



journal homepage: http://www.aessweb.com/journals/5007

INVESTIGATION OF THE RELATIONSHIP BETWEEN ENTREPRENEURIAL OPPORTUNITY RECOGNITION AND ENTREPRENEURIAL CAPITALS

Susan Ramezanpour^T

Faculty of Psychology and Management, Azad University of Shiraz, Iran

Seyran Amiriyan

Faculty of Philosophy and Psychology, Yerevan State University, Yerevan

Ali Naghi Mosleh Shirazi

Faculty of Management and Economy, Shiraz University, Iran

ABSTRACT

The heart of entrepreneurship is the creation and/or recognition of opportunities. Although there is no universal definition of entrepreneurship, opportunity recognition has been viewed as the central definition of this phenomenon. Without an opportunity there is no entrepreneurship. Therefore opportunity recognition is widely seen as a key step of the entrepreneurial processes. The identification of opportunities has been recognized as one of the most important abilities of successful entrepreneurs. The goal of this study is to examine the relationship between the entrepreneurial opportunity recognition process and the social, human capital. The entrepreneurship model utilized in this study is the one following the resource-based theory. In the framework of the present study a total of 353 questionnaires were distributed among Iranian entrepreneurs and the data were analyzed based on multi variety regression and path analysis. The obtained results from data analyses show that the process of opportunity recognition among

The obtained results from data analyses show that the process of opportunity recognition among Iranian entrepreneurs is dependent upon social and human capitals.

© 2014 AESS Publications. All Rights Reserved.

Keywords: Iranian, Entrepreneurs, Entrepreneurship, Social capital, Human capital, Strong ties, Weak ties, Opportunity recognition.

1. INTRODUCTION

Without an opportunity there is no entrepreneurship (Short *et al.*, 2010). Hence opportunity recognition is widely seen as a key step of the entrepreneurial processes (Baron, 2006a). Entrepreneurship is defined as identifying and exploiting opportunities and it can be conceptualized

along the entrepreneurial process which proceeds from identifying opportunities to achieving the new venture growth (Shane and Venkataraman, 2000b; Baron, 2007). (Gaglio and Katz, 2001). Entrepreneurship is gaining importance as an academic field, as researchers try to understand why some people succeed to recognize opportunities while others do not, and how these discovered opportunities are evaluated and exploited. The identification of opportunities has been recognized as one of the most important abilities of successful entrepreneurs (Ardichvili et al., 2003). Researchers have demonstrated that opportunity identification may be related to several factors; entrepreneurial alertness (Kirzner, 1973), prior knowledge (Shane, 2000a), social networks (Singh et al., 1999; Rong et al., 2011), entrepreneurial cognition (Baron, 1998) and potential financial reward (Schumpeter, 1976). Social Capital is essential for entrepreneurial opportunity recognition to have access to resources, exchange information and get others opinion (Singh et al., 1999). Individuals' access to external knowledge through the social networks in which they participate is found to be fundamental for developing the capacity to recognize new business opportunities (Ramos-Rodríguez et al., 2010). Social networks are particularly important for accessing and reducing the costs of resources necessary for entrepreneurial activity (Cromie et al., 1994; Portes, 1998); they are sources of information about new opportunities (enhance knowledge) and make entrepreneurial action more financially rewarding (Birley, 1985; Burt, 1997; Johannisson, 2000). Several studies have explored the role that human capital plays in opportunity identification (Davidsson and Honig, 2003; Ucbasaran et al., 2003). The human capital literature revolves around individual knowledge and the application of such knowledge (Ulrich, 1998). Knowledge is an idiosyncratic resource that is unequally dispersed among individuals in a society (Hayek, 1945), and individuals are thought to identify opportunities because they possess uniquely different fields of knowledge or human capital (Venkataraman, 1997).

Capital theory postulates that individuals will differ with respect to their personal abilities for two reasons. First, individuals invest in different types (e.g., formal education versus on the job training) and degrees of resources over time (Becker, 1993; Mincer, 1994). Second, because there is variance in social environments where individuals are reared, individuals will develop networks with different types of resources, as well as differing degrees of the ability to extract resources and benefits from their social structures, networks and memberships (Coleman, 1988). It is generally assumed that greater amounts of human and social capital enhance an individual's ability to acquire, information resources into knowledge and act upon discovered opportunities (Davidsson and Honig, 2003). This research provides a framework for the process of entrepreneurial opportunity recognition based upon the resource theory; we present two research questions that will be analyzed further throughout this paper:

A) How do human and social capitals of entrepreneurs affect their ability to recognize opportunities?

B) How does social capital mediate the effect of human capital on the entrepreneurial opportunity recognition?

