

The Effect of Social Capital on Opportunity Recognition in Entrepreneurs as Mediated by the Social Network: A Case of Managers in the Science and Technology Park of the University of Tehran

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Abstract

The main purpose of this paper is to examine the effect of social capital on entrepreneurial opportunity recognition. The research's theoretical background entails social networks and social capital (including the cognitive, relational and structural aspects). The present research is empirical and employs a quantitative-survey approach. Moreover, the statistical population includes all the 60 managers in the Science and Technology Park. A questionnaire has been used as the instrument for data collection. Ultimately, the results show that social capital positively influences opportunity recognition with relational social capital delivering the most impact.

Keywords: Social capital; Opportunity recognition; Social capital aspects; Social network; Science and technology network

Introduction

The creation of a new venture today requires a suitable social environment. Understanding the surrounding environment could greatly facilitate the identification of a community's needs. An entrepreneurial opportunity is defined as 'situations in which new goods, services, raw materials, markets and organizing methods can be introduced through the formation of new means, ends or means-ends relationships' [1-3]. The initial understanding of opportunity recognition depends on the social context or the type of social capital. Building social capital, in turn, needs the presence of social networks.

Every community relies on interactions and relationships in order to reach higher goals. Of course, the difference between individuals in terms of their respective network has an impact on the likelihood of opportunity recognition. Opportunity recognition is the result of individual performance and the environment [4]. The degree of an entrepreneur's interaction with the social environment, which includes strong ties and relationships among individuals, leads to the development of ideas. According to Shane and Venkataraman [2] what makes certain people to recognize opportunities while others do not is because 1) they have the necessary information to recognize opportunities and 2) they have the necessary mental capacities to create value. Previous research has investigated the effect of the social network on opportunity recognition but has not paid attention to the contexts that shape the social network. The present study is innovative in that it identifies the effective contexts such as social capital and its aspects and examines their effect on opportunity recognition.

The development of ideas in any environment requires strong ties and interactions between individuals. Of course, strong ties and interactions do not necessarily facilitate the identification of social needs; they rather enhance the social network between individuals. Therefore, new ideas, opportunities or potential competitive advantages are recognized after they are evaluated.

Ardichivili [5] identifies social networks as one of the effective factors of opportunity recognition. Researchers believe that the social capital that exists inside social networks utilize interconnections to

access a greater span of information which can be used to recognize practical opportunities.

Network connections and ties facilitate access to resources and information, knowledge and investors as the most important channels of opportunity identification. A review and evaluation of the previous research reveals that researchers have investigated the economic environment and entrepreneurial awareness while the present takes a step further by examining the aspects of social capital on opportunity recognition.

The main purpose of this study is to investigate the effect of social capital on opportunity recognition. Therefore, we will first define social capital and social network which will be followed by the development of a theoretical framework for opportunity recognition. The last section provides an analysis of the results of the research data which was gathered from the questionnaires distributed among experts in the Science and Technology Park of Tehran.

Theoretical Background

Definition of social capital

Social capital refers to characteristics such as social life, networks, norms, trust, etc. which enables the participants to pursue their goals more effectively [6]. Based on Coleman [7] social capital is the resulting combination of potential and actual resources, to wit, the capital or resources that individuals or groups can attain through making

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connections with each other. In another definition, social capital consists of networks, associations or institutions that are created based on shared norms and trust facilitating cooperation.

Davidson and Hoing showed that factors that effectively affect emotional social capital (having parents, intimate friends, etc.) are strongly linked to opportunity recognition. Apart from informed and experienced individuals, instruments and tools, a social network requires qualities such as trust, commitment, accountability etc. to ensure the achievement of its goals. Social networks include all people that are in connection with each other and who understand this connection well [8]. An understanding of these connections leads to opportunity recognition. In other words, social capital provides networks that facilitate opportunity discovery elements such as opportunity identification, locating and mobilizing scarce resources, etc.

Therefore, it can be said that social capital involves cognitive, relational, and structural aspects that lead to the creation of social networks and hence opportunity recognition.

