European Journal of Business and Management
ISSN 2222-1905 (Paper) ISSN 2222-2839 (Online)
Vol.5, No.18, 2013

Business Innovation through knowledge sharing: An applied study on the Jordanian Mobile Telecommunications Sector

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Abstract
The study aimed to identify and examine the influence of the individual and organizational knowledge sharing enablers on knowledge sharing behavior that leads to develop firm innovation capability. A descriptive analytical methodology approach was adopted in this research. For the purpose of data collection; a questionnaire was developed and administered for collecting data from the sample. 150 questionnaires were distributed randomly to employees in the managerial and development levels of the companies, (98) retrieved and (95) were accepted for analysis. After that, data analysis took place to examine the study variables. After conducting the analysis, the study found that while there is a positive effect of the individual factor "enjoyment in helping others" and the organizational factor "top management support" on the employee knowledge sharing behavior. There is no influence of the individual factor "knowledge self efficacy" and the organizational factor "organizational rewards" on the employee knowledge sharing behavior.
Keywords: knowledge sharing, innovation, telecommunications, Jordan

1. Introduction

Due to the rapid development in the information and communication technology (ICT) and their effect in economy and industry, organizations nowadays are using knowledge as a strategic resource to achieve their objectives and goals and as a primary driver for sustaining organization competitive advantage. At the same time developing innovative products and services become essential for attaining and retaining competitiveness in the local and other global markets (Miron, *et a*l., 2004).

There is also increasing evidence that innovation management depends on knowledge, which is the key building block for innovation processes (Darroch and McNanughnton, 2002).

Researchers has shown considerable interest in innovation and how companies can develop their employees abilities, still there is a shallow understanding about the enablers and factors that positively influence the innovative capability of the firm.

There are many factors addressed as prerequisites that facilitate knowledge sharing behavior. These factors vary and range from individual to organizational level factors.The development of innovation capability of an individual through the development of knowledge behavior needs support of the right set of enablers. Therefore, organizations need to understand which knowledge sharing enablers are effective and key in creating conducive environment that facilitate knowledge sharing which will lead ultimately to reach innovation capability.

The Jordanian mobile telecommunication sector is one of the large and most efficient sectors in Jordan, it is highly competitive. This poses a stress on the management of these firms and their innovative capability as a means for achieving competitive advantage.

2. Objectives of the study

1. To show the importance of knowledge as a strategic resource for the organization and as a key promoter of innovation.
2. To identify knowledge sharing enablers on the organization and examine their effects in both knowledge sharing process and organization innovation capability.

3. Literature review

3.1. Knowledge sharing

Knowledge sharing is one of the most commonly discussed processes in the knowledge management in these days (Ford, 2001). Many people acquire knowledge but that is not enough, they need to share it so they can develop this knowledge. Knowledge sharing is different from communication and information distribution but all are related in a way or another (Nelson and Cooprider, 1996; Huber, 1991). Tuomi (1999) defined knowledge sharing as the readiness of someone within an organization to publish the knowledge he has with others. Knowledge sharing is a social process that takes place through the interaction and communication between individuals.

Bartol and Srivastava (2002) have defined knowledge sharing as individuals sharing of organizational relevant information, ideas, suggestions, and expertise with one another. The concept of knowledge sharing indicates the

giving and receiving of information framed within a context by the knowledge of the source (Sharratt and Usoro, 2003). Van Den Hooff and De Ridder's (2004) also defined knowledge sharing as a process where individuals commonly exchange their implicit (tacit) and explicit knowledge to create new knowledge. It can be deemed as an organization's routine whether organizations have clear procedure on knowledge sharing or not (Kharabsheh, 2007). It is also the process of exchanging data, information, know how, skills, feedback and expertise regarding products, procedures and processes (Myers and Cheung, 2008).

Knowledge transfer, knowledge diffusion, knowledge distribution, and information sharing are other terms that similarly describe the process of knowledge sharing (Hou, *et a*l., 2009; Kim and Ju, 2008; Kuo and Young, 2008).

There is another criteria for classifying knowledge related to the knowledge sharing behavior which divides it into individual and organizational knowledge. Individual knowledge is the knowledge that exist in the body and mind of the individual (Lam, 200). It includes both explicit and tacit knowledge (Assefa, 2010). Organizational knowledge is the knowledge that exists in the organization's knowledge repositories which appear in form of rules, procedures and routines (Lam, 200). It is embedded in the organization's services and products that made it remains within the organization even though one of the employees in the company leaves it (Assefa, 2010).

3.2. Knowledge sharing enablers

Previous researches listed different factors that facilitate knowledge sharing behavior, in this research knowledge sharing enablers will be categorized into two general factors, individual and organizational factors. In each one we will examine two main sub factors, enjoyment in helping others and knowledge self-efficacy as individual factors, top management support and organizational rewards as organizational factors.

3.3. Individual Factors

3.3.1 Enjoyment in helping others

Previous research considered Enjoyment in helping others as it derived from the concept of altruism. Altruism is the opposite of selfishness, it is the belief in or practice of disinterested and the selfless concern for the well-being of others(Lin, 2007). Altruism said that altruism is an expression that includes flexible behaviors that help specific others with organizationally relevant tasks or problems (Organ, 1988).

