

Investigating the relationship between social capital and establishment of knowledge management in Allameh Tabataba'i University

Golpar Mehrabi

M.A Educational Psychology, Allameh Tabataba'i University, Tehran, Iran
Corresponding Author: g.mehrabi.48@gmail.com

Abstract

Present study, by paying attention to the role and importance of social capital and knowledge management which are the most important resource of a country and organization during the recent years, explain the role of these intangible assets and organizational strategic resources in sustainable development and organizational advantage .Transferring and sharing of knowledge and information between people and organizations in macro and micro levels, depends on the people that facilitate and accelerate this transition, so the importance of communication and interaction among people based on trust and norms in development, creation and application of knowledge has been emphasized .In this regard, it has tried to investigate the relationship between social capital (structural, communication and cognitive aspects) and knowledge management .Presented study is applied in terms of aim and in terms of data collection is descriptive and correlation .Statistical population is included all staffs and board of science members of Allameh Tabataba'i University that 80 of them were randomly selected using Cochran formula .Obtained results of subject literature and field research findings show that, there is a meaningful relationship among social capital, organizational culture, organizational structure, infrastructure and change content factors which all of them are variables of knowledge management readiness.

Keywords: Knowledge management, social capital, organizational culture, organizational structure.

Introduction:

Mc Luhan (1999) believes that, information revolution with the advent of digital resources and communicational tools, caused fundamental changes in all aspects of contemporary human life. Entering to the information Era, development of new tools and application of information and communication technology (ICT) has led to the formation of a new approach in education affair. Information technology as a new media, containing messages and concepts for development of the informational society to the knowledge –based society. Which its speed and continuity in the fourth wave of human life, takes place by the concept of “knowledge management”. From the perspective of nature, knowledge is a developed form of conceptual data and information (quoted by salavati, 2010). Data are raw facts and if they interpreted and assessed, turn to information. According to “Power” and “Swart” (2005) information are understandable data for receiver and knowledge is accumulating the information and acquired skills which are obtained from information by receivers.

Flynn (2004) believes that, knowledge is the result of human actions. So that people are at the center of organizational knowledge –creation and create knowledge and exchange it with each other. So understanding the relation and interaction of data, information, knowledge and wisdom are important. To explain the concept of knowledge management, a modern approach has been developed. Including Stockdale (2006) believes that abilities of organizations based on intangible assets of organizations in form of software can be characterized the ability of organization knowledge which it is a new concept of knowledge management. These assets have an increasing and effective roles in knowledge management cycle, where knowledge is created, conceived and developed. The role of intangible assets is an unmatched social capital which increase the readiness of organizations by implementing of knowledge management (quoted by paul, 2010).

Holt (2000), defined the organizational readiness for implementing the knowledge management as an essential prerequisite for a person or an organization for opportunities and increasing the competitive advantage in face of organizational changes. Simon (1996) and Jansen (2000) (quoted by Zomorjian and Rostami, 2010) believes that, in order to establishment of knowledge management for reducing the risk and uncertainty, two fundamental questions should be answered by managers: First, what is the current basic function of an organization for knowledge management and secondly, what changes should be made before starting the knowledge management activities? Thus paying attention to the context of knowledge management establishment in successful implementation of different existing organizational factors are significant including: organizational structures, organizational cultures, technology and human resources. Successful implementation of knowledge management is linked to several factors: social capital is one of these factors which is interacted with knowledge management variables. Social capital is a modern concept which consider in social and economical studies of societies. This capital in a society is strongly influenced by the organizations performance and specially

educational institutions .In scientific literatures about correcting the capital, different definitions and interpretations have been proposed: “Vogt” (1993) defined the capital as a generating wealth and source of income generation(quoted by salavati, 2009 and kazemi 2008).

