The relationship between social capital and organizational entrepreneurship
(Case Study: Kermanshah Islamic Azad University)

Milad rashidi¹, babak jamshidi navid², mehrdad ghanbari³

1. Business Management M.A. Student, Department of Business Management, Kermanshah Branch, Islamic Azad University, Kermanshah, Iran.
2. Department of Business Management, Kermanshah Branch, Islamic Azad University, Kermanshah, Iran.
3. Department of Business Management, Kermanshah Branch, Islamic Azad University, Kermanshah, Iran.

Corresponding Author email: miladrashidy@gmail.com

ABSTRACT: Today, considering the vastness and variety of the changes imposed on the corpus of firms, they have found that in order to deal with inevitable constant changes, create continuously new competitive advantages by a new combination of their existing resources; so the importance of creative and innovative human capital, i.e. organizational entrepreneurs has become more prominent. As universities as the main custodians of education and training of specialized and skilled human resources in the community play a critical role, further evaluation of entrepreneurship by them will develop the concept more broadly. In addition, social capital and special attention to it as a critical factor in achieving organizational goals in order to promote the organization's plans (which influences innovation, creativity and collective learning and facilitates their fulfillment) is also critical. Therefore, this study attempts to investigate the relationship between social capital and organizational entrepreneurship in Kermanshah Islamic Azad University. The study population is composed of faculty members and staff in Kermanshah Islamic Azad University and the sample is chosen by utilizing Cochran test and classification method. Data related to the questionnaire and the variables of each question and hypotheses are evaluated on a scale of 1 to 10. For this purpose, eight hypotheses have been proposed. Research methodology according to the objective of the study is applied, and with regard to data collection is of a descriptive-correlative type. Furthermore, the study model analysis and hypotheses test was performed via structural equations approach (SEM), and confirmatory factor analysis and charting a path analysis were conducted using Lisrel software and the findings indicated that there is a significant and positive relationship between social capital and organizational entrepreneurship (university). The overall results of the test hypotheses confirming and demonstrating the overall confirmation of the assumed relationships in the study.

Key words: social capital, entrepreneurship, entrepreneurial university, structural equations model (SEM).

INTRODUCTION

Considering the competitive economy and its dependence on the current markets which is accompanied by fast changes in international environment and rapid transition from an industrial society into an information one and from a national economy into a global economy, some believe that the world markets tomorrow belongs to the companies that appreciate entrepreneurial risk-taking and tend to invest in order to develop their intellectual capital at a macro level (Gibb, 2005). Major industrial countries as the conquerors of this field pay special attention to the utilization of resources and capitals and by taking privilege of educated and specialized work forces, have moved the wheels of development and achieved major innovations, and it should be noted that access to these innovations that have revived the economy of developed countries depends on entrepreneurship (Shan, et al.,
Social capital as a social phenomenon plays important roles in entrepreneurial activities, and firms with high levels of social capital also each participant realizes the mobilization of all assets by an internal interaction (Pollock, et al., 2004). Within an entrepreneurial economy, there is a social motivated board of directors with entrepreneurial backgrounds can be the most important factor in the development of an entrepreneurial university (Rothaermel, et al., 2007). Within an entrepreneurial economy, there is social capital taking privilege of committed staff involved in firm activities. In addition, strong communication in organization leading to commitment to firm values and goals and exchanges costs is decreased with the establishment of a more effective relationship between individuals and this could be assumed as a competitive process that relies on social situation and context: first, the entrepreneur is the product of his social environment, and second, entrepreneurship is a social activity and consequently the presence or absence of social links and communications impacts the nature of business (Bolino, 2002). This study attempts to investigate the concepts of social capital as a necessary context and background for the accomplishment of entrepreneurship in firms and also to examine the impact of different aspects of the social capital on firm entrepreneurship (university) as one of the most significant centers for promoting entrepreneurship. Therefore, we investigated different aspects of social capital in Islamic Azad University of Kermanshah which enables systematic improvements in the development of targeted entrepreneurship in universities, due to the existence of social capital in this organization. Therefore, considering the above, this study aims to answer the question that is there any significant correlation between social capital and firm entrepreneurship?