2. ENTREPRENEURSHIP/ OPPORTUNITY RECOGNITION

Entrepreneurship is defined as identifying and exploiting opportunities and it can be conceptualized along the entrepreneurial process which proceeds from identifying opportunities achieving to the new venture growth (Shane and Venkataraman, 2000b; Baron, 2007). Consequently, an entrepreneur is someone who recognizes an opportunity and creates a new venture to pursue it (Kirzner, 1997). Without an opportunity there is no entrepreneurship (Short *et al.*, 2010). Hence Opportunity recognition is widely seen as a key step of the entrepreneurial processes. Eckhardt and Shane (2003) define entrepreneurial opportunities 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. They exist because different agents have different beliefs about the relative value of resources when they are converted from inputs into outputs (Kirzner, 1997; Shane and Venkataraman, 2000b). Different approaches have been taken to explain the factors that influence the opportunity recognition. A number of studies have been proved that both recognition and exploitation opportunities are likely to be related functions of the broad resource an individual Possesses (Casson, 2003).

Opportunity identification by entrepreneurs may be a function of an individuals' capacity to handle complex information and their prior knowledge (Venkataraman, 1997; Shane and Venkataraman, 2000b) and Social networks (Ardichvili et al., 2003; Ozgen and Baron, 2007). Entrepreneurs are heterogeneous with respect to the amount of information they seek and their opportunity identification behavior (Shane, 2000a). One potential source of this heterogeneity is differences in the level and nature of their human capital, which has been viewed in terms of attributes, skills (Becker, 1975) and cognitive characteristics (Alvarez and Busenitz, 2001). Social capital and networks assist entrepreneurs during the opportunity development phase by exposing them to a wide range of different views, ideas and information (Davidsson and Honig, 2003). Therefore, one of the ways that people gain information about entrepreneurial opportunities is through their social network. Social networks allow access to different human skills and knowledge, which enables the entrepreneur to learn from others experiences. The Resource-based theory of entrepreneurship argues that access to resources by founders is an important predictor of opportunity-based entrepreneurship and a new venture growth. This theory stresses the importance of social and human resources. Thus, access to resources enhances the individual's ability to detect and act upon discovered opportunities (Davidsson and Honig, 2003). Social and human capital represents two classes of theories under the resource - based entrepreneurship theories.

2.1. Human Capital

Human capital, including natural skills such as intelligence and other abilities acquired through education or professional experience (Burt, 1992; Wu *et al.*, 2009; Tihula and Huovinen, 2010; Wagener *et al.*, 2010). Human capital theory generally argues that individuals with more or higher human capitals achieve higher performance during executing tasks. (Becker, 1975; Dimov and Shepherd, 2005). Human capital is an important variable that has influences on opportunity recognition (Dimov and Shepherd, 2005). More comprehensively, human capital has been defined as the company's employees and managers' *individual capabilities*, knowledge, skills and

experience which are relevant to the task at hand, as well as the capacity which is added to this reservoir of knowledge, skills and experience through individual learning (Lumpkin and Dess, 2001). Human capital is an entrepreneur's knowledge, which he or she could have acquired through education, experience or both. Two key characteristics, formal education and prior experience, underlie the concept of human capital. Formal education is one component of human capital that may assist on the accumulation of explicit knowledge that may provide skills useful to entrepreneurs. Human capital is not only the result of formal education, but also it includes the experience and practical learning that have been taken place on the job, as well as non-formal education, such as specific training courses that are not a part of traditional formal educational structures. Thus, broad labor market experience, as well as specific vocationally oriented experience, is theoretically predicted to increase human capital (Becker, 1964).- The knowledge gained from education and experience represents a resource which heterogeneously distributed across individuals and is central to understand the differences in opportunity identification and exploitation (Shane and Venkataraman, 2000b; Anderson and Miller, 2003). More specifically, researchers argue that individuals' education may enhance the opportunity recognition through the facilitation of access to knowledge and the connections to other knowledgeable people. Therefore, one important role of human capital in stimulating entrepreneurship pertains to one's access to information necessary to the recognition of opportunities in the market place. Further empirical research has shown that the ability to identify opportunities is related to such human capital variables as education, work experience, and entrepreneurial experience (Davidsson and Honig, 2003), prior knowledge (Shane, 2000a), prior knowledge of customer problems (Shepherd and De Tienne, 2004), experiential knowledge (Dimov, 2003) and previous entrepreneurial experience (Ucbasaran et al., 2003). This ability increases opportunity recognition and even entrepreneurial success. As a result, people who are more capable of seeking and processing information, are more likely to be successful in opportunity recognition than others.

2.2. Social Capital

One approach to opportunity recognition that attracts attention is based on theories of social capital (Senjem and Reed, 2002; Davidsson and Honig, 2003), and social networks (Hills *et al.*, 1997; Singh *et al.*, 1999; Hoang and Young, 2000). Generally, social capital refers to the actual and potential resources that individuals obtain from knowing others, being part of a social network with them, or merely from being known to them and having a good reputation (Nahapiet and Ghoshal, 1998). It is found that network ties, activeness, alertness and prior knowledge are important factors that to how entrepreneurs recognize new opportunities (Kontinen and Ojala, 2011).

