2000).

Knowledge management is the capacity for effective action; it is a firm's most valuable asset because it embodies best practices, routines, lessons learned problem–solving methods, and creative processes that are often difficult to replicate (Grant et al., 1996; Liebowitz and Wright, 1999; Renzel, 2008).

• Neha Yadav (Ph.D. student), Faculty of Management Studies, Gurukul Kangri Vishvavidyala, Haridwar (India).Pin Code-249404
Email-Id: yadavneha268@gmail.com
• Prof. S.P. Singh (Research Guide), Faculty of Management Studies, Gurukul Kangri Vishvavidyala, Haridwar (India).Pin Code-249404
Email-Id: spsingh.gkv@gmail.com

2.1 Knowledge Management Components

Knowledge management has two components: Knowledge Management Infrastructure and Knowledge Management Processes.

The knowledge management infrastructure is the mechanism for the organization to develop its knowledge and also stimulate the creation of knowledge within the organization as well as the sharing and protection of it. Knowledge management process is the mechanism of collecting and identifying useful information (i.e. knowledge acquisition), transferring tacit knowledge to explicit knowledge (i.e. knowledge creation or transfer), storing the knowledge in the repository (i.e. organizational memory), disseminating it through the whole organization (i.e. knowledge sharing), enabling employees to easily retrieve it (i.e. knowledge retrieval) and exploiting and usefully applying knowledge (i.e. knowledge leverage).

Researchers studied that culture, structure, people and information technology are the main elements which build the knowledge management infrastructure in any organization.

Culture

Organizations are made up of individuals. Employees with their own unique behavior, norms, and values influence the organization (Prusak 1996) and create the organizational culture (Dilnutt 2000). Culture not only specifies what knowledge is valued, but also what knowledge must be kept inside the organization for sustained innovative advantage (Long, D.D. 1997).

Organizations should establish an appropriate culture that encourages people to create and share knowledge within an organization (Holsappie. C.W.and Joshi, K.D., 2001). Organizational Culture explicitly favour knowledge sharing and knowledge integration encourage debate and dialogue in facilitating contributions from individuals at multiple levels of the organization (Davenport & Prusak 1998).

There are four comprehensive ways in which culture influences the behaviors central to knowledge creation, sharing, and use. First, culture shapes assumptions about what knowledge is and which knowledge is worth managing. Second, culture establishes relationships between individual and organizational knowledge, determining who is expected to control specific knowledge, as well as who must share it and who can hoard it. Third, culture creates the context for social interaction that determines how knowledge will be used in particular situations. Finally, culture shapes the processes by which new knowledge with its accompanying uncertainties is created, legitimated, and distributed in organizations (DeLong and Fahey, 2000).

Employee interaction and collaboration especially among those not working side by side, are very important when an organization attempts to transmit tacit knowledge between individuals or convert tacit knowledge to explicit knowledge, thereby transforming it from the individual to the organizational level (Nonaka 1990, 1994; Nonaka & Konno 1998, Nonaka & Takeuchi 1995; O'Dell & Grayson 1998).

Structure

Organizational structure involves centralization of authority, formalization, complexity, and integration (Miller and Droge 1986) and is the way in which responsibility and power are allocated and work procedures are carried out among organizational members (Nahm, Vonderembse & Koufteros, 2003).Organizational structure can inhibit or enable effective knowledge management through the influence of the structural framework in place, the way this framework facilitates knowledge creation and innovation, the impact of this framework on corporate behavior, and the provision of access to knowledge to foster creativity with the allocation of responsibility to individuals(Dilnutt,2000;Gold, A.H.; Malhotra, A.and Segars 2001, Hedlund. G.1994, Nonaka. I., and Takeuchi, H.1995).

Researchers suggested that organizations need to change from hierarchical departmentalized structures to flatter, organic, network styles which facilitate transferring and creating knowledge for the firm (Beveren 2003; Gehani 2002; Pemberton & Stonehouse 2000) and that the successful organizations of the future will be characterized by simplicity and flexibility of organizational design (Beveren 2003).

