

Mediator Role of Knowledge Management in Relation with Intellectual Capital & Social Capital of Shahrbabak High School Female Teachers

Esmat Hassan Pour

Department of Educational Sciences, Payam Noor University, Sharbabak, I.R. Iran.

Received: March 21, 2015

Accepted: July 7, 2015

ABSTRACT

Studying the effect of intellectual capital on social capital, emphasizing on mediator role of knowledge management of teachers is purpose of current survey. The method of study is descriptive – correlative and from purpose point of view is applicative study based on structural equations model. Statistical society involves 527 high school teachers. 226 teachers using simple random sampling were selected. Study tools includes three questionnaires such as intellectual capital, social capital and knowledge management. The results show there is significant relationship between intellectual capital and social capital. Intellectual capital has positive effect on knowledge management. Social capital has positive effect on knowledge management. The role of knowledge management is not enough strong that acts as mediator variable.

KEY WORDS: Intellectual capital, Social capital, Knowledge management, Structural equations model.

1. INTRODUCTION

Nowadays through developing information technology and arriving to knowledge economy that physical and financial assets are not enough respondent to organization success anymore, organization must substitute these assets with other such as intellectual capital, as just in this way organizations can gain constant competitive advantages in this new world which all organizations compete for obtaining information and knowledge. In fact, organizations must increase and manage their intangible assets for warranty their future success and persistence. Meanwhilesocial capitals has attracted critics' opinions in different fields such as sociology, policy, economy, management and utilizing it for increasing intellectual capital of organization and its effective application during past years. On the other hand, knowledge management is the main responsibility of those organizations which are following optimum application of this valuable and appreciable asset. Knowledge management is a process which helps organization to create greater power by little force and be defined as a new method of directing organization and sharing intellectual and scientific resources. It also helps to find, choose, organize and publish beneficial and important data. Knowledge management is necessary for solving problems, dynamic learning and making decision and can improve organizational function by providing intelligence functions (14)

It is clear the resulted benefits of utilizing knowledge management cause organization do effort for establishing that process.

The primitive efforts of almost all organizations face to this main challenge that despite considerable financing for its establishing, expanding and using its applications are occurred slowly. One of the main reasons of this problem is low level of organizations infra-structural readiness for accepting and applying knowledge management. (15) Hence we try to study the effect of intellectual capital on social capital regarding the mediator role of knowledge management.

2. Theoretical issue

1.2 Intellectual capital

Intellectual capital is a composition of intangible stocks that make organizations be able to do their tasks. Such definitions provides important issues for understanding intellectual capital. (10) Intellectual capital is determined as a resource that is recognized, obtained and considered for creating more valuable assets. Intellectual capital signifies to intellectual materials such as knowledge, information, virtual stocks and experiences that create value. (11)

2.2 Social capital

Social capital is a set of networks, norms, values and a cognition that facilitates intra and inter groups' cooperation for obtaining interactive benefits. (4) Social capital is a result of people cooperation and interaction who have common ideas. (9)

3.2 Knowledge management

Knowledge management is a process that makes organizations be able to obtain tasks for learning (localize knowledge), coding (out sourcing), dispensing and transforming knowledge.

Knowledge management is a set of processes that utilizing resulted outputs can reach to knowledge based competitive weapon in organizations. (13) Knowledge management is a homogenous and systematic process involve obtaining, creating, storing, dispensing and utilizing knowledge by people and groups for reaching to organization purposes. (6)

Organizations can utilizes gathered data through process of knowledge management.

3. Research back ground

Qelich & Moshabaki (2006) proceed the role of social capital on creating intellectual capital of two automobile manufacturing factories. The results show the effective role of social capital on creating and improving intellectual capital and its dimensions (5)

Bentis et al (2000) has studied the relationship between intellectual capital and trading function of companies in service and non-service industries. The results declare the interactive relationship between two case studies, it seems intellectual capital has rather moderate effect between 25-30% on trading function. (8)

RiahiBoluki surveys the effect of intellectual capital on function of multinational companies applying the related data of 81 firms from 1992 to 1996. The results show significant positive relationship. (2)

Defining effective determinants of social intellectual on American companies function, Koruz et al (2006) has declared cognition asset, social partnership, social solidarity and increasing of social interactions are influential on improving firms' functions. (12)

Zhang (2007) has studied the social capital role on Chinese private firms. He has showed there is no significant relationship between variety of organizational membership and private firms' functions. (16)

4. Research purposes

4.1 Main purpose

The main purpose of current study is determining the relationship between intellectual capital and social capital, emphasizing the moderate role of knowledge management and providing guidelines for its successful establishment.