Social capital aspects

Social capital consists of components such as social trust, integrity and participation. These three components are embedded in an interactive relationship where each reinforces the other. Previous research has investigated various aspects of social capital. Ultimately, Nahapiet and Ghoshal [9] classified all these aspects into three clusters: structural, cognitive, and relational.

i) ties in a network entailing the extent and depth of the ties; ii) the network configuration including network hierarchy, communicability and density; and iii) organizational proportionality which means to what extent the networks created for a special purpose may be used for other purposes.

α) The cognitive aspect

The cognitive aspect consists of two components: 1) shared language or symbols, 2) shared narratives.

β) The Relational aspect

The relational aspect involves trust, norms, commitments, interactions and shared identity

χ) The Structural aspect

The structural aspect relates to the links in a network, network configuration, and organizational proportionality.

Conceptual framework

Relational social capital and opportunity recognition

The most important aspects of this dimension of social capital include: trust, norms, obligations and commitments and shared identity [9]. Social capital is comprised of the existing resources within the social interactions and the cooperation system between the individuals in a community which result in rational relations, feelings of trust and cooperation between individuals in the community hence augmenting the tendency to develop social relations and interaction. This leads to the discovery of opportunities in the community.

Trust means to believe the veracity and integrity of an individual or group in delegating a task to them without having to doubt about the outcome or to worry or need to do preliminary checks or monitoring.

It is easier for individuals to communicate with each other when

there is a feeling of trust between them. Therefore, they can exchange information and resources which in turn facilitate opportunity discovery and lead to more communication channels. Moreover, as interaction between individuals increases more trust grows between them which contributes to more information and resources exchange between the network members. Miztal [10] argues that trust provides a context for communication and discourse. Bonits [11] also contends that trust could lead to development of intellectual capital. Therefore, it can be said that it is more likely for an individual to get access to knowledge, information, and other available resources in his social network if he can develop higher levels of trust. Because of human's limited understanding and capacity in processing and storing data, no one alone can have enough information to make choices and decisions [12]. Therefore, one could conclude that social capital is related to information acquisition in the opportunity discovery processes. Ozgen and Baron [13] and Bygrave and Hofer [14] believe that social relations with others are an important source of information for opportunity discovery. Sources of opportunity include all the factors that lead to the creation of a need or the meeting of present or future needs.

Structural social capital and opportunity recognition

Structural social capital refers to the general communication pattern between individuals i.e. who one communicates with and how [15] and it involves 1) existing ties in the network which includes the extent and depth of the ties, 2) the network configuration which includes the network hierarchy, communicability and density and 3) organizational proportionality which means to what extent the networks created for a special purpose may be used for other purposes. Structural characteristics such as justice, equality and altruism [7], networks and participation in social relations and the community membership comprise one of the indicators of outward-looking social capital [16].

Structural social capital leads to the creation of networks that facilitate opportunity discovery involving opportunity identification and mobilization of scarce resources.

Social networks assist the expansion of network boundaries. This takes place through allowing the sharing of knowledge and information through which an individual could discover news ideas or opportunities. It should be noted though that there is little research on opportunity recognition via social networks. In previous studies, Hills et al. [17] report that people learn how to discover opportunities with the help of resources within social networks.

Ties and links between networks, access to resources, information and knowledge make up social capital and are among the most important canals of opportunity recognition as one of the elements of entrepreneurial process. Apart from informed and experienced individuals, facilities or equipment, every social network also requires other elements to achieve its goals such as trust, commitment, accountability, etc. The network size has a positive and meaningful relationship with opportunity recognition. Sieg [4] defines the links and ties between network members as a valuable source. In other words, social capital paves the ground for the development of norms and trust which in turn leads to opportunity recognition and the attainment of goals.

Cognitive social capital and opportunity recognition

Cognitive social capital refers to resources that provide manifestations, interpretations and shared meaning systems among groups [18]. The cognitive dimension which revolves around cognition

(or in other words, the mental, rational or intellectual activities) utilizes shared language and shared insight to generate values for the network members thus setting the ground for optimized activities within the social system. Bourdieu argues that social capital is the ‘the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition’ or in other words, group membership. This network would provide its each member with collective capital support and warrant them credit.

