KNOWLEDGE MANAGEMENT PRACTICES: ROLE OF ORGANIZATIONAL CULTURE

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ABSTRACT

Today, the key global pressure on management practices is knowledge identification, creation, innovation, dissemination, and development of talent. Workforce diversity in globalized business reflects a multitude of cultural and ethnic backgrounds necessitate aligning corresponding differences in knowledge management practices. Keeping in view the theoretical and empirical importance, the present study investigates the predicting role of culture attributes (Collaboration, Formalization, Trust and Learning) with reference to knowledge management practices (Knowledge Creation). The study was carried out on purposively selected sample of 813 corporate sector employees at different managerial positions. They were administered questionnaires including Organizational culture scale (OCS) and Knowledge Management Practices Scale (KMPS). Multiple regression analysis results revealed that Collaboration, Formalization and Trust significantly predict Knowledge Management Practices. Furthermore, ANOVA showed significant difference with reference to levels of managerial positions and knowledge management process. Study limitation, future research and implications are discussed.

Key Words: Knowledge Management Practices and Culture
INTRODUCTION

Knowledge Management has emerged as one of the most important area in management practices and established as a basic resource for firms and economies. Knowledge management is regarded as collection, distribution and efficient use of knowledge resources. It is a process of knowledge creation, validation, presentation, distribution and evaluation. Knowledge management according to Bounfour (2003) is a set of procedures, infrastructures and technical and managerial tools, designed towards creating, sharing, leveraging information and knowledge within and across organizations. Knowledge Management is a systematic and integrative process of coordinating organization wide activities of acquiring, creating, storing, sharing, diffusing and deploying knowledge by individuals and groups, in pursuit of organizational goals.

Knowledge Management is a multi dimensional construct with a large number of interrelated attributes. However, its three components or attributes that are commonly found in the literature are: knowledge acquisition or adaptation, knowledge dissemination or sharing and responsiveness to knowledge or knowledge use. The knowledge management practices in the organizations depend on some prerequisites. One of the important pre-condition for effective knowledge management is organizational culture.

Organizations do not operate in a social vacuum but are influenced by the socio-cultural context (Hofstede, 2001), hence, the organizational culture has also been considered as form of organizational capital (Camerer & Versalainen, 1998). Organizational culture consisting of behavior, action, and values that people in an organization is expected to share and follow. Organizational culture as a concept is also considered to be key element in managing organizational change and renewal, a sort of glue that bonds the social structure of an organization together.

During the last two decades, the dramatic evolution in business and the dawn of new economy has changed the dynamics of market; consequently, creating a competitive environment among organizations to consolidate and reconcile their knowledge assets (Gold, Malhotra & Segars, 2001). As knowledge has been identified as one of the most important resources that contribute to competitive advantage of an organization, many organizations have reached the conclusion that effective knowledge management is the only way to lever their core competencies and achieve competitive sustainability.

Knowledge management is a rather a new phenomenon and is in the initial stages of its exploration. In order to develop new knowledge and use the knowledge which already exists within organizations, it seems essential to create an atmosphere of trust and security to encourage innovation, experimentation and risk taking (Lopez et al., 2004). Although, some of the large multinational firms, local institutions, development sector organizations, public and private departments and the financial institutions are working on knowledge management, still the concept is localized to a few information system wizards within these organizations (Khilji, 2001). There is a lack of empirical evidence about what are the specific cultural variables that support knowledge management processes and help in development of knowledge culture (Oliver & Kandadi, 2006).

Furthermore, an excessive focus on technical issues rather than social aspects, results in poor knowledge management practices or altogether failure to comply the practices in the organizations. Specifically, there is lack of empirical evidence about what are the specific cultural variables that support knowledge management processes and help in development of knowledge culture (Oliver & Kandadi, 2006). Consequently, necessitates understanding the success and failure of knowledge management within organizations by identifying and assessing the preconditions that are necessary to flourish the endeavor.