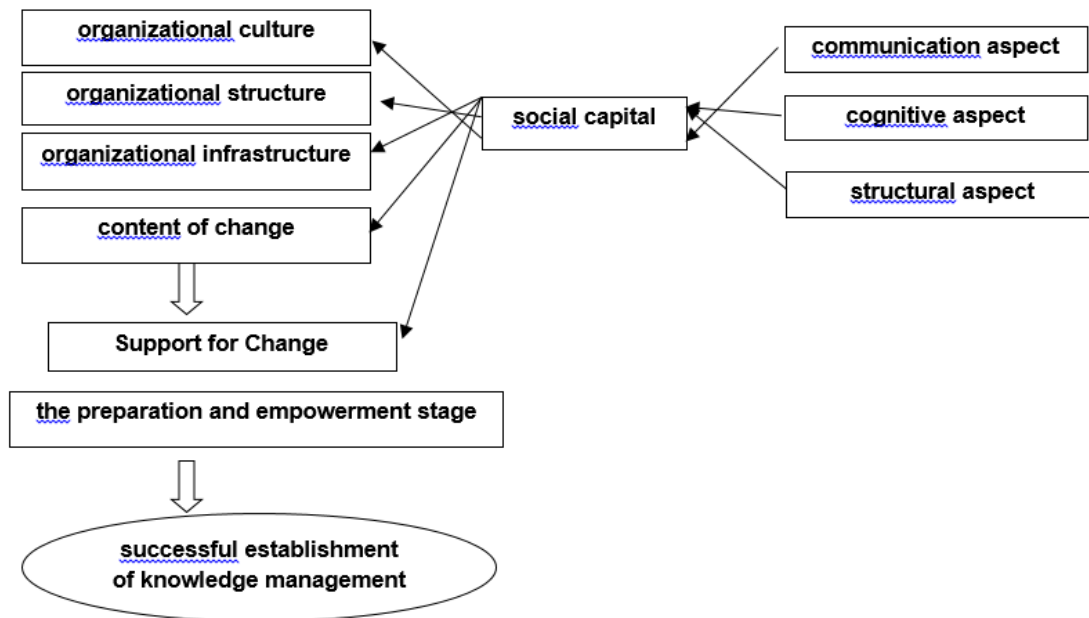
Fukuyama (1995) proposed another definition of social capital and says: social capital can be defined simply as a certain set of norms or informal values .Careful examination of the above definition helps that by understanding the relation of social capital with knowledge management variables, become aware of quality and quantity of knowledge management establishment .So that, if there is a more relationship between social capital and knowledge management variables, while it can be understood about social capital than the quality of knowledge management establishment, in addition, by the help of knowledge management variables, it can be aware of the quality and quantity of social capitals in organizations which are included the role of human capitals and consequently, intellectual capitals .So that the elements and aspects of social capitals, according to Bolino et. al. studies (2006) including: obligations, expectations and mutual trust, communication channels, effective implementation guarantees and norms and according to Alvani and Seyed naghavi studies (2001), conforming with findings of “Cady” group, Harvard university, forgiveness and volunteering, justice participation in civic engagement, diversity of social interactions and friendship, in the organizations which are measurable, can be learnt about the amount of knowledge management establishment .Because these components have a meaningful relationship with knowledge management variables such as: organizational culture, organizational structure, infrastructure and conceptual changing factors .Daniel Bell believes that, not only the role and importance of knowledge and information has been increased quantitatively, but also qualitatively, it has created changes in type of knowledge as well .In post –industrial societies, theoretical knowledge is known as the most important type of knowledge which represent the abstract knowledge and principles that can be compiled or at least rooted in the system of regulations and framework for actions (styhre, 2008). Universities and educational and research centers are pioneer in this field that had, have and will have increasing role in production and development the theoretical knowledge and provide the areas of knowledge management establishment by taking advantage of enabling brain software (paul,2010).

