Review of Factors Affecting Knowledge Sharing Behavior

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Abstract-**Knowledge sharing is the key to successful implementation of knowledge management. This is the reasons that why over the year's researchers have focused on various aspects of knowledge sharing. This paper reviews the important factors so far discussed by various authors in their studies and considered them very crucial for knowledge sharing. Besides reviewing, some new factors are also included in this study. Factors which are discussed in this study are organizational structure, organizational climate, organizational size, Information Technology, rewards, stressors and job. This paper can give readers an understanding of knowledge sharing and its factors.**

Keywords: Knowledge Sharing Behavior; Job Factor; Stressors; IT; Rewards

I. INTRODUCTION

Earlier Knowledge Management (KM) was not considered important for organizations but now knowledge is considered as the economic resource for an organization [1], [2]. Knowledge sharing is considered as the most significant part of KM [3]. Therefore it can be concluded that knowledge sharing is the base for KM [4]. Knowledge is possessed by individuals and the incorporation of individual's knowledge into organizational knowledge depends on "employees' knowledge sharing behavior" [5].

Although knowledge sharing is crucial but still individuals do not share their knowledge because they consider it important for themselves [6] as it can help them to remain valuable in the organization. They can not be enforced to share their knowledge but can be motivated to do so [7]. Even though there are motivational methods to encourage knowledge sharing behavior but changing the behavior of individuals is one of the greatest challenges for the success of KM [8] and knowledge sharing.

Importance of knowledge sharing for KM requires about knowing that how employees can be motivated to share

information in a way that organization's overall intellectual capital can be leveraged [9]. Thus it is always important to know about those factors which might increase knowledge sharing behavior because it is not easy to incorporate the knowledge of an individual into organizational knowledge. People do not prefer to share their knowledge due to multiple reasons [10]. Those reasons include organizational factors, stressors and personal gains. Once people are hesitant to share their knowledge with others in the organization then knowledge gaps will emerge. These knowledge gaps will act as barrier in achieving the desired outcomes [11].

Based on these issues it is important to come up with those factors which will help to increase the knowledge sharing behavior of employees so that knowledge gaps can be reduced. People believe that technology is the major facilitator for knowledge sharing but this is not the case with large organizations. They have many sophisticated methods for knowledge sharing but still that technology is helping them very little. Thus sharing is primarily peopled oriented [12]. Besides technology, there are certain other factors which help to increase the knowledge sharing behavior and it is important to know them [13]. Majority of the studies have discussed factors which includes intrinsic and extrinsic rewards [3], organizational climate & socio-psychological factors [10], ICT [4], long term, short term benefits and costs [14]. There are certain other factors from organizational behavior perspective on which very less work is done and thus this research also focuses on those factors. Those factors include job related issues like job performance, job satisfaction, job characteristics and job involvement. Other factors include employee related issues (psychological contract, organizational commitment, employee turnover and empowerment), organizational factors and stressors. Although these factors may not directly impact knowledge sharing behavior but they do impact.

II. LITERATURE REVIEW

KM involves capturing, storing, sharing and using knowledge [15] where as knowledge sharing is the process in which an individual shares knowledge with others. This knowledge is either created or acquired by that individual [7]. Knowledge sharing was also defined in [13] as: "for individual employees, knowledge sharing is talking to a colleague to help them get something done better, more quickly or more efficiently. For an organization, knowledge sharing is capturing, organizing, reusing and transferring experience-based knowledge that resides within the organization and making that available to others in the business".

Knowledge sharing behavior is an act of individual because knowledge is possessed by them [5]. And behavior or act of an individual can be mainly defined by two theories known as Theory of Reasoned Action (TRA) and Theory of Planned Behavior (TPB). TRA is the base of TPB and TRA can predict almost any kind of behavior [14]. Many researchers have used these tow theories especially TRA to predict knowledge sharing behavior.

A. Theory of Reasoned Action and Theory of Planned Behavior

TRA states that behavior of an individual is lead by intention which ultimately depends on attitude and subjective norms [16], whereas TPB is the enhanced version of TRA. TPB explains that perceived behavioral control is another factor which should be considered while analyzing the behavior of an individual through TRA. Based on TRA and TPB, one can conclude that knowledge sharing behavior is derived by knowledge sharing intention which is a function of knowledge sharing attitude, subjective norms and perceived behavioral control.

