

Knowledge creation (seci) through Human resource practices and rapport: a conceptual model from social perspective

Wali UR Rehman

Department of Management Sciences,
COMSATS Institute of Information Technology, Islamabad

Keywords

Knowledge, SECI, Knowledge Management, HR Practices, Social Perspective, PSF

Abstract

The paper, primarily descriptive in nature, on the basis of previous literature, aims at developing a conceptual model by integrating the human resources practices and rapport (social perspective – relational variables) for knowledge creation. Nonaka and Takeuchi (1995) SECI model integrated with a modified model developed by Kase, Paauwe and Zupan (2009) to hypothesize the mechanism through which HR practices facilitate knowledge creation. However, some testable propositions are developed for testing in future. Some testable propositions, on the basis of the integrated conceptual model and the relevant literature in the field of knowledge management, are developed in the study. These propositions have implications for researchers in their future research endeavors. Kase, et al. (2009) used MRQAP for necessary conversions and appropriate analysis of data (collected for dyads). Furthermore, some new conceptual models can be developed by inclusion of personality traits (as moderator) in the model.

1. Introduction

The growing dependence of the organizations, especially the professional service firms, on knowledge compels them to create knowledge both internally and through its external environment. This quest for knowledge or the useable ideas (i.e., relevant, current and actionable as argued by Bailey & Clarke, 2000), has put all the organizations on their toes. The same can be seen from the increasing emphasis on the knowledge based-view of the firm in increasing number of researches (e.g., Grant, 1996; Van den Bosch et al., 2005 and Taminiau, Smit and de Lange, 2007). As for any other resource there is a proper management, which can ensure its efficient and effective utilization, it is also required for knowledge to be managed. According to Malhotra (1998), one of the definitions of the knowledge management is the organizational capacities/capabilities and processes to create knowledge through synergistically combining the technologies, activities and human resources – basic source of information sharing and creation. However, according to Drucker (1999) knowledge management is to attain competitive advantage by planning, organization, controlling, exploitation and coordination of individual knowledge resources (Also see Perseus Publishing, 2002).

There is a plethora of researches which contributed in the field of knowledge management, particularly in development of conceptual model (e.g., Nonaka & Takeuchi 1995; Bailey & Clarke 2000; Lowendahl et al. 2001; Kaše et al., 2009; Swart, & Kinnie, 2010; and Taminiau et al., 2007) to facilitate managers to capitalize on for proper management of knowledge for the benefit of the individuals as well as organizations. However, most cited and very famous model in the field of knowledge management is developed by Nonaka and Takeuchi (1995), famously known as SECI model – short form of socialization, externalization,

combination and internalization. Their theory was originally based on the theory of Polyani (1958), one of the pioneers of the knowledge management research, particularly knowledge as a tacit knowledge. The model conceptualizes the modes of creation and conversion of different kinds of knowledge i.e., tacit and explicit knowledge. The four modes of conversion combine tacit to tacit, tacit to explicit, explicit to explicit and explicit to tacit, respectively. Firms, especially those which are depending on knowledge as strategic resource for competitive advantage over its competitors, need to usefully capitalize on the model in order to strengthen its resource base i.e., knowledge. Research has shown that firms can gain competitive advantage either by increasing its knowledge stock i.e., a unique, which cannot be imitated, or by increasing its capacity for innovatively and creatively blending its core resource (i.e., knowledge, if it is not unique) with other resources (Lowendahl, Revang & Fosstenlokken, 2001).

Another model developed by Kase, Paauwe and Zupan (2009) by linking HR practices with intra-firm knowledge transfer (for creation of knowledge for organization) and suggested, on the basis of empirical results, that effective HR activities facilitating interaction among employees result in knowledge transfer (both knowledge sharing and knowledge sourcing). Firms can capitalize on the model by employing HR practices, supporting knowledge transfer among its employees. These practices include effective work design, incentives (both collaborative and competitive) and motivation, and training and development (training in group rather than individual facilitates knowledge transfer); however, this relationship is subject to effective interrelationships (i.e., cognitive, affective and structural relations) among members of the firms. However Call (2005) argued that the success of knowledge management is contingent upon the factors such as culture, the knowledge resources, and how those acquiring this resource interact. He further suggested that no single KM model can serve as panacea, hence subject to change from company to company, and industry to industry. Therefore, this paper proposes an integrated model for the knowledge creation, for potential application in knowledge intensive firms. The integrated model will be useful for understanding the HR practices and interrelationship between employees and the conversion of knowledge as mentioned in SECI model.