Social networks provided by an extended family or community-based relationships are likely to reinforce the effects of education, knowledge, experience and financial capital. This leads to the fact that participation in social networks benefits individuals involved in start-up activities (Putnam, 1993). Social networks help entrepreneurs to acquire the human, financial and social capital that they need to achieve their goals (Hansen, 1995; Jensen, 2001; Ripolles and Blesa, 2005; Welter and Kautonen, 2005) while connecting the entrepreneurs to knowledgeable people, they gain a lot of visibility, information and influence because of strong social capital, therefore

entrepreneurs progress in their opportunity recognition process along with lots of encouragement and support from friends or family members (Davidsson and Honig, 2003). (Granovetter, 1973; Ardichvili et al., 2003; Ozgen and Baron, 2007) mention the influence of social networks on recognition of opportunity. The social networks are sets of relationships formed between the entrepreneur and others with the purpose of providing the entrepreneur, the resources necessary to start a new venture (Birley, 1985; Johannisson, 1988). Social networks have been separated into strong ties and weak ties. The strong ties represent the family and close friends that are in relationship with the entrepreneur not because of economical purposes but to provide feedback and support. Family members are present in entrepreneurial networks in all phases of establishing a firm. The presence of an entrepreneur in the family can compensate for financial and managerial restrictions. Further, emotional support received from a family member who is an entrepreneur might be very helpful to sustain emotional stability (Greve and Salaff, 2003). In addition, parents engaged in entrepreneurial activities offer unique skills to their children's business. Furthermore, they are an easily accessible resource in this regard. On the one hand, strong ties make it easier for their children to get the information without spending as much time searching. On the other, although entrepreneurs are more likely than the average population to have parents that also run a business, not all follow their parents' line of work. However, can be to expect children of selfemployed parents to include them in their discussion networks (Greve and Salaff, 2003). The weak ties are derived from the individual's relationships with specific networks that can give access to new information and ideas. In other words, resources that otherwise would be impossible to be found in the immediate network (Granovetter, 1973), emphasize and argue that weak ties are less reliable but more likely to provide access to a variety of new information. Based on the assumption that entrepreneurship consists of two related processes, discovery of entrepreneurial opportunities and exploitation of such opportunities; the analysis performed by Davidsson and Honig (2003) emphasizes the increasingly important role of weak ties that provide specific knowledge unlikely to be available within close networks of strong ties during the exploitation period (Gustafsson and Autio, 2011). In general, the effect of social capital on entrepreneurial performance is reflected in four aspects. First, social networks give entrepreneurs access to a variety of scarce resources (Light, 1984; Zimmer and Aldrich, 1987; Bates, 1995). Second, social networks give entrepreneurs access to intangible resources such as credibility and competence (Bruderl and Preisendorfer, 1998; Bosma and De Wit, 2004). Third, since entrepreneurs are limited in their ability to assemble and absorb information for their decision-making process, they have to rely upon frequent external contacts, especially with distributors, suppliers, competitors and customer organizations to obtain necessary information and advice (Birley, 1985; Smeltzer et al., 1991; Brown and Butler, 1995; Peters and Brush, 1996). Fourth, (Stuart et al., 1999; Calabrese and Silverman, 2000) points out that social network have reputational and signaling effects; positive perceptions of a firm's network participation may lead to subsequent profitable business exchanges (Santarelli and Thu Tran, 2013). This study demonstrates the fact that social and human capitals influence the entrepreneur's ability into opportunity recognition. The researchers are interested in finding out the influence of each one separately and also the dimensions of social and human capital on opportunity

recognition. Therefore, the hypotheses have been presented and subsequently analyzed in this study.

3. THE STATEMENT OF THE PROBLEM AND RESEARCH PURPOSES

Nowadays, entrepreneurship is a solution to the social and economic problems of any society; at the same time, its development in all aspects of society is a real need for any country. Therefore, the growth and dynamism of a society is tied with the creativity of human beings.

The society can get to the real development once this development arises from inside society. The society members should explore the problems, analyze them, find out the obstacles and remove them. They should present solution spastically and solve the problems. The entrepreneurs as the main human capitals are very effective in the development of the society and country; because they can control the conditions related to ever-increasing extension of new needs by recognizing opportunities. After all, they can create useful and prominent effects which, in turn, can lead to the well-being of all the members of the society. In addition, the entrepreneurs act, in fact, as a bridge between the industry and university. In other words, they fill the gap between knowledge and market (Ahmadpour, 1999). One basic concern of the entrepreneurship approach is the question why some particular individuals, in similar conditions, have the ability to recognize and create opportunities in various environments and undertake entrepreneural actions, while others do not.

The purpose of this research is to investigate the relationship between social and human individual capabilities of entrepreneurs in recognizing entrepreneurial opportunities.

4. THE RESEARCH FRAMEWORK

Dimensions, components and indicators of this study are determined based on the resource – based entrepreneurship theories. According to this model, entrepreneurial opportunity recognition has two dimensions as follows; a) human capital that includes two indicators:

1) Formal education, 2) knowledge and experience prior

b) Social capital, which includes one indicator, i.e. networks (weak and strong ties).