Knowledge workers can sometimes be encouraged by qualified altruism owning to their aspiration to help others (Constant, *et a*l., 1994; Davenport and Prusak, 1998). Employees are essentially motivated to put in knowledge because engaging in rational pursuits and solving tribulations are demanding or pleasant, and because it is a source of enjoyment to them (Wasko and Faraj, 2000).

3.3.2 Knowledge self-efficacy

Self-efficacy state is the judgments of persons based of their capabilities to manage and carry out courses of action necessary to attain detailed levels of performance (Bandura, 1986). Also it is the person's thinking about his/her capabilities to create most wanted effects (Bandura, 1994). Real self-efficacy leads to the growth of those skills that can therefore cause associated manners (Bandura, 1986). The goals people set, self-efficacy are very important predictors of and motivations to people's performance (Heslin and Klehe, 2006).

Self-efficacy can encourage employees to share knowledge with each other's (Wasko and Faraj, 2005). Researchers have also discovered that employees with good self confidence in their capability to offer helpful knowledge are more expected to achieve specific responsibilities (Constant, *et a*l., 1994). Self-efficacy has been found to be one of the key determinants in forming optimistic approaches on the way to knowledge sharing over a knowledge sharing context (Ye, *et a*l., 2006). Knowledge self-efficacy normally appears in people believing that their knowledge can encourage work efficacy and help to work out job related troubles (Luthans, 2003).

3.4. Organizational Factors

To make knowledge sharing more efficient, organizations have to produce a culture whereby knowledge sharing is encouraged and pleased (Forstenlechner and Lettice, 2007). Depending on this we can notice that the most important organizational factors that affect knowledge sharing behavior is the encouragement of employees, in other words the top management support and the organizational rewards system.

3.4.1 Top management support

Top management is a group that consists of persons on the chief level of organization management, who have day by day accountability in managing company.The organization's values are based on knowledge orientation, top management know how to influence workers attitudes by implementing and keeping values and positive beliefs towards knowledge (Yu, *et a*l., 2004). This is why top management's support is one of the important possible influences on organizational knowledge (Connelly and Kelloway, 2003).

Many studies have discovered that top management support is essential in creating a helpful environment and providing satisfactory resources (Lin, 2006). MacNeil (2004) highlighted the significance of the noticeable top management's support to organizational knowledge sharing environment. Moreover, Lin and Lee (2004) projected that the awareness of top management and their support to knowledge sharing beliefs is required for continuing an optimistic knowledge sharing culture in the organization.

Lin (2007) states that, availability of top management's support can help the employees getting positive awareness towards knowledge sharing. So, it is expected that top management support has significant job in increasing approach towards employees' knowledge sharing.

3.4.2 Organizational rewards

Hansen and Avital (2005) states that "the main factor which form employees' attitude towards knowledge sharing is formal incentive structure or rewards", that's why they believe that employees' attitudes towards knowledge sharing directly influenced by formal incentives the organization offer. Organizational rewards point out what the organization values outline in which the employees behave (Cabrera and Bonache, 1999). Chaudhry (2005) claims reward and incentive as inspiring factors for knowledge sharing. Rewards and incentives will expand a helpful approach for information sharing and make an organizational culture values the information sharing practices (Cantoni, *et a*l., 2001). It is unlikely to believe that people share their knowledge without allowing for some advantage in return (Al-Alawi, *et a*l., 2007).

Rewards are expected to have an effect on people's performance (Homans, 1974). According to Riege (2005) the lack of unambiguous reward and acknowledgment systems may aggravate employees to share their knowledge. Bring in a good knowledge sharing motivation system can encourage knowledge giving organizational members' (Chua, 2003).

Bock and Kim (2002) makes it clear that if one is sure about getting extrinsic benefit from knowledge sharing activity, like financial reward, promotion or study opportunity, his positive attitude and beliefs towards knowledge will be greater than before. Organizational rewards can vary from financial incentives such as salary increase and bonuses to non-financial reward such as promotions and job security (Davenport and Prusak, 1998; Hargadon, 1998).

3.5. Innovation

Different authors use different definitions of innovation that are appropriate under certain circumstances. An early simple definition of innovation introduced by Barnett (1953) defines innovation as the introduction of something new. Another early definition by Thompson (1965) considers innovation as a generation adoption and implementation of new ideas, processes, products or services. A more comprehensive definition is provided by West and Farr (1990) who defined innovation as an "intentional introduction and application of new products, processes, procedures, or ideas that are designed to significantly benefit the individual, the group, the organization or wider society".

From an organizational perspective, Damanpour (1991) defines innovation as the implementation of an idea or behavior that is new to the organization, whether though a system, policy, program, device, process, product or service. He also considers innovation as a means to change an organization, whether the change is a pre-emptive action to influence an environment or it's a response to its internal or external environment.

