

## Investigating the Relationship between Knowledge Management Processes and Organizational Culture

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**Abstract:** This paper explores the relationship between organisational knowledge organisational culture in the civil industries in Iran. Today, the key global pressure on management practices is knowledge identification, creation, innovation, dissemination, and development of talent. Workforce diversity in globalized business reflects 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. The population of the research consists of 950 people of managers of the companies of civil industries in Iran. A sample of 295 subjects was selected as statistical sampling. They were administered questionnaires including Organizational culture scale (OCS) and Knowledge Management Practices Scale (KMPS). Multiple regression analysis results revealed that There is a significant relationship between Knowledge Management and organizational culture in the civil industries in Iran.

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**Key Words:** Knowledge Management, Organizational culture, Formalization, Trust, Organizational learning.

### 1. INTRODUCTION

Knowledge has long been understood as a key element in establishing competitive advantage (Nonaka, 1994; Davenport and Prusak, 1997). Organizations are built not only on a foundation of exchanging information, but on creating, sharing, integrating and applying knowledge (Kogut and Zander, 1996; Adenfelt and Lagerstrom, 2006).

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[5]. 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. 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). Objective of this study is to evaluate relationship between organisational knowledge organisational culture in the civil industries in Iran.

### 1-1.LITERATURE REVIEW

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 stake holders". 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.

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 (Thomas,et al, 2001) have discussed four critical stages of management of a firms 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 (Darroch, 2003)

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., 2003).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.

The culture of an organisation influences the way in which practitioners learn and share knowledge . 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).

### 1-2.Organizational culture Dimensions

Alavi, Kayworth & Leidner (2005) cite expertise, formalization, innovativeness, collaboration and autonomy as the values of organizational culture that lead to effective knowledge management (Alavi et al,2006).

The current study, focus on trust, collaboration, learning and formalization, as cultural factors of knowledge creation process.

#### 1-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).

## 2-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, 1996).

## 3-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).

## 4-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.

## Hypothesis 1

There is a positive relationship between Knowledge Management (KM) with culture Organizational dimensions.

## Hypotheses 2

2-1- There is a positive relationship between KM and Formalization.

2- 2- There is a positive relationship between KM and Trust.

2- 3- There is a positive relationship between KM and Learning.

2- 4- There is a positive relationship between KM and Collaboration

## 2.Materials and Methods

This study is an investigation and correlational research. The population of the research consists of 950 people of managers of the companies of Civil industries in Iran. A sample of 295 subjects was selected as statistical sampling.

Organizational culture scale (OCS) 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 Management was used. The items were rated on a 7 point Likert's type scale, ranging from

(1), Strongly Disagree to (7) Strongly Agree. Based on table (1) and table (2), the internal consistency reliability estimates for the knowledge management dimension was 0.89 and the Organizational culture was .86. According to Pearson correlation test, correlation is significant which are indicated in tables (3) and (4). Thus, null hypothesis can be rejected. The reason is that Sig. is lower than 0.05.

Table 1. Variables' reliability statistics

Variables	Cronbach's Alpha
knowledge management	0.89
Organizational culture	0.86

Table 2. Organizational culture Variables reliability statistics

Variables	Cronbach's Alpha
Trust	0.84
Collaboration	0.85
Learning	0.87
Formalization	0.86

**3.Results**

Correlation Test of all variables along with alpha coefficient values calculated in order to establish the validity and reliabilities of the instruments, shown in Table 3.

According to the Pearson correlation test (table3), null hypothesis cannot be rejected. It means that the existence of a significant relationship between KM process and organizational culture in companies is at 0.95 degree of confidence. As it illustrated in table (3),(4) the relationship between KM and every dimension of organizational culture is significant for "Trust", "Formalization " and " Learning "and "Collaboration".

Table 3. Pearson Correlation between KM and Organizational culture

Knowledge Management	Organizational culture	
	0.561	Pearson correlation
	0.046	Sig. (2-tailed)

Table 4. Pearson correlation test of Variables

Independent Variables	Dependent Variables	N	Sig	Result
Constant	KM	295	.000	Not Rejected
Trust	KM	295	.000	Not Rejected
Collaboration	KM	295	.000	Not Rejected
Learning	KM	295	.120	Not Rejected
Formalization	KM	295	.000	Not Rejected

In order to verify the direct/predicting effect of organizational culture attributes (Trust, Collaboration, Learning and Formalization) on knowledge management process, multiple regression was computed and has shown in Table 5, the value of R2 explains 23.5% of the variance in the scores for

knowledge management accounted for by the cultural dimensions.

The regression results partially support the hypothesis, as significant contribution to the knowledge management is made by trust, collaboration, formalization, and learning has shown significant impact.

Table 5. Result of Multiple Regression Analyses for Trust, Collaboration, Learning and Formalization on KM

Variables	B	SE	$\beta$	t	p
Constant	13.06	.80		18.89	.000
Trust	.17	.05	.14	3.63	.000
Collaboration	.24	.04	.22	6.01	.000
Learning	.08	.04	.06	1.54	.120
Formalization	.30	.05	.25	6.36	.000

$Df = (4, 294), R^2 = .270, *p < .001$

**4.Discussions**

The research findings confirmed the similar research. There is a significant relationship between Km process and organizational Culture dimensions. 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. 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 Saeed,et al. (2010) a deeply ingrained learning culture is a precondition for successful knowledge creation.

Although, knowledge management 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).

### Implication

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. In this study, we use the effect of Organizational culture dimensions on knowledge management but using other organizational factors such as technology or strategy that can be effect on KM for analysis can be done in future studies.

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