People

Knowledge resides in people. People are at the core of creating organizational knowledge (Chase 1997; Holsapple & Joshi 2001; Ndlela & Toit 2001; Lee & Choi 2003). Managing people who are willing to create and share knowledge is crucial task and finding new sources of motivation to increase people participation in knowledge sharing is a real challenge for organizations (O'Dell & Grayson 1999; Migdadi 2005). T-shaped skills enable their possessors to explore the interfaces between their particular knowledge domain and various applications of that knowledge in particular products (Leonard-Barton 1995). However, people will attempt to create new knowledge only if their organization has an environment that encourages forming T-shaped skills and provides a

systematic management of these skills (Lee & Choi 2003; Migdadi 2005).

Information Technology

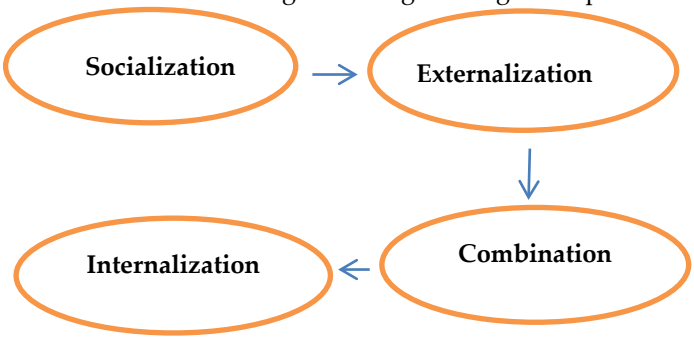
Information Technology has a crucial role to play in the creation and dissemination of knowledge in a variety of organizations. Information technology allows an organization to create, share, store, and use knowledge (Leonard-Barton. D.1995). Information technology is essential for the storage and retrieval of information and explicit knowledge (Davenport & Prusak 1998). Moreover, Information technology particular is an ability to apply knowledge across situations. Functional Skills are useful in overcoming the barriers of distance and time (Nonaka 1991; Ruokonent 2001; Stough, Eom & Buckenmyer 2000).

Studies have found that information technology is widely employed to connect people with reusable codified knowledge and facilitates conversations to create new knowledge (Stonehouse, G.H. and Pemberton. J.D., 1999). Business intelligence, collaboration, distributed learning, knowledge discovery, knowledge mapping, opportunity generation, as well as knowledge security are technological aspects of effective knowledge management (Leonard-Barton, 1995 and Grant, 1996). Thus, the support of technology is essential for initiating and carrying out knowledge management.

2.3 Knowledge Management Processes

Knowledge management processes offer an understanding of the manner in which organizations discard "old" knowledge, maintain existing knowledge and create new knowledge (Alavi & Leidner, 2001; Grover & Davenport, 2001, Bhatt, 2005). These processes take place in different contexts from organization to organization depending on the organization's knowledge management focus. These processes generally consist of two distinct and interconnected knowledge cycles that feed on each other enabling organizations to learn, reflect, unlearn and relearn. One is the innovative cycle, representing a progression of unstructured knowledge to more structured and reproducible knowledge embedded in processes and businesses. The other is the knowledge sharing cycle representing the process of collecting, organizing, sharing, accessing and using information with knowledge repository as the focal point. Bergeron (2003) provides probably the most detailed and, for the purposes of this study, useful description of knowledge management processes. He used the concept of knowledge management life cycle including eight processes (creation and acquisition, modification, use, transfer, archiving, translating/repurposing, access, and disposal).

Nonaka (1994) asserts that knowledge is fundamentally convertible. He proposed four key stages of knowledge conversion known as SECI (socialization, externalization, combination and internalisation). Nonaka and Takeuchi (1995) postulated that knowledge conversion involves the transformation of tacit into explicit knowledge followed by the re-transformation from explicit to tacit knowledge and described the following knowledge management process:



- Socialization is seen as the method of adapting implicit knowledge into new tacit knowledge.
- Externalization involves the process of articulating tacit knowledge into explicit knowledge.
- Combination is seen as the method of transferring explicit knowledge into more intricate and organized sets of explicit knowledge.
- Internalization is the process of integrating explicit knowledge into tacit knowledge

Zaim (2006) provided a more comprehensive view of the knowledge management process. He opined "*Knowledge management is the systematic management of all activities and processes referred to generation and development, codification and storage, transferring and sharing, and utilization of knowledge for an organization's competitive edge*".