From a customer perspective, Porter and Stern (1999) view innovation as more than just science and technology. It is the transformation of knowledge into new products, processes and services to meet the needs of the customers. Cardinal, *et a*l., (2001) emphasized on this definition in a general way when he indicated that the innovation process encompasses the technical, physical, and knowledge based activities that are main to the product development procedures. Baker (2002) also considers innovation as a process to create something completely new from the start to the end but also it is able to quickly adopt externally new innovations that may be of benefit to the organization. He affirmed on the importance of external innovation coping and dealing as it is related to the internal innovation.

Innovation, according to Levitt (2002), is not a simple job. It is a concrete and difficult activity, which forces the organization to use its resources to a specific end. It involves, as Calcantone, *et a*l., (2002) goes on, the acquisition, dissemination, and use of a new knowledge. Herkema (2003) defines innovation as a knowledge process which aims at creating a new knowledge directed towards the development of commercial and applicable solutions. It is a process wherein knowledge is acquired, shared and assimilated under the aim of creating new knowledge that embodies products and services. He also emphasizes that innovation can be the adoption of an idea or behavior that is new to the organization.

According to Chen, *et a*l., (2004) innovation is the introduction of a new combination of the necessary factors into the production system. Gloet and Terziovski (2004) described innovation as the implementation of discoveries and interventions whether they are products, systems or processes.

All the previous definitions of innovation agreed that innovation is a process aimed to deliver a new product or service through doing existing practices differently (Assefa, 2010). The importance of them is that they distinguish innovation from other organizational terms in as much as innovation involves the "intentional introduction and application of new and improved ways of doing things" (Anderson, *et a*l., 2004).

According to GNU (2005) definitions of innovation it focuses on two things; the innovation of new products and the innovation of new process of existing products. There is an assumption that both have different social and economic impacts. Introduction of new products is generally supposed to have a positive impact to the income

growth and workers, while innovation in the process is more considered as a development of efficiency (Aulawi, *et a*l., 2009). Damanpour and Gopalakrishnan (2001) stress that it is important to differentiate between product and process innovation, as the implementation of each one of them requires different organizational skills and resources. For instance Ngah and Ibrahim (2009), think that product innovation requires the company to take in consideration the importance of customers' needs, design and production, while process innovation encourages the application of technology to improve efficiency in the development of a product.

3.5.1 Innovation capability

If we mention a deeper innovation view of point which relates to the firm tendency to innovation we should measure the innovation capability of the firm or organization. Miles and Snow (1978); Schumpeter (1938) define firm innovation capability as the firm's ability to create new value propositions through a set of activities; such as offering of new products or product services, adopting new organizational and operational practices, technological solutions or creating new skills and competencies. Innovation capability also defined as the skills and knowledge necessary to effectively realize, master and enhance existing technologies, and to create new ones (Lall, 1992).

Lawson and Samson (2001) define innovation capability and link it directly with knowledge as it is the ability to continuously convert ideas and knowledge into new products, processes and systems for the advantage of the firm and its stakeholders. Unlike Ussahawanitchakit (2007) who define innovation capability as the ability to develop new products that satisfy the market needs, develop its technological process, implement new products and technological process in the future and responds the activity of unpredictable technological changes and opportunities done by the competitors.

There are many views of the innovation capability among researchers. According to Wei (2006) there are several researchers and institutions who focus on how extent the ability in creating the right opportunity for innovation. Some researchers focus on measuring individuals' level of technique and creativity, while others develop components to examine the innovation capability of a company.

Raava (2007); Angehrn, *et a*l., (2001) agreed on that innovation capability can be measured on the individual level or company level. But this research study of innovation capability is focused on the assessment of firm innovation capability (company or firm level). That's why the innovation capability which will be explained in this research is the ability that formed as a result of knowledge sharing behavior among individuals in a firm, organization or company.

3.5.2 Innovation and knowledge sharing

Based on the view of knowledge sharing as one of the core and most important activity of knowledge management we can mention the relationship between knowledge and innovation, knowledge management and innovation to come moreover with the relationship between knowledge sharing and innovation.

We can now understand from previous studies that innovation is an outcome of knowledge (Afuah, 2003; Storey and Kelly, 2002; Bubner, 2001; Lin, 2001; Tsai, 2001; Drucker, 1985). According to Tsai (2001) any new products or new innovative idea will be part of new knowledge. While Storey and Kelly (2002) figured that lack of knowledge will slow down any innovation idea. Afuah (2003) recommend that innovation sometimes will lead us to utilize our benefits from the knowledge that we have by getting good leads and low customer services. In addition, Dougherty, *et a*l. (2002) improved that most institution will find a smooth and creative solution once they depend on the good knowledge. They argue that innovation depend heavily on the accumulation of new knowledge in an organization.

Davenport and Prusak (2002) believe that knowledge reflects the personality of any institutions which gives their employees to live an environment that motivate them to innovate in new ideas or new product processes.

Knowledge management indicates that where we can find an effective and creative innovation there will be a good knowledge management. It creates an environment advantageous to innovation (Du Plessis, 2007). This view is already improved by many authors (Smith, *et a*l., 2005; Darroch and McNaughton, 2002; Parlby and Taylor, 2000). Parlby and Taylor (2000) believe that knowledge management is all about supporting individuals to innovate, generate new ideas and exploit the organization's thinking power.

