

The Study of the Relationship between Social Capital and Intellectual Capital of the Organization (Case Study: University of Medical Sciences of Mazandaran Province)

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Doi:10.5901/mjss.2016.v7n4s1p317

Abstract

The purpose of this study is to review the relationship between social capital and intellectual capital of university of medical sciences and health services of Mazandaran. This research is an applied study and of a developmental type in terms of purpose and in terms of nature and method, it is a descriptive correlational study. The statistical population includes all of the employees of Mazandaran University of Medical Science and health services who were working in 2013. By using the Morgan sample volume estimation table, the sample volume of the study included 108 persons by using a classified random sampling method based on gender. The data collection method has been a library and field study one. The data collection in this research is a researcher-made questionnaire. In order to test the research hypotheses and the data obtained from the questionnaires, the data was analyzed by using SPSS software and inferential statistics. The results of the study showed that there is a relationship between dimensions of social capital and intellectual capital of the employees.

Keywords: Social Capital, Intellectual Capital, University of Medical Sciences Mazandaran

1. Introduction and Statement of the Issue

Traditionally, three kinds of capitals including natural capital, physical and human capital have been assumed as basis for economical performance and development together. With the occurrence of the information technology revolution, the information and network society and also the quick advancement of technology, the pattern of economic growth have been basically changed since the 1990s. Nowadays, knowledge has become the most important alternative capital for financial and physical capitals. The knowledge-based business environment requires an approach which includes the new intangible organizational assets such as knowledge and qualifications of the human resources, innovation, relationships with the customer, organizational culture, organizational systems and structures. On the other hand, another important organizational capabilities, which can be of great help in creating and sharing the knowledge and create a "sustainable organizational advantage" for the organization in comparison with other organizations is social capital (Nahapiet, et al., 2006: 242). Social capital is an integrated concept that explains the rate of norms and networks in the specific period of time. The social capital of every society results from the cultural and social conditions of that society and is an important index of social and cultural condition of that society (Tajbakhsh, et al., 2012: 156).

Armstrong, in his conceptual model, considers social capital as an element of intellectual capital, but others discuss it as an effective factor in creating intellectual capital (Qelichli and Moshabbaki, 2006).

Of course, judgment about the role social capital can play in creating the intellectual capital of university of medical sciences needs numerous theoretical and experimental studies and there are very few studies in this field; therefore, the researcher attempts to specify the role social capital plays in creating the intellectual capital of the university of medical sciences and why and how it plays this role. It is necessary to mention that in this study, the intellectual capital model is

based on Bennis's theory which is different from the definition presented by Spender. In this regard, it has been attempted to study the effect of each of the components of social capital on intellectual capital to present the methods to develop social capital in the intellectual capital in the Mazandaran's University of Medical Sciences.

2. Literature of the Research

2.1 Definition of the main concepts

2.1.1 Social capital

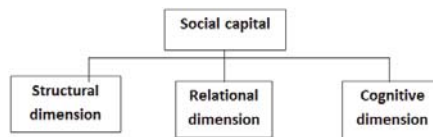
From the organizational point of view, Ghoshal and Nahapiet define social capital as actual and potential benefits that are available in the network, can be accessed through the network, or is caused by the network of the relationships of a person's relationships or a social unit. In fact, social capital is one of the important organizational capabilities and assets that can help organizations in creating and sharing knowledge and create sustainable organizational advantages in comparison with other organizations (Nahapiet and Ghoshal, 1998).

2.1.2 Intellectual capital

Intellectual capital provides a new database through which the organization can compete (Benites, 1999). Knowledge (the final product) stands against information (raw material). From the point of view of Ruth, et al., social capital includes all of the processes and assets which aren't showed in the balance sheet. And it also includes all intangible assets like trademarks, patent and exploitation rights and brand, which are considered in modern accounting methods (Ruth, 1997).

2.2 Theoretical principles

Among the existing models of social capital, the model presented Ghoshal and Napahyt is used in this study.



This model can be applied for reviewing the role of social capital in creating intellectual capital given the main purposes of the present study.

2.3 Dimensions of social capital according to Napahyt and Ghoshal model

Napahyt and Ghoshal, with an organizational approach, categorized the different dimensions of social capital in three classes as follows: structural, relational (customer) and cognitive.

2.3.1 Structural element:

Structural element of social capital refers to the overall pattern of the contacts between people meaning that to whom and to what you have access. The most important aspects of this element are network relationship between people, network configuration, and appropriate organization. (Alvani, 2001: 56)

Network relationships: The main recommendation of the social capital theory is that the network relationships make accessing the sources (like knowledge) possible.

Network relationships Configuration: the overall configuration of network relationships forms an important aspect of social capital that can effect on intellectual capital development (Portes, 1998: 24).

Appropriate organization: the social capital created by the total of the relations and connections, norms and confidence in a specific environment often can transfer a social environment to another one and that is how it affects the social exchange patterns .