Research Literature

Social Capital

In today's business world, the greatest firm value is based on intangible assets. The capability to identify and estimate the source of this value is critical. In order to administer social capital management, we need to understand its origin and how to create these assets in firms (Frish & Leana, 2009). Social resources capital is energy or power that forms the structure of economic factors and focuses on a specific goal in a social context (Patel & Conklin, 2009). Coleman's definition of social capital focuses on its structural aspect. He states that social capital consists of an aspect of social structure that facilitates individuals' interactions within the structure (Islam et al., 2006). Social network is a social structure, which is composed of individual or organizational groups. In this network, individuals or organizations with one or more specific types of associations have joined together. Most of the formed structures are very complex. Research has shown that social networks play an important role in determining solution to problems, managing firms and measuring individuals' success in achieving their goals (Weng, et al., 2008), so that more vast social entrepreneurial networks, much more opportunity could be identified. One of the most important factors in identifying opportunities, is social capital composed of social networks and in fact these networks, make entrepreneur face further resources and opportunities and extends its circle of choice extensive (Bhagavatula, et al., 2010). According to Putnam (2001) human capital is referred to as the ability of individuals and social capital as relationships among individuals. A social network is formed by social relationships and link between individuals in a firm and society. They will benefit from bilateral relations through exchange of information and cooperation in solving problems (Ring, et al., 2010). Napahit and Gushal (1998) by an organizational approach, have divided different aspects of social capital into three categories including cognitive capital, relational capital and structural capital (Sabatini, 2008). The cognitive element of social capital is those resources that provide symbols, interpretations and semantic systems shared among different groups. The relational element of social capital describes a personal relationship between individuals established due to their past interactions. Structural element of social capital is the overall pattern of contact between individuals, i.e. who and how you have access to (Rhodes, et al., 2008).
Entrepreneurship and organizational entrepreneurship

In recent years, considering the role of entrepreneurs in the industrial and economic growth and prosperity, and also with regard to the issues and bottlenecks caused by economic and industrial recessions and in particular unemployment, it is imperative to promote entrepreneurship in large scale (Ardischvili, et al., 2008). In addition, experts are of the opinion that capital can lead to the development of nations by means of combining entrepreneurship and effective use of knowledge. So economists have divided factors of production into five categories: land, workforce, capital, knowledge and entrepreneurship (Archibong, 2004). The term entrepreneurship is often used in private and commercial sector but today it has entered into discussions on the public sector management, primarily due to the important role of government in communities and attempt to revolutionize public organizations and to improve their performance (Zampetakis & Moustakis, 2007). Entrepreneurial activity involves the discovery, evaluation and exploitation of opportunities to introduce products and services, ways of organizing, markets, and new raw materials through organized efforts that have not yet performed (Shane, 2003). Heinonen and poikkijoki (2006) also argue that entrepreneurship due to considerable effects on micro- and macro- economic has attracted much attention. Entrepreneurship is a critical factor in the generation of new ideas, creating new companies and businesses, and generally development of the economy. Sometimes there exists an association between factors influencing firm entrepreneurship and firm atmosphere which incorporates internal environmental factors and constituents. And management support, time of availability, flexibility of organizational boundaries, authority (authorization) and reward and reinforcement are some of the components of firm atmosphere and they can influence staff entrepreneurial behaviors (Hornsby, et al., 2002). Organizational entrepreneurship includes fostering entrepreneurial behaviors in an organization which has been established previously. In short, organizational entrepreneurship means that organizations can develop profitable innovations by encouraging employees to think, and providing them with freedom and flexibility to pursue their plans, without being caught in the quagmire of bureaucracy (Moghimi and Ramezan, 2011).