Literature hold that stored knowledge and its ease of retrieval is in the core of innovation capability. Seidler-de Alwis and Hartmann (2008) indicate that creativity is very important for innovation which derives from obvious, visible and invisible accumulation of experience. Augmenting that, Fiol (1996) believes and insist that any organization can find their way in innovation and generate innovation outcomes from the accumulated knowledge they have absorbed.

Marina (2007) believes that knowledge management can develop the way of innovation by applying major roles on it. On the basis of its view the first major role that knowledge management in innovation is related to the tacit knowledge. Knowledge management enables the sharing and codification of tacit knowledge. The second major role that knowledge management plays in innovation is supporting the conversion of implicit knowledge to

explicit one, which will automatically help to switch implied knowledge to become expressed. This support covers all needed platforms as well as the processes to ensure that tacit knowledge becomes explicit.

The third major role that knowledge management plays in innovation is related to the enabling of collaboration**.** Collaboration can foster innovation through offering technological platforms and tools that enable knowledge creation, sharing, gathering and leverage within these collaborative forums. Knowledge management role here is to facilitate collaboration.

Hargadon and Sutton (1997) cleared that when knowledge sharing takes place between individuals or groups within the organization, individual or group ideas appear novel to others. This can result in developing new product or product process. They further note that effective knowledge transfer between groups and individuals help much in problem solving.

Knowledge sharing, which also called, Knowledge dissemination and responsiveness to knowledge, are considered the most two important tools for innovation due to their ambiguous and unique nature (Teece, 1998; Grant, 1996; Day, 1994). In Nonaka and Takeuchi (1995) opinion, one of the most important tools of creativity is information sharing. But what makes information sharing more important is not the physical assets, instead it is those intellectual assets that increases in value with use (Carneiro, 2000).

Subramaniam and Youndt (2005) believe that, innovation is dependent on the amount of information we gathered from knowledge. Individual knowledge enhanced when people interact, that leads for a growth of new knowledge (Nonaka, 1994). Kharabsheh (2007) stated that individual stage of knowledge distribution helps organizations to switch any individual owned knowledge to become organizational knowledge among firms, While business value and innov

ation can be reached through a strategy of explicit knowledge exchange in the organization (Assefa, 2010).

4. Research model

In this study; knowledge sharing enablers have two dimensions namely organizational and individual factors, each one of them has two factors, enjoyment in helping others and knowledge self-efficacy are the individual factors where top management support and organizational rewards are the organizational factors. These factors are the independent variables of the study and it is proposed that they will directly affect the knowledge sharing behavior.

In the other hand knowledge sharing behavior also have two dimensions namely knowledge donation and knowledge collecting, these two behaviors recognized as intermediate factors that are linked to the dependent variable of the study, firm's innovation capability.

5. Research Hypothesis

Hypothesis 1: Individual factors (enjoyment in helping others and knowledge self efficiency) positively influence employee willingness to donate knowledge.

Hypothesis 2: Individual factors (enjoyment in helping others and knowledge self efficiency) positively influence employee willingness to collect knowledge.

Hypothesis 3: Organizational factors (top management support and organizational rewards) positively influence employee willingness to donate knowledge.

Hypothesis 4: Organizational factors (top management support and organizational rewards) positively influence employee willingness to collect knowledge.

Hypothesis 5: Employee willingness to donate knowledge positively influence firm innovation capability.

Hypothesis 6: Employee willingness to collect knowledge positively influence firm innovation capability.

Hypothesis 7: Knowledge sharing enablers positively influence firm innovation capability.

6. Research Methodology and Design

6.1. Population and sample

The population of this study consisted of all employees in the development and managerial levels of the mobile telecommunication companies in Jordan. The Jordanian mobile telecommunication sector consists of three companies Orange, Zain and Umniah. The total number of employees in these companies is 3800 employee divided into 2000, 1300, 500 employee respectively. The target population of this study was the employees' working in the managerial and development levels in the listed companies, as this study derived to assess their behavior. Employees in these departments are estimated to be 900, which is 24% of the total number of the sector personnel. A total of (300) questionnaire were distributed, (98) were retrieved with a (32%) response rate. (95) questionnaires were accepted for analysis.

6.2. Research instrument (Measures)

A questionnaire was used as the research survey instrument; it comprised a series of statements reflecting the items operationalising the constructs of the study. All statements were measured on a seven-point Likert scale,

ranging from strongly disagree (1) to strongly agree (7). The questionnaire was pretested and revealed no problems.

To ensure the validity of the instrument (questionnaire) the face validity method were used and the instrument was assessed by a group of five academic specialists. Face validity of questionnaire items was satisfactory according to the expert view point of the academics. Revisions were made to the questionnaire based on the comments and feedback receives from the academics. After considering their suggestions a final version of the questionnaire was developed.

To assess the instrument reliability the internal consistency was verified using Cronbach Alfa Coefficient for consistency. The closer it is to 1 the greater the internal consistency is; accordingly the results were statistically acceptable since the value is greater than 0.60 which is acceptable to administrative and human sciences (Sekaran, 2003). all of the values of Cronbach Coefficient are above 0.60 we can approve that the instrument is consistent.