Figure-1. The conceptual model for research

5. MATERIALS AND METHODS

The present research sample consists of 3000 entrepreneurs, who were selected by Ministry of Labor and the scientific institutes affiliated to universities. Through the application of Cochran 1977 formula, 353 samples were obtained. The questionnaires, which were distributed among samples, were collected and the data were analyzed based on Multi Variety Regression and Path analysis.

5.1. Research Hypotheses

Hypothesis 1: Entrepreneurial opportunities are in positively significant relationship with human and social capital.

Hypothesis 2: The entrepreneurial opportunity recognition has a positively significant relationship with human capital when the social capital is an intermediary variable.

6. RESEARCH OUTCOMES/ DISCUSSION

In order to study the relationship between the entrepreneurial opportunity recognition and entrepreneurial capitals (human, social), two hypotheses were taken into consideration. For hypothesis 1, we used regression equation. The findings of the research show that if we consider the entrepreneurial opportunity recognition as a dependent variable and use the regression model to measure its relationship with the independent variables (human and social capitals), we will come to the below equation:

 $Y = 0.639 + 0.864 X_1$ (human capital) $+ 0.043 X_2$ (social capital) $R^2 = 86.5$ (Equation 1)

(Y is entrepreneurial opportunity recognition)

The standard coefficients in Table 1 show that the variables of human capital (0.825) and social capital (0.133) effectively contribute to the increase in the amount of entrepreneurial opportunity recognition.

Model	Unstandardized Coefficients (dependent Coefficients Coefficients		Unstandardized		t	sig	R square
	В	Std. Error	Beta	_			
Constant	0.639	0.078		8.154			
Human	0.864	0.055	0.825	15.727	0.000**	0.865	
Social	0.043	0.017	0.133	2.540	0.012*		

Table-1. Standardized Coefficients (dependent variable: opportunity recognition)

Notes: dependent variable, opportunity recognition; independent variables, human and social capital

** Correlation is significant at the 0.01 level (2-tailed)

* Correlation is significant at the 0.05 level (2-tailed).

In this part, we are going to evaluate the correlation and the connection between the components of two capitals with dependent variable, i.e, the ability of recognition of opportunity through the application of Pearson correlation coefficient.

As you see in the conceptual model, the components of human capital include formal and academic education and experimental knowledge which are the result of market knowledge and © 2014 AESS Publications. All Rights Reserved.

professional experiences. The components of social capital consist of weak and strong ties. The results of the correlation coefficient (Table 2) show that the ability of opportunity recognition has a significant relationship with the components of social capital (parents, relatives, friends and other people). This significant relationship also holds true for the ability of opportunity recognition and the components of human capital at the level of 0.01 and 0.05. Regarding the significance of the correlation coefficient for achieving a suitable model, we use the multivariate regression.

Correlation Matrix							
	у	Human	social	P&F	O&R	Fed	Wex
У	1.000						
	**						
human	0.926	1.000					
	0.000						
	**	**					
social	0.762	0.763	1.000				
	0.000	0.000					
	**	**	**				
P&F	0.406	0.475	0.329	1.000			
	0.000	0.000	0.000				
	*	**		**			
O&R	0.202	0.276	0.142	0.416	1.000		
	0.027	0.002	0.123	0.000			
Formal							
education	0.044	0.006	-0.074	-0.161	-0.070	1.000	
	0.643	0.951	0.431	0.084	0.453		
	**	**	**	**	**		
Work							
experience	0.492	0.534	0.401	0.564	0.437	-0.048	1.000
	0.000	0.000	0.000	0.000	0.000	0.607	

Table-2. Correlation Coefficient Matrix

* : Correlation is significant at the 0.05 level (2-tailed).

** : Correlation is significant at the 0.01 level (2-tailed).

Notes, Y: Opportunity recognition; dependent variable

P&F: parents and friend; O&R: other people and Relative; dimensions of social capital.

Fed: Formal Education; Wex : Work Experience, dimensions of human capital

Taking into account the opportunity recognition and due to the examination of the effects of human capital dimensions, i.e., formal education and work experiences; the results of the Table 3 indicate that human capital is added to the ability of opportunity recognition, as many as 0.471 for each experimental knowledge unit, while it is 0.06 for academic studies. Therefore, taking into consideration the low amount of Beta for educational level, dependent variable, i.e., the ability of opportunity recognition is significant at the level of 0.01 just for educational knowledge.