Addition of both the above models in an integrated model can be useful for professional service firm to efficiently and effectively capitalize on its human resources as well as its knowledge resources through creation of knowledge. Since all but one conversion routes (left out is 'combination', which involves explicit to explicit) suggested by Nonaka and Takeuchi (1995) are purely dependant on the employees' capabilities to gain or share the knowledge from tacit to explicit or tacit to tacit or explicit to tacit. The 'combination' (i.e., conversion from explicit to explicit) is less of an HR practices issue, rather it is the firm's knowledge resources and knowledge base available in the codified form and the only effort required is the creative and innovative capacities of its human resources. The very next section provides components and detailed account of the conceptual model, which is followed by some testable positions on the basis of the researches. Conclusion, research limitations and research / practical implications are provided in detail at the end of the article. Careful causal relationships have been identified in the conceptual model, and each relationship has been supported by relevant literature.

2. Conceptual model: HR practices and seci model

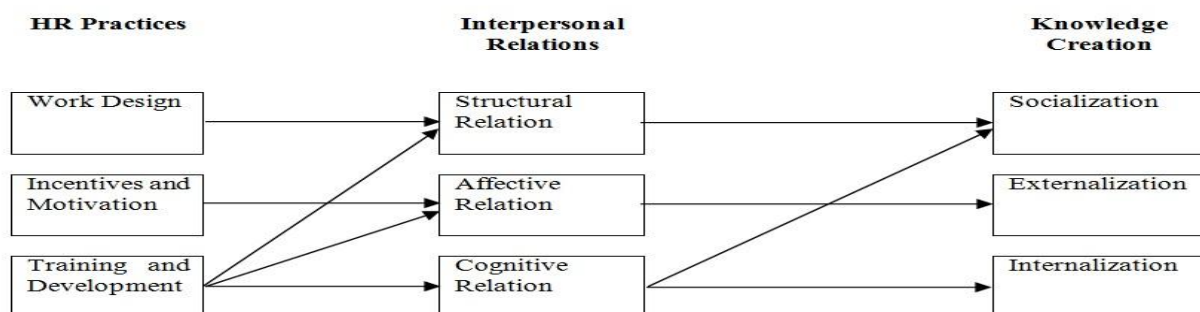
Previous researches, conducted in the field of the knowledge management in general and conceptual models development, in particular, emphasizing the role of HR practices on

knowledge creation were considered for development of an integrated (testable) model. However, the two models (i.e., Nonaka's and Kase's) were slightly modified and integrated. In the former 'combination', however, in the latter's model dimension of intra-firm knowledge transfer were precluded for the reason explained in the relevant sections. Both the models involved knowledge creation, wherein knowledge creation is the dependent on the HR practices rather than firm's other capabilities (e.g., knowledge management system, which involves technologies and other knowledge codification techniques). To cope with the resistance by the knowledge worker (who acquires the knowledge), a consultancy firm needs to develop and design its HR activities which can foster the social interaction between employees and enhance their willingness to share their knowledge which can be codified and utilized for the organization. This individual's behavior is due to fear of loss of his status, which he acquired through the knowledge and hence will not disclose and transfer it to the organizations (Dunford, 2000). However, Leiponen (2006) paradoxically defined the knowledge sharing as increasingly important and negligibly attempted by the consultancies.

According to Heusinkveld and Benders (2005), consultants often fight for legitimization of their concepts (the potential knowledge to be shared), but lack of management support restrict the process of new concept development as the researcher termed it as. Management, while coping with this problem by developing a strategy supported by some incentives, can encourage workers to share their ideas for possible codification and new product development. Strategies of the firm decide about competitive advantage or disadvantage of the employees' knowledge. Since his knowledge is no more with the firm if he leaves the firm. Therefore, firm doesn't have its own memory, it keeps things in its databases, in the forms of tools and methods (Werr & Sjernerg, 2003; and Dunford, 2000). The more the firm can accumulate the knowledge of its worker the more it has competitive advantage.

Different studies in the field of knowledge management showed that there are several factors, which hinder the process of knowledge creation (which is the outcome of knowledge sharing) ranging from lack of infrastructure (von Krogh et al., 2000); however if there is such infrastructure available then lack of appropriate integration of conducive culture, organizational structure and HR practices (such as incentives, training etc.) are attributed to the impediments for knowledge creation (Morris & Empson, 1998). However, at individual level fear of exploitation (i.e., undermining other's knowledge viz-a-viz own knowledge) also plays important role in impeding the transfer of knowledge among employees (Empson, 2001).

Figure 1: Conceptual Model



Source: *Integrated modified models of Nonaka & Takuechi (1995) and Kase et al. (2009)*

Through HR practices firms can provide an environment for its employees, which fosters their interactions; however, it is not the only purpose of HR activities, rather it does so for encouraging its employees to share their individual knowledge with the peers (Gratton, 2005), which evidently show the importance of the social structure of the firm (Zupan & Kase, 2007). This means firms HR practices are molded for the greater benefit of the firm for its endeavor to strengthen its knowledge base, which can be achieved through employees' internal social connections. HR practices which are affecting the spatial work design of the employees are important, which involves work design (where employees are placed and allocated, there distance from the coworkers etc.), incentive and motivation (both collaborative and competitive, which both affect the employees relationships with their coworkers), and training (particularly group training, during which workers share their knowledge with each other) (see Kase et al., 2009).