7. Discussion of findings

After analyzing the collected data; findings of this study show that, the most primary enabler for both knowledge donation and collecting is the individual factor "enjoyment in helping others". This result implies that employees who are willing and motivated to share knowledge with colleagues feel pleasure in sharing knowledge and helping others. Based on this result we can understand the importance of the supportive organization culture and strong relationships between employees in supporting the knowledge sharing behavior. We can conclude that employees in the Jordanian telecommunication sector are friendly, collaborators and willing to help others and are enjoying that.

This result is consistent with some of previous studies that found that there is an influence of enjoyment in help others on knowledge sharing behavior such as Lin (2007) and (Rahab; Sulistyandari; Sudjono, 2011).

Findings also confirmed that the organizational factor "top management support" was effective to knowledge sharing behavior aand both of its' aspects donation and collecting. While the other organizational factor "organizational rewards" has no influence on knowledge sharing activities. These findings states that, employee knowledge sharing behavior is affected and encouraged by the influence of top management support but not dependent on the level of organizational rewards system .

Depending on this result we can conclude that employees in the Jordanian telecommunication sector companies are influenced by the psychological factors and concerned about their mangers support, help and encouragement more than the organizational rewards system and they are not expecting to receive more rewards to increases their knowledge sharing attitude. Also this may indicate that employees in the Jordanian telecommunication sector companies are satisfied with their jobs financially, they believe that their knowledge sharing behavior is psychologically rewarding.

Findings shows the last of the knowledge sharing enablers in this study, "knowledge self efficacy", has no influence on both of the knowledge sharing activities, donation and collecting. This could reflect that employees lack of confidence about the knowledge they own. Furthermore they may not be aware about the benefits that their knowledge will achieve to others if it was effectively shared with their colleagues. Based on this we can highlight the shortage of self confidence in employees personal knowledge may be the reason behind this result which is related to personality issues.

Results show that employee willingness to both donate and collect knowledge is significantly related to firm innovation capability and has influence on it. This finding reveals that knowledge sharing behavior and its activities could be considered as an enabler and pre-request for developing innovation capability. It is essential for having knowledge sharing culture in organizations and reinforcing knowledge sharing practices by management like trainings in knowledge transfer. Also managers should care about building and enhancing good relationships between colleagues to facilitate the knowledge sharing activates between them that lead to innovation in all of its forms.

Results showed that the there is a positive significant relationship between them were firm innovation capability influenced by applying knowledge sharing enablers. This finding show that knowledge sharing enablers in its two types can be applied to achieve an advantage on both willingness to share knowledge and improving firm innovation capability. Also it may lead to achieve firm innovation capability. Managers can take advantage of using these enablers to enable the knowledge sharing behavior of employees and enhancing the firm innovation capability.

The last result of this research is concerned with the impact and interaction between all of the study factors and over all of them. The significance of this result is to ensure the importance of knowledge sharing activities, donation and collecting, as intermediate factor that affected by the set of study enablers and affect the firm innovation capability.

The previous result showed the firm innovation capability is directly affected by knowledge sharing enablers, but we should also mention the importance of knowledge sharing activities as mediator between them. Results confirmed a positive significance of the knowledge sharing activities that are affected by knowledge sharing enablers on firm innovation capability. Managers should try to understand the importance of all the variables studied here and how they affected and effected in the interaction between them.

8. Conclusion

In summary, results of this study indicates that in the Jordanian telecommunication sector companies, the individual factor "enjoyment in helping others" effects on knowledge sharing activities within the companies while the factor "knowledge self-efficacy" has no effect. Organizational factors, "top management support" considered as a supportive factor to conduct knowledge sharing activities in that companies where "organizational rewards" factor didn't affect both activities of knowledge sharing.

Knowledge sharing behavior in its two activities (donation and collecting) has a positive effect over the company capability to innovate in the market. Organizational and individual enablers of knowledge sharing activities has a positive effect on firm innovation capability but the effect of those enablers on knowledge sharing activities will lead to more effect on firm innovation capability.

Executives in the Jordanian telecommunication sector companies should build an organizational culture that allows employees to interact smoothly with each other. This is done by encouraging employees to share knowledge they have with others. Managers also need to increase the level of enjoyment that employees feel when they help their colleagues and share knowledge with others.

Another critical success factor comes from top management ability to allowing subordinates to develop higher self-esteem by motivating them to be more confident about the knowledge they have and the usefulness it will give to the company if this knowledge is shared. So, telecom companies should support knowledge sharing activities among the workers.

Organizational rewards have a positive impact. However, management should use both types of incentives monetary and nonmonetary as they are both very important.

Knowledge sharing is directly linked to innovation. Organizations are supposed to encourage employees to gain new knowledge, develop existing one and share it with others.