4.2 Subsidiary purposes

- Determining relationship between intellectual capital and knowledge management.
- Determining relationship between intellectual capital and social capital.
- Determining relationship between knowledge management and social capital.

5. Research hypotheses

- Intellectual capital has positive effect on social capital.
- Intellectual capital has positive effect on knowledge management.
- Knowledge management has a mediator role regarding intellectual and social capital.

6. Examining hypothesis model

Conceptual framework of current study for surveying and examining the hypotheses is:

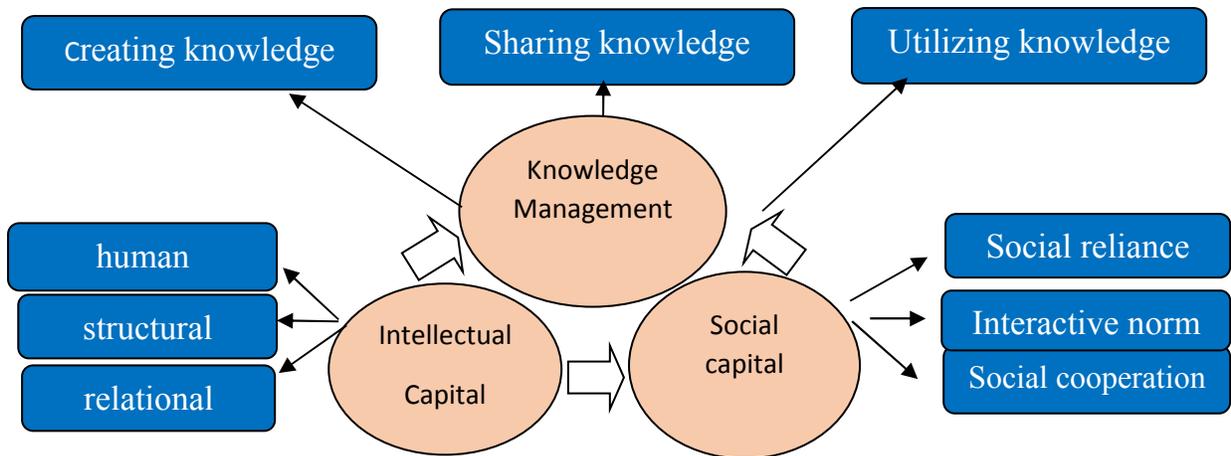


Figure 1. Research conceptual model

7. Method of research

The method of study is descriptive – correlative and from purpose point of view is applicative study based on structural equations model. Many methods were provided for surveying the relation between variables during recent decades. One of these methods is structural equations model or multi variable analysis through latent variables. Structural equation model is a statistical comprehensive approach for examining hypotheses related to observe and latent variables. Applying current approach can determine acceptableness of theoretical models. As most of existed variables in managerial researches especially organizational behaviors are latent, the necessity of utilizing those models increases daily. (3)

7.1 statistical Society, Sample size & Method of sampling

Statistical society involves 527 ShahrBabak female high school teachers. Sample size that is calculated by simple random sampling using Morgan formula is 226.

7.2 Method of gathering data

Theoretical framework uses different resources such as books, scientific magazines and thesis. Gathering data has been done by standard questionnaires that is distributed among statistical samples and needed date were obtained.

7.3 Research tools

Research tools includes three semi standard questionnaires named intellectual capital, social capital and Knowledge management that its validity and reliability has been measured and confirmed by experienced experts and Cronbakh alpha, respectively. (Intellectual capital 0.791, social capital 0.810, knowledge management 0.882)

8. Research findings

8-1 Descriptive findings

Gender state of sample includes 16.3 female and 81.4 male. Education state of sample involves 6.3 diploma, 34% upper diploma, 39.5% bachelor, 15.1% master and 6% devoted to PhD degree. Job background state shows 15.1% is related to less than 5 years, 30.2% to 6-10 years, 33.7% to 11-15 years, 18.6% to 16-20 years and 1.2% is devoted to above 20 years.

Age state includes 14% less than 30 years old, 52.2% to 31-40, 31.4% to 41-50 and 1.2% to 51-60 years old. There is no person above 60 years old. Marriage state involves 19.8% single and 80.2% are married people.

8.2 Examining hypotheses

8.2.1 Examining first hypothesis

- Intellectual capital has positive effect on social capital.

Let's consider:

Y= dependent social capital variable.

X= independent intellectual capital variable.

