The main objective of this study is to investigate the effect of social capital on recognition of entrepreneurial opportunities. The theoretical framework of the study includes the social network and social capital that are investigated with respect to three aspects of cognition, relation, and structure. Research method is applied in terms of purpose, and quantitative-survey in terms of strategy. The sample population includes the managers of all companies deployed in Technology Park – 60 directors. In order to collect the data we used questionnaire tool and distributed the questionnaires through census method. Ultimately, the findings of the study suggests that social capital has a positive effect on opportunity recognition, meanwhile, compared to other dimensions, relational social capital has a stronger role in recognizing opportunity.

Keywords: Social Capital, Opportunity Recognition, Social Network, Technology Park

1. INTRODUCTION

Today, the social environment must be fully ready to create and develop businesses. Understanding the surrounding environment of people has a significant role in recognizing the needs of the community. Entrepreneurial opportunity denotes to the possibility of introducing new products, services, primary material, markets, and organizing methods through creating new instrument-purpose relations (Casson, 1982, Shane, Venkataraman, 2000, Eckhardt, Shane, 2003).

Primary identification of opportunity recognition depends on the social environment or the type of social capital; and the creation of social capital requires establishment of social networks.

The type of interaction and communication influences achieving higher goals in a community. However, the differences between people, based on the network where they are, affects the chances of recognition of opportunity (Arnious, 2004). Opportunity recognition is a joint function of individual and the environment(Sigh, 2000). The degree of entrepreneurs’ interaction with the environment that includes strong relationship with people leads to the evolution of ideas. Shane and Venkataraman (2000) suggested the reason that some people have the capacity to recognize opportunities while others tend to ignore them is related to these things: A) having necessary knowledge to recognize opportunity and B) necessary mental capabilities and assets for creating value out of it. The previous researches that investigated the effect of social network on opportunity recognition (Elyasi et al., 2011) did not pay necessary attention to platforms and contexts of creation of social networks; the innovation in this paper is the study and identification of effective areas on entrepreneurs’ opportunity recognition such as social capital and its dimensions.

The spark and creation of an idea in any environment will require strong ties and interaction between individuals, of course, strong ties and relationship does not automatically lead to creation and identification of problems and social needs, but strong links and relationships between people will lead to a social network. In this case, new ideas and opportunities and potential competitive advantages are evaluated and then are recognized. One of the factors identified as social networking opportunities. Ardichvili (2000) believes that one of the factors of opportunity recognition is social networks. Scholars believe that social assets within social networks use the inter network communications to achieve a wide range of insight, that can recognize those practical opportunities.

Connections between the networks provide access to resources, data, knowledge and investors as social capital which is the most important channels of identifying opportunity. Therefore, examining and assessing previous studies we find that and previous studies have focused on the economic environment entrepreneurial alertness, however, this study regarding previous studies focuses on the effect of social dimensions on opportunity recognition.

The main objective of this study is examining the effect of social capital on opportunity recognition. First, we will discuss about the description and identification of social capital and social network, and then we will address compiling a theoretical framework and opportunity recognition. We collected data through questionnaires distributed among experts of Science and Technology Park and the results are obtained from them.

2. THEORETICAL FUNDAMENTALS

2.1 Definition of Social Capital

Social capital consists of features of social life, networks, norms and trust that enable participants to more effectively pursue their common (Putnam, 1993). Social capital will be the result of potential and actual resources (Coleman, 1988). He defines social capital as capital and resources that individuals and groups achieve via linking with each other or communicating (ibid). Another
definition says social capital is the networks, association,
and institutes that form with common norms and relations
relying on trust and facilitate cooperation (Bank, 1997).
Davidson and Houing (2003) suggested that the effective
factors on development of emotional social capital
(having close parents or friends, etc.) have a strong
relationship with recognizing opportunities. Every social
network needs factors such as trust, commitment,
responsibility and so on to achieve its objectives in
addition to knowledgeable and experienced people,
facilities and financial tools. Social networks comprise all
people who communicate with each other and an
individual understands this communication (Barner 1979;
Michel 1969). Knowing these communications we can
identify opportunities. In fact, social capital allows for
networks where it is easier to discover opportunities,
identify them, and find place where scarce resources gather.