Refrences

1. Afuah, A. (1998). Innovation Management: Strategies, Implementation and Profits, Oxford University Press, New York.
2. Afuah, A. (2003). Innovation Management, Oxford University Press, New York, NY.
3. Al-Alawi, A. I. Al-Marzooqi, N. Y. and Mohammed, Y. F. (2007). Organizational Culture and Knowledge Sharing: Critical Success Factors, Journal of Knowledge Management, Vol. 11 No. 2, pp. 22-42.
4. Angehrn, A., Nabeth T., Razmerita L. and Roda C. (2001). Centre For Advanced Learning Technologies (CALT) of The European Institute of Business Administration (INSEAD), In The Presentation of The Centre For Advanced Learning Technologies (CALT) of The European Institute of Business Administration (INSEAD), Conference, Lille France, Www.Calt.Insead.Edu/Publication/Conference/200 1 - IHM-HCI-Presentation_ of_ CALT.Pdf, Viewed 12th Agust 2007.
5. Assefa, T. (2010). Enabling Knowledge Sharing To Promote Innovative Organizations In Africa, A Paper To Be Presented At Expert Group Meeting on Harnessing Knowledge To Achieve Mdgs, Addis Ababa, Ethiopia.
6. Bandura, A. (1986). Social Foundations of Thought and Action: A Social Cognitive Theory, Prentice-Hall, Englewood Cliffs, NJ.
7. Bandura, A. (1994). Self-Efficacy, In Ramachaudran, V. S. (Ed.), Encyclopedia of Human Behaviour, Academic Press, New York, Vol. 4, pp. 71-81.
8. Barnett, H. G. (1953). Innovation: The Basis of Cultural Change, Mcgraw-Hill, New York, NY.
9. Bartol, K. M. and Srivastava, A. (2002). Encouraging Knowledge Sharing: The Role of Organizational Reward Systems, Journal of Leadership and Organizational Studies, Vol. 9 No. 1, pp. 64-76.
10. Bock, G. W. and Kim, Y. G. (2002). Determinants of The Individuals Knowledge Sharing Behavior: The Theory of Reasoned Action Perspective, Paper Presented At Pasific-Asia Conference on Information System (PACIS), Meiji University, Tokyo, Japan, pp. 1008-1023.
11. Bubner, D. (2001). An Innovative Approach to Measuring How Well Innovation Is Managed, Available At: www.Waveglobal.com (Accessed 21 January 2008).
12. Cabrera, E. F. and Bonache, J. (1999). An Expert HR System For Aligning Organizational Culture and Strategy, Human Resource Planning, Vol. 22 No. 1, pp. 51-60.

13. Cantoni, F., Bello, M. Frigorio, C. (2001). Lowering the Barriers to Knowledge Transfer and Dissemination: The Italian Cooperative Banks Experience. The 9th European Conference on Information System. Bled, Slovania, June 27-29.
14. Carneiro, A. (2000). How Does Knowledge Management Influence Innovation and Competitiveness?, Journal of Knowledge Management, Vol. 4, pp. 87–98.
15. Chaudhry, A. B. (2005). Knowledge Sharing Practices in Asian Institutions: A Multi-Cultural Persepective from Singapore, IFLA 2005, OSLO.
16. Chua, A. (2003). Knowledge Sharing: A Game People Play, Aslib Proceedings: New Information Perspectives, Vol. 55 No. 3, pp. 117-29.
17. Connelly, C. E. and Kelloway, E. K. (2003). Predictors of Employees' Perceptions of Knowledge Sharing Culture, Leadership & Organization Development Journal, Vol. 24 No. 5, pp. 294-301.
18. Constant, D., Kiesler, S. and Sproull, L. (1994). What's mine is ours or is it? A study of attitudes about information sharing, Information Systems Research, Vol. 5 No. 4, pp. 400-21.
19. Damanpour, F. (1991). Organizational Innovation: A Meta-Analysis of Effects of Determinants and Moderators, Academy of Management Journal, pp. 555–590.
20. Darroch, J. and Mcnaughton, R. (2002). Examining the Link between Knowledge Management Practices and Types of Innovation, Journal of Intellectual Capital, Vol. 3 No. 3, pp. 210-22.
21. Davenport, T. and Prusak, L. (1998). Learn How Valuable Knowledge Is Acquired, Created, Bought and Bartered, Australian Library Journal.
22. Davenport, T. and Prusak, L. (1998). Working Knowledge, Harvard Business School Press, Cambridge, MA.
23. Day, G. (1994). The Capabilities of Market Driven Organizations, Journal of Marketing, Vol. 58, pp. 37-52.
24. Dougherty, D., Munir, K. and Subramaniam, M. (2002). Managing Technology Flows in Practice: A Grounded Theory of Sustainable Innovation, Academy of Management Proceedings, Technology & Innovation Management Division, pp. E1-E6.
25. Du Plessis, M. (2007). The Role of Knowledge Management in Innovation, Journal of Knowledge Management, Vol. 11 No. 4, pp. 20-29.
26. Fiol, C. M. (1996). Squeezing Harder Doesn't Always Work: Continuing The Search For Consistency In Innovation Research. Academy of Management Review, Vol. 21, pp. 1012–1021.
27. Ford, D. (2001). Trust and Knowledge Management: The Seeds of Success, Queen's KBE Center for Knowledge-Based Enterprises, Queen's University, Kingston, ON, Canada, Available At: Http://Business.Queensu.Ca/Knowledge/Workingpapers/Working/Working_01-08.Pdf (Accessed 26 August 2004).
28. Forstenlechner, I. and Lettice, F. (2007). Cultural Differences in Motivating Global Knowledge Workers, Equal Opportunities International, Vol. 26, pp. 823-833.
29. Grant, R. M. (1996), Toward A Knowledge Based View of The Firm, Strategic Management Journal, Vol. 17, pp. 109-22.
30. Hansen, S. and Avital, M. (2005). Share and Share Alike: The Social and Technological Influences on Knowledge Sharing Behavior, Sprouts: Working Papers on Information Environments, System and Organizations, Vol. 5 No. 1, pp. 1-19, Http://Sprouts.Case.Edu/2005/050101.Pdf, (Viewed 17t August 2007).
31. Hargadon, A. and Sutton, R. (1997). Technology Brokering and Innovation in A Product Development Firm, Administrative Science Quarterly, Vol. 42 No. 4, pp. 716-49.
32. Hargadon, A. B. (1998). Firms As Knowledge Brokers: Lessons In Pursuing Continuous Innovation, California Management Review, Vol. 40 No. 3, pp. 209-27.
33. Heslin, P. A. and Klehe, U. C. (2006), Self-Efficacy, In Rogelberg, S.G. (Ed.), Encyclopedia of Industrial/Organizational Psychology, Vol. 2, Sage, Thousand Oaks, CA, pp. 705-8.
34. Homans, G. C. (1974). Elementary Forms of Social Behavior, 2nd Ed., Harcourt Brace Jovanovich, New York, NY.
35. Hou, H., Sung, Y. and Chang, K. (2009). Exploring the Behavioral Patterns of an online Knowledge-Sharing Discussion Activity among Teachers with Problem-Solving Strategy, Teaching & Teacher Education, Vol. 25, pp. 101-108.
36. Huber, G. P. (1991). Organizational Learning: The Contributing Processes and the Literatures, Organization Science, Vol. 2 No. 1, pp. 88–115.
37. Kharabsheh, R. A. (2007). A Model of Antecedents of Knowledge Sharing, Electronic Journal of Knowledge Management, pp. 419-426.
38. Kim, S. and Ju, B. (2008). An Analysis of Faculty Perceptions: Attitudes toward Knowledge Sharing and Collaboration in an Academic Institution. Library & Information Science Research, Vol. 30, pp. 282-290.