Even though an individual has the knowledge sharing attitude and intention, still that individual can lack knowledge sharing behavior. This is because of the reason that there are some external factors as well that can affect it [17]. Although there can be many kind of such factors but one of the factors widely explored by researchers and practitioners is reward. Numerous researchers have concluded that rewards can have an impact on knowledge sharing behavior because people do not share for free. In other words there is no "free lunch" [9]. This phenomenon can be explained by two theories which are known as Economic Exchange Theory (EET) and Social Exchange Theory (SET). Researchers have combined TRA, TPB with SET and EET to see the overall knowledge sharing behavior.

B. Economic Exchange Theory and Social Exchange Theory

EET states that "individuals will behave by rational self-interest. Thus knowledge sharing will occur when rewards exceeds its costs" [18], [19]. This means that there should be some extrinsic rewards in exchange of knowledge sharing; only then individuals will share their knowledge. On the other hand SET says that there should be some intrinsic rewards for knowledge sharing [20].

Knowledge sharing behavior and the factors affecting this behavior are under consideration of researchers from many years. They have proposed a set of factors which might impact knowledge sharing attitude, intention or behavior based on the findings that there can be some external factors which can impact behavior [17]. There are factors whose presence might increase knowledge sharing behavior or vice versa.

C. Factors Promoting and Hindering Knowledge Sharing Behavior

Earlier rewards were considered to increase the knowledge sharing behavior. Later researchers proved that rewards (extrinsic) can only be used for short term solution. Once they are taken away, people go back to their behavior [21]. Thus they can be used to start a process but not for long term purpose [3]. Rewards can be categorized into intrinsic and extrinsic rewards. Extrinsic rewards may only be useful for temporary purpose [22]. Reference [10] also concluded that extrinsic rewards can not be used as primary motivational factor for knowledge sharing behavior. On the other hand intrinsic rewards are without monetary expectations and they are in-built so they can last longer. These two concepts (extrinsic and intrinsic rewards) were also discussed by EET and SET.

Culture and climate of an organization also plays a vital role in building a knowledge sharing behavior of an individual. Organizational culture is "evolved context within which specific situations are embedded" [23], [10]. It has a history; people hold it "collectively" and it can not be easily manipulated by power or influence [10] whereas organizational climate "refers to a contextual situation at a point in time and is linked to the thoughts, feelings and behavior of organizational members" [23], [10]. It is temporary in nature and can be manipulated "by people with power and influence" [10]. For knowledge sharing, organizational culture is more important because knowledge sharing needs a supporting organizational culture [14]. A culture which cannot be manipulated and people trust it when they think of sharing. An environment in which knowledge sharing is considered important, employees share willingly instead of being forced [13].

As we know that value of knowledge increases on sharing [24]. And knowledge sharing process involves 'knowledge donation' and 'knowledge collection' [25]. This means communication is an important aspect (for knowledge donation and collection). Knowledge sharing involves social interaction [26], [27] and this is not possible without communication because communication in an organization plays a similar role like a heart plays in a body [28]. Individuals and departments in an organization cannot survive without communicating. This communication between individuals, departments and organizations helps to collect and gain knowledge thus improving the level of trust which is another crucial factor for knowledge sharing.

Time and space is also considered an important factor affecting knowledge sharing behavior [29], [30]. If

employees are too busy in doing their own job and do not have sufficient time to communicate with their colleagues then it is hard that knowledge sharing can occur in such conditions. Cognitive barriers [31], [7], [29], [32] can decrease the knowledge sharing behavior among employees if such gaps exist in the organization. Some other barriers include structural barriers (authority and status hierarchies) [31], [29], [30], [32], [33], [34] and organizational size [35].

D. Availability of Technology for Knowledge Sharing

Technology infrastructure facilitates easy communication which is the key to knowledge sharing [33]. Although IT is considered as one of the important means of knowledge sharing but still it is not the most important factor. Knowledge resides in the minds of people thus social aspect of knowledge sharing behavior is more important as compare to technical side. IT can no doubt facilitate people while sharing their knowledge but it can not make sure that it is the only reason for knowledge sharing.

E. Job Related Issues

Job Performance is defined as "the level of productivity of an individual employee, relative to his or her peers, on several job-related behaviors and outcomes" [36]. Job performance has a positive impact on affective organization commitment [37] which in turn has a positive relationship with knowledge sharing [38]. Similarly, a study by [39] analyzed that organizational commitment may influence knowledge sharing willingness. Thus according to transition relation, job performance has a positive relationship with organizational commitment and organizational commitment has a positive relationship with knowledge sharing thus we can predict that job performance also has a positive relationship with knowledge sharing.