The individuals having university degrees in this research have this viewpoint that they were not able to differentiate the present opportunities of the society. The justification for this view point is, as a matter of fact, the ongoing growth and development of the society. Therefore, such individuals in these situations can generate ideas convertible to the business affairs or discover and exploit the opportunities which are in urgent need of knowledge and technology. Such

opportunities, in addition to having some personal characteristics, should have one more important feature, namely having the ability to differentiate the obstacles and limitations of information and consequently transforming it to the ideas and opportunities. In a sample society, in some industries which need a proper knowledge and technology, the management and staff members have some particular attitudes and motives which actually make obstacles to recognize the opportunities. These attitudes also prevent the educated people to discover and exploit the opportunities. So the subjects claimed that recognizing opportunities demands more effort. While the persons having economic intuition and the know-how of the market could easily discover the opportunities and insert them into their business than their educated counterparts.

with dime	ension of human capital				
Model	Variables	Unstandardized Coefficients	Standardized Coefficients	Sig	D2

Table-3. Standardized Regression Coefficient from Analysis Predicting Opportunity recognition

Model	Variables	Coefficients		Coefficients		e: -	R ²
Widder	v al lables	В	Std. Error	Beta	ι	Sig.	K-
	(Constant)	1.761	0.114		15.497	0.000**	0.223
1	formal education	0.022	0.028	0.066	0.799	0.426ns	
	Informal knowledge	0.151	0.027	0.471	5.679	0.000**	
2	(Constant)	1.831	0.073		25.213	0.000**	0.219
-	Work experience	0.15	0.027	0.468	5.656	0.000**	

**: Correlation is Significant at the 0.01 level (2-tailed).

*: Correlation is Significant at the 0.05 level (2-tailed).

Ns: non-Significant

Y: Opportunity recognition, dependent variable: Informal knowledge and Work experience, independent variables

Regarding the significance of the correlation coefficient of the two components, social capitals and the opportunity recognition ability, we may plan a model using these two components in order to predict the opportunity recognition ability. But the results of the multivariate regression (Table 4), shows that due to the insufficient amount of Beta (O&R=0.04) compared with Beta (P&F=0.389), we can conclude that the ability of opportunity recognition and its connection with strong ties is significant at the level of 0.05, while it is not the case for those of weak ties.

The attitudes and viewpoints of the participants regarding the information role which was the result of connection among family members, friends and other people indicated a far more important role of the whole family, friend group and relatives. Here we can justify that father; mother and friends in a sample society have an important position, because the strong emotional connection and the noticeable confidence among family members result in the easy exchange of information. In doing so, the members find novel ideas, parents would rather their sons and/or daughters be presented with the latest findings and information. Therefore, the family union is considered as an important resource for generating acceptable ideas that can later be converted into business. On the other hand, friends possessing new and complicated information have a basic role in holding of gatherings among each other.

Mode l	Unstandardized Coefficients		Standardi zed Coefficien ts	t	Sig.	R ²	
		В	Std. Error	Beta			
	(Constant)	2.116	0.034		62.117	0.000**	0.166
1	Weak tie	0.008	0.019	0.04	0.428	0.669ns	
-	Strong tie					0.000**	_
	Sublig ue	0.047	0.011	0.389	4.195		
2	(Constant)	2.12	0.033		65.135	0.000**	0.165
2	Strong tie	0.049	0.01	0.406	4.826	0.000**	_

Table-4. Standardized Regression Coefficient from analysis prediction opportunity recognition

 with dimension of social capital

**: Correlation is Significant at the 0.01 level (2-tailed).

*: Correlation is Significant at the 0.05 level (2-tailed).

Ns: non-Significant

**: Correlation is Significant at the 0.01 level (2-tailed).

*: Correlation is Significant at the 0.05 level (2-tailed).

Ns: non-Significant

Y: Opportunity recognition ,dependent variable :Weak and strong ties :independent variables

As a result, friends create effective and reliable ties and as an intermediate group between family and relatives. They also have an important role in giving out information.

Taking into account the significance of correlation coefficient of the two components, i.e., social capital and the ability to recognize opportunity, we might design a model for estimating the ability recognition. But the result of multivariate regression (Table 4) shows that the amount of Beta for the strong network tie is higher than that of weak network. Therefore, the dependent variable is significant at the level of 0.05 for the strong network tie, while it is not the case for the weak one. Considering the high correlation coefficient between the social capital and human capital, the social capital will be regarded as an intermediary variable. Thus, the initial hypothesis will be changed in the following way:

Hypothesis 2: The entrepreneurial opportunity recognition has a positively significant relationship with human capital when the social capital is an intermediary variable.

At first we need to calculate the effects of the human capital on the social capital. Afterwards, we consider the calculation of the effect of the social capital as an independent variable on the main dependent variable of entrepreneurial opportunity recognition, and get the following equations;

 Y (social capital) = -2.723 + 2.464 X (human capital)
 $R^2 = 58.2\%$ (Equation 2)

 Y=1.831+0.247 X (social capital)
 $R^2=58.1\%$ (Equation 3)

(Y is entrepreneurial opportunity recognition)

Model		dardized ficients	Standardized Coefficients	t	sig	R square
	В	Std. Error	Beta			
Constant	-2.723	0.343	0.763	-7.947	0.000**	0.582
Human	2.464	0.192		12.806	0.000**	

Table-5. Standardized Coefficients (dependent variable: human capital)

**: Correlation is significant at the 0.01 level (2-tailed).

Table-6. Standardized Coefficients independent variable (social capital)							
Model		ndardized fficients	Standardized Coefficients	t	sig	R square	
		Std.		_			
	В	Error	Beta				
Constant	1.831	0.035	0.762	51.896	0.000**	0.581	
social	0.247	0.019		12.786	0.000**		

**: Correlation is significant at the 0.01 level (2-tailed

Taking into account the low determination coefficients of Table 5, Table 6 and compared to the high determination coefficient of the two-variable Table 1, it seems that hypothesis 1 is more reliable than hypothesis 2.