Given the above, the matter of researcher is rooted from studying in the field of knowledge management and social capital .In fact, researcher by acquiring general knowledge about knowledge management status, concluded that, it (knowledge management status) in Naragh Allameh Tabataba’i University is far from the desired situation .Meanwhile by studying about the social capital, concluded that these two concepts can have conceptual relationship with each other .In fact researchers matter comes from a vague sense in respect to the status of knowledge management and social capital in University to check the status and relationship between these two variables take action to improve the knowledge management and social capital in order to Allameh Tabataba’i University take advantage of benefits of implementation of knowledge management .So, presented research is studying the effect of social capital on establishing a management system in the context of field research setting goals in Allameh Tabataba’i

University so based on the results of the subject literature and also obtained findings of field research, necessary evidences are provided in order to determine the meaningful relationship between social capital and readiness of knowledge management variables as well as presenting necessary suggestions in order to develop appropriate strategies and a good understanding of the readiness of the organizations which are under study in the correct orientation and the other problems facing the improving movement of the biggest learner and leading university .

Conceptual Model:

The theoretical framework is a conceptual model based on theoretical relationships among a number of factors that have been considered important related to the issue .This idea, by checking the research back grounds in the scope of problems, flow in a logical way .According to this definition, researcher by investigating the social capitals theoretical literatures has presented the referred aspects by investigating the social capitals theoretical literatures .Since various aspects of different perspectives had been presented in national and organizational levels, the researcher has used the provided aspects by: “Nahapit” and “Goshal” in this sense that, this model with organization approach, categorize different aspects of social capitals in three floors .In the case of organizational readiness for establishing the knowledge management, different models had been presented as well that after examining the available models in this regard, as previously discussed, a model chose that, selected indexes for readiness has defined by paying attention to the all process of knowledge management (Zomorrodian and Rostami, 2010) .According to this, the below conceptual model presented as the research theoretical framework.



Conceptual model of research (adapted Zomorrodian and Rostami, 2010)

The main hypothesis:

- Social capital has an impact on establishing the knowledge management in Allameh Tabataba'i University.

Hypothesis:

- Social capital has an impact on organizational culture factor in Allameh Tabataba'i University.
- Social capital has an impact on organizational structure factor in Allameh Tabataba'i University.
- Social capital has an impact on organizational infra structure factor in Allameh Tabataba'i University.
- Social capital has an impact on supporting the changing factor in Allameh Tabataba'i University.
- Social capital has an impact on content of changing factor in Allameh Tabataba'i University.

Research methodology:

This study in terms of aims is applied and in terms of the way of obtaining the need data is descriptive (non –experimental) and survey .Also since structural equation modeling will be used

to test the hypothesis, among the correlation researches, is analysis of correlation matrix or co – variance.

Variables and indexes of research:

In main theory, social capital is independent variable and readiness of establishing the knowledge management is dependent variable .In the next assumptions, social capital is independent variable and aspects of knowledge management are dependent variables .Social capital indicators have shown in table below.

Table 1: Studied variables and indicators

Indicators	Elements	Variable
<ul style="list-style-type: none"> ✓ Relationship based on honesty and mutual trust ✓ Cooperation as a requirement ✓ Existence of team work ✓ Criticism ✓ Commitment to objectives ✓ Preference interests of the organization ✓ Being member of a joint family 	Relational	Social capital
<ul style="list-style-type: none"> ✓ Existing of common values and goals ✓ Understanding and cooperation based on common stories 	Cognitive	
<ul style="list-style-type: none"> ✓ Warm personal relationships ✓ Good and high working relationships ✓ Structure facilities communication among work teams and committees 	Structural	
<ul style="list-style-type: none"> ✓ Trust ✓ Collaboration ✓ Organization open atmosphere ✓ Learning from failures 	Organizational culture factor	Establishment of knowledge management
<ul style="list-style-type: none"> ✓ Lack of formality ✓ Lack of centralization ✓ Communication channels ✓ Team structure 	Organizational structural factor	
<ul style="list-style-type: none"> ✓ Network access ✓ Information quality 	Infra structure factor (IT)	

<ul style="list-style-type: none"> ✓ Flexibility ✓ Access to the applicable software ✓ Access to hardware and network 		
<ul style="list-style-type: none"> ✓ Benefits of changing ✓ Proportion of ✓ Incompatibility 	Changing content factor	
<ul style="list-style-type: none"> ✓ Support of senior management ✓ Employees involvement ✓ Compensation and reward system ✓ Training 	Support of changing factor	

Data collecting methods:

1-Library studies:

Library studies have been widely used in conducted studies about the relationship between social capital and knowledge management in order to collect information related to the literature and history research, explain the effective indicators in social capital and improve the process of knowledge management.