University as an entrepreneur

Clark believes that dynamic universities in the twenty-first century act as an entrepreneur and are able to combine the specialized and administrative values (Rae, 2004). In fact it is essential for the development of entrepreneurship to promote educational levels, i.e. work management knowledge (Lordkipanidze, et al., 2005). In some studies, academic entrepreneurship in universities is defined as a field that seeks to understand and describe venture businesses and new products resulting from a university's intellectual assets (Liano, 2006). Etzkowitz one of the leading experts of academic entrepreneurship investigated the causes of the emergence and characteristics of entrepreneurial universities. He believes that nowadays universities due to a change in the nature of knowledge production and economic production, in addition to research and higher education, have found a third role the regional and economic development (Etzkowitz&Leydesdorff, 2000). Etzkowitz has completed the entrepreneurial university model by five interrelated propositions that are derived by her analysis on the development of entrepreneurial universities in United States, Europe and Latin America. This guide for organizational revision includes providing necessary resources and knowledge investment, development of relationship between universities and industry and government, the relationship of university with other organizational areas and entrepreneurial organizational structure and focus on innovation and attention at all times (Etzkowitz, 2006). In short we can say that the characteristics of entrepreneurial universities include entrepreneurial organizational structure, shared vision and prospective strategy, ongoing interaction with the environment and entrepreneurial corporate culture (Vestergaard, 2007; Liesner, 2006).

Research Background

Doh and zolnik(2010) in their study "social capital and entrepreneurship: An exploratory analysis" examined the relationship between social capital and entrepreneurship. They constructed a measure of social capital which incorporates indicators of trust (generalized and institutional), associational activity (active and passive membership), civic norms. In their study, self-employment is used as a proxy for entrepreneurship. The results from an empirical model which controls for factors which are theorized to impact entrepreneurship at both individual and national levels show that there is a positive relationship between social capital and entrepreneurship. Iivonen et al., (2010) in their study "social capital and entrepreneurial behavior and advancing innovativeness in interaction between small rural entrepreneurs and researchers" argue that innovation processes between entrepreneurs and researchers are activated by interaction. They add that social capital increases the efficiency action, for example, information dissemination by minimizing redundancy. In this study, authors adopt a theoretical approach that combines social capital and entrepreneurial behavior. As a result of interviews with 15 groups of
entrepreneurs, a system of categories was compiled as the phenomenographic method assumes. It was indicated that the key dynamics of the cooperation between entrepreneurs and researchers is embedded in a common understanding of entrepreneurial behavior and learning as well as a trust-building process.

Linan and Santos (2007) in their study "is social capital effective on entrepreneurial intent?" analyzed the specific influence of the new socioeconomic factor of social capital on the formation of entrepreneurial intentions. To test the theoretical hypotheses, an empirical study was carried out using the Partial Least Squares (PLS) technique with data from a sample of undergraduate students in the last year of their degree. The population was selected because different individuals showed a higher propensity towards firm creation.

Mark et al., (2009) in their study "exploring the roles of social capital and team-efficacy in virtual entrepreneurial team performance" investigated the role of various forms of social capital in the performance entrepreneurial teams in a virtual context. The results indicated that perceptions of social capital in the form of relational capital, cognitive capital and entrepreneurial orientation are significantly positive predictors of team-efficacy. Moreover, it was revealed that team-efficacy was a strong positive predictor of entrepreneurial team performance in a virtual context.

**Research conceptual framework**

Theoretical framework is a conceptual pattern based on theoretical relationships among certain factors which are considered significant with respect to investigated issues. The theoretical framework progresses in a reasonable manner by investigating research background in the area of the problem. Based on the above definitions and previous works, in order to investigate social capital variable, Nahapit and Goshal model is used, and to investigate firm's entrepreneurship variable for maximum adaptability to the field under study, entrepreneurial university model proposed by researchers is utilized (Figure 1).

**The Research hypothesis**

**the main hypothesis**

There is a significant positive correlation between social capital and organizational entrepreneurship in Kermanshah Islamic Azad University.

**the Sub-hypotheses**

There is a significant positive correlation between Structural capital and organizational entrepreneurship in Kermanshah Islamic Azad University.