3 Organizational Performance

Various researches have been conducted relating organizational performance to different aspects of the firm. Chakravarthy (1986) argued that it is difficult to engage in comprehensive comparative analysis of the differences between the performances of companies when using traditional financial measures such as Return on Equity (ROE), Return on Capital (ROC), and Return on Sales (ROS). Similarly, Kaplan and Norton (1996) found that classic financial accounting measures such as Return on Investment (ROI) and Earning per Share (EPS) can be deceptive when providing indications regarding the issues of continuous progress and innovation. Davenport (1999) show that, although the relationship between knowledge management and performance indicators has been

discussed at length of balance sheet, exchange value, market value, etc., few firms have been able to create a causal relationship between knowledge management activities and organization performance utilizing traditional measurements.

Many scholars have therefore felt it necessary to attempt to measure other organization performance indicators when attempting to investigate the effects of knowledge management including non-financial performance measures such as productivity (Lapre and Wassenhove, 2001), quality (Mukherjee, Lapre, and Wassenhove, 1998), and innovation (Francisco and Guadamillas, 2002).Cotora (2007) claimed that to measure corporate performance, it is imperative that a system takes into account indefinable values such as competencies, partnerships and knowledge along with inter-relationships and the process of conversion in situations. Daud, and Yusoff (2010) emphasized that knowledge management processes and social capital can be integrated to enhance organizational performance.

Mills and smith (2011) studied that some knowledge resources (e.g. organizational structure, knowledge application) are directly related to organizational performance, while others (e.g. technology, knowledge conversion), through important prediction of knowledge management are not directly related to organizational performance.

4 Role of Knowledge Management in Organizational Performance

A good amount of research has been conducted on the impact of knowledge management on organization performance. Research shows that knowledge management process can result in ways of working, new technologies and develop new products (Su, Chen and Sha, 2006). The knowledge base of a company is commonly viewed as the fundamental underlying factor in performance levels (Lai and Lee, 2007).

Knowledge acquisition, at the organizational level is a prerequisite for success of an organization and seeks to explore the role of knowledge management processes and competencies in achieving superior performance among organizations (Kasim, 2008). Knowledge management education and training can give business opportunities of small- and medium-scale software companies (SMSCs) to improve productivity, product quality, flexibility, inter-employee relationships, effective knowledge creation and knowledge utilization while achieving their cost, quality and time targets and thus, Small- and medium-scale software companies can gain competitive advantage to sustain their business (Kumarawadu,2008).

Bergeron (2003) suggested the knowledge management life cycle including eight processes (creation and acquisition, modification, use, transfer, archiving, translating/repurposing, access, and disposal). This research will adopt these eight processes to evaluate knowledge management life cycle processes.

1. Knowledge creation and acquisition

The knowledge creation process is oriented towards acquiring and developing knowledge, or replacing existing knowledge within the organizational tacit and knowledge base. Knowledge is either acquired within an organization or gained from external sources. Knowledge creation consists of initiatives and activities undertaken towards the generation of new ideas or objects (Mitchell and Boyle, 2010). At the first phase of the knowledge management life cycle (KMLC), information is created or acquired internally by knowledge workers, externally through outsourcing, or purchased from an outside source, and the mechanisms for this phase include self-reporting, documentation, program, instrumentation, network, knowledge engineering (Bergeron, 2003).

2. Knowledge Modification

The knowledge modification process is based on managing an organization's internal and external knowledge and the conversion of this knowledge in an accessible and usable form using information technology and information management skills. Integration, combination, structure, coordination, conversion, editing, review, approval or rejection, storage, organization, maintenance, cataloguing, classification, retrieval and organizational memory consist of major activities of the modification process. (Davenport & Prusak 1998; Bhatt, 2001; Duffy, 2001; Gold et al., 2001; Grover & Davenport, 2001; Carine, 2003).The information through the modification phase is modified to meet the future needs of the knowledge management. The support mechanisms of this phase include editing tools, tracking, security, and version control (Bergeron, 2003).

3. Knowledge Use

This is oriented towards the actual use of knowledge. Employees should collaborate to use knowledge for the benefits of their organizations through acquire, accumulate, seek, create, generate and capture knowledge (Daud and Yusoff, 2010). The range of potential uses for knowledge is virtually unlimited depending upon the needs and activities of the knowledge workers and management within the organization (Bergeron, 2003).Feedback system, tracking system, dissemination technology, and search technologies are the main support mechanisms for knowledge use phase (Bergeron,2003).

