

Studying the relationship between components of social capital and knowledge management

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Abstract: This study aimed to determine the relationship between social capital dimensions and knowledge management among the headquarter staff of Medical Sciences University of Zahedan through correlation method. The population of this research was all headquarter staff of Medical Sciences University of Zahedan who consisted of 530 people that among these, 217 ones were selected for participating in the present study. The tools used in this research were two questionnaires: Nahapiet and Ghoshal Social Capital Standard Questionnaire (1998) and Nonaka and Takeuchi Knowledge Management Questionnaire (1999). Pearson correlation test and stepwise regression were used in order to analyze the data. The results of the main hypothesis of this study showed that there is a significant relationship between social capital and knowledge management. The results of stepwise regression showed that the best predictor of knowledge management has been the structural dimension of social capital.

Keywords: social capital, knowledge capital, structural capital, relational capital, knowledge management

INTRODUCTION

Future organizations, like today's organizations, will work in a highly competitive and complex environment. The accelerating move of scientific information of human knowledge in the twenty-first century has subjected the organization's viability to various factors. According to many common but unspoken assumptions, one of the conditions of survival of organizations in such an environment is that the distinction between plural population and plural form (organizational culture, organizational structure, organizational systems, etc.) should be taken into consideration; just as compliance with illustrative interpretations that explains the complexities, searching for synergistic relations, organizational reminding, managing the diversities and promoting mutual compatibility are considered as the other alternatives. In such circumstances, those organizations are successful in their work which make themselves agile and dynamic and try to reinvent themselves, and forget the inexpressive process of illusion of change and start a wonderful move from linear language to live language, from machine-based patterns to ecology-based patterns, and from rigid structures to changing environments. These changes require capital.

Therefore, any organization in order to achieve its objectives requires at least three types of capital that are complementary and the growth and development of the organization is also subject to presence of all three categories of minimum capital namely, social capital, human capital and economic capital. Today, development literature on the topic of capital contains several forms of this concept. Capital in a general sense refers to the set of available assets, facilities and resources that is shown in various forms and shapes (Etesami and Fazeli Kebria, 2009). Capital has been classified in different ways. In one classification, capital is divided into four categories: economic, human, cultural and social capital. Economic capital refers to financial assets or physical infrastructures including building, manufacturing machines, and facilities and equipment (Manzoor and Yadipoor, 2008). Human capital is also a concept that includes capabilities and skills such as the specialized knowledge existing in the organization's personnel (Peng Lin, 2011). In fact, human capital includes the skills and abilities that people earn; abilities in the field of education, verbal and communication skills, self-confidence, leadership ability, and ... can be named among them (Manzoor and Yadipoor, 2008). Culture capital is another dimension of capital. According to Bourdieu, when we talk of culture capital, we consider a collection of cognitive knowledge and abilities that are manifested in the form of cultural goods and tools. In this sense that is not dissimilar to the concept of human capital of Coleman, culture capital is all that we now know as cultural goods. These goods are a form of culture capital that affect social relationships and building a dynamic and efficient social network. And finally, social capital as the fourth dimension is the result of accumulation of potential or actual resources such as expertise and skills that is related to ownership of a lasting network of more or less institutionalized relationships among those who join a group. Social capital is embodied in the relations between individuals and social capital is created when the relations between people are changed in a way that facilitates action. Social capital is the set of norms existing in

social systems which causes promotion of collaboration level among the members of that society and reduces the costs of transactions and communications (Manzoor and Yadipoor, 2008).

Thus, social capital, as one of capital types, is located next to other capital sources affecting economic growth. Often at first glance social capital is largely ignored in economic growth, but this kind of capital is the necessary and essential precondition for economic growth of any society, because economic growth requires systematic relationships of social actors (Savizi and Mohammadi, 2011). Bourdieu (1983) has defined social capital as “the sum of actual or potential resources related to possession of a lasting network of more or less institutionalized relations of mutual acquaintance or authentication” (Elgar et al., 2011). “A certain set of informal norms or values that the members of the group, that cooperation among them is allowed, are shared in it” (Ahmadi et al., 2010). The collective and shared value of social networks that includes all criteria of mutual interactions and includes the desire to do tasks related to network members (Goodarzvand et al., 2011); and the forces that increase the potential for economic development in a community through creation and strengthening of social relationships and patterns of social organizing (Pirahi, 2009); these are among the other definitions of social capital. Bourdieu, Coleman, Putnam and Fukuyama are among the theorists of social capital.