39. Kuo, F. and Young, M. (2008). Predicting Knowledge Sharing Practices through Intention: A Test of Competing Models, Computers in Human Behavior, Vol. 24, pp. 2697-2722.
40. Lall, S. (1992). Technological Capabilities and Industrialization, World Development, Vol. 20 No. 2, pp. 165–186.
41. Lam, A. (2000). Tacit Knowledge, Organizational Learning and Societal Institutions: An Integrated Framework, Organizations Studies, Vol. 18 No. 6, pp. 973-996
42. Lawson B. and Samson D. (2001). Developing Innovation Capability in Organizations: A Dynamic Capabilities Approach, International Journal of Innovation Management, Vol. 5 No. 3, pp. 377-400.
43. Lin, H. (2006). Impact of Organizational Support on Organizational Intention To Facilitate Knowledge Sharing, Knowledge Management Research and Practice, Vol. 4 No. 1, pp. 26-35.
44. Lin, H. (2007). Knowledge Sharing and Firm Innovation Capability: An Empirical Study, International Journal of Manpower, Vol. 28 No. 3/4, pp. 315-332.
45. Lin, H. and Lee, G. G. (2004). Perceptions of Senior Managers toward Knowledge-Sharing Behavior, Management Decision, Vol. 42 No. 1, pp. 108-25.
46. Lin, I. (2001). Innovation in the Networked World, In Hamilton, B. (Ed.), Innovation and Imagination at Work, Mcgraw-Hill, Sydney, pp. 1-16.
47. Luthans, F. (2003). Positive Organizational Behavior: Developing and Managing Psychological Strengths, Academy of Management Executive, Vol. 16 No. 1, pp. 57-75.
48. Macneil, C. M. (2004). Exploring the Supervisor Role as a Facilitator of Knowledge Sharing In Teams, Journal of European Industrial Training, Vol. 28 No. 1, pp. 93-102.
49. Marina du Plessis (2007). Knowledge management: what makes complex implementations successful?, Journal of Knowledge Management, Vol. 11, No. 2, pp. 91 – 101.
50. Miles, R. E. and Snow, C. C. (1978). Organizational Strategy, Structure, and Process, New York: Mcgraw-Hill.
51. Miron, E., Erez, M. and Naveh, E. (2004). Do personal characteristics and cultural values that promote innovation, quality, and efficiency compete or complement each other?, Journal of Organizational Behavior, Vol. 25, pp. 175-99.
52. Myers, M. and Cheung, M. (2008). Sharing Global Supply Chain Knowledge, MIT Sloan Management Review, Vol. 49 No. 4, pp. 67-73.
53. Nelson, K. M. and Cooprider, J. G. (1996). The Contribution of Shared Knowledge To IS Group Performance, MIS Quarterly, Vol. 20 No. 4, pp. 409–429.
54. Nonaka, I. (1994). A Dynamic Theory of Organizational Knowledge Creation, Organizational Science, Vol. 5 No. 1, pp. 14-37.
55. Nonaka, I. and Takeuchi, H. (1995). The Knowledge Creating Company: How Japanese Companies Crate The Dynamics of Innovation, Oxford: Oxford University Press.
56. Organ, D. W. (1988). Organizational Citizenship Behavior: The Good Soldier Syndrome, Lexington Books, Lexington, MA.
57. Parlby, D. and Taylor, R. (2000). The Power of Knowledge: A Business Guide To Knowledge Management, Available At: www.Kpmgconsulting.Com/Index.Html
58. Raava, M., (2007). A Manager's Ambiversion as a Prerequisite for Innovation. www.Prokons.Ee/Files/1171611795.Pdf, (Viewed 2nd January 2008).
59. Rahab, Sulistyandari, Sudjono, (2011). The Development of Innovation Capability of Small Medium Enterprises Through Knowledge Sharing Process: An Empirical Study of Indonesian Creative Industry, International Journal of Business and Social Science, Vol. 2 No. 21. [Special Issue – November 2011].
60. Riege, A. (2005). Three-Dozen Knowledge-Sharing Barriers Managers Must Consider, Journal of Knowledge Management, Vol. 9 No. 3, pp. 18-35.
61. Schumpeter, E. B. (1938). English Prices and Public Finance, Review of Economic Statistics Vol. 20, pp. 21–37.
62. Sekaran, U. (2003). Research method for business: a skill building approach, John Wiley & Sons, 4th edition.
63. Sharratt, M., and Usoro, A. (2003). Understanding Knowledge-Sharing In online Communities of Practice, Electronic Journal on Knowledge Management, Vol. 1 No. 2, pp. 187-196.
64. Smith, K. G., Collins, C. J. and Clark, K. D. (2005). Existing knowledge, knowledge creation, capability, and the rate of new product introduction in high-technology firms, Academy of Management Journal, Vol. 48 No. 2, pp. 346-57.
65. Storey, C. and Kelly, D. (2002). Innovation in Services: The Need For Knowledge Management, Australasian Marketing Journal, Vol. 10 No. 1, pp. 59-70.