4. Knowledge Archiving

Knowledge archiving involves the storing of the information in an appropriate form that ensures the security and access to this information in the future, and this happen through information technologies, controlled vocabularies, libraries, controlled environment, and maintenance programs (Bergeron, 2003).The organizational memory resides in various forms such as electronic databases, written documents, codified knowledge in expert systems, organizational procedures and processes, and tacit knowledge located in individuals brain (Alavi and Leidner,2001).

5. Knowledge Transfer

Knowledge transfer is the movement of knowledge from the point of creation or codification to the point to use (Nonaka & Takeuchi, 1995; Holtham & Courtney, 1998; Alavi & Leidner, 2001).Knowledge transfer is ''*a process of exchange of explicit or tacit knowledge between two agents, during which one agent purposefully receives and uses the knowledge provided by another*''. In order to increase the value of the information and to enable knowledge sharing, information should be transferred freely within the organizational context using various types of media (Bergeron, 2003). He assumed that in this phase Physical transfer, and networks are the support mechanisms for knowledge transfer.

6. Knowledge Translation/Repurposing

Here the information is translated from its original form to a form more suitable for the user (e.g. from numerical to textual form). This simplifies the information to suit the recipients' specific requirements. This process take place through outsource expertise, and information technologies (Bergeron, 2003).

7. Knowledge Access

The successful KM systems provide continuous access for authorized users through the use of query support mechanisms. Corporate policy, information technology, and librarian are the chief support mechanisms of knowledge access (Bergeron, 2003).

8. Knowledge Disposal

Some information will be of little or no value in the future and therefore requires to be destroyed or stored elsewhere through established processes and technologies in order to keep the standard body of knowledge at a manageable level (Bergeron, 2003). Clear, coherent procedures are applied when selecting information for disposal or disposing them in order that valuable information does not end up being destroyed.

5 CONCLUSIONS

This paper presented an analytical review of the available studies concerning the relationship between Knowledge Management and Organizational Performance. This study focused on two components of knowledge management. Knowledge management has two components: Knowledge Management Infrastructure and Knowledge Management Processes.

Knowledge management infrastructure consists of four elements: culture, structure, people and information technology. Culture encourages people to create and share knowledge within an organization through employee interaction and collaboration for improve organization performance. Organizational structure enable effective knowledge management through the influence of the structural framework in place, the way this framework facilitates knowledge creation and innovation, the impact of this framework on organization performance. People are at the heart of creating organizational knowledge. Knowledge and competence can be acquired by admitting new people with desirable skills which effect on performance of organization. Information Technology plays an important role in the creation and dissemination of knowledge in any organizations. Information technology support to knowledge management includes business intelligence, collaboration, distributed learning, knowledge discovery, knowledge mapping, opportunity generation, as well as security which are impact on organizational performance.

This study has identified different knowledge management processes (creation and acquisition, modification, use, transfer, archiving, translating/repurposing, access, and disposal) represents the valuable aspects of organizational knowledge. The first phase of knowledge management process is Knowledge creation and acquisition, which are related to organizational performance through self-reporting, documentation, program instrumentation, networks, and knowledge engineering. At the next phase, Knowledge modification is the process of editing tools, tracking, security, and version control which effect in organizational performance. The third phase of knowledge management processes is knowledge use. It is related to organizational performance through feedback systems, tracking systems, dissemination technology, and search technologies. At the fourth phase of knowledge management processes, Knowledge archive impact on organizational performance through information technologies, controlled vocabularies, librarian, controlled environment, and maintenance programs.

At the next phase, Knowledge transfer connects individuals through physical transfer, and networks. Knowledge translation/repurposing are the six phase / stage of

knowledge management processes, which impact in organizational performance through outsource expertise, and information technologies. At the next phase, Knowledge access is knowledge distribution to individuals which can use it through corporate policy, information technologies, and librarian. And the last phase of knowledge management processes is knowledge disposal. It is a process of selecting information for disposal or disposing them in order that valuable information does not end up being destroyed through established processes, and technologies which directly related to the organization performance.