Social perspective of the knowledge creation process is considered due to importance of its three dimensions (i.e., cognitive relations, affective relations, and structural relations). These three relations dimensions are relevant and can be manipulated by the HR practices (Kase et al., 2009). The relationship between the HR practices and the relational dimensions are depicted in model (Figure-1). The following sections elaborate the HR practices (particularly configuration-changing practices as elaborated by Kang et al., 2007), their impacts on relational variables and the consequent results i.e., socialization, externalization, combination and internalization (the knowledge creation processes).

2.1 Socialization through HR practices

According to Nonaka and Takeuchi (1995), the socialization is the process wherein tacit knowledge is converted into tacit knowledge and knowledge is created. By applying relevant HR practices, in the form of work design (by locating the workers from the different department in the same project, and allocating these workers in spatial proximity etc.) they build structural relationship between each other. This proximity is helpful in exchange of ideas among workers and result in sharing of knowledge from one source (one employee) to other (Kase et al., 2009). Similarly another activity of HR is to provide incentives and motivate employees to share their knowledge. By providing collaborative incentives for group accomplishment, the firm can optimally integrate the knowledge acquired by individual employee(s) resulting in knowledge creation. This HR practice results in establishment of affective relation between employees, due to building of trust among them while working collaboratively. In the process of achieving their combined goal, they will tend to share their tacit knowledge in the form of facilitating each others with their own expertise and experiences.

The third activity of the HR is the training, but to get maximum results, the group training is preferable. While carpooling for training venue, partaking lunch and interactions off as well as on the training sessions will result in sharing their experiences and other form of tacit knowledge with each other. During this activity they tend to build structural, affective and cognitive relationship with each other and get to know the level and type of others knowledge. Since people from the same working class and same prior experiences usually attend the same training therefore, they are more likely to be cognitively compatible with each other. Following propositions are developed as a result of above discussion:

P1: Effective structural relations between employees will mediate the relationship between work design and the extent the tacit knowledge is converted into tacit knowledge.

P2: Effective structural relations between employees will mediate the relationship between group training & development opportunities and the extent the tacit knowledge is converted into tacit knowledge.

P3: Effective cognitive relations between employees will mediate the relationship between group training & development opportunities being offered and the extent the tacit knowledge is converted into tacit knowledge.

2.2 Externalization through HR practices

Externalization is conversion from tacit to explicit knowledge, and is a bit difficult but very important task for the firm viz-a-viz creation of knowledge for its own consumption (Nonaka & Takeuchi, 1995). This is the process on which almost all of the knowledge intensive firms rely. During this process knowledge possessed by individual employee is shared with the firm in the form of codified knowledge. The codification takes place in the form of documents, manuals, procedures, methods, etc., for which a strong knowledge transfer mechanism is required. However, HR practices are to be efficiently developed in terms of work design (possible infrastructure to be provided to each employee for codification of his knowledge). Their access to and from their colleagues (who are responsible for knowledge creation) is very important here i.e., the structural relation. Incentives and motivation for risk taking and sharing their ideas with the firm may be provided to the employees, so that they can comfortably share their ideas (knowledge) with others. Only appropriate rewards and motivation may persuade them to give up their knowledge for the firm. Fostering entrepreneurial spirit among employees is very important coupled with the culture of mutual trust will ensure transfer of knowledge from mind to the document/product. As argued by Kase et al. (2009), only collaborative incentives can result in affective relationship among employees, which are premise of the knowledge transfer from tacit (non-codified form) to explicit (codified form). Keeping in view the above discussion of externalization following proposition is developed:

P4: Trustful affective relationship between employees will mediate the relationship between collaborative incentives being offered to employees and the extent the tacit knowledge is converted into explicit knowledge.

2.3 Internalization through HR practices

Internalization is the process of conversion from explicit knowledge into tacit knowledge. This is somewhat a reverse process, wherein knowledge is gained from the codified form of knowledge by looking into insights. Sometimes consultants learn from their clients while delivering the current products. According to Nonaka and Takeuchi (1995), individuals keep learning from their own or someone else's existing explicit knowledge. This process demands HR activities which foster the learning process and give incentives for new skills. Through offering lucrative incentives for learning new dimensions of what already learnt by individuals. Effective training sessions offered for individuals in groups facilitate such learning either through their peers, or their super-ordinates. They can learn from their own experiences with the external environment. The continuous process of learning from already existing materials and own products is the process, which can be dependent on the cognitive relations of the people involved in the process. Keeping in view the above discussion of externalization following proposition is developed:

P5: The cognitive compatibility between employees will mediate the relationship between group training opportunities and the extent the explicit knowledge is converted into tacit knowledge.