2.3.2 Cognitive element:

This element refers to the sources which provide the manifestations and interpretations and systems of shared meanings among the groups. The most important aspects of this dimension are shared codes and language and shared stories.

Shared codes and language: shared language affects the conditions of combining and exchanging knowledge. Language has a direct and important function in social relations, exchanges information, people ask each other questions and do business affairs in the society and also language influences our perceptions.

Shared stories: myths, stories and metaphors provide strong tools in societies for creating, exchanging and keeping sets of meanings (Fukuyama, 2005: 118)

2.3.3 The relationship element:

This element describes a kind of personal relationship established by the individuals with one another due to the record of their interaction. The most important features of this dimension of social capital are trust, norms, requirements, expectations and identity.

Trust: researches show that where the relations are based on a high level of trust, people tend to establish cooperative interactions and social exchange.

Norms: cooperative norms can create a strong basis for creating intellectual capital. Interactive norms, the importance of which in intellectual capital has been shown, are: tendency to assessment and responding to variety, critical spirit and tolerating failure (Jahangiri, et al., 2010: 41)

2.4 Requirement and expectations:

Requirement shows a commitment or a responsibility for doing something in future. Coleman distinguishes requirements from generalized norms and considers them as expectations created in specific personal relationships.

Identity: identity is a process in which people think that they are a unique group with some individuals or a group of individuals. Cramer, et al., found out the feeling of empathy with a group increases the concern about collective results and processes and therefore it also increases the probability of opportunities for exchanging information (Baker Vain, 2003: 106)

2.5 Bontis's Model for reviewing intellectual capital

Bontis in 1998, following his previous theories, stated that social capital is composed of three elements of customer capital, structural capital and human capital. In his opinion, a main part of human capital composes people's subjective knowledge. This knowledge includes experimental skills which cannot easily be mentioned as articulated. Bontis believes that human capital has an important role because it's considered as the main source of creativity and innovation. He believes that structural capital includes organizational structures and mechanisms which have supportive roles in promoting the employees to the maximum of the processes, R&D and functions. Bontis thinks that these elements include culture, information system of the current affairs and the efficiency of each of them.

From Bontis's point of view, customer capital includes familiarity with marketing channels and knowledge of relationships with customers and each of these two has a significant role in an organization. In addition, he believes that other aspects like relationships with the opponents and suppliers are the other important elements of this capital (Bolen 2005, quoted by Alem Tabrizi, 2007).

2.6 Experimental background of the research

Samiee (2013) reviewed "the effect of social, cultural and economical capitals of the family on their children's professional and academic accomplishment" in his master's thesis in Al-Zahra University. The obtained results in the dimension of social capital show that the communicability of the respondents is at a low level and also, they are weak in the voluntary and unofficial groups which are generally at a low level in social capital. Social capital in men is more than that in women and the employed people have more social capital than unemployed ones.

Mirzakhani (2012), in his thesis, reviewed the relationship between social and cultural capitals with an approach to the academic major and academic performance. The results of his/her study show that social capital is a multidimensional concept that has four main dimensions including rate of social activity, social relations with family, social

relations rate with friends, and neighbors and social trust. In this study, the mean of social capital are significantly different in different academic majors.

The results of Zhang's study (2008) on reviewing the role of social capital on the performance of private company in China showed that there is no significant relationship between variety of membership of individuals in various organizations and performance of their private companies. Also, short-term investment in the reinforcement of social capital of the members of the private companies will have a great influence on the performance of these companies. The components of the social capital considered in this study have included social participation, trust, coherence and social awareness.

Garcia and Martinez (2007), in an experimental study, reviewed the relationship between intellectual capital information used in the investment decisions in Spanish companies.

3. Research method

This research is a correlational descriptive in terms of its data collection method and it is an applied research in terms of its purpose. The statistical population of this research includes all employees of Mazandaran's University of Medical Sciences and health care services of the Mazandaran province working in 2013. And according to recorded statistics, they were 149 persons. Given the sample volume (149) and by referring to the Morgan sample volume estimation table, the sample volume of the research has been considered to be equal to 108 persons. In order to choose the research samples, the stratified random sampling method has been used based on gender the details of which can be shown in table (1).

Table (1): The frequency of population and sample based on gender

Gender	Population volume	Ratio (in percentage)	Sample volume
Male	104	70%	76
Female	45	30%	32
Total	149	100%	108

Also the tool used for collecting the data in this study has been researcher-made questionnaire. Validity and reliability of the questionnaire have been measured by experienced professors and Cronbach's alpha coefficients (social capital: 0.74 and intellectual capital: 0.79)

4. Results

4.1 Descriptive findings

%70 of the all of the respondents is formed of males (the highest frequency) and %30 is formed of females (the lowest frequency). %13 of the samples had associate degree (the lowest frequency). Also %36 of the testees had a professional record of less than 10 years (lowest frequency) and %64 had a professional record of more than 10 years (lowest frequency). %25 of the participants were single (lowest frequency) and %75 were married (lowest frequency).

