Relationship between the dimensions of organizational structure and the dimensions of knowledge management in Tehran government suspended of iran

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Abstract: This study evaluates the relation between organizational structure and knowledge management in the Tehran government suspended. Stephen.P.Robbins model is used for measuring organizational dimensions including formality, complexity and focus. Main Elements of knowledge management consist of 3 blocks: knowledge creation, knowledge transfer, knowledge maintenance. The population of this research is all of the Tehran government suspended managers and employees including 60 persons. In this research we used Krejcie & Morgan's table to select the sample size. we carried out a survey by the means of knowledge management questionnaire and standard questionnaire of Robin's structure among this sample. After collecting and analyzing data based on correlation coefficient of Spearman, the results clearly showed that there is a meaningful relation between organizational structure dimensions and knowledge management. In addition, we found out there is a relation between organizational formality and knowledge management. Moreover, there is a relation between organizational focus and knowledge management. The last recognized result was the relation between organizational complexity and knowledge management.

1. Introduction

In spite of the growth and development of knowledge management, many organizations still have experienced the lack or failure of knowledge transfer to the detriment of their operations (Babcock, 2004; KPMG, 2004).

Organizations can be more successful when they facilitate the conditions in which knowledge providers effectively share their knowledge and knowledge recipients effectively acquire and apply that knowledge (Argote & Ingram, 2000; Quigley, Tesluk, Locke, & Bartol, 2007). While there has been extensive research on knowledge transfer from various perspectives, most studies to date have neglected the knowledge recipient perspective, and have instead targeted the knowledge provider perspective such as knowledge contribution and sharing. Thus, there is a critical need to examine how knowledge recipients select their strategies for acquiring the specialized knowledge needed to do their work. According to Muller e Grings (2003), the competitive factor is knowledge and the abilities of people in each organization. Thus, many organizations have realized the importance of easy systematic actions to identifying, developing, sharing, using and holding back knowledge (Paula Michelle purcidonio, 2006).

Knowledge creation and knowledge transfer are considered to be two main activities of knowledge management. Creation and transfer of knowledge require special structure, culture and technology in the organization. Organizational structure represents the manner of organizing people and professions in an organization. Structure may courage or discourages knowledge management (Asghar Najafitireh shabankareh, 2012).

Knowledge management is a new viewpoint for organization which believes that if organizations want to be successful, they must access to knowledge and have a deep understanding of it in all layers. So recognition of knowledge management backgrounds in the organization and implementation of this phenomenon is the first step and the most important issue of this organization. Considering the importance of this issue, the researcher tries to study the relation between organizational structure and knowledge management among the employees and managers of Tehran government suspended of Iran.

2. Theoretical fundamentation

2.1. Organizational Structure

Organizational Dimensions: Organizations have special characteristics that make them to understandable and comparable. Content dimensions indicate whole organizational and structural dimensions and also state internal characteristics of an organization. They provide a basis for organization which make it measurable and comparable (Queng,M.D,2005).

Formality: It tries to set a standard for duties. When the level of formality increases, then description of

specified rules and regulations would be great and clear instructions for job process is available.

Concentration: It relates to levels of hierarchy authorities that could make decisions. If the head make most of decisions in organization, organization will be centralized. In decentralized organizations more power is vested in to inferiors and such decisions are made in lower layers.

Complexity: The amount of separation which exists in an organization and it is categorized in to 3 categories: horizontal separation, Vertical separation, Geographical separation.

2.2. *Knowledge management*

Knowledge management is a new and controversial term and has many different definitions. The term knowledge management was first introduced in Europe Management Conference in 1986. Alternative definitions have been proposed since that attempt to capture the complexities of knowledge management. The American Productivity and Quality Center defines knowledge management as "the strategies and processes of identifying, capturing and leveraging knowledge"(Atefeh et al 1999, p. 172). Knapp (1998) defined it as the art of transforming information and intellectual assets into enduring value for an organizations clients and its people. Daruch (2003) defines it as the process that creates, share, distribute and use the knowledge in the organization. Different scholars have identified different processes for knowledge management such as:

1. Creation, transfer and application (Spender, 1996)

2. Capture, transfer and application (Delung, 1997)

3. Identification, capture, development, sharing, dissemination, application and storage (Probest et al, 2000).

Knowledge creation process

Knowledge creation process is complex, multidimensional and dynamic. Organizational knowledge creation is the ability of an institute to create knowledge, circulate it in the organization, products, services and systems (Nonaka and Takeushi, 1995). Nonaka (1995), the Hitotsubashi university professor of management in Tokyo believes that successful companies are organizations that are consistently creating and circulating new knowledge in the organization and applying it to new products technology. In fact, he wants to say that knowledge creation must be the centerpiece of the companies' organizational strategies. The knowledge management literature distinguishes between individual and organizational knowledge creation. These differences are important since the knowledge creation process features are different depending on whether the knowledge is individual or organizational. It can be said that social knowledge is the total amount of things people know (Goucher, 2007). Ang and Massingham

(2007) presented a list of factors that affect knowledge creation. They classified these elements into four groups of cultural, organizational, knowledge sources and knowledge processes. Knowledge is created in the spiral that goes through pairs of seemingly antithetical concepts such as order and chaos, micro and macro, part and whole, mind and body, tacit and explicit, self and other, deduction and induction, and creativity and control (Nonaka et al, 2001). In order to understand how organizations create knowledge dynamically, Nonaka and others (2001) have presented a model of knowledge creation consisting of there elements. These three elements have to interact with each other to form the knowledge spiral that creates knowledge.

1. The SECI process the process of knowledge creation via conversion from tacit to explicit knowledge;

2. "Ba" the shared context for knowledge creation;

3. Knowledge assets the inputs, outputs and moderators of the knowledge- creating process.

Knowledge storage process

Alavi (2000) claimed that knowledge creating new knowledge is not enough and mechanisms are needed to store acquired knowledge and to retrieve it when needed. The concept of organizational memory is a great solution in this regard. Organizational memory includes knowledge residing in various component forms that may include written documentation, structured information stored in electronic databases, codified human knowledge stored in expert systems, documented organization procedures and processes, and tacit knowledge acquired by individuals and networks of individuals (Tan et al, 1998). Organizational memory includes individual memory (a person's observation, experiences and actions) as well as shared knowledge and interactions, organizational culture, transformations, structure (formal organizational roles), ecology (physical work setting) and information archives (inside and outside of the organization) (Walsh and Ungson, 1991). Organizations which like their knowledge to be accessible in the future must at least have a great command of three basic knowledge management processes. On the one hand, they have to choose events, people and processes which are worthy of storing. On the other hand, they must be able to store their experience in an appropriate form. Finally, they have to guarantee their up-to-date organizational memory. Furthermore, they should develop security technologies to limit the accessibility of their knowledge. The following activities are necessary for protecting knowledge: knowledge protection against inappropriate use or being leaked in inside or outside of the organization, limited accessibility to some of the knowledge sources of knowledge by password technology, identifying restricted knowledge easily, tacit knowledge protection and most importantly,

communicating the importance of knowledge protection on a corporate level (Probast et al, 2000).

Markwart (2002) believes that a knowledge storage system must have the following factors:

1. A structure which allows the system to present the information quickly and correctly.
2. Classification of (information) events, policies or procedures based on learning needs.
3. the ability to present information precisely and clearly
4. an on time, precise and available content

Knowledge dissemination(Transfer) process

Alavi and Leadner (2001) define knowledge dissemination as the process of transfer knowledge through out the organization. Knowledge dissemination process can happen between individuals, groups or organizations using any type or number of communication channels. Similarly, Gupta and Govindarjan (2000) equating knowledge sharing to knowledge flows theorize that knowledge flows comprise of five elements: value of the source knowledge, willingness of the source to share knowledge, media richness of the communication channel, willingness of the recipient to acquire knowledge and the absorptive capacity of the recipient. Davenport and Prusak (1998) define knowledge sharing as a process of knowledge exchange between individuals and groups. Connelly and Kelloway (2003) define knowledge sharing as a set of behaviors that involve the exchange of information or assistance to other. They are number of factors that influence knowledge sharing behaviors of individuals. They range from hard issues such as tools and technologies to soft issues such as motivations and provision of incentives to encourage knowledge sharing, organizational culture, personal values and self-identities, national culture, trust, care organizational resources like time and space and access to knowledgeable people in the organization (Chennamaneni, 2006). Another group of researchers believes that the most important elements that affect knowledge sharing are organizational infrastructure and human resources management. Organizational infrastructures include organizational culture, organizational structure, rules and information technology (Yi, 2005). Knowledge dissemination is defined as knowledge exchange management in the organization for encouraging innovation; increasing the awareness of great past procedures and making users adopt better procedures for their future decision-making. The personnel degree of participation in knowledge dissemination affects new products quality (Yang, 2008). Markwart (2002) points to two voluntary and involuntary approaches with regards to knowledge exchange. The voluntary methods may be done in different ways. The written method includes individual communications such as notes, reports, bulletins and also publications. National conferences, article abstracts, teacher-student training, foreign consultants or official courses participation provide more opportunities for exchanging knowledge. Changing personnel's position and posts can be planned for knowledge dissemination in the organization. Knowledge can also be involuntarily exchanged through stories and myth, permanent work force and unofficial networks. The less the voluntary or planned knowledge exchange is, the more loss in the potential knowledge would be.