Now using regression variance analysis table, we will analysis the effect of intellectual capital on social capital. Before analyzing regression model, we determine Durbin Watson Statistic. Durbin Watson Statistic is equal to 1.763. This Statistic is between 0-4 and its average is equal to 2 and other figures around it are independent remainders. If regression become close to zero or four, it means dependency of remainders and unsuitableness of model. As the amount of this analysis is around 2, so the final model will be suitable and the remainders are independent.

Table 1: The resulted of regression variance analysis of intellectual capital on social capital

Model	Sum of squares	Degree of freedom	Average of squares	Statistic F	The level of significance	R	
Regression	9.273	1	9273	31.07	0.0001	0.52	0.261
Remained	25.069	84	0.298				
Total	34.342	85					

The result of table 1 shows intellectual capital has positive effect on social capital.

Table 2: Regression coefficient of intellectual capital on social capital

Variable index	Regression coefficient	Standard derivation of coefficient	Standard Regression coefficient	Statistic t	The level of significance of Statistic t
Constant amount	0.96	0.374		2.563	0.012
intellectual capital	0.715	0.128	0.52	5.574	0.0001

Considering the result of table 2, it can be said the effect of intellectual capital on social capital is 52% and significant. It worth to note among different and various indices RMSEA, GFI & NFI indices are suitable for determining the fitness of structural equations model.

Table 3. Data & analysis of structural equations model

Intangible variable (independent)	Intellectual capital		
	human	Structural	relational
Tangible dimension of variable	IC1	IC2	IC3
Abbreviation of tangible variables	0.35	0.33	0.41
Standard coefficients	confirmed		
Confirm/reject of whole model	Social reliance	Interactive norm	Social cooperation
dimension of dependent variable= social capital	SC1	SC2	SC3
Abbreviation of dependent variables	0.58	0.91	0.64
Standard coefficients			

Regarding above results, intellectual capital has positive effect on social capital.

8.2.2 Examining second hypothesis

- Intellectual capital has positive effect on knowledge management.

Let's consider:

Y= dependent knowledge management variable.

X= independent intellectual capital variable.

Now using regression variance analysis table, we will analysis the effect of intellectual capital on knowledge management. Before analyzing regression model, we determine Durbin Watson Statistic. Durbin Watson Statistic is equal to 1.748. This Statistic is between 0-4 and its average is equal to 2 and other figures around it are independent remainders. If regression become close to zero or four, it means dependency of remainders and unsuitableness of model. As the amount of this analysis is around 2, so the final model will be suitable and the remainders are independent.

Table 4: The resulted of regression variance analysis of intellectual capital on knowledge management

Model	Sum of squares	Degree of freedom	Average of squares	Statistic F	The level of significance	R	
Regression	8.987	1	8.987	20.174	0.0001	0.44	0.194
Remained	37.418	84	0.445				
Total	46.405	85					

The result of table 4 shows intellectual capital has positive effect on knowledge management.

Table 5: Regression coefficient of intellectual capital on knowledge management

Variable index	Regression coefficient	Standard derivation of coefficient	Standard Regression coefficient	Statistic t	The level of significance of Statistic t
Constant amount	0.919	0.457		2.009	0.048
intellectual capital	0.704	0.157	0.44	4.492	0.0001

Considering the result of table 5, it can be said the effect of intellectual capital on knowledge management is 44% and significant.

Table 6. Data & analysis of structural equations model

Intangible variable (independent)	Intellectual capital		
	human	Structural	relational
Tangible dimension of variable	IC1	IC2	IC3
Abbreviation of tangible variables	0.35	0.33	0.41
Standard coefficients	confirmed		
Confirm/reject of whole model	Creating knowledge	Sharing knowledge	Utilizing knowledge
dimension of dependent variable= knowledgemanagement	SC1	SC2	SC3
Abbreviation of dependent variables	0.58	0.91	0.64
Standard coefficients			

Regarding above results, intellectual capital has positive effect on knowledge management.

8.2.2 Examining third hypothesis

- Intellectual capital has positive effect on knowledge management.

Let's consider:

Y= dependent social capital variable.

X= independent intellectual capital variable.

Z= knowledge management as mediator variable

It worth to note among different and various indices RMSEA, GFI & NFI indices are suitable for determining the fitness of structural equations model.