Most of the studies concerning knowledge management are conducted in capitalistic American and European setups. The present study provides a test of the value of organizational knowledge management in a collectivistic culture of South Asian countries and will provide empirical evidence to the prevailing practices by identifying the specific cultural attributes that inhibit or support knowledge management processes.
The main focus of the present study has been to examine the predicting role or effects of Trust, Learning, Collaboration and Formalization (Organizational Culture Attributes) with regard to Knowledge Creation (Dimension of Knowledge Management Practices). Additionally, the proposed study explores the role of management hierarchical levels with reference to knowledge management practices.

LITERATURE REVIEW

Today, the key global pressure on management practices is knowledge identification, creation, innovation, dissemination, and development of talent. The ground rules of economic competition have shifted in important ways in recent years because of the impetus of globalization, proliferation of information technology, the availability of information and the changing nature of organizational forms. Today’s economy is dubbed as knowledge based or knowledge economy, where participants sell knowledge, focused on research, innovation and other forms of knowledge creation (Islam, 2006). In an economy where the only certainty is uncertainty, the one sure source of lasting competitive advantage is improved knowledge management (Nonaka, 1994).

Researchers from different disciplines have given different categories of knowledge. Academic literature presents two perspectives of knowledge, the cognitive and the constructionist point of view. Another categorization is the Ontological dimension i.e., Individual and collective knowledge; and Epistemological Dimension i.e., explicit and tacit knowledge.

Standards Australia (2003) defines knowledge managements as, “The design, review and implementation of both social and technological processes to improve the application of knowledge, in the collective interest of stakeholders”. Nonaka (2007) prefers to call knowledge management as Knowledge-Based Management, connecting people to people and people to information to create competitive advantage. Knowledge management is a human resource management exercise than a technology based discipline. It is not merely state of the art technology used to improve efficiency of the knowledge. Rather it is an exercise about how people can be motivated, best utilize their knowledge, experiences and enhance the creativity by using state of the art technology.

Number of researchers, on knowledge management has focused on specific processes and activities within knowledge management. Lee, Lee and Knag, (2005) introduced the Knowledge Circulation Process that can be determined by knowledge creation, knowledge accumulation, knowledge sharing, knowledge utilization and knowledge internalization. Researchers like (e.g. Thomas, Sussman, and Handerson, 2001) have discussed four critical stages of management of a firm’s knowledge. These include knowledge creation and acquisition, knowledge transfer, interpretation of the knowledge to serve organization goals, and application of knowledge to achieve organizational goals. Darroch (2003) has elicited knowledge creation and acquisition, knowledge dissemination and responsiveness to knowledge as main components of knowledge management practice.

Knowledge creation deals with a variety of knowledge, whether tacit or explicit and is accelerated by encouraging synergistic interrelations of individuals from diverse back grounds” (Lee et al., 2005). Nonaka (1994) cites dynamic organizations as the ones that not only process information but also create information and knowledge. Through interaction with environments, organizations absorb information, convert these into knowledge and combine it with their experience, values and rules. Nonaka, postulates that organizational knowledge creation can be viewed as an upward spiral process, starting at the individual level moving up to the collective (group) level and then to the organizational level, sometimes reaching out to the inter-organizational level.

Gold et al. (2001) empirically proved the effective knowledge management was the result of knowledge infrastructure i.e. technology structure, culture and knowledge process architecture. Knowledge creation depends on individual performing activities through which tacit and explicit knowledge is shared and combined for refinement of activities and development of knowledge (Adenfelt & Lagerstrom, 2006).
CULTURE

Workforce diversity in globalized business reflects a multitude of cultural and ethnic backgrounds, shared values that blur potentially sharp cultural differences. The cultural differences from country to country necessitate aligning corresponding differences in management practices. Resultantly, the success or failure of knowledge management within organizations depends on ‘culture’, an emerging pre-requisite for effective knowledge management.

Deshpande and Webster (1989) define organizational culture as the set of shared values that help organizational members understand organizational functioning and thus guide their thinking and behavior. Researchers argued that culture is a complex system of norms and values that is shaped over time and affects the types and variance of organizational processes and behaviors (Barney, 1986).

Organizational culture as a concept is considered to be a key element of managing organizational change and renewal (Pettigrew, 1990). Thus, culture is a sort of glue that bonds the social structure of an organization together. Hofstede, (1991) called culture the “Software of the mind”. In the competitive environment the organizations have to change its culture in order to survive otherwise, it may be even counterproductive (Jex, 2003).