Therefore, according to Hills et al., in some cases, there is a meaningful difference between the individual and the social network. Previous research has identified that social networks provide access to significantly more opportunities than would an individual discover alone. Furthermore, it is much less likely that an individual identify an opportunity through formal searching. An individual may believe that it is best to recognize opportunities before hurling himself into an industry, whereas social networks are based on the premise that it is best to recognize opportunities after entering a marketplace (Figure 1).

Methodology

The present paper falls into the practical research category and employs a descriptive survey approach for collecting research data. The aim of this paper is to examine the effect of social capital (structural, relational and cognitive) on opportunity recognition Goshal and Nahapiet [19]. Social capital is used as the moderating variable (i.e. the second independent variable) in the research model. The relational, structural and cognitive aspects of social capital were each measured by four separate statements (12 in total) and another four statements were used to measure the social network. The social network includes network hierarchy and connectedness between individuals [4]. And opportunity recognition is defined as the ambiguous market needs, resources or capacities that have not been well exploited [5]. The 5-point Lickert scale was used to measure each index (ranging from ‘totally agree’ to ‘totally disagree’). Ultimately, the sum of all items for each index was divided by its number. The research population includes all the 60 managers from the established firms in the Science and Technology Park of the University of Tehran. The paper used a consensus (N=n) in order to increase the statistical accuracy and reduce errors. A consensus is when the size of the statistical population equals the sample size. Descriptive and inferential statistics were used as two methods for analyzing the research data. The descriptive statistics consists of the descriptive data (i.e. percentage and frequency) from the demographic items whereas, mean and standard deviation compose the descriptive statistics of the research indices. The PLS software was used to test the research hypotheses and the theoretical model.

In order to determine the validity of the academic experts’ opinions, the items in the fields of social capital and opportunity recognition were first confirmed. The reliability population is as follows (Table 1).

Data Analysis

Demographic data

In this research 85% of the study sample is male and the remaining 15% is female. As regards age, 30% of the firm managers in the Science and Technology Park are below 30 and 10% are over 60 with the highest frequency rate of 40% related to the 31-40 age groups. 20% of the research sample is between 41 and 50.

Description of the indexes

The descriptive statistics of the indexes is shown in Table 2

Inferential Statistics

Sub hypotheses test

According to the research results summarized in Table 3, the structural social capital does not have a direct and linear relationship with social network whereas, the relational and cognitive social capital have a direct and linear relationship with social network. The structural and cognitive social capital has a direct and linear relationship with opportunity recognition. The relational social capital, however, does not have a direct and linear relationship with opportunity recognition. Finally, social network has a direct and linear relationship with opportunity recognition.

The final research model is shown in Figure 2.

Discussion and Conclusion

In the present paper, we discussed the effect of social capital on opportunity recognition in all the managers from the established firms in the Science and Technology Park of the University of Tehran. At present, evidence shows that individuals play an important role in the process of opportunity recognition in social networks. The overall result of the research indicates that the cognitive and structural aspect of social capital affect entrepreneurial opportunity recognition. Furthermore, Sieg [4] believes that social capital has a positive effect on opportunity recognition. Social network has a significant effect on opportunity recognition. The relational and cognitive aspects of social capital have an effect on social network. Based on the results, the structural social capital does not have a meaningful effect on opportunity recognition.

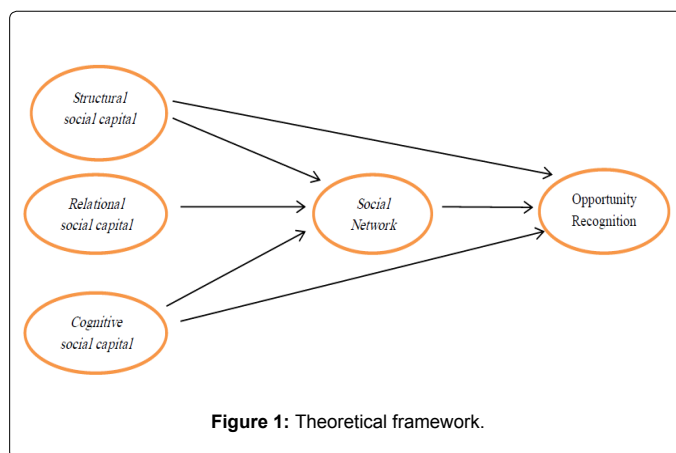


Figure 1: Theoretical framework.