This paper studied on knowledge management processes and its attempts to measure their impact on organization performance which might lead to more in-depth validation of these proposed processes as well as providing a guideline for effective utilization of these processes to improve organization performance.

6 REFERENCES

[1] Alavi M and Leidner D. (2001), 'Review: knowledge management and knowledge management systems: conceptual foundations and research issues', MIS Quarterly, vol. 25, no.1,pp. 107-136.

[2] Beveren, JV (2003), 'Does health care for knowledge management?' Journal of Knowledge Management, vol. 7, no. 1, pp. 90-5.

[3] Boumarafi, B. and Jabnoun, N. (2008), 'Knowledge management and performance in UAE business organizations', Knowledge Management Research & Practice, vol. 6, pp. 233–238.

[4] Chadha, S. K. and Kapoor, D. (2010), 'A study on knowledge management practices of auto component manufacturing companies in Ludhiana city the 70 IUP', Journal of Knowledge Management, vol. 8, no. 1 & 2.

[5] Chakravarthy B.S.(1986), 'Measuring strategic performance', Strategic management,vol. 7, no. 5, pp.437-458.

[6] Chase, R (1997), 'The knowledge-based organizations: an international survey', Journal of Knowledge Management, vol. 1, no. 1, pp. 38-49.

[7] Cotora L. (2007), 'Managing and measuring the intangibles to tangibles value flows and conversion process: Romanian space agency case study'. Measuring business excellence, vol.11, no.1, pp. 53-60.

[8] Daniel Palacios Marques, Fernando Jose Garrigos Simon (2006), 'The Effect of Knowledge Management Practices on Firm Performance', Journal of Knowledge Management, vol.10, issue: 3, Page: 143 - 156.

[9] De Carolis, D. (2003), 'Competencies and imitability in the pharmaceutical industry: An analysis of their relationship with firm performance', Journal of Management, vol. 29, no. 1, pp. 27-50.

[10] DeLong, DW & Fahey, L (2000), 'Diagnosing culture barriers to knowledge management', Academy of Management Executive, vol. 14, no. 4, pp. 113-28.

[11] Francisco J.F and Guadamillas F. (2002), 'A case study on the implementation of knowledge management strategy oriented to innovation', Knowledge and Process Management, vol. 9, no.3, pp. 162- 671.

[12] Fugate, B. S., Stank, T. B. and Mentzer, J.T. (2009), 'Linking improved knowledge management to operational and organizational performance', Journal of Operations Management, vol. 27,pp. 247–264.

[13] Gehani, RR (2002), 'Chester Barnard's executive and the knowledge-based firm', Management Decision, vol. 40, no. 10, pp. 980-91.

[14] Grant, RM (1996), 'Toward a knowledge-based theory of the firm', Strategic Management Journal, vol. 17, no. Winter Special, pp. 109-22.

[15] Gupta B., Iyer L. & Aronson, J., (2000), 'Knowledge management: practices and challenges', Industrial Management & Data Systems, Vol. 100, No.1, pp. 17-21.

[16] Hasan H and Al-Hawari M. 2003. 'Managing styles and performance: a knowledge space framework'. Journal of Knowledge Management, vol. 7, no.4, pp: 15-28.

[17] Ibrahim, I., Edgar, D. and Reid, V. (2009), 'Assessing the role of knowledge management in adding value: moving towards a comprehensive framework', Journal of Information & Knowledge Management, vol. 8, no. 4, pp. 275-286.

[18] Kasim, R. S. (2008), 'The Relationship of Knowledge Management Practices, Competencies and the Organizational Performance of Government Departments in Malaysia', World Academy of Science, Engineering and Technology, vol.48, pp. 798-804.

[19] Lapr M.A and Wassenhove L.N.V.(2001), 'Creating and transferring knowledge for productivity improvement in factories', Management Science,vol. 47, no.10, pp: 1311-1325.

[20] Liang, T., Ouyang, Y. And Power, D. (2007), 'Effects of knowledge management capabilities on perceived performance: an empirical examination', Decision support for global enterprises, vol. 2. Springer US, pp. 139-164.

[21] Miller, D & Droge, C (1986), 'Psychological and traditional determinants of structure', Administrative Science Quarterly, vol. 31, no. 4, pp. 539-60.