Based on this finding, we use path analysis to measure the direct and indirect effects of the variables. As it can be seen from the results of Table 7, the indirect effect of human capital through social capital (0.102) is considerably different from its direct effect (0.825). Therefore, the intermediary role of the social capital can be rejected. In other words, it can be claimed that entrepreneurial opportunity recognition is dependent upon human and social capitals.

Table-7. The dir	ect and indirect	t effects of the	variables in	Path analysis
------------------	------------------	------------------	--------------	---------------

Variables	Human Capital	Social Capital
Human capital	0.825	0.629
Social capital	0.102	0.133

Human and social capital independent variables

7. CONCLUSION

This study was designed as the investigation of the relationship between entrepreneurial opportunity recognition and entrepreneurial capitals.

The study proposed a simple conceptual model, linking the social and human capitals and entrepreneurial opportunities and then this model was tested in Iran. For the purpose of this study, data were collected from 120 Iranian entrepreneurs through questionnaires.

As mentioned in above theoretical issues, one of the most important abilities on identifying opportunities is formal education. The findings show that the formal education does not have a positive significant relationship with the ability to recognize opportunities. But experimental results have shown that the knowledge gained through experiences and previous work is positively associated with the ability to recognize opportunities. Therefore the findings of this part are in line with those of researchers who believe that practical knowledge and experience are important factors in identifying opportunities to consider.

As mentioned in above theoretical issues, one of the most important abilities in identifying opportunities is social capital /social network. In fact, the social networks are the same as social capital which are of two types, weak ties and strong ties. Weak ties include other entrepreneurs, relatives and the community of people. Strong ties include family members and close friends. The experimental findings show that strong ties are positive and significant. Actually they are predictor variables in the opportunity recognition process.

In general, the results of this research with regard to the participants' attitudes, as reflected in the questionnaires, show that the following factors are important in the process of opportunity recognition among Iranian entrepreneurs.

- a) Relationship with family members and close friends (strong ties)
- b) Relationship with other entrepreneurs and relatives (weak ties)
- c) Prior experience and knowledge

This suggests that business founders have access to specific resources that enable them to detect and act upon new entrepreneurial opportunities, and is previously empirically confirmed. Overall, the results of this research are in accordance with prior researches, such as (Shane and Venkataraman, 2000b; Davidsson and Honig, 2003; Dimov and Shepherd, 2005; Ucbasaran *et al.*, 2008; Ramos-Rodríguez *et al.*, 2010; Kontinen and Ojala, 2011; Rong *et al.*, 2011) which have explored the relationships between entrepreneurs' human and social capital and opportunity recognition.

REFERENCES

- Ahmadpour, D.M., 1999. Karafarini: Ta'arif, nazariat, olgooha [Entrepreneurship: Definitions, theories, models]. Tehran: Pardis Company.
- Alvarez, S.A. and L.W. Busenitz, 2001. The entrepreneurship of resource-based theory. Journal of Management, 27(6): 755–775.
- Anderson, A. and C. Miller, 2003. Class matters: Human and social capital in the entrepreneurial process. Journal of Socio – Economics, 32(1): 17-36.
- Ardichvili, A., R. Cardozo and S. Ray, 2003. A theory of entrepreneurial opportunity identification and development. Journal of Business Venturing, 18(1): 105–123.
- Baron, R.A., 1998. Cognitive mechanisms in entrepreneurship: Why and when entrepreneurs think differently than other people. Journal of Business Venturing, 13(4): 275-294.
- Baron, R.A., 2006a. Opportunity recognition as pattern recognition: How entrepreneurs connect the dots to identify new business opportunities. Academy of Management Perspectives, 20(1): 104-119.
- Baron, R.A., 2007. Entrepreneurship: A process perspective. In J.R. Baum, M. Frese, and R. A. Baron (Eds.), The psychology of entrepreneurship. Mahwah, NJ: Lawrence Erlbaum. pp: 19-39.
- Bates, T., 1995. Self-employment entry across industry groups. Journal of Business Venturing, 10(2): 143-156.