3. Materials AND Methods

The objective of this research is to identify and study the Relationship between the dimensions of organizational structure and the dimensions of knowledge management. This research is a case study on Tehran government suspended of iran, following hypotheses were proposed:

Main hypothesis: There is a relationship between the dimensions of organizational structure and the dimensions of knowledge management in Tehran government suspended.

Secondary hypothesizes:

- There is a relationship between the Formalization and the Knowledge Creation in Tehran government suspended.
- There is a relationship between the Formalization and the Knowledge Transfer in Tehran government suspended.
- There is a relationship between the Formalization and the maintain Knowledge in Tehran government suspended.
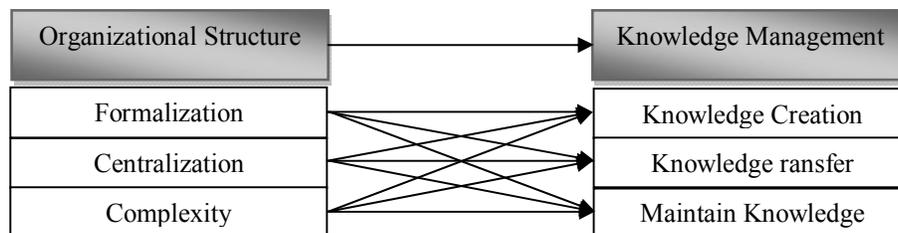

Fig. 1 Conceptual model of the research

- There is a relationship between the Complexity and the Knowledge Creation in Tehran government suspended.
- There is a relationship between the Complexity and the Knowledge Transfer in Tehran government suspended.
- There is a relationship between the Complexity and the Maintain knowledge in Tehran government suspended.
- There is a relationship between the Centralization and the Knowledge Creation in Tehran government suspended.
- There is a relationship between the Centralization and the Knowledge Transfer in Tehran government suspended.
- There is a relationship between the Centralization and the Maintain knowledge in Tehran government suspended.

In order to confirm or reject the hypotheses, the collected data from the theoretical foundations and the questionnaires are analyzed through standard statistical methods and technics. To have a quicker access to the opinion of the participants in the research, we used the method of data collecting by the questionnaire. The content validity of these questionnaires was confirmed by officers of management faculty of university of Tehran and their reliabilities were obtained by Krunbakh Alpha again (KM=0/95 and organizational structure=0/9). Additionally, to specify the validity of the questionnaire we used judgmental method the research statistical population of the research contained all managers and employees of in Tehran government suspended. including 60 persons. In this research we used Krejcie & Morgan's table to select the sample size.

Finally 50 questionnaires were returned and analyzed Results were optioned by SPSS in tow levels of descriptive (internal tendency, variability, frequency) and inferential (spearman correlation) Statistics.

4. Findings of the research:

The descriptive data of the research show that approximately 26% of the participants in the statistical sample are female and the remaining 74% are male. Almost 26% of the participants had between 0 to 5 years of work experience, and 20% of the participants had between 6 to 10 years of work experience, 16% of the participants had between 11 to 15 years of work experience, 20% of the participants had between 16 to 20 years of work experience, 14% of the participants had between 21 to 25 years of work experience, 4% of the participants had between 26 to 30 years of work experience.

Additionally, almost 16% of the participants had a diploma degree, almost 42% of the participants had a associate degree, almost 26% of the participants had a bachelor degree, and the remaining 16% of the participants had master's degree or higher.

We used correlation test to determine the relationship between Organizitional Structure and Knowledge management. Since the variable of the research are qualitative in nature, thus the Spearman correlation test was the base for calculations. The results of the findings are as follow:

- *First hypotheses:* There is a relationship between the Formalizational and Knowledge Creation in Tehran government suspended.