66. Subramaniam, M. and Youndt, M. A. (2005). The Influence of Intellectual Capital on the Types of Innovative Capabilities, Academy of Management Journal, Vol. 48 No. 3, pp. 450-63.
67. Teece, D. J. (1998). Capturing Value from Knowledge Assets: New Economy, Market For Know-How and Intangible Assets, California Management Review, Vol. 40 No. 3, pp. 55-79.
68. Thompson, V. A. (1965). Bureaucracy and Innovation, Administration Science Quarterly, Vol. 5 No. 1, pp. 20.
69. Tsai, W. (2001). Knowledge Transfer in Intra-Organizational Networks: Effects of Network Position and Absorptive Capacity on Business Innovation and Performance, Academy of Management Journal, Vol. 44 No. 5, pp. 996-1004.
70. Tuomi, I. (1999). Data Is More Than Knowledge: Implications of The Reversed Knowledge Hierarchy For Knowledge Management and Organizational Memory. Journal of Management Information Systems, Vol.16, pp. 103-117.
71. Ussahawanitchakit, P. (2007). Innovation Capability and Export Performance: An Empirical Study of Textile Business in Thailand, International Journal of Business Strategy, Vol. 7 No. 1, pp. 1-9.
72. Van Den Hooff, B. and De Ridder, J. A. (2004). Knowledge Sharing In Context: The Influence of Organizational Commitment, Communication Climate and CMC Usage on Knowledge Sharing, Journal of Knowledge Management, Vol. 8 No. 6, pp. 117-30.
73. Wasko, M. M. and Faraj, S. (2000). It is what one does: Why People Participate and Help Others in Electronic Communities of Practice, Journal of Strategic Information Systems, Vol. 9 No. 2, pp. 155-73.
74. Wei, S. L., (2006). The Impacts of Technological Opportunity and Technology Integration Capability on Business Performance: An Empirical Study of High-Tech Industry In Taiwan, M.S. Thesis, Institute of Business Administration, National Cheng Kung University.
75. West, M. A. and Farr, J. L. (1990). Innovation and Creativity At Work: Psychological and Organizational Strategies, Wiley, Chichester, pp. 3-13.
76. Ye, S., Chen, H. and Jin, X. (2006). An Empirical Study of What Drives Users To Share Knowledge In Virtual Communities, In Lang, J., Lin, F. and Wang, J. (Eds), Knowledge Science, Engineering and Management, Springer, Berlin, pp. 563-75.
77. Yu, S. H., Kim, Y. G. and Kim, M. Y. (2004). Linking Organizational Knowledge Management Driver To Knowledge Management Performance: An Exploratory Study, Proceedings of The 37th Annual Hawaii International Conference on System Science, 5-8 January 2004, Manoa, Vol. 8 No. 8, pp. 80237.