

**PREDICTING INNOVATION IN PERSONNEL OF
YOUTH INTELLECTUAL TRAINING CENTER BASED
ON SOCIAL CAPITAL**

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Abstract

The purpose of the present research is predicting innovation components in personnel of youth intellectual training center by social capital. The research method is descriptive of the type of correlation. The study population were the whole 195 personnel of Esfahan youth intellectual training center. The sample volume by using the kerjcie and Morgan table sampling (1970), 130 employees were selected by cluster random sampling. For gathering data, social capital questionnaire of Nahapit and Ghoshal (1998) and Dorabjee innovation (1998) were used. The validity of the questionnaires was proved by clear-sighted professors of management major. The reliability of the questionnaires using Cronbach's alpha coefficient which were 0.79 and 0.93. The research results showed that amongst social capital components, the best predictive one for organizational innovation at first step is structural dimension and at the second step in addition to structural is cognitive dimension. There was no meaningful difference between personnel's ideas about social capital and organizational innovation by considering demographic factors (sex, age, academic education and years of work).

Key words: social capital, organizational innovation, Cognitive, Relational, structural

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Introduction

The changes in customers, technology and competitive behavior which constitutes the present commercial world's characteristics, have faced the organizations with basic changes relating to keeping and increasing their products and services, thus the organizations need to permanently search for advantages of being constantly competitor (ToloieEshlaghi&Moatofi, 2011, p. 14). The nowadays social capital concept is known as the principal of organization advantage (NaserEsfahani, et al, 2011) and is the grounding innovation at organization level. (Subramanian & Youdut, 2005; Kassa, 2005). Social capital according to Kelman (1990) and Kim (2007) is recognized as a useful resource which result from social union nets that consider bringing trust in relations of members of nets. (Mohamed, 2001) and instead of becoming the sum of social relations of individuals, it is a collective characteristic and is the subordinate result of organizational activities and also is the necessary element of successful collective performance (Nahapiet&Ghoshal, 1998). The social capital according to Leana and colleagues (1995) Velsler (2006) is an organizational characteristic, not the assets excluded to the every one of members, that is organization and members are together members of it and is considered the sidelong product of the other organizational activities (Rezvani&Toghraee, 2011). Nahapeit and Goshal (Nhapeit&Goshal, 1998) put the different aspects of social capital in three classes, cognitive, relational and constructive capital and his point of view, the main interpretation of organizational social capital is that social nets which are developed during time, creates a base for trusting and cooperating and include worthy potential and actual resources which helps guiding social relations, organizational social capital is like a potential force which applying it causes efficiency increasing and people who have higher social capital, have a more positive view about organization and consider it innovative (Saedi et al, 2010, p.132).

Innovation plays a central role in present competitive environment, so knowing the way of managing it is important (Fernandez et al. 2013, p.4). From the point of view of Damanpour (2006), innovation refers producing new products or responding to an outside customer or also market and processing innovations are actually new elements that employed in organizational products or activities (Tohidi&Mandegari, 2012, P.4527). Innovative process is more than creating is inventing new ideas which include the activities engaged in developing and performing. Actually, innovative process is considered as developing and performing new ideas by people who participate in interchanging with others in organizational and positive fields

during time (Wong, 2004). Innovation is creating new knowledge and ideas of getting work for facilitating new products by the purpose of promoting internal work processes, structure and creating market towards products and services (Baregheh et al, 2009). Zheng(2008) accounts innovation in the sense of leaving old patterns and it is the most important capability of growing and developing organization. In his view, nowadays innovation increasingly recalled as one of the main factors in keeping competitive characteristic and longtime successfulness of organization in competitive market. From the point of view of Jimenes and Cegarra(2008) the reason of this is that organizations which has the capacity of creating innovation, could respond to environmental challenges which itself promoting organizational performance more quickly and better than non-innovative organizations.

Social capital is a basic concept in recognizing innovation and creation of organization because from one hand innovative process affects creation and on the other hand facilitates its existing (Goshal & Akhilesh, 2007). By this, serious international competition, innovation and interrupted markets are the effective trends in the today work environment more than before (Algera et al, 2006). Social capital effects on organizational performance by creating innovation and sharing knowledge and reducing interchanges (Brooks & Nafukho, 2006; Zheng, 2008) and based on using internal and external organizational relations, effective employing social capital could reach to proper cooperation which not only increases knowledge but also make organizations create a better innovative performance by gathering the viewpoints in organizational learning and changes of learning approaches (Wu et al, 2009, p.177). By this way, from the point of view of Leana&Pil(2006) andGoyal&Ahkilesh(2007), effect on at least two types of innovative activities: first, innovation requires congruence of different knowledge which belongs to different members of organization, those which provides this congruence. Second, social capital facilitates innovation by increasing and encouraging cooperation and coordination between people and different units of organization. Actually of the direct advantages of social capital is getting information and innovation.