There is a significant positive correlation between cognitive capital and organizational entrepreneurship in Kermanshah Islamic Azad University.

There is a significant positive correlation between relational capital and organizational entrepreneurship in Kermanshah Islamic Azad University.
There is a significant positive correlation between social capital and entrepreneurial organizational structure in Kermanshah Islamic Azad University.

There is a significant positive correlation between social capital and shared vision and prespective strategy in Kermanshah Islamic Azad University.

There is a significant positive correlation between social capital and ongoing interaction with environment in Kermanshah Islamic Azad University.

There is a significant positive correlation between social capital and entrepreneurial corporate culture in Kermanshah Islamic Azad University.

**Methodology**

This study is applied in terms of its objective and is descriptive-measurable in terms of data type. To test study hypotheses, and to test the significance among observer and hidden variables and also fitting measurement models obtained by confirmatory factor analysis using structural interactions model (SEM), path analysis model via Lisrel software was applied. To examine how well works a model in terms of explaining a set of observed data especially compared to other models, values of the indices NFI, (RMSEA), (GFI), (AGFI) are used. Questionnaire was applied to test assumed hypotheses. Therefore, research method is based on field studies. Data required to test questionnaire hypotheses is used in a scale of 1-10, which standard questionnaire includes 37 questions, of them 17 questions are related to social capital and 20 to entrepreneurship. To evaluate the reliability of questionnaire, Cronbach's Alpha was used in this study and the value obtained for social capital is 0.897 and for firm entrepreneurship 0.936, which indicates suitability and high reliability of the questionnaire. Statistical community includes faculty members (230 persons) and staff (265) in Kermanshah Islamic Azad University. Sample volume using Cochran formula is 220 persons and for selecting the sample volume of each class, suitability assignment method is used.

<table>
<thead>
<tr>
<th>Sample description companies</th>
<th>Sample size</th>
<th>Class size (N_h)</th>
<th>Sample size (n_h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>faculty members</td>
<td>230</td>
<td>(220 \times \frac{230}{495} = 102)</td>
<td></td>
</tr>
<tr>
<td>staffs</td>
<td>265</td>
<td>(220 \times \frac{265}{495} = 118)</td>
<td></td>
</tr>
<tr>
<td>total</td>
<td>495</td>
<td>220</td>
<td></td>
</tr>
</tbody>
</table>

**Data Analysis**

To test hypotheses, confirmatory factor analysis is applied, so that in data analysis, the significance coefficient (t-value) and standardized estimation of structural equations model is considered. Confirming or rejecting relationships in order to investigate study hypotheses is based on this idea that if significance coefficient is out of range -1.96 and 1.96, the causal relationship is perceived by variable and at the confidence level 0.95 is significant and vice versa.

Structural model test of the main hypothesis is conducted as follows. In testing the hypothesis, the degree of effect from Lisrel software output model is obtained in standard estimation state and degree of significance of output model is obtained by significance state. Hypothesis null or hypothesis one for rejecting or confirming study hypothesis is as follows:

\(H_0: \) there is a significant relationship between two variables.

\(H_1: \) there is a significant relationship between two variables.

**Confirming or rejecting the study main hypothesis**

Given that the test significance coefficient (coefficients T) in the regression is assumed higher than 01.96, hypothesis null is rejected and hypothesis one is confirmed, i.e. impact of social capital on organizational entrepreneurship is 0.84 and its significance amount 15.10. In the test of this hypothesis using structural equation model, software output indicates the suitability of structural model fitted to test hypotheses. The 053/0 = RMSEA also shows the suitability of the structural model based on the sample size. In other words, the observed data was primarily based on the conceptual model GFI, AGFI and NFI are respectively equal to 0.91, 0.87 and 0.93, which indicates a relatively good fit of the model (based on sample size). All the indices of the model fitting are discussed below:

- Normed Fit Index (NFI) = 0.93
- Goodness of Fit Index (GFI) = 0.91

925
Adjusted Goodness of Fit Index (AGFI) = 0.87

The results and findings of study hypotheses test are summarized and presented in Table 2.