Nahapiet and Ghoshal classify social capital with an organizational approach and consider it including structural, cognitive, and relational dimensions (Feyzi and Ronaghi, 2011). Structural dimension: structural dimension refers to impersonal configuration of the links between individuals or social units. The important aspects of this dimension are the three aspects of network link, network arrangements, and network stability (Yangkoh, 2011). The links existing in the network: network link includes certain practices through which the members of social unit are linked together and are working with each other (Goodarzvand, 2011). In general, it involves the extent and severity of the communications existing in the network (Alvani and Shirvani, 2006). Network arrangements: they determine the patterns of ties among the members of social units (Goodarzvand, 2011) and include network hierarchy, network communicability and network density. Network stability: it includes the amount of proximity and similarities between people in a social unit (Goodarzvand, 2011). In general, this dimension contains that how much the size of the network created for a specific purpose may be used for other purposes (Alvani and Shirvani, 2006). Cognitive dimension: cognitive dimension considers the group of aspects that create the representations, interpretations and conceptual system shared between team members, and reflects the extent of sharing of project team members in a shared perception and development of a shared cognitive practice among themselves (Yangkoh and Rowlinson, 2011), and refers to the resources that provide manifestations, interpretations, and shared systems among groups.

Regarding the relationship between social capital and knowledge management, some researches have been carried out that among them the following researches can be mentioned: Saeidi, Azizi Mehr, Toosi and Tamizi (2010), in a study titled “Examining the amount of social capital and its relationship to innovation in Tondar unit of Iran Khodrov” showed that the amount of social capital in Tondar unit of Iran Khodrov” had been at a medium level. Also other results of the research indicated that there is a positive significant relationship between social capital and innovation and innovating in the organization. Also there is a significant relationship between network membership and innovation and also between social trust and innovation.

Research hypotheses:

Main hypothesis: There is a relationship between social capital and knowledge management.

Sub-hypothesis:

There is a relationship between Structural capital and knowledge management.

There is a relationship between Cognitive capital and knowledge management.

There is a relationship between Relational capital and knowledge management.

The dimensions of social capital can predict knowledge management.

RESEARCH METHODOLOGY

The research method is descriptive and correlational. The population of this research was all headquarter staff of Medical Sciences University of Zahedan who consisted of 530 people that among these, using the table recommended by Cohen et al. and through stratified random sampling proportional to size, 217 ones were selected for participating in the present study. The tools used in this research were two questionnaires: Nahapiet and Ghoshal Social Capital Standard Questionnaire (1998) and Randsip Knowledge Management Questionnaire (1979). Formal and content validity of both questionnaires were confirmed by some professors and experts in the field. Reliability was also calculated through Cronbach's alpha coefficient that this coefficient was 0.91 for social capital questionnaire and 0.89 for knowledge management questionnaire. In order to analyze the information,

descriptive statistics and inferential statistics methods including Pearson correlation coefficient and stepwise regression were used.

RESULTS

Main hypothesis: There is a relationship between social capital and knowledge management.

Table 1, Correlation coefficient of Social capital and knowledge management

Criteria variable	Knowledge management		
Statistical index			
Predictor variable	Correlation coefficient	Square of correlation coefficient	Significance level
Social capital	0.248*	0.062	0.015

Results of Table 1 shows that correlation coefficient between social capital and knowledge management ($r= 0.248$) is significant. According to the coefficient of determination (r^2), 6.2 percent of the variance of social capital and knowledge management had been common. Therefore, there is a relationship between social capital and knowledge management.

Sub-hypothesis1: There is a relationship between Structural capital and knowledge management

Table 2, Correlation coefficient of Structural capital and knowledge management

Criteria variable	Knowledge management		
Statistical index			
Predictor variable	Correlation coefficient	Square of correlation coefficient	Significance level
Structural capital	0.262**	0.069	0.008

Results of Table 2 shows that correlation coefficient between Structural capital and knowledge management ($r= 0.262$) is significant. According to the coefficient of determination (r^2), 6.9 percent of the variance of Structural capital and knowledge management had been common. Therefore, there is a relationship between Structural capital and knowledge management.

Sub-hypothesis2: There is a relationship between social capital and knowledge management.

Table 3, Correlation coefficient of Cognitive capital and knowledge management

Criteria variable	Knowledge management		
Statistical index			
Predictor variable	Correlation coefficient	Square of correlation coefficient	Significance level
Cognitive capital	0.251**	0.063	0.009

Results of Table 3 shows that correlation coefficient between Cognitive capital and knowledge management ($r= 0.251$) is significant. According to the coefficient of determination (r^2), 6.3 percent of the variance of Cognitive capital and knowledge management had been common. Therefore, there is a relationship between Cognitive capital and knowledge management.

Sub-hypothesis3: There is a relationship between Relational capital and knowledge management.

Table 4, Correlation coefficient of Relational capital and knowledge management

Criteria variable	Knowledge management		
Statistical index			
Predictor variable	Correlation coefficient	Square of correlation coefficient	Significance level
Relational capital	0.226*	0.051	0.022

Results of Table 4 shows that correlation coefficient between Relational capital and knowledge management ($r= 0.226$) is significant. According to the coefficient of determination (r^2), 5.1 percent of the variance of Relational capital and knowledge management had been common. Therefore, there is a relationship between Relational capital and knowledge management.

Sub-hypothesis3: The dimensions of social capital can predict knowledge management.