Index	Items	Cronbach's Alpha
Structural social capital	4	0/86
Relational social capital	4	0/83
Cognitive social capital	4	0/82
Social networks	4	0/81
Opportunity recognition	4	0/92

Table 1: Cronbach's Alpha values of the research indexes.

Index	Frequency	Min.	Max.	Mean	SD
Cognitive social capital	60	4.50	75/11	1812/7	84146/1
Relational social capital	60	4.50	50/14	1812/8	22960/2
Structural social capital	60	4.50	50/13	1438/8	03644/2
Opportunity recognition	60	3.25	75/12	9000/6	19396/2
Social network	60	4.25	25/16	2750/8	56067/2

Table 2: The descriptive statistics of the indexes.

Hypothes es	Sig.	Sig. level	Impact factor
Structural social capital – social network	1/96	1/62	0/10
Relational social capital – social network	1/96	4/16	0/40
Cognitive social capital – social network	1/96	1/17	0/09
Structural social capital – opportunity recognition	1/96	4/59	0/36
Relational social capital – opportunity recognition	1/96	0/47	0/06
Cognitive social capital – opportunity recognition	1/96	5/03	0/41
Social Network – opportunity recognition	1/96	4/19	0/48

Table 3: Relationship between significance and the impact factor.

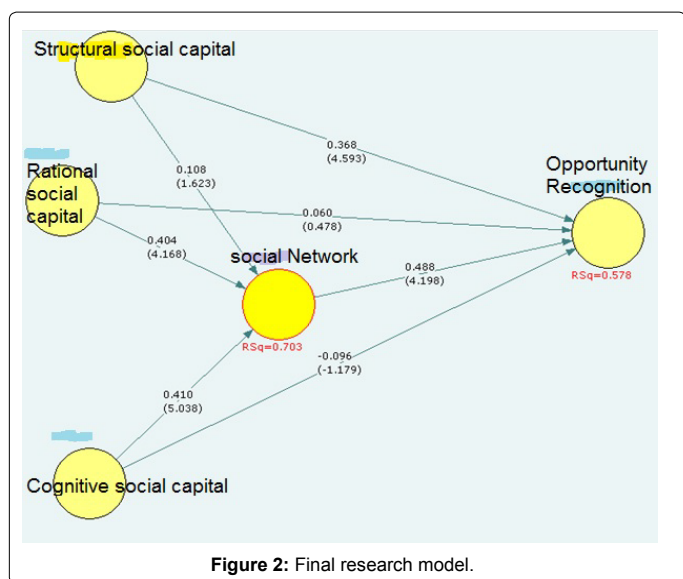


Figure 2: Final research model.

The network size has a significant and positive relationship with opportunity recognition.

The pivotal idea behind social capital can be summed up in its own term. The community members communicate with each other and can support and help each other, hence attaining things that they could not otherwise on their own. Social capital refers to a social organization's characteristics such as networks, norms and trust which help to increase cooperation and coordination to the end of ensuring mutual benefits and creating shared norms, mutual trust and the attainment of goals. The greater the extent of trust in a community the greater will be the social capital in that community hence more cooperation and mutual trust between its members. Therefore, when relationships between individuals are governed by trust, it will ease the information flow and ultimately leads to opportunity recognition [20]. The degree of interaction between the entrepreneur and his social environment which involves strong connection and ties with others, results in the development of ideas. Initial recognition of opportunity depends on the social environment or the type of social capital. In the end, it should be mentioned that social capital is also dependent on social networks. Science and Technology Parks need to consider all the three aspects of social capital in order for them to be able to address community needs. The stronger the relationship between these variables, the higher will be the chances of business opportunity recognition. Universities need to create a network of expertise from different fields to facilitate business plan and opportunity recognition.

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