2- Field researches:

In this study, two standard questionnaires were used to collect information:

A)The social capital questionnaires: these questionnaires which have been designed based on Nahapit and Goshal models (1998), measures three structural aspects (7 items), communicational (7 items) and cognitive (6 items).

B) Readiness of establishing the knowledge management questionnaires: these questionnaires measures five aspects of: organizational culture, organizational structure, infra structures, support of changing and changing content.

Validity and reliability of measuring tools:

In this study, in order to measure the internal consistency (reliability) of questionnaires Cronbach’s alpha method was used which is called: alpha coefficient, Cronbach’s alpha coefficient or even alpha .In this method, components or parts of the test are used to assess its reliability coefficient .This method is used in cases that, the questions have more than two alternatives .Cronbach’s alpha coefficient has been obtained 84% for social capital questionnaire and 85% for establishment of knowledge management questionnaire .These numbers indicates

that, the used questionnaires has required reliability or in other words, trustworthiness .To check the validity, different types of validity, content validity were examined .Thus the content validity depends of the judgment of the jury .So in order to determine the validity of the questionnaire, the experts were consulted and validity (reliability) of questionnaires were confirmed by experts and professors.

Statistical population and statistical samples:

According to definition, statistical population is a collection of individuals or entities which at least have more than one common trait .Usually in each study, under investigated population is a statistical population which the researchers is tended to study the variable characteristics of its unites .One of the purposes of scientific researches is describing the state of society .Under investigated population in this research is consisted of all employees and managers of Naragh Allameh Tabataba'i University.According to information obtained from documents in Allameh Tabataba'i University, the number of population which is under investigation is included 100 persons .For sampling of the population, the simple random sampling method was used .So that among the samples, a number of them were selected randomly in order to responds to the questionnaires and information received from them .Due to the limited sample size of the population and executive facilities and considering the limits of performance, the number of samples were considered 80 by the use of Cochran formula.

Methods of data analyzing:

In order to analyze data obtained from social capital and knowledge management questionnaires, descriptive statistics such as: mean, standard deviation, variance etc. were used .In inferential parts, confirmatory factor analysis tests (structural equation modeling) were used to identify the latent (hidden) variables .In structural equation models, on the one hand, the applicability of research data and conceptual models will be examined whether does it have an appropriate fitness and on the other hand, the significance of relationships will be tested in this fitness model .to study the correlation among variables of research, "Pearson" correlation has used.

Research findings:

Descriptive findings:

Table 2: Descriptive statistics for scales

Minimum	Maximum	Variance	Chulegi	Protraction	Standard devia.	Mean	Scale
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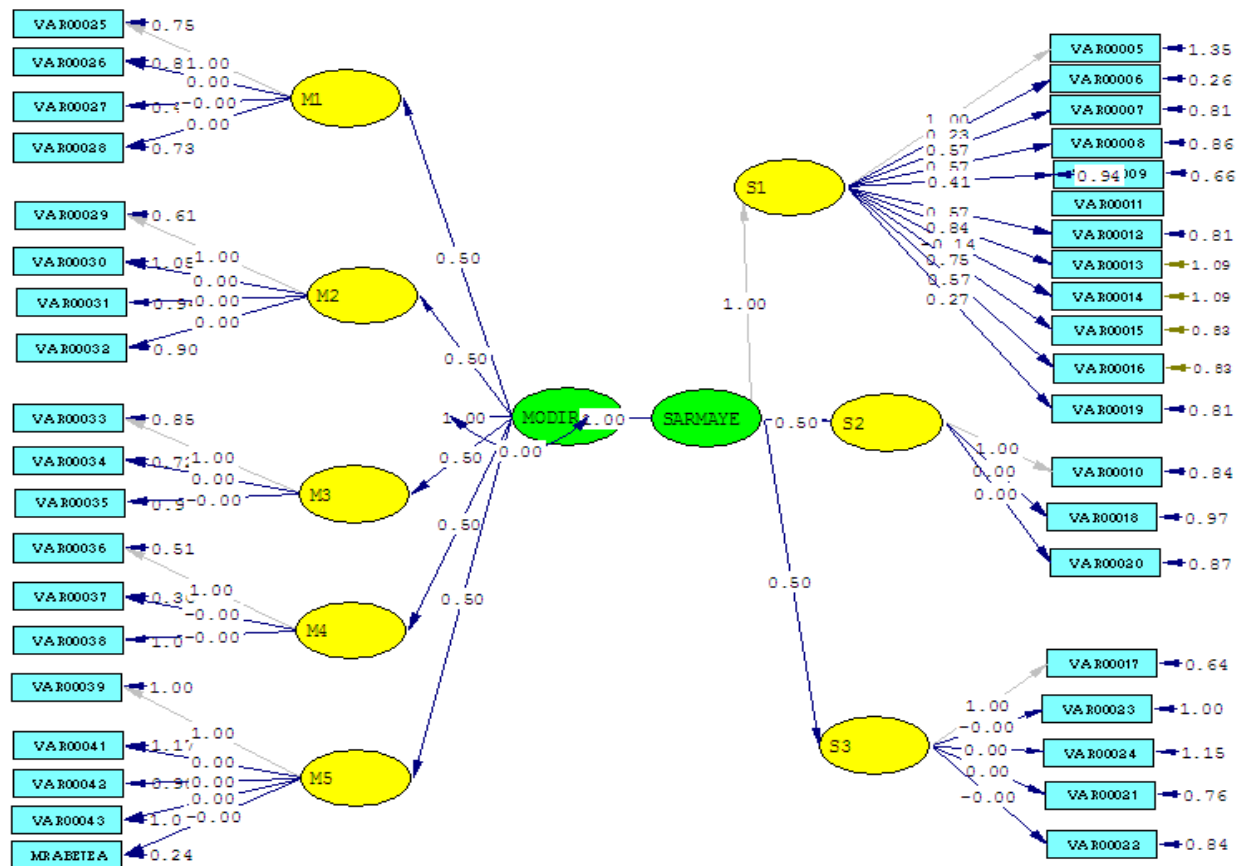
19	49	47.01	0.129	0.335	6.85	32. 35	Structu ral aspect
3	9	2.541	0.064	0.835	1.59	5.6 2	Relatio nal aspect
7	22	11.61	0.199	0.569	3.40	13. 53	Cognitive aspect
4	17	8.177	0.262	0.341	2.85	10. 47	Organi zational culture
4	17	10.22	0.452	0.393	3.19	11. 82	Organi zational structure
3	14	5.348	0.385	0.313	2.31	7.7 6	Infra structure
5	24	18.12	0.209	0.506	4.25	15. 18	Support of changing
3	11	3.13	0.136	0.205	1.77	7.0 7	Changing content

According to the obtained results, correlation coefficient between two variables of social capital and organization cultures are: 0.684, correlation coefficient between two variables of social capital and organizational structure is 0.598, correlation coefficient between variables of social capital and organization structure is: 0.518 and correlation coefficient between two variables of social capital and changing content is: 0.446 and by paying attention to the achieved significant level, all of these coefficients are significant

Studying the research conceptual model:

In order to investigate the research conceptual model, confirmatory factor analysis has used to determine whether mentioned model in Allameh Tabataba'i University population has an acceptable validity or not? Factor analysis, is a multivariate statistical method which is used for analyzing tables or correlation coefficient matrices .This analysis in presented study has performed by: LISRER (8.7) software.