Four types of culture are found in organizations i.e. power culture, role culture, support culture and achievement culture (McKenna, 2000). South Asian culture independence from British rulers was marked by passive management culture borrowed from the British colonial era (Khilji, 2001). The local culture of public sector organizations has been identified as a replica of the colonial era: bureaucratic, centralized and non responsive to customer need (Khilji, 2002).

Knowledge management processes are embedded in social settings which heavily influence these processes (Alavi, Kayworth & Leidner, 2006). Many scholars and practitioners (e.g. Lopez et al., 2004; Kulkarni, Ravindran & Freeze, 2007), believe that an organizational culture that is supportive and or adaptive can enable the successful implementation of knowledge management technologies as well as practices.

Alavi, Kayworth & Leidner (2005) cite expertise, formalization, innovativeness, collaboration and autonomy as the values of organizational culture that lead to effective knowledge management. The current study, focus on trust, collaboration, learning and formalization, as cultural factors (Predictors) of knowledge creation process.

Formalization

In work setup formalization refers to rules, procedure and written documentation such as policy manuals and job descriptions (Daft, 2001). Graham and Pizzo (1996) argued that effective knowledge management requires a balance between open and flexible organization system along with formality and discipline to ensure tangible output. The study, contend that structured and standardized procedures are needed to capture, control and connect knowledge. Although, a general belief that formalization inhibits creativity and innovation and thus knowledge management. However, the empirical evidences do not support the concept, as more innovation and creativity have been found in more formalized setups (Lee & Choi, 2003, Zaman, 2006).

According to Keiser, Beck and Tainio (2001), the formal rules enable organizational learning and knowledge and increase the effectiveness of organizational communication. Rules and directives help sequencing problem solving and decision making, which in turn facilitate knowledge accumulation (Gold et al., 2001). Formalization is also manifested by uncertainty avoidance practices of establishment and enforcement of rules, procedures and regulations (House et al., 2004).

Trust

Trust is the most important explicitly stated value essential for knowledge management. Lopez et al. (2004) stress that an atmosphere of trust and security is essential to encourage innovation, experimentation and risk taking in order to develop new knowledge and use existing knowledge. Trust has been defined as an expectation that arises within a community of regular, honest and cooperative behavior, based on commonly shared norms, on the part of other members of that community (Fukuyama,
Trust among people is associated with professional relationships rather than individual relationships (Wang, Ashleigh & Meyer, 2006). Trust is considered an important predictor of knowledge creation (Lee & Choi, 2003) and interpersonal trust is empirically found positively linked to knowledge acquisition (Politis, 2003).

**Learning**

The cultivation of culture that supports and encourages knowledge acquisition and learning to occur may be more important than any of the technological advancements. Lee and Choi (2003) defined learning as the degree of opportunity, variety, satisfaction and encouragement for development in organization. Tracy et al. (1995) cited social support from supervisors and coworkers, continuous innovation and competitiveness as key elements of learning.

Organizational learning is synonymous to capacity to innovate and related to the ability to apply knowledge in organizations (Sinkula, 1994). A learning process relating to use of conceptual knowledge enhances the employees’ knowledge applicative capability (Tsai & Lee, 2006). A learning culture opens up formal and informal channels of communication (Bhatt, 2000).

Learning is found to be a predictor of knowledge creation (Lee and Choi, 2003). Bhatt (2000) relates individual learning capability and organizational learning culture to broadening of knowledge base. Strong learning culture of firms is linked to creation, acquisition, and transfer of knowledge (Murray and Donegan, 2003).

**Collaboration**

Collaboration is the degree of active support and help in the organization. Collaboration is defined as human behavior sharing of meaning and completion of activities with respect to a mutually-shared goal and taking place in a particular social or work setting (Sonnenwald & Pierce, 2000).

Delong and Fahey (2000) cited interactivity, collaboration, sharing and teaching, dealing with mistakes, orientation to existing knowledge as the cultural characteristics, shaping social interaction in the context of knowledge management. Lopez et al., (2004) empirically identify collaborative culture as a means to leverage knowledge through organizational learning. A culture of collaboration helps in knowledge creation by increasing knowledge exchange. Collaboration is also found positively linked with knowledge creation (Lee and Choi, 2003). Based on the preceding literature review following hypothesis is developed:

H: Formalization, Trust, Learning and Collaboration would have a positive predicting impact on Knowledge Creation.