Oconner et al(2007) came to this conclusion in evaluating organizational innovation capability for planning in Australian governmental organizations plays an important role in creating areas of appearing organizational innovations by using Delphi technique and brainstorming thought that human capital in organization along with knowledge and proper approach and also by passing special academic courses, structural capital with having searching strategy and designing

flexible organizational structure, relational capital by creating desired relationship with customers and internal and external fortunate.

Zheng (2008) showed in his study that the components of structural dimensions of social capital, such as the size of net have strong meaningful effect on innovation and also the components of relational dimension include trusting and cognitive norms have a positive relation with innovation, but the components of cognitive capital in relation to two other dimensions have less relation with innovation.

Kassa (2011) showed in one of his studies that social capital, specially its structural aspects affects positively on innovative activities in the form of formal and informal nets and civil participations.

Jbilou et al(2008) found in a research by the title of “Information technology and communication and organizational innovation in Canadian health services” that from the point of view of decision makers oh this organization which were classified to three groups classic decision makers, innovative decision makers and technological decision makers in organization with classic decision makers, the obstacles of organizational innovation are mostly in approach and are related to lack of relational capital but organization with innovative decision makers and technology make the organization promote and develop by using informal technology and communication.

Rezvani and Toghraee(2011) found in their study by the title of “Social capital’s playing role in trending towards organizational innovation in knowledge base companies, case studies of those companies located in Universityof TehranScience & TechnologyPark” that all the three dimensions of organizational social capital (relational, structural and cognitive) have a positive and meaningful role in trending towards innovation in knowledge base companies and in relation to structural and cognitive have a stronger congruence with innovation.

By appearance of the age of globalization, the competition is inevitable which brings with itself the need of change and creation (Chang et al, 2006). Organizations should be innovative to respond to the changing request and life style of customers. Also in order to make profit from the created situations by technology and changes of market (Rowely et al, 2011). Innovation has become increasingly as one of the main factors of long time successfulness of companies in competitive markets because organizations will be able to respond to environmental challenges more quickly and better by high capacity of innovation (Jimenes&Cegarra, 2008). Innovation of

personnel in work environment is the base of enhancing performance in any organization and study on motivations and factors of creating the innovation is very important (Scott & Bruce, 2004). So, regarding this fact that social capital results in innovation as the most important capacity of organization, it's required that managers will be aware of social capital management of their organization by examining, evaluating and promoting its levels. Thus by this in addition to having competitive characteristic, can enhance efficiency and effectiveness of organizational performance. The purpose of the present research is predicting social capital by innovation among Esfahanyouth intellectual training center's personnel.

Research hypothesis:

1. There is a relation between the components of social capital (relational, structural and cognitive) with innovation Esfahanyouth intellectual training center's personnel.
2. Social capital components have the capability of predicting organizational innovation of Esfahanyouth intellectual training center's personnel.
3. There is a difference between the ideas of Esfahanyouth intellectual training center's personnel in the case of social capital regarding demographic factors (sex, age, education, and years of working).
4. There is a difference between the ideas of Esfahanyouth intellectual training center's personnel in the case of innovation regarding demographic factors (sex, age, education, and years of working).

Research method:

The purpose of the present research is predicting innovation ... in personnel of children and teenagers thinking training club by social science. The research method is descriptive of the type of correlation. The research society was the whole 195 personnel of youth intellectual training center in Esfahan. The sample volume by using the krejcie and Morgan table sampling (1970), 130 employees were selected by cluster random sampling. In order to evaluate social capital, Nahapiet & Ghoshal social capital 17-question questionnaire (1998) is used by Likert 7 point scale (strongly agree=1, strongly disagree=7). This questionnaires' evaluates three components of cognitive, structural and relational. The validity of the questionnaire was proved by clear-sighted professors of management major. The amount of reliability questionnaire was calculated by

using Cronbach alpha which were 0.79 and 0.93. For analyzing research data, Pierson congruence coefficient, Regression and Analysis of Variance (MANOVA) have been used. In order to analyzing the findings, software of SPSS (version 18) has been used.

Research findings:

First hypothesis: There is a relation between the components of social capital (relational, structural and cognitive) with innovation Esfahanyouth intellectual training center’s personnel.

Table 1: Mean, standard deviation and Correlation Coefficient between research variances

Row	research variance	Mean	standard deviation	1	2	3	4
1	Cognitive	22/81	5	-			
2	Relational	29/92	6/14	0/477**	-		
3	structural	27/60	3/99	0/598**	0/417**	-	
4	Innovation	41/40	9/90	0/465**	0/375**	0/773**	0/503**
5	social capital	80/34	12/34	0/836**	0/826**		0/538**

p<0/ 01

The results of table 1 shows that innovation has a meaningful relation with cognitive dimension (r=0.465), relational dimension (r=0.375) and structural dimension (r=0.503) and total capital (r=0.538).

Second hypothesis:Social capital components have the capability of predicting organizational innovation of Esfahanyouth intellectual training center’s personnel.