Table 1. Results for the first hypotheses

		Knowledge Creation
Formalizationa	Spearman's Correlation coefficient	-0.477
	Sig. value	0.00
	Number	50

Regarding the obtain value of Sig. from the Spearman's correlation test that is equal to 0.000 and less than 0.05, we can conclude that there is a relationship between the Formalizational and the Knowledge Creation in Tehran government suspended. The intensity of this relationship is equal to -0.477 regarding the obtained Spearman's correlation coefficient.

- *Second hypotheses:* There is a relationship between the Formalizational and Knowledge Transfer in Tehran government suspended.

Table 2. Results for the first hypotheses

		Knowledge Transfer
Formalizational	Spearman's Correlation coefficient	-0.633
	Sig. value	0.00
	Number	50

Regarding the obtain value of Sig. from the Spearman's correlation test that is equal to 0.000 and less than 0.05, we can conclude that there is a relationship between the Formalizational and the Knowledge Transfer in Tehran government suspended. The intensity of this relationship is equal to -0.633 regarding the obtained Spearman's correlation coefficient.

- *Third hypotheses:* There is a relationship between the Formalizational and maintain Knowledge in Tehran government suspended.

Table 3. Results for the first hypotheses

		maintain Knowledge
Formalizational	Spearman's Correlation coefficient	-0.535
	Sig. value	0.00
	Number	50

Regarding the obtain value of Sig. from the Spearman's correlation test that is equal to 0.000 and less than 0.05, we can conclude that there is a relationship between the Formalizational and the maintain Knowledge in Tehran government suspended. The intensity of this relationship is equal to -0.535 regarding the obtained Spearman's correlation coefficient.

- *Fourth hypotheses*: There is a relationship between the Complexity and Knowledge Creation in Tehran government suspended.

Table 4. Results for the first hypotheses

		Knowledge Creation
Complexity	Spearman's Correlation coefficient	0.362
	Sig. value	0.005
	Number	50

Regarding the obtain value of Sig. from the Spearman's correlation test that is equal to 0.005 and less than 0.05, we can conclude that there is a relationship between the Complexity and Knowledge Creation in Tehran government suspended. The intensity of this relationship is equal to 0.362 regarding the obtained Spearman's correlation coefficient.

- **Fifth hypotheses:** There is a relationship between the Complexity and Knowledge Transfer in Tehran government suspended.

Table 5. Results for the first hypotheses

		Knowledge Transfer
Complexity	Spearman's Correlation coefficient	0.418
	Sig. value	0.001
	Number	50

Regarding the obtain value of Sig. from the Spearman's correlation test that is equal to 0.001 and less than 0.05, we can conclude that there is a relationship between the Complexity and Knowledge Transfer in Tehran government suspended. The intensity of this relationship is equal to 0.418 regarding the obtained Spearman's correlation coefficient.

- **Sixth hypotheses:** There is a relationship between the Complexity and Miantain Knowledge in Tehran government suspended.

Table 6. Results for the first hypotheses

		maintain Knowledge
Complexity	Spearman's Correlation coefficient	0.315
	Sig. value	0.013
	Number	50

Regarding the obtain value of Sig. from the Spearman's correlation test that is equal to 0.013 and less than 0.05, we can conclude that there is a relationship between the Complexity and Miantain Knowledge in Tehran government suspended. The intensity of this relationship is equal to 0.315 regarding the obtained Spearman's correlation coefficient.

- *Seventh hypotheses*: There is a relationship between the Centralization and Knowledge Creation in Tehran government suspended.

Table 7. Results for the first hypotheses

		Knowledge Creation
Centralization	Spearman's Correlation coefficient	-0.525
	Sig. value	0.00
	Number	50

Regarding the obtain value of Sig. from the Spearman's correlation test that is equal to 0.00 and less than 0.05, we can conclude that there is a relationship between the Centralization and Knowledge Creation in Tehran government suspended. The intensity of this relationship is equal to -0.525 regarding the obtained Spearman's correlation coefficient.

- *Eighth hypotheses*: There is a relationship between the Centralization and Knowledge Transfer in Tehran government suspended.

Table 8. Results for the first hypotheses

		Knowledge Transfer
Centralization	Spearman's Correlation coefficient	-0.658
	Sig. value	0.00
	Number	50

Regarding the obtain value of Sig. from the Spearman's correlation test that is equal to 0.00 and less than 0.05, we can conclude that there is a relationship between the Centralization and Knowledge Transfer in Tehran government suspended. The intensity of this relationship is equal to -0.658 regarding the obtained Spearman's correlation coefficient.