Table 7. Data & analysis of structural equations model

Intangible variable (independent)	Intellectual capital		
	human	Structural	relational
Tangible dimension of variable	IC1	IC2	IC3
Abbreviation of tangible variables	0.35	0.33	0.41
Standard coefficients	confirmed		
Confirm/reject of whole model	Creating knowledge	Sharing knowledge	Utilizing knowledge
dimension of mediator variable= knowledge management	KM1	KM2	KM3
Abbreviation of mediator variables	0.43	0.66	0.84
Standard coefficients	Social reliance	Interactive norm	Social cooperation
dimension of dependent variable= social capital	SC1	SC2	SC3
Abbreviation of dependent variables	0.58	0.91	0.64
Standard coefficients			

Although the whole of model is confirmed, however the role of knowledge management action is not enough strong that be able to consider as mediatorvariable. As the effect of intellectual capital on social capital is 0.52%.Regarding the role of knowledge management, the effect of intellectual capital on social capital will be less than 0.188 and less than 0.52. Hence its mediator role is not confirmed.

9. Discussion and conclusion

In today’s knowledge based competition world, those organizations are successful and sustainable that utilizes utmost their unphysical capitals like intellectual capital. The result of current study shows the positive relationship of intellectual capital on creating and manifesting of social capital and the positive relationship of those two variable dimensions are correspondent to Alizade et al (2013) &Beikzade et al (2011) studies. On the other hand, the examination of second hypothesis shows the positive effect of thinking asset on knowledge management that is correspondent to Qelich & Moshabaki studies. In dynamic economy, the main challenge of organization is utilizing of intangible capitals especially intellectual capital. (5) In accordance with current study results, it is necessary to consider intellectual capital of organization as one of effective factors on improving intellectual capital function and knowledge management.

It is suggested that managers of Shahr Babak education and developing organization establishing technical portal and conversation room and virtual round table for interacting the experiences and opinions of expert teachers with others.

REFERENCES

1. Beykzade, Jafar. Pourmohammadi, Faride (2011). Social capital, intellectual capital origin, of the economy, community work, and 131.ss 130: 11-20.
2. Riahi, A. (2003). Intellectual capital and company performance in multinational corporations. *Journal of Intellectual Capital*, Vol. 4, No. 2, pp. 215-26.
3. Soltani, Mohammad. (2011). Creativity promotion model (based on organizational culture) Cultural organizations (case study: Mashhad cultural organizations). *Cultural management degree thesis, University and Research.*
4. Sharifiansani, Maryam. (2001). Social capital, the main concepts and theoretical framework, scientific-research Fsl-Namh social welfare, Year 1, No. 2, Ss5-18.
5. Ghalich, B. Moshabbaki, A. (2006). Role of social capital in the creation of intellectual capital, management Dansh.shmarh 19.ss 125-147.
6. Moeini, Ali. Saremi, Mahmoud. Khani, Mousa. (2011). Determine organizational readiness for knowledge management using factor analysis. *Journal - Journal behavior*, No. 44, pp. 138-123.
7. Vaezi, R. Moslemi, T. (2000). Identify organizational factors influencing the optimal performance of the knowledge management system (case study). *Development Journal*, No. 1, pp. 7-19.1.
8. Bontis, N. (2001). Managing organizational knowledge by diagnosing intellectual capital: framing and advancing the state of the field. *Idea Group publishing*, pp.271-301.
9. Carmona-Lavado, Antonio and Cuevas- Rodriguez, Gloria and Cobello- Medina, Carmen,(2010), Social and organizational capital: Building the context for innovation, *Industrial Marketing Management*, Vol 39, pp 681-690.
10. H. Luthy David,(2002). Intellectual capital and Its Measurement, college of business Utah state university.
11. KananGopika, G.AulburWilfried, (2004), Intellectual Property Measurement Effectiveness, *Joyrnal of Intellectual capital*, Vol,5, No.3, pp 389-413.

12. Krause, D.R., Handfield, R.B. and Beverly (2006). The relationships between supplier development, commitment, social capital accumulation and performance improvement. *Journal of Operations Management*, Vol. 25, No. 2, pp. 528-545.
13. Lee H. & Choi, B. (2003). Knowledge Management enablers, process and organizational performance: An Integrative view and empirical Examination. *Journal of Management Information Systems*, 20(1), PP: 179-228.
14. Malhotra, Y., (2001), Information management to knowledge management, Retrieved from <http://www.brint.com/papers/kmebize>.
15. Yolles, M. (2005). "Organizational Intelligence", *Journal of workplace learning*, 17(1).
16. Zhang, L. (2007). Social capital accumulation, business governance, and enterprise performance: A structural-equation-model approach, thesis (M. Phil). Hong Kong University of Science and Technology, Appears in collections: SOSC master these.