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Research hypotheses text</th>
<th>Path Coefficient</th>
<th>significance coefficients (t-value)</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Hypothesis</td>
<td>There is a significant positive correlation between social capital and firm entrepreneurship in Kermanshah Islamic Azad University.</td>
<td>0.84</td>
<td>10.15</td>
<td>Not Rejected</td>
</tr>
<tr>
<td>Hypothesis 1</td>
<td>There is a significant positive correlation between Structural capital and organizational entrepreneurship in Kermanshah Islamic Azad University.</td>
<td>0.39</td>
<td>4.75</td>
<td>Not Rejected</td>
</tr>
<tr>
<td>Hypothesis 2</td>
<td>There is a significant positive correlation between cognitive capital and organizational entrepreneurship in Kermanshah Islamic Azad University.</td>
<td>0.52</td>
<td>5.12</td>
<td>Not Rejected</td>
</tr>
<tr>
<td>Hypothesis 3</td>
<td>There is a significant positive correlation between relational capital and organizational entrepreneurship in Kermanshah Islamic Azad University.</td>
<td>0.22</td>
<td>1.96</td>
<td>Not Rejected</td>
</tr>
<tr>
<td>Hypothesis 4</td>
<td>There is a significant positive correlation between social capital and entrepreneurial organizational structure in Kermanshah Islamic Azad University.</td>
<td>0.86</td>
<td>12.4</td>
<td>Not Rejected</td>
</tr>
<tr>
<td>Hypothesis 5</td>
<td>There is a significant positive correlation between social capital and shared vision and perspective strategy in Kermanshah Islamic Azad University.</td>
<td>0.61</td>
<td>9.07</td>
<td>Not Rejected</td>
</tr>
<tr>
<td>Hypothesis 6</td>
<td>There is a significant positive correlation between social capital and ongoing interaction with environment in Kermanshah Islamic Azad University.</td>
<td>0.7</td>
<td>10.23</td>
<td>Not Rejected</td>
</tr>
<tr>
<td>Hypothesis 7</td>
<td>There is a significant positive correlation between social capital and entrepreneurial corporate culture in Kermanshah Islamic Azad University.</td>
<td>0.73</td>
<td>9.86</td>
<td>Not Rejected</td>
</tr>
</tbody>
</table>

The test output investigates the relationship between social capital and organizational entrepreneurship (main hypothesis) using Lisrel software during standard estimation (Figure 2) and significance coefficients (Figure 3) as follows:

![Figure 2](image1.png)
![Figure 3](image2.png)

**Structural model to test the research hypotheses 1, 2 and 3**

The test output investigates the relationship between the dimensions of social capital and organizational entrepreneurship (hypotheses 1, 2, 3) using Lisrel software in the standard estimation (figure 4) and the significance of study hypotheses as follows:

The impact of structural capital and organizational entrepreneurship is 0.39 and its significance amount is 04.75 (confirming the hypothesis).

The impact of cognitive capital and organizational entrepreneurship is 0.52 and its significance amount is 05.12 (confirming the hypothesis).

The impact of relational capital and organizational entrepreneurship is 0.22 and its significance amount is 01.96 (confirming the hypothesis).
Given that all significance coefficients of these hypotheses (coefficients T) in regression test are more than 0.196, all three hypotheses are confirmed. In the test of the study hypotheses using structural equation model, software output indicates the suitability of structural model fitted to test hypotheses. The RMSEA=0.062 also indicates the suitability of the structural model fitting. In the other words, observed data to a large extent is based on the study conceptual model. Model fitting indices of GFI, AGFI and NFI indicating a relatively good fitting of the model are discussed below:

- Normed Fit Index (NFI) = 0.91
- Goodness of Fit Index (GFI) = 0.90
- Adjusted Goodness of Fit Index (AGFI) = 0.85

**Structural model to test the research hypotheses 4, 5, 6 and 7**

Given that all significance coefficients of these hypotheses (coefficients T) in regression test are more than 0.196, all four hypotheses are confirmed.