Table 5: Multiple correlation coefficient table of social capital and knowledge management

Statistical index	Predictor variable	multiple correlation coefficient	multiple correlation coefficient square	Adjusted multiple correlation coefficient square	F coefficient	Significance level
Criteria variable						
Structural capital	KM	0.268	0.072	0.062	7.204	0.009

P<0.01

As the findings of Table 5 shows, among the variables studied in regression, the best predictor of knowledge management in the first step had been structural capital. Based on the results of stepwise regression analysis, the relationship between the variable of structural capital and knowledge management had been significant. Accordingly, in the first step, structural capital coefficient explains 7.2 percent of knowledge management variance. The observed F in P<0.01 had been significant. So the regression can be generalized to the statistical population.

Table 6. Table of beta coefficient in prediction of knowledge management

Statistical index	Predictor variable	Non-standard beta coefficients		Standard beta coefficients	T coefficient	Significance level
		Beta	Criteria error			
First step Knowledge management	Structural capital	0.563	0.210	0.268	2.684	0.009

The results in Table 6 indicate that beta coefficient, per one unit increase in structural capital, increases knowledge management as 0.268 units.

Table 7. Table of variables out of equation in regression for prediction of knowledge management

Scale	Beta	T value	Significance level
Cognitive capital	-0.252	-1.005	0.312
Relational capital	0.140	0.573	0.538

P<0.05

As is seen in table (7), the relationship between social capital and knowledge management in the dimensions of relational capital and cognitive capital has not been significant.

DISCUSSION AND CONCLUSION

The results of the main hypothesis of the study indicated that there is a relationship between social capital and knowledge management. In explaining this relationship we can say that social capital is the accumulation of potential and actual available and accessible resources, through the network of relationships of a person or a social unit and is one of the important organizational capabilities and assets that can help organizations very much in creating and sharing knowledge and create them sustainable organizational advantage compared to other organizations. In other words, social capital is a network of relationships and links based on social, interpersonal,

and inter-group trust and the interactions between individuals and social groups, organizations, and institutions that provides social cohesion and social protection and the required energy for individuals and groups in order to facilitate actions in order to achieve individual and group objectives. This capital consists of three components namely the underlying resources in social structure, accessibility of people to these kinds of social resources and using or collecting these kinds of social resources in targeted actions. The ability of social capital in sharing and creation of knowledge is one of the main reasons of effective and efficient workplace outcomes, including knowledge management. In the light of forming of dynamic in-group and out-group relationships resulted from social capital, working teams based on trust are formed within the organization and the required energy for facilitating of actions between them is provided. Formation of knowledge teams in organization, as one of the consequences of social capital, has provided the groundwork for development of ideas in the organization and encourages organizational employees to solve organizational problems in new ways. So, it can be expected that in the light of increasing of social capital within the organization, knowledge management will also increase. The results of the second hypothesis showed that there is a relationship between the structural dimension of social capital and knowledge management. In explaining this result it can be said that, given that the structural dimension of social capital refers to impersonal configuration of ties between individuals or social units, the important aspects of this dimension include network link, network arrangements, and network stability. Network link contains certain practices that the social unit members are related to each other and work together. Network arrangements determine the patterns of link between members of social units and include hierarchy of network, network communicability, and network density. Network stability also indicates that how much a network created for a specific purpose may be used for other purposes. This dimension generally includes existence of favorable working system, formation of working groups and appropriate choice of people in different works. When a favorable working system is working in the organization, it means that the layout of working group has been done appropriately and the organizational affairs have been grouped based on expertise. Positioning of each of organizational employees in the specialized group provides the ground for their familiarity with the features of the working field and makes them more aware of the assigned duties. Thus, it can be expected that all activities related to the job, that are listed in organizational job description, are selected and organized fully conscious. Also complete familiarity of staff with the methods of doing the work, in addition to enjoying favorable working system, encourages them to fulfill the assigned duties in the best way. Obviously, in such a working environment, ideas will be proposed in order to optimize working system and knowledge management will increase. One of the other results of the present study is the relationship between cognitive dimension of social capital and knowledge management. Cognitive dimension considers those aspects that provide the representations, interpretations and conceptual system shared between group members, and reflects the extent of sharing of project team members in a common understanding and development of a common cognitive procedure among members. Also this dimension refers to resources that provide common manifestations, interpretations, and systems among groups. The most important aspects of this dimension are common language and common anecdotes. Language is a tool through which people can communicate with each other and exchange information. Moreover, common language increases the ability to combine information; common anecdotes also include stories and metaphors that cause maintaining of sets of meaning in a society. In another classification, relational dimension includes common goals and common vision. Common goal means the amount of common understanding and common vision of members of social unit regarding the goals and results of group activities, and common culture also includes the amount of behavioral norms common among members. For example, how much is the willingness of members in order to participate in group activities of the organization which shows the amount of common culture among members. So, it can be expected that in the light of changing of organizational structure towards change-encouraging structure, knowledge management will be increased.

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