4.2 Inferential findings

In order to statistically review the hypotheses, the Pearson correlation test has been used because of variable's distance measurement level.

4.2.1 The primary hypothesis: There is a relationship between social capital and intellectual capital of the employees.

Table (2): Statistical analysis of second hypothesis of research

Variables	Pearson coefficient	Error rate (α)	Sig (significance level)
Social capital and intellectual capital	0.661	0.005	0.000

Given that in the Pearson table the value of sig (significance level) is significant at the error level of 0.5 ($\text{sig}=0.000 < \alpha=0.05$), therefore, with a 95% of confidence, this result is obtained that there is a relationship between these two variables and actually there is a direct relationship between social capital and intellectual capital of the employees.

4.2.2 *The secondary hypothesis 1: there is a relationship between cognitive dimension of social capital and intellectual capital of employees.*

Table (3): Statistical analysis of first primary hypothesis of research

Variables	Pearson coefficient	Error rate (α)	Sig (significance level)
Cognitive dimension of social capital and intellectual capital	0.652	0.005	0.000

Given that in the Pearson table the value of sig (significance level) is significant at the error level of 0.5 ($\text{sig}=0.000 < \alpha=0.05$), therefore, with a 95% of confidence, this result is obtained that there is a relationship between these two variables and actually there is a direct relationship between the cognitive dimension of social capital and intellectual capital of the employees.

4.2.3 *The secondary hypothesis 2: there is a relationship between structural dimension of social capital and intellectual capital of employees.*

Table (4): Statistical analysis of second primary hypothesis of research

Variables	Pearson coefficient	Error rate (α)	Sig (significance level)
Structural dimension of social capital and intellectual capital	0.564	0.005	0.000

Given that in the Pearson table the value of sig (significance level) is significant at the error level of 0.5 ($\text{sig}=0.000 < \alpha=0.05$), therefore, with a 95% of confidence, this result is obtained that there is a relationship between these two variables and actually there is a direct relationship between the structural dimension of social capital and intellectual capital of the employees.

4.2.4 *The secondary hypothesis 3: there is a relationship between relational dimension of social capital and intellectual capital of employees.*

Table (5): Statistical analysis of third primary hypothesis of research

Variables	Pearson coefficient	Error rate (α)	Sig (significance level)
Relational dimension of social capital and intellectual capital	0.436	0.005	0.000

Given that in the Pearson table the value of sig (significance level) is significant at the error level of 0.5 ($\text{sig}=0.000 < \alpha=0.05$), therefore, with a 95% of confidence, this result is obtained that there is a relationship between these two variables and actually there is a direct relationship between the structural dimension of social capital and intellectual capital of the employees.

5. Conclusion

The purpose of this study is to review the relationship between social capital and intellectual capital of university of medical sciences and health services of Mazandaran. The most important obtained results showed that there is a significant relationship between social capital and intellectual capital of the organization. In the following section, the obtained results have been discussed.

The experts of management science basically discuss that organizations have specific capabilities for creating and sharing knowledge, which create specific advantages in comparison with other organization. Social capital is one of the important organizational capabilities and assets of organizations which can be of great help for the organization in creating and sharing knowledge. Although Bontis does not use social capital in his intellectual capital model, nonetheless

he says that trust and culture facilitate intellectual capital in organizations. Furthermore, from the perspective of Nahapiet and Ghoshal, intellectual capital is basically a social product and also knowledge and meaning always exist in a social texture which means that they are both created and also remain sustainable through current relations in the groups.

The results of the first secondary hypothesis show that there is a relationship between cognitive dimension of social capital and intellectual capital of the employees. In fact, presence of various cultures between colleagues and desirableness of working in an organization for the employees and also employee's sense of duty leads to the improvement and reinforcement of the level of intellectual capital in the organizations. This result complies with the results of Samiee's (2013), Ghelichli (2012) and Saminton (2011).

The results of the second secondary hypothesis show that there is a relationship between the structural dimension of social capital and intellectual capital of the employees. According to the theoretical views, if managers of these organizations encourage and facilitate the relations network, friendships and unofficial communications of the employees with their colleagues can be developed by guaranteeing connections, information exudation and social support and it can the development of intellectual capital. Also satisfactory social communications between the employees will lead to the growth of their relationships. By developing the relation network, in addition to social skills, knowledge, experience and information is exchanged between them and the substrate for the creativity of talented employees will be provided and employees can create more value and make the organization the place for useful communications. These results comply with the results of Samiee (2013) and Ghelichli (2012).

The results of the third secondary hypothesis show that there is a relationship between the relational dimension of social capital and intellectual capital of the employees. In explaining this result, it must be said that if an organization has a high level of trust, the employees have more tendency to social exchange and cooperative interaction. Also, the employees trusting one another is necessary for creating knowledge in cases where it is vague and trust is lacked. If the managers of an organization encourage trust, cooperative norms and the shared identity in the organization, they have actually created a strong basis for creating intellectual capital in the organization. These results comply with the results of Samiee (2013) and Ghelichli (2012).

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