[22] Mills A. & Smith T. (2011), 'Knowledge management and organizational performance: a decomposed view', Journal of Knowledge Management, vol.15, no.1, pp. 156-171.

[23] Nahm, AY, Vonderembse, MA & Koufteros, XA (2003), 'The impact of organizational structure on time-based manufacturing and plant performance', Journal of Operations Management, vol. 21, no. 3, pp. 281-306.

[24] Ndlela, LT & Toit, ASA (2001), 'Establishing a knowledge management programme for competitive advantage in an enterprise', International Journal of Information Management, vol. 21, no. 2, pp. 151-65.

[25] Nonaka, I & Konno, N (1998), 'The concept of 'BA': building a foundation of knowledge creation', California Management Review, vol. 40, no. 3, pp. 40-54.

[26] Nonaka, I (1991), 'The knowledge-creating company', Harvard Business Review, vol. 69, no. 6, pp. 96-104.

[27] Nonaka, I (1990), 'Redundant, overlapping organization: a Japanese approach to managing the innovation process', California Management Review, vol. 32, no. 3, pp. 27-38.

[28] O'Dell, C & Grayson, J (1999), 'Knowledge transfer: discover our value proposition', Strategy & Leadership, vol. 27, no. 2, pp. 10-5.
[29] O'Dell, C & Grayson, C (1998), 'If only we knew what we know: identification and transfer of internal best practices', California Management Review, vol. 40, no. 3, pp. 154-74.
[30] Pemberton, JD & Stonehouse, GH (2000), 'Organizational learning and knowledge assets – an essential partnership', The Learning Organization, vol. 7, no. 4, p. 184-93.
[31] Radwan Kharabsheh, Ihab Magableh, Sukina Sawadha (2012), 'Knowledge Management Practices (KMPs) and Its Impact on Organizational Performance in Pharmaceutical Firms', European Journal of Economics, Finance and Administrative Sciences, Issue 48, pp. 6- 15.
[32] Ruokonent, T (2001), 'Operation and maintenance: support from the center', Modern Power System, vol. 21, no. 2, pp. 41-3.
[33] Stough, S, Eom, S & Buckenmyer, J (2000), 'Virtual teaming: a strategy for moving your organization to the new millennium', Industrial Management & Data Systems, vol. 100, no. 8, pp. 370-8.
[34] Su C.T Chen Y.H and Sha D.Y. (2006), 'Linking innovative product development with customer knowledge: a data-mining approach', Technovation, vol.26, no.7, pp: 784-795.
[35] Yang J and Wang C. 2004. 'Advancing organizational effectiveness and knowledge management implementation'. Tourism Management, vol. 25, no.5, pp: 593–601.
[36] Zack, M., McKeen, J. and Singh, S. (2009), 'Knowledge management and organizational performance: an exploratory analysis', Journal of Knowledge Management, vol. 13, no. 6, pp. 392-409.
[37] Zaim H. (2006), 'Knowledge management implementation in IZGAZ', Journal of Economic and Social Research, vol.8, no.2, pp: 1-25.
[38] Bergeron B., 'Essentials of knowledge management'. Hoboken, New Jersey: John Wiley & Sons, Inc, 2003.
[39] Davenport, TH & Prusak, L, 'Working Knowledge: How Organizations Manage What They Know', Harvard Business School Press, Boston, MA, 1998.
[40] Kaplan R.S and Norton D.P., 'The balanced scorecard', Boston: Harvard Business School Press, 1996.
[41] Nonaka, I & Takeuchi, H, 'The Knowledge-creating Company: How Japanese Companies Create the Dynamics of Innovation, Oxford' University Press, Oxford, 1996.
[42] Long, D.D., 'Building the knowledge-based organizations: How culture drives knowledge behaviors', Working Paper of the Center for Business Innovation, Emst & Young LLP Cambridge. MA, 1997.
[43] Dilnutt, RP, 'Knowledge management as practiced in Australian organizations: a case study approach', DBA thesis, Southern Cross University, 2000.
[44] Migdadi, MM, 'An integrative view and empirical examination of the relationships among knowledge management enablers, processes, and organizational performance in Australian enterprises', PhD thesis, University of Wollongong, 2005.
[45] Prusak, L, 'Knowledge in Organizations', Butterworth-Hieneman, Boston, 1996.