Table 2:Multiple Correlation Coefficient of predicting innovation by social capital components

Dependent Variable	Predictor variables	Unstandardized Coefficients		Beta	t	P	R	R2	F	P
		B	Standard Error							

innovation	Step 1.	Structura	1.2	0/203	0/50	6/1	0.00	0/5	0/2	37/8	0.0
		1	47		3	54	1	03	53	76	01
	Step 2.	Structura	0/8	0/247	0/35	3/5	0.00				
		1	67		0	15	1	0/5	0/2	23/1	0.0
								43	95	89	01
		Cognitiv	0/5	0/197	0/25	2/5	0.01				
		e	06		6	70	1				

P≤0.01

As table 2 shows that among the studied variances in regression. The best predictor of innovation in Esfahanyouth intellectual training center's personnel in first step is structural social capital dimension and in the second step in addition to the social capital, there is cognitive dimension. Based on results of regression step by step analysis, the relation between structural and cognitive social capital with innovation has been meaningful. Based on this, structural dimension describes innovation variance 25.3 and in the second step describes structural and cognitive dimension 29.5. The observed F at the level of $p < 0.01$ was meaningful, so regression is recognizable the whole statistical society.

Third hypothesis: There is a difference between the ideas of Esfahanyouth intellectual training center's personnel in the case of social capital regarding demographic factors (sex, age, education, and years of working).

Table 3: Results of Analysis of Variance of social capital Mean based on demographic factors

demographic factors	Sum of squares	df	Mean Square	F	p	Eta	Observed Power
sex	420/144	1	420/144	3/142	0/080	0/039	0/417
age	144/581	2	72/291	0/541	0/585	0/014	0/136
education	479/955	3	159/985	1/196	0/317	0/044	0/309
years of working	32/197	2	16/98	0/120	0/887	0/003	0/068

The results of table 3 shows that there is not a difference between the ideas of Esfahanyouth intellectual training center's personnel in the case of social capital regarding demographic factors (sex, age, education, and years of working). Thus the third hypothesis is rejected.

Fourth hypothesis: There is a difference between the ideas of Esfahanyouth intellectual training center's personnel in the case of innovation regarding demographic factors (sex, age, education, and years of working).

Table 4: Results of Analysis of Variance of social capital Mean based on demographic factors

demographic factors	Sum of squares	df	Mean Square	F	p	Eta	Observed Power
sex	56/903	1	56/903	0/581	0/448	0/007	0/069
age	25/022	2	12/511	0/128	0/880	0/003	0/117
education	346/360	3	121/453	1/240	0/301	0/046	0/320
years of working	23/121	2	11/560	0/118	0/889	0/003	0/067

The results of table 4 show that there is a difference between the ideas of Esfahanyouth intellectual training center's personnel in the case of social capital regarding demographic factors (sex, age, education and years of working). Thus the third hypothesis is rejected.

Discussion and conclusion

The findings of the first table showed there is a meaningful relation between the components of social capitals which are relational, structural and cognitive with innovation in Esfahanyouth intellectual training center's personnel. These findings coordinate with the results of Oconner et al (2007), Kassa (2008) and Rezvani and Toghraee (2011) based on the existence of a relation between social capital and innovation. These results show social capital facilitate innovation by enhancing and encouraging coordination and cooperation between different units of organizations and people. Healthy and humanistic relationship in work could enhance skills of

personnel and eventually innovation in individuals by the effect it has on interchanging information and delivering knowledge.

The findings of Regression analysis showed step by step that the best predictor of innovation in youth intellectual training center's personnel in the first step has been structural dimension and in the second step has been congruence dimension. Net joins which because of wide communication between members of organization have the most effects on cooperation of members in the area of innovation. Thus people get knowledge resources by net relations and by having a common language in group's present ideas and innovation in organizations. Actually by presenting quality aspects like trusting, common values and goal, cooperation and participation, the expectations and requirements would become explicit and those layers of bureaucracy among different groups of people which suppresses innovation and creativity are removed in organization. In addition the time and resources which are spent on controlling the behavior of person in organization could be spent on creating new ideas and innovative activities. The results of third hypothesis shows that there is not a difference between the ideas of Esfahanyouth intellectual training center's personnel in the case of social capital regarding demographic factors (sex, age, education and years of working). Thus the third hypothesis is rejected. The findings of fourth hypothesis show that there is a difference between the ideas of Esfahanyouth intellectuals training center's personnel in the case of social capital regarding demographic factors (sex, age, education and years of working). Thus the third hypothesis is rejected.

By considering the results of research, the following suggestions are presented in order to promote social capital and innovation in organization.

-The manager of organization should consider creativity in net and communication inside and outside of club so by this get much information about informal ways and knowing new conditions of new technology and products.

- The managers should nurture values in company instead of using blocking trends and methods so personnel could communicate easily with each other and share their skills and professions.

- The managers should provide the grounds of increasing face to face relations by setting entertainments plans in order to creating understanding and better relations based on trusting among personnel.

-Providing a ground for creating, delivering and using information in club helps personnel getting new ideas and a special site to experience and interchange thoughts.

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