**METHOD**

**Sample**

Based on purposive sampling design, 1500 managers from 50 organizations in 7 different sectors including Banking, Software, Telecom, Post, Transport, Petroleum and Food was contacted. However, 813 of these participants provided complete data and were included for the study with the response rate of 54.2 %. Thus, the final sample included 17% participants from senior management level, whereas 44% and 27% from middle and lower levels respectively.

**Instrument**

Organizational culture scale (OCS) by Tayyab (2008) measured the four attributes of organizational culture. The OCS in current study consists of 13-items; 4 for Collaboration, 3 each for Learning, Trust and Formalization. The scale was rated on 7-point Likert-type scale, with 7 indicating “Strongly Agree” to 1 indicating “Strongly Disagree”. The test for alpha reliability was .86 for the current instrument.

The Knowledge Management Process Scale was adapted to measure knowledge management process by Lee et al. (2005). This version consisted of 29-items questionnaire that measure the five dimensions of Knowledge Management Processes, however in the present study 5 items measuring the Knowledge Creation was used. The items were rated on a 7 point Likert’s type scale, ranging from (1)
Strongly Disagree to (7) Strongly Agree. The internal consistency reliability estimates for the knowledge creation dimension of KMPS was 0.78.

**PROCEDURE**

Participants were approached individually during office hours in their respective organizations with the help of concerned administration. In case of field locations, emails and post mail were also used to approach participants through their organizations. Participants were briefed about the purpose of study and confidentiality was assured to the participants, sufficient time given to complete the questionnaires and collections were made when intimated.

**RESULTS AND DISCUSSION**

Correlation matrix of all variables along with alpha coefficient values calculated in order to establish the validity and reliabilities of the instruments, shown in Table 1.

**Table 1**

*Correlation Matrix of Variables (N = 813)*

<table>
<thead>
<tr>
<th>Variables</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>V</th>
</tr>
</thead>
<tbody>
<tr>
<td>I Trust</td>
<td>.78</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II Formalization</td>
<td>.36*</td>
<td>.65</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>III Learning</td>
<td>.36*</td>
<td>.41*</td>
<td>.83</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV Collaboration</td>
<td>.42*</td>
<td>.46*</td>
<td>.35*</td>
<td>.75</td>
<td></td>
</tr>
<tr>
<td>V Knowledge Creation</td>
<td>.32*</td>
<td>.40*</td>
<td>.27*</td>
<td>.40*</td>
<td>.73</td>
</tr>
</tbody>
</table>

*p<0.001*, (Boldface Shows Alpha Coefficient Values of Variables)

In order to verify the direct/predicting effect of organizational culture attributes (Trust, Collaboration, Learning and Formalization) on knowledge creation process, multiple regression (enter method) was computed. In Table 2, the value of $R^2$ explains 23.5% of the variance in the scores for knowledge creation accounted for by the cultural dimensions ($F=63.33$, $p < .001$). The regression results partially support the hypothesis, as significant contribution to the knowledge creation is made by trust ($\beta = .13$, $p < .001$), collaboration ($\beta = .20$, $p < .001$) and formalization ($\beta = .23$, $p < .001$), while, learning has not shown significant impact.

Collaborative culture affects knowledge creation through increasing knowledge exchange (Nahapiet & Ghoshal, 1998), as the exchange in knowledge among different members is a prerequisite for knowledge creation. The collaborative culture fosters this type of exchange by reducing fear and increasing openness among members (Lee & Choi, 2003). The findings are in line with Zucker et al. (1996) that the significance of collaborative culture on knowledge creation in biotechnology industry and Lee and Choi (2003) who found a positive relationship between collaborative culture and knowledge creation in a Korean Stock Exchange.

Trust facilitates open, substantive and influential knowledge exchange. When trust is high, the individuals are more prone to participate in knowledge exchange, resulting in knowledge creation (Nahapiet & Ghoshal, 1998). Again, the findings are in line with Lee and Choi (2003). Learning is the acquisition of new knowledge by the individuals who are able and willing to apply it in decision making or influencing other. According to Quintas et al. (1996) a deeply ingrained learning culture is a precondition for successful knowledge creation.