*Job Satisfaction is defined as "*a person's evaluation of his or her job and work context" [40]. Job satisfaction has a positive relationship with affective organizational commitment [37] and organizational commitment has a positive relationship with knowledge sharing [38]. Thus it can be concluded that job satisfaction has a positive relationship with knowledge sharing.

Each *job characteristics* (skill variety, task identity, task significance, autonomy and feedback) has a positive relationship with organizational commitment [41]. On the other hand organizational commitment has a positive relationship with knowledge sharing [38] thus job characteristics has a positive relationship with knowledge sharing.

Job Involvement is defined as "the degree to which a person is identified psychologically with his work or the importance of work in his total self-image" [42]. "Higher level of job involvement enhances job satisfaction, career satisfaction and organizational commitment" [43] whereas organizational commitment has a positive relationship with knowledge sharing [38], thus it can be predicted that job involvement has a positive relationship with knowledge sharing.

F. Employee Related Issues

Employee attitude towards organization can be measured by his/her turnover intention, commitment towards organization, psychological contract and empowerment in job.

Employee Empowerment is defined as "the feeling of control and self-efficacy that emerges when people are given power in a previously powerless situation" [40]. "Employee empowerment and teamwork" positively affect organizational commitment [44] and organizational commitment has a positive relationship with knowledge sharing [38], thus employee empowerment positively affects knowledge sharing.

Organizational Commitment is defined as "a person's emotional attachment to, identification with, and involvement in a particular organization" [40]. Organizational commitment has a positive impact on knowledge sharing [38]. It is because of the reason that when people are committed to their organization then they will not think only for themselves. They will think for the overall benefit of the organization and that is possible by increasing the overall productivity of employees which can be achieved through knowledge sharing.

Psychological Contract is "an exchange agreement between individuals and their organization" [45]. Organizational commitment is the output of psychological contract [46]. This means that psychological contract has a positive relationship with organizational commitment and organizational commitment has a positive impact on knowledge sharing [38], thus psychological contract has a positive relationship with knowledge sharing.

Employee Turnover Intention is related to organizational commitment in inverse direction [47]. Therefore higher the turnover intention, lower will be the organizational commitment. Based on this, one can conclude that when turnover has a negative impact on organizational commitment and organizational commitment has a positive impact on knowledge sharing [38], then employee turnover intention will have an inverse relationship with knowledge sharing.

G. Stressors

Stress is "an adaptive response to a situation that is perceived as challenging or threatening to the person's well-being" [40] whereas stressors are "any environmental condition that place a physical or emotional demand on the person" [40]. This means that higher the organizational commitment, lower will be the job stress and other stressors. There are five kinds of stressors. These are physical environment, role-related, interpersonal, organizational and non-work stressors [40].

Organizational commitment negatively affects job stress [48]. This means that higher level of job stress will result lower level of organizational commitment. On the other hand organizational commitment has a positive relationship with knowledge sharing [38], thus it can be concluded that stressors which lead to job stress will have a negative impact on knowledge sharing which means that lower level of stressors will result in higher level of knowledge sharing. On

the other hand job stress also affects job performance [49] which too has an impact on job satisfaction and indirectly on knowledge sharing.

III. CONCLUSION

Ample amount of work has been done on factors affecting knowledge sharing behavior. However, because human behavior is always complex and difficult to predict, more research work should be done. For this purpose current study tried to conceptually link some of the factors to knowledge sharing. This paper summarized the most repeatedly used factors which affect knowledge sharing behavior along some new dimensions from organizational behavior perspective. Most important factors discussed by previous work done in this field include organizational culture, organizational size, organizational climate, IT and rewards. Other includes job factors, stressors and employee-organization related issues. Little work is done on these factors (job factors, stressors and employee-organization related issues) and their impact on knowledge sharing. Therefore a comprehensive empirical approach is needed to explore the relationship between these factors and knowledge sharing behavior.

REFERENCES

[1] P. F. Drucker, "The Information Executives Truly Need," Harvard Business Review, pp. 54-62, January-February 1995.