- Becker, G.S., 1964. Human capital. New York: Columbia University Press for the National Bureau of Economic Research.
- Becker, G.S., 1975. Human capital: A theoretical and empirical analysis, with special reference to education. New York: Columbia University Press, for the National Bureau of Economic Research.
- Becker, G.S., 1993. Nobel lecture: The economic way of looking at behavior. The journal of Political Economy, 101(3): 385-409.
- Birley, S., 1985. The role of networks in the entrepreneurial process. Journal of Business Venturing, 1(1): 107–117.
- Bosma, N.S. and G. De Wit, 2004. The value of human and social capital investments for the business performance of startups. Small Business Economics, 23(3): 227–236.
- Brown, B. and J.E. Butler, 1995. Competitors as allies: A studyof entrepreneurial networks in the U.S. wine industry. Journal of Small Business Management, 33(3): 57–66.
- Bruderl, J. and P. Preisendorfer, 1998. Network support and the success of newly founded businesses. Small Business Economics, 10(3): 213–225.
- Burt, R., 1992. Structural holes: The social structure of competition. Cambridge: Harvard University Press.
- Burt, R.S., 1997. The contingent value of social capital. Administrative Science Quarterly, 42(2): 339-366.
- Calabrese, T. and B.S. Silverman, 2000. Canadian biotechnology startups, 1991–1997: The role of incumbents' patents and strategic alliances in controlling competition. Social Science Research, 29(4): 503–534.
- Casson, M., 2003. Entrepreneurship, business culture and the theory of the firm. In Z.J. Acs and D.B. Audretsch (Eds.), Handbook of entrepreneurship research: An interdisciplinary survey and introduction.Berlin: Springer. pp: 223-246.
- Coleman, J.S., 1988. Social capital in the creation of human capital. American Journal of Sociology, 94(S): S95-S120.
- Cromie, S., S. Birley and I. Callaghan, 1994. Community brokers: Their role in formation development of business ventures. SMEs: Internationalization, networks and strategy. J. M. Veciana. Hampshire, U.K.: Avebury.
- Davidsson, P. and B. Honig, 2003. The role of social and human capital among nascent entrepreneurs. Journal of Business Venturing, 18(3): 301-331.
- Dimov, D.P., 2003. The nexus of individual and opportunity: Opportunity recognition as a learning process. InW.D. Frontiers of entrepreneurship research Wellesley. MA: Babson College.
- Dimov, D.P. and D.A. Shepherd, 2005. Human capital theory and venture capital firms: Exploring "home runs" and "strike outs. Journal of Business Venturing, 20(1): 1-21.
- Eckhardt, J.T. and S.A. Shane, 2003. Opportunities and entrepreneurship. Journal of Management, 29(3): 333-349.
- Gaglio, C.M. and J.A. Katz, 2001. The psychological basis of opportunity identification: Entrepreneurial alertness. Journal of Small Business Economics, 16(2): 93–111.
- Granovetter, M., 1973. The strength of weak ties. American Journal of Sociology, 78: 1360-1380.
- Greve, A. and J.W. Salaff, 2003. Social networks and entrepreneurship. Entrepreneurship. Theory and Practice, 28(1): 1-22.

- Gustafsson, R. and E. Autio, 2011. A failure trichotomy in knowledge exploration and exploitation. Research Policy, 40(6): 819–831.
- Hansen, E.L., 1995. Entrepreneurial networks and new organization growth. Entrepreneurship: Theory and practice, 19(4): 7-19.
- Hayek, F.A., 1945. The use of knowledge in society. American Economic Review, 35(4): 529-530.
- Hills, G.E., G.T. Lumpkin and R. Singh, 1997. Opportunity recognition: Perceptions and behaviors of entrepreneurs. Wellesley, MA: Frontiers of Entrepreneurship Research, Babson College.
- Hoang, H. and N. Young, 2000. Social embeddedness and entrepreneurial opportunity recognition: (more) evidence of embeddedness. Frontiers of entrepreneurship research. Wellesley, MA.: Babson College.
- Jensen, J.I., 2001. Social networks, resources and entrepreneurship. International Journal of Entrepreneurship and Innovation, 2(2): 103-109.
- Johannisson, B., 1988. Business formation: A network approach. Scandinavian Journal of Management, 4(3-4): 83-99.
- Johannisson, B., 2000. Networking and entrepreneurial growth. In the Blackwell handbook of entrepreneurship, Ed. D Sexton and H. Landstrom. Oxford: Blackwell. pp: 368–386.
- Kirzner, I.M., 1973. Competition and entrepreneurship. Chicago and London: University of Chicago Press.
- Kirzner, I.M., 1997. Entrepreneurial discovery and the competitive market process: An Austrian approach. Journal of Economic Literature, 35(1): 60-85.
- Kontinen, T. and A. Ojala, 2011. International opportunity recognition among small and medium-sized family firms. Journal of Small Business Management, 49(3): 490-514.
- Light, I., 1984. Immigrant and ethnic enterprise in North America. Ethnic and Racial Studies, 7(2): 195–216.
- Lumpkin, G.T. and G.G. Dess, 2001. Linking two dimensions of entrepreneurial orientation to firm performance: The moderating role of environment and industry lifecycle. Journal of Business Venturing, 16(5): 429-451.
- Mincer, J., 1994. Human capital: A review. In C. Kerr and P.D. Staudohar (Eds.), Labor economics and industrial relations: Markets and institutions. Cambridge, MA: Harvard University Press. pp: 109-141.
- Nahapiet, J. and S. Ghoshal, 1998. Social capital intellectual capital. And the Organizational Advantage Academy of Management Review, 23(2): 242-266.
- Ozgen, E. and R.A. Baron, 2007. Social sources of information in opportunity recognition: Effects of mentors, industry networks and professional forums. Journal of Business Venturing, 22(2): 174-192.
- Peters, M. and C. Brush, 1996. Market information scanning activities and growth in new ventures: A comparison of service and manufacturing businesses. Journal of Business Research, 36(1): 81–89.
- Portes, A., 1998. Social capital: Its origins and applications in modern sociology. Annual Review of Sociology, 24(1): 1–24.
- Putnam, R., 1993. The prosperous community: Social capital and public life. American Prospect, 13(1): 35-42.
- Ramos-Rodríguez, A.R., J. Medina-Garrido, J. Lorenzo-Gómez and J. Ruiz-Navarro, 2010. What do you know or who do you know? The role of intellectual and social capital in opportunity recognition. International Small Business Journal, 28(6): 566-582.