- *ninth hypotheses*: There is a relationship between the Centralization and Maintain Knowledge in Tehran government suspended.

Table 9. Results for the first hypotheses

		maintain Knowledge
Centralization	Spearman's Correlation coefficient	-0.619
	Sig. value	0.00
	Number	50

Regarding the obtain value of Sig. from the Spearman's correlation test that is equal to 0.00 and less than 0.05, we can conclude that there is a relationship between the Centralization and Maintain Knowledge in Tehran government suspended. The intensity of this relationship is equal to -0.619 regarding the obtained Spearman's correlation coefficient.

- *Main hypotheses***:** There is a relationship between the dimensions of organizational structure and the dimensions of knowledge management in Tehran government suspended.

Table 10. Results for the first hypotheses

		dimensions of knowledge management
dimensions organizational structure	Sig. value	0.00
	Number	50

Regarding the obtain value of Sig. from the Spearman's correlation test that is equal to 0.00 and less than 0.05, we can conclude that there is a relationship between the dimensions of organizational structure and the dimensions of knowledge management in Tehran government suspended.

5. Conclusion and suggestions

The obtained results of the analysis of the hypotheses are presented in table 11 with regard to the findings of the research. Then some suggestions will be offered on the basis of these findings.

We conclude that:

There is a meaningful and inverse relation between formality and Knowledge Management(Knowledge Creation, knowledge transfer, maintain Knowledge) among Tehran government suspended employees, which means that the high level of formality is correlated to the low level of knowledge Management and vice versa. Implementation of knowledge management with the rules and regulations and decisions related to labor relations. Flexibility and less emphasis on work rules lead to better ways of doing things, exchange ideas and experiences and thus to create, transmission and the preservation of Knowledge.

There is a meaningful and inverse relation between Centralization and Knowledge Management (Knowledge Creation, knowledge transfer, maintain Knowledge) among Tehran government suspended employees, which means that the high level of Centralization is correlated to the low level of knowledge Management and vice versa. Implementation of knowledge management in organizations is associated with decision-making authority. So one of the facilitators of the process, lack of concentration and decentralization of decision-making authority.

Table 11.Results of the data analysis

Ro	hypotheses	Sig. value	Confirm or deny	Spearman's Correlation coefficient	Type of Relationship
1	There is a relationship between the Formalizational and Knowledge Creation in Tehran government suspended.	0.000	confirm	-0.477	Inverse
2	There is a relationship between the Formalizational and Knowledge Transfer in Tehran government suspended.	0.000	confirm	-0.633	Inverse
3	There is a relationship between the Formalizational and maintain Knowledge in Tehran government suspended.	0.000	confirm	-0.535	Inverse
4	There is a relationship between the Complexity and Knowledge Creation in Tehran government suspended.	0.005	confirm	0.362	Direct
5	There is a relationship between the Complexity and Knowledge Transfer in Tehran government suspended.	0.001	confirm	0.418	Direct
6	There is a relationship between the Complexity and Miantain Knowledge in Tehran government suspended.	0.011	confirm	0.315	Direct
7	There is a relationship between the Centralization and Knowledge Creation in Tehran government suspended.	0.000	confirm	-0.525	Inverse
8	There is a relationship between the Centralization and Knowledge Transfer in Tehran government suspended.	0.000	confirm	-0.658	Inverse
9	There is a relationship between the Centralization and Maintain Knowledge in Tehran government suspended.	0.000	confirm	-0.619	Inverse
10	There is a relationship between the dimensions of organizational structure and the dimensions of knowledge management in Tehran government suspended.	0.000	confirm	-------	-------

The authorities can design and make recommendations system and employee participation in a comprehensive feedback system for idea generation, transmission and preservation of the experience it provides to the organization.

There is a meaningful and direct relation between Complexity and Knowledge Management(Knowledge

Creation, knowledge transfer, maintain Knowledge) among Tehran government suspended employees, which means that the high level of Complexity is correlated to the high level of knowledge Management. Implementing Knowledge Management division of labor, job titles, various parts of the organization, there are different levels in the organizational hierarchy of authority and distribution of different sectors in different parts of the organization are linked.

Authorities to take advantage of the knowledge management, Should act in such a way that the structure of the organization to facilitate smooth flow of knowledge. In order to make use of Organizational structure with low centralization and formalizational and high Complexity

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