[2] R. Blumentritt and R. Johnston, "Towards a strategy for knowledge management," Technology Analysis & Strategic Management, Vol. 11, No. 2, pp. 287-300, September 1999

[3] G. Bock and Y. Kim, "Breaking the Myths of Rewards: An Exploratory Study of Attitudes about Knowledge Sharing", PACIS Proceedings, 2001

[4] H. Ahmad, N. Sharom, and C. S. Abdullah, "Knowledge Sharing Behavior in Public Sector: the Business Process Management Perspectives", http://www.eg2km.org, 2006

[5] I. Nonaka and N. Konno, "The Concept of 'Ba': Building a Foundation for Knowledge Creation," California Management Review, Vol. 40, No. 3, pp. 40-54. 1998

[6] T. H. Davenport, "Some Principles of Knowledge Management," Business and Strategy, pp. 34-41 September 1995

[7] M. Gibbert and H. Krause, "Practice Exchange in a Best Practice Marketplace, in Knowledge Management Case Book: Siemens Best Practices", T. H. Davenport and G. J. B. Probst (Eds.), Publicis Corporate Publishing, Erlangen, Germany, pp. 89-105. 2002

[8] R. Ruggles, "The State of Notion: Knowledge Management in Practice," California Management Review, Vol. 40, pp. 80-89, 1998

[9] F. Barachini, "Cultural and Social Issues for Knowledge Sharing," Journal of Knowledge Management, Vol. 13, No. 1, pp. 98-110, 2009

[10] G. Bock, Y. Kim and J. Lee, "Behavioral Intention Formation in Knowledge Sharing: Examining the Roles of Extrinsic Motivators, Social-Psychological Forces, And Organizational Climate," MIS Quarterly, Vol. 29, No. 1, pp. 87-111, 2005

[11] L. Baird and J. Henderson, "The knowledge engine", San Francisco, CA: Berrett-Koehler, 2001

[12] R. McAdam and R. Reid, "SME and large organization perceptions of knowledge management: comparisons and contrasts," Journal of Knowledge Management, Vol. 5, No. 3, pp. 231-241, 2001

[13] H. Lin, "Effects of extrinsic and intrinsic motivation on employee knowledge sharing intention," Journal of Information Science, Vol. 33, No. 2, pp. 135-149, 2007

[14] Q. Huang, R. M. Davison and J. Gu, "Impact of personal and cultural factors on knowledge sharing in China," Asia Pacific J Manage, Vol. 25, pp. 451-471, 2008

[15] T. H. Davenport and L. Prusak, "Working Knowledge," Harvard Business School Press, Boston, 1998

[16] M. Fishbein and I. Ajzen, "Beliefs, Attitude, Intention and Behavior: An Introduction to Theory and Research," Philippines: Addison-Wesley Publishing Company, 1975

[17] I. Ajzen and M. Fishbein, Understanding Attitudes and Predicting Social Behavior, Englewood Cliffs, NJ: Prentice-Hall, 1980

[18] H. H. Kelley ND W. J. Thibaut, Interpersonal Relations: A Theory of Interdependence, NY: Wiley, 1978

[19] D. Constant. S. Kiesler and L. Sproull, "What's Mine Is Ours, or Is It? A Study of Attitudes about Information Sharing," Information Systems Research, Vol. 5, pp. 400-421, 1994

[20] P. Blau, Exchange and Power in Social Life, New York: Wiley, 1967

[21] A. Kohn, "Why Incentive Plans Cannot Work," Harvard Business Review, pp. 54-63, Sept.- Oct. 1993

[22] C. H. Kelman, "Compliance, Identification, and Internalization: Three Processes of Attitude Change," Journal of Conflict Resolution, Vol. 2, pp. 51-60, 1958

[23] R. D. Dennison, "What Is the Difference between Organizational Culture and Organizational Climate? A Native's Point of View on a Decade of Paradigm Wars," Academy of Management Review, Vol. 21, No. 3, pp. 619-654, 1996

[24] S. Bhirud., L. Rodrigues and P. Desai, "Knowledge sharing practices in KM: A case study in Indian software subsidiary," Journal of Knowledge Management Practices, Vol. 2, No. 2, pp. 83-90, 2005

[25] B. van den Hoof and A. J. de Ridder, ''Knowledge sharing in context: the influence of organizational commitment, communication climate and CMS use on knowledge sharing," Journal of Knowledge Management, Vol. 8, No. 6, p. 118, 2004

[26] H. M. Zack, "Developing a knowledge strategy", California Management Review, Vol. 41, No. 3, 1999

[27] C. J. Lang, "Managerial concerns in knowledge management," Journal of Knowledge Management, Vol.5, No.1, pp.43-57, 2001

[28] C. J. Thomas., A. W. Kellogg and T. Erickson, "The knowledge management puzzle: Human and social factors in knowledge management," IBM Systems Journal, Vol. 40, No. 4, pp. 863-884, 2001