Figure 1: The first factor analysis model in standardized coefficient



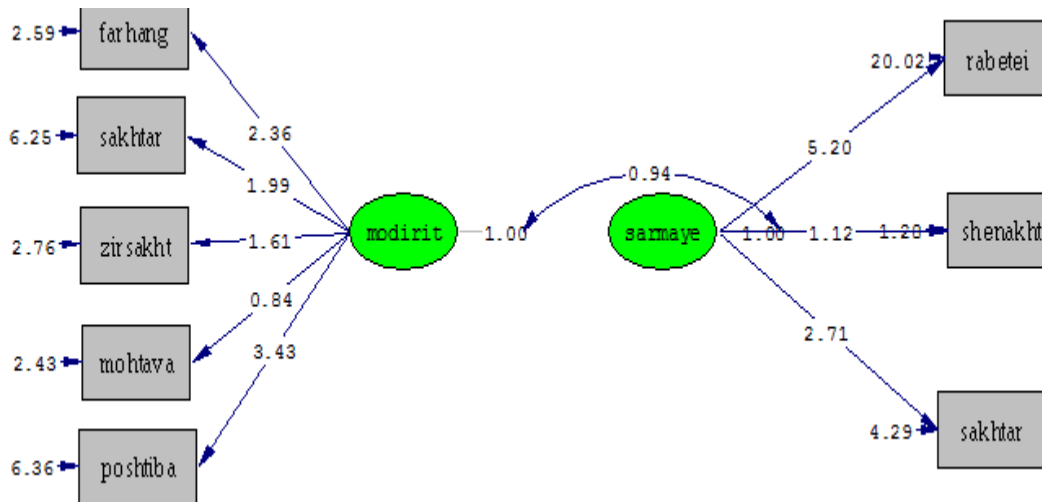


Figure 2: The relationship between social capital and knowledge management

To assess the adequacy of model, various statistics and indicators has been released .Since each of these indicators only reflect a certain aspects of the model, Sun (2005) to evaluate the fit of model in studies which are the same with presented research which their aim is examine the validity of measuring tools, proposes the following measures:

The square root of the variance estimation error of approximation (RMSEA), Tucker –Louise index (TLI) or not fitted soft index (NNFI), comparative fit index (CFI), Mc Donald central indicator (MC) and standardized root mean square residual (SRMR), Chi du statistic which is so sensitive to the sample size and multivariable normal deviation (Jarzgak and Surbum, 2001) .In presented study, Chi du indicators, the ratio of Chi –du on freedom degree, root mean square error approximation goodness of fit index, comparative fit index, normed fit index and non – normed fit indexes have been used .These information are given in below table.

Table 4: Indicators factors analysis model

Goodness indicators		Indicator
Allowed limited	Amount	
Less than 3	2/26	$\frac{\chi^2}{df}$
Less than 0.1	0/07	RMSEA ¹ (Root mean square error approximation)
Above 0.9	0/94	GFI ² (Goodness of fit index)
Above 0.9	0/93	CFI ³ (Comparative fit index)
Above 0.9	0/95	NFI ⁴ (Normed fit index)
Above 0.9	0/93	NNFI ⁵ (Non –normed fit index)

In general, each of the indicators obtained from “LISREL” program don’t show alone the suitability or non –suitability of the model and these indicators should be interpreted together .The resulting values for these indicators shows that totally, confirmatory factor analysis model in order to explain and model fitting, is in good conditions.

Discussion and conclusions:

Today, knowledge is the most important and most precious resource in industrial economies and also is the most important asset that organizations have as well as determination of innovation, profitability and considered as their sustainable competitive advantage which is regarded as an learning organization .The different between these organizations and the other organizations is benefit from the knowledge- based employees as human capital .Universities and research centers have an indispensable role in educating the knowledge –based employees. So they achieve this aim when they establish knowledge management system in their in their own structures .Evaluation of knowledge management establishment is based on the social capital in studied population which means University of Allameh Tabataba’i which is purpose of this study,

provides the necessary evidences to answer the series of research questions .Studied scientific bases accompanied by investigated backgrounds, have presented scientific evidences of importance of establishing the knowledge management system based on social capital .Also results of the field study shows that there is a significant relationship between social capital in three aspects of cognitive, structural and relational with readiness of establishing knowledge management such as: organizational culture, organizational structures, infra structures, changing content and support of changing factors. The results have also shown that social capital leads to readiness of establishing the knowledge management in five mentioned aspects in studied population.

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