- The impact of social capital and entrepreneurial organizational structure is 0.86 and its significance amount is 12.4 (confirming the hypothesis).
- The impact of social capital and shared vision and prespective strategy is 0.61 and its significance amount is 9.07 (confirming the hypothesis).
- The impact of social capital and ongoing interaction with environment is 0.7 and its significance amount is 10.23 (confirming the hypothesis).
- The impact of social capital and entrepreneurial corporate culture is 0.73 and its significance amount is 9.86 (confirming the hypothesis).

The test output investigates the relationship between social capital and dimensions of organizational entrepreneurship (hypotheses 4, 5, 6, 7) using Lisrel software during standard estimation as follows: (figure 5)

**RESULTS AND CONCLUSION**

This study attempts to investigate all the relationships between dimensions of social capital and organizational entrepreneurship in university as well as the impact of social capital on the different aspects of organizational entrepreneurship. As the results showed the research main hypothesis is based on significant positive relationship between social capital and firm entrepreneurship in university, so that the amount of its effect and significance is 0.84 and 10.15, respectively and these results are in line with Doh and Zolnic (2011). The results indicate that the social capital is an important factor in the accomplishment of organizational entrepreneurship in order to deal with organizational change and achieving organizational goals. Obviously, providing an appropriate context for increasing social capital is time consuming and difficult. Therefore, organizations and especially universities, in terms of their importance in promoting entrepreneurship in society must pave the way for firm entrepreneurship through constant investment, and by support of a desired level of social capital, design and define a suitable pattern of entrepreneurship in firms. Findings indicate that organizations
and especially universities’ emphasis on the improvement of cognitive capital as a key strategy in organization leads to more successful implementation of firm entrepreneurship. The main assumption of this study is that social capital plays a significant role in firm entrepreneurship and therefore more opportunities are identified, because one important factor in identifying opportunities is social capital that is composed of social networks, which provide entrepreneurs with more resources and opportunities and extend their circle of choice. Based on the results of the secondary hypotheses which investigate the effect of various dimensions of social capital on firm entrepreneurship, it could be said that the cognitive dimension of social capital can have the greatest impact on organizational entrepreneurship. This means that the sources of social capital which provide symbols, interpretations, and systems and shared meanings among groups in order to achieve common goals have the greatest impact on organizational entrepreneurial infrastructure in university.

In the test of the study hypotheses using structural equation model, software output indicates the suitability of structural model fitted to test hypotheses. The RMSEA=0.053 also indicates the suitability of the structural model fitting. In the other words, observed data to a large extent is based on the study conceptual model. Model fitting indices of GFI, AGFI and NFI indicating a relatively good fitting of the model are discussed below:

- Normed Fit Index (NFI) = 0.95
- Goodness of Fit Index (GFI) = 0.93
- Adjusted Goodness of Fit Index (AGFI) = 0.90

**Study suggestions**

- In order to improve organization’s social capital some actions must be taken such as creating trust between members and organizational units, participation and extension of networks among members and formation of utility promotion committees.
- Training staff and utilizing strategic planning models for training firms’ entrepreneurs.
- The formation of business networks and encouraging staff to participate in organizational plans and objectives that promote inter-firm relationships.
- Holding training sessions in the area of inter-firm relationships for firms’ managers and officials.
- Supporting entrepreneurship cores in universities as the effective centers for the development of faculty members and staff.
- Applying new methods of encouragement and punishment and promoting firm status by formulating new performance indices based on increase in the level of social capital.
- Designing and performing mechanisms in order to institutionalize values and firm perspective to invest on the cognitive element of social capital.
REFERENCES


Rae D. 2004. “Practical theories from entrepreneurs’ stories: discursive approaches


Vestergaard J.2007. The Entrepreneurial University Revisited: Conflicts and the Importance of Role Separation, Social Epistemology 21(1).