- Ripolles, M. and A. Blesa, 2005. Personal networks as fosterers of entrepreneurial orientation in new ventures. International Journal of Entrepreneurship and Innovation, 6(4): 239-248.
- Rong, M.A., H. Yen-Chih and S. Oded, 2011. Social networks and opportunity recognition: A cultural comparison between Taiwan and the United States. Strategic Management Journal, 32(11): 1183-1205.
- Santarelli, E. and H. Thu Tran, 2013. The interplay of human and social capital in shaping entrepreneurial performance: The case of Vietnam. Small Business Economic, 40(2): 435–458.
- Schumpeter, J.A., 1976. Capitalism, socialism and democracy. New York: Harper and Row.
- Senjem, J.C. and K. Reed, 2002. Social capital and network entrepreneurs. Frontiers of entrepreneurship research. Wellesley, MA: Babson College.
- Shane, S., 2000a. Prior knowledge and the discovery of entrepreneurial opportunities. Organization Science, 11(4): 448–469.
- Shane, S. and S. Venkataraman, 2000b. The promise of entrepreneurship as a field of research. Academy of Management Review, 25(1): 217–226.
- Shepherd, D. and D. De Tienne, 2004. Prior knowledge, potential financial reward, and opportunity identification. Entrepreneurship Theory and Practice, 29(1): 91–112.
- Short, J.C., T. Moss and G.T. Lumpkin, 2010. The concept of opportunity in entrepreneurship research: Past accomplishments and future challenges. Journal of Management, 36(1): 40-65.
- Singh, R.P., G.E. Hills, R.C. Hybels and G.T. Lumpkin, 1999. Opportunity recognition through social network characteristics of entrepreneurs. In P.D. Reynolds, W. D. Bygrave, S. Manigart, C.M. Mason, G.D. Meyer, H.J. Sapienza and K. G. Shaver (Eds.), Frontiers of entrepreneurship research: Wellesley, MA: Babson College. pp: 228 –256.
- Smeltzer, L.R., B.L. Van Hook and R.W. Hutt, 1991. Analysis and use of advisors as information sources in venture startups. Journal of Small Business Management, 29(3): 10–20.
- Stuart, T.E., H. Hoang and R.C. Hybels, 1999. Interorganizational endorsements and the performance of entrepreneurial ventures. Administrative Science Quarterly, 44(2): 315–349.
- Tihula, S. and J. Huovinen, 2010. Incidence of teams in the firms owned by serial, portfolio and first-time entrepreneurs. International Entrepreneurship and Management Journal, 6(3): 249-260.
- Ucbasaran, D., P. Westhead and M. Wright, 2008. Opportunity identification and pursuit: Does an entrepreneur's human capital matter. Small Business Economics, 30(2): 153-173.
- Ucbasaran, D., M. Wright, P. Westhead and M. Binks, 2003. Does entrepreneurial experience influence opportunity identification? Journal of Private Equity, 7(1): 7–14.
- Ulrich, D., 1998. A new mandate for human resources. Harvard Business Review, 76(1): 124-134.
- Venkataraman, S., 1997. The promise of entrepreneurship as a field of research. Academy of Management Review, 26(1): 13-17.
- Wagener, S., M. Gorgievski and S. Rijsdijk, 2010. Businessman or host? Individual difference between entrepreneurs and small business owner in the hospitality industry. Service Industries Journal, 30(9): 1513-1527.
- Welter, F. and T. Kautonen, 2005. Trust, social networks and enterprise development: Exploring evidence from East and West Germany. International Entrepreneurship and Management Journal, 1(3): 367– 379.

- Wu, L., C. Wang, C. Tseng and M. WU, 2009. Founding team and start-up competitive advantage. Journal of Management Decision, 47(2): 345-358.
- Zimmer, C. and H. Aldrich, 1987. Resource mobilization through ethnic networks: Kinship and friendship ties of shopkeepers in England. Sociological Perspectives, 30(4): 422–445.

Views and opinions expressed in this article are the views and opinions of the authors, International Journal of Asian Social Science shall not be responsible or answerable for any loss, damage or liability etc. caused in relation to/arising out of the use of the content.