Although, knowledge creation requires flexibility and less emphasis on work rules and lack of formal structure, tends to enable individuals within an organization to communicate and interact with one another. But effective knowledge management requires a balance between open and flexible organization system along with formality and discipline to ensure tangible outputs (Ichigo et al., 1998). The structured and standardized procedures are needed to capture, control and connect knowledge.
Furthermore, the formal rules enable organizational learning and knowledge and enhancing the effectiveness of organizational communication (Keiser, et al., 2001). Rules and directives help sequencing problem solving and decision making, which in turn facilitate knowledge accumulation too. Empirical literature also supports the results contending that a more innovation and creativity have been found in more formalized setups (Lee & Choi, 2003, Zaman, 2006).

**Table 2**

*Multiple Regression Analyses for Trust, Collaboration, Learning and Formalization on Knowledge Creation (N=813)*

<table>
<thead>
<tr>
<th>Model</th>
<th>Variables</th>
<th>B</th>
<th>SE</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Constant</td>
<td>15.01</td>
<td>.80</td>
<td>.13</td>
<td>18.89</td>
<td>.000</td>
</tr>
<tr>
<td>II</td>
<td>Trust</td>
<td>.17</td>
<td>.05</td>
<td>.13</td>
<td>3.62</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Collaboration</td>
<td>.23</td>
<td>.04</td>
<td>.20</td>
<td>6.01</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Learning</td>
<td>.06</td>
<td>.04</td>
<td>.05</td>
<td>1.54</td>
<td>.125</td>
</tr>
<tr>
<td></td>
<td>Formalization</td>
<td>.32</td>
<td>.05</td>
<td>.23</td>
<td>6.36</td>
<td>.000</td>
</tr>
</tbody>
</table>

\[ R^2 = .238, \quad \Delta R^2 = .235 \]
\[ F = 63.33^*, \quad df (4, 808) \]

*p < .001

Table 3 shows that the mean knowledge creation scores of the respondents from senior level is 28.86 (SD=3.65), whereas mean knowledge creation score for middle and lower level management is 27.29 (SD = 4.79) and 27.66 (SD = 4.12) respectively.

**Table 3**

*One-way Analysis of Variance (ANOVA) of Management Levels for Score on Knowledge Creation (N=813)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Management Levels</th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Senior (n = 224)</td>
<td>Middle (n = 358)</td>
<td>Lower (n = 231)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Knowledge Creation</td>
<td>28.86</td>
<td>3.65</td>
<td>27.29</td>
<td>4.79</td>
<td>27.66</td>
</tr>
</tbody>
</table>

*p < .001

The effect of management levels on knowledge management process reveal that the senior management levels are significantly different from middle and lower levels in the way they create knowledge. The possible explanation can be that middle managers perform the role of linking pins in organizations taking directives from the top management and forwarding to the operational managers. The senior and lower managers are more involved in planning and execution of decision and handling of information respectively, hence, more involved in knowledge processing than the middle managers.

**IMPLICATIONS AND FUTURE RESEARCH**

The present study is one of the pioneer works on the subject in Pakistani organizational context, provides evidence, suggesting the importance and contributing to the existing body of universal knowledge in areas of organizational culture and knowledge management.

The findings of the research help knowledge management researchers as well as practitioners develop a better understanding of the role of organizational culture and successful implementation of knowledge management process. Management, while designing and developing strategies and policies and training manuals, the current study may provide necessary guidelines to understand the issues of knowledge management and culture.
The findings of this study provide an initial understanding and pave the way for further research in this area. The future research could replicate and extend this research to enrich and enhance these preliminary findings in our context by exploring it in different organizational settings. Furthermore, the future research may focus on other important areas of organizational culture (Autonomy, Power sharing, Expertise and Mentoring) and knowledge management process attributes (Knowledge capitalization, sharing, transformation and capturing).

The strength of relationship between formalization and knowledge creation in the current study is in counterintuitive direction and noteworthy that needs further exploration.

REFERENCES