[29] J. P. Hinds and J. Pfeffer, "Why Organizations Don't 'Know What They Know': Cognitive and Motivational Factors Affecting the Transfer of Expertise, in Sharing Expertise: Beyond Knowledge Management," M. Ackerman, V. Pipek, and V. Wulf (Eds.), MIT Press, Cambridge, MA, pp. 3-26, 2003

[30] D. Leonard and S. Sensiper, "The Role of Tacit Knowledge in Group Innovation," California Management Review, Vol. 40, No. 3, pp. 112-132, 1998

[31] M. N. Dixon, "Common Knowledge: How Companies Thrive by Sharing What They Know", Harvard Business School Press, Boston, 2000.

[32] G. V. Krogh., K. Ichijo and I. Nonaka, "Enabling Knowledge Creation," Oxford University Press, Oxford, England, 2000

[33] S. Kim and H. Lee, "Organizational factors affecting knowledge sharing capabilities in E-Government: An Empirical study," Proceedings of the 2004 annual national conference on Digital government research, Seattle, WA, 2004

[34] D. E. W. Creed, & E. R. Miles, "Trust in organizations: A conceptual framework linking organizational forms, managerial philosophies, and the opportunity costs of controls," In R. M. Kramer & T. R. Tyler (Eds.), Trust in organizations: Frontiers of theory and research. Thousand Oaks, CA: Sage Publications, 1996

[35] A. Serenko., N. Bontis and T. Hardie, "Organizational size and knowledge flow: a proposed theoretical link," Journal of Intellectual Capital, Vol. 8, No. 4, pp. 610-627, 2007

[36] J. B. Babin and S. J. Boles, "Employee behavior in a service environment: a model and test of potential differences between men and women," Journal of Marketing, Vol. 62, No.2, pp.7-91, 1998

[37] O. Karatepe and M. Tekinkus, "The effects of work-family conflict, emotional exhaustion, and intrinsic motivation on job outcomes of front-line employees," International Journal of Bank Marketing, Vol. 24 No. 3, pp. 173-93, 2006

[38] [38] E. Jacobs and G. Roodt, "The development of a knowledge sharing construct to predict turnover intentions," Aslib Proc., Vol. 59: pp. 229-248, 2007

[39] J. Storey and E. Barnett, "Knowledge Management Initiatives: Learning from Failure," Journal of Knowledge Management, Vol. 4, No. 2, pp. 145-156, 2000

[40] L. S. McShane, & A. M. V. Glinow, "Organizational Behavior," New York, McGraw Hill, 2000

[41] H. M. Abu Elanain, "Job characteristics, work attitudes and behaviours in a non-western context," Journal of Management Development, Vol. 28, No. 5, pp. 457-477, 2009

[42] M. T. Lodahl and M. Kejner, "The definition and measurement of job involvement," Journal of Applied Psychology, Vol. 49, pp. 24-33, 1965

[43] M. Igbaria., J. S. Schiffman and J. T. Wieckowski, "The respective roles of perceived usefulness and perceived fun in the acceptance of microcomputer technology," Behaviour & Information Technology, Vol. 13, pp. 349-361, 1994

[44] N. Karia and H. M. Asaari, "The effects of total quality management practices on employees' work-related attitudes," The TQM Magazine, Vol. 18, No. 1, pp. 30–43, 2006

[45] H. Zhao, S.J. Wayne, B.C. Glibkowski and J. Bravo, "The impact of psychological contract breach on work-related outcomes: A meta-analysis," Personnel Psychology, Vol. 60, pp. 647–680, 2007

[46] P. Massingham and K. Diment, "Organizational commitment, knowledge management interventions, and learning organization capacity," The Learning Organization, Vol. 16, No. 2, pp. 122-142, 2009

[47] S. Camp, "Assessing the effects of organizational commitment and job satisfaction on turnover: An event history approach," The Prison Journal, Vol. 74, pp. 279–305, 1994

[48] K. J. Sager, "Reducing Sales Manager Job Stress," The Journal of Consumer Marketing, Vol. 7, No. 4, pp. 5-14, 1990

[49] S. E. Williams, R. T. Konrad., E. W. Scheckler., E. D. Pathman., M. Linzer., E. J. McMurray., M. Gerrity., and M. Schwartz, "Understanding physicians' intentions to withdraw from practice: the role of job satisfaction, job stress, mental and physical health," Health Care Manage Review, Vol. 26, No.1, pp. 7-19, 2001