P6: Trustful affective relationship between employees will mediate the relationship between group training opportunities and the extent the explicit knowledge is converted into tacit knowledge.

2.4 Combination

This is the process of converting explicit knowledge into explicit knowledge, and is the simplest form of conversion of the knowledge (Nonaka & Takeuchi, 1995). This is sometimes termed as pseudo-innovation, which can be achieved either through incremental development in the already existing form of the knowledge (product, since it is already in the explicit form i.e., codified) or radical change in the already development product/codified form of knowledge. Both of them require organizational infrastructures, which facilitate the conversion of explicit knowledge to explicit knowledge. Firms can simply engage unskilled workers to work on the project in a standardized procedure developed for the purpose, which requires hard-core HR activities (i.e., composition changing HR practices e.g., selection, recruitment etc.) (for detail see Kang et al., 2007 and Kase et al., 2009). Therefore, firms can capitalize on its already established tools, method and procedures for ensuring knowledge creation through 'combination' process; therefore this dimension was precluded from the SECI model included in this study.

4. Discussion

The objective of the article was to develop an integrated model of knowledge creation for the firms - knowledge intensive firms. The two models (Nonaka & Takeuchi, 1995 and Kase et al., 2009) are integrated after slight modification in each of them. The purpose for integration of the models is to visualize a process through which the four modes of the knowledge creation/conversion are achieved. In addition to that the HR practices are highlighted which can contribute towards successful conversion of knowledge. However, mediating role of the relational variables (e.g., cognitive, structural and affective relations) is also highlighted. Some propositions are developed for each process of conversion of knowledge by specifically highlighting the roles of the HR practices and the relational dimensions of the social perspective.

According to Alvesson (2001) companies which are based on the intellectual work of well-educated and experienced people and produce quality products/services are classified as knowledge intensive companies. However, in his recent research he doubted the claim of these companies about the knowledge as a source they use, what they are doing, and what are their outcomes (Alvesson, 2011). Nevertheless these companies are knowledge intensive and include law, management, accounting, engineering, audit and marketing etc.. Keeping this classification I suggest for modification of the conceptual model by incorporating HR activities/tools for efficient application to capitalize on the knowledge gained by senior fellows and its flow to the junior executives.

Khan (2010), while comparing Pakistan and Dutch culture on Hofstede (1993) cultural dimension, showed that Pakistan is high on collectivism, which means people in Pakistan are generally more inclined towards collectivism rather than individualism. Therefore, an effective model, comprising suitable HR practices for capitalizing on the collective attitude of the people can grasp the knowledge through the process of socialization, externalization and internationalization. Both the countries are categorized as Medium (not low) on long term orientation, which shows that employees working in organizations will be committed towards their organizations, and hence motivated to share their knowledge and just a matter of

organizational tools/methods, which can ensure knowledge creation (Khan, 2010). This assertion can be based for development of a suitable model for the professional services firms in Pakistani, which has practical implications of the model developed in this study.

The integrated model would be a contribution towards the knowledge management field, if it is modified according to the requirements of the specific organization in the professional services field. By carefully selecting the HR practices which underpin the learning processes in the professional services firms may provide conducive organizational culture for knowledge creation and transfer from learned employees to the new entrants. The other research implications of the model are briefly accounted for in the following section.

5. Research limitations/implications

The scope of this article was to develop an integrated conceptual model for the understanding of the knowledge conversion mechanisms and the HR practices supporting these conversions. Some propositions have been developed in this study, which have potential to be tested. It is for researchers in the field of Knowledge management to test the propositions while applying the methodology employed by Kase et al. (2009) regarding data collection (name generator), instruments used for data collection (provided in the referred article's appendix) and data analysis (using Multiple Quadratic Assignment Procedure abbreviated as MRQAP; for details Kilduff & Tsai, 2005) as used by Kase, et al., 2009) for necessary conversions and appropriate analysis of data. Since the relational variables included in the study require data collection for dyads, therefore, necessary conversion is to be made through MRQAP for data analysis and for substantiation of the proposed hypotheses.

However, such other model can be developed by inclusion of personality traits of the individuals as moderator of the relationship between the relational variables and the modes of conversion. Since personality traits affect individual's attitudes viz-a-viz other people around him (e.g., socially agreeable or otherwise will behave differently). New conceptual model can be developed by including other dimensions of Personality construct, which can moderate the knowledge creation process i.e., either a person is not open, socially agreeable, innovative, introvert or extrovert. Only those employees will be useful in the process of the knowledge transfer (knowledge sharing and knowledge sourcing) who are open, social, extrovert and innovative, otherwise, they will not yield the desired results.

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