Therefore, we can say that social capital comprises:
cognition, relational, and structural dimensions of entrepreneurs for creating social networks that will lead to recognizing opportunities.

2.2 Dimensions of Social Capital

Social capital involves the components of social trust, social solidarity, and social engagement (Azkia and Ghaffari, 1388). These three components are in an interactive relationship and enhance each other. So as in the works of all past scholars different dimensions of social capital is analyzed, in the end Ghoshal and Nahapiet classified all of them in three dimensions of structural, cognitive, and relational (Ghoshal and Nahapiet, 1998). The three dimensions consist of:

a. The links inside the network: including extent and severity of communications existent in the network; 2) form and composition of the network: including hierarchy, connectivity and density inside the network; and 3) organizational fitness: that is how much a network made for a special target can be used for other purposes.

b. Cognitive Dimension

Cognitive dimension includes two elements: 1) shared language and codes; 2) shared narratives (ibid).

c. Relational Dimension

Relational Dimension include: trust, norms, mutual commitments and relations, and determining shared identity (ibid).

d. Structural Dimension

dimension include: existent links in the network, form and composition of network, organizational fitness (ibid).

3. CONCEPTUAL FRAMEWORK

The most important aspects of this dimension of social capital are: trust, norms, requirements and expectations, and determining shared identity (Nahapiet & Ghoshal, 1998). Social capital is the existent resources in the social interactions and purposeful system of cooperation and assistance among the members of the community that results in reasonable relations, sense of trust and collaboration between members of the society and makes more people want to establish social relations and interaction with each other, as well as being able to discover opportunities inside the community. Trust means believing in honesty and justness of a person or group to entrust or do something without any doubt or need for initial research and/or monitoring and controlling and having doubt about its consequences. If people could trust each other, they can more easily establish relations with each other; they can exchange resources and data and identify opportunities; and there will be more communication channels. Moreover, increasing interactions between individuals, leads to spread of trust, consequently the exchange of information and resources among network members is facilitated. Miztal states that trust paves the ground for relations and conversation (Miztal, 2000). Bontis (2001) believes that trust can lead to development of intellectual capital (Bontis, 2001). Thus, we can conclude that if someone reaches higher levels of trust, the more likely s/he will achieve knowledge, information and other resources existent in her/his social network. No person alone has enough information to choose and decide, because individuals have a bounded rationality and ability to process and store data (Simon, 1976). So we can say that social capital is related to obtaining information in the process of identifying and discovering opportunity. Ozgen and Baron (2007) and Bayger and Houfer (1991) believe that social relations with others is an important source of recognizing opportunity.

Sources of opportunity include all factors that cause needs and/or the feasibility of meeting the needs of present and future.

The Link between Structural Social Capital and Opportunity Recognition

Structural social capital points out to a general paradigm of contacts between people, which is whom you contact, and how (Burt, 2005), comprising 1) the existent links in the network: including extent and severity of communications existent in the network; 2) form and composition of the network: including hierarchy, connectivity and density inside the network; and 3) organizational fitness: that is how much a network made for a special target can be used for other purposes. Structural characteristics such as equality, fairness, benevolence (Coleman, 1999) presence at networks of social relations and engagement rate at the community are indicators of outside-group social capital (Putnam, 2000). Structural social capital allows for networks that facilitate the discovery of opportunities, identifying them, and finding the place where scarce resources gather.
People's social networks can help expand these boundaries, providing access to information and knowledge through communicating with others; this way an individual can get new ideas and opportunities, while there are limited number of studies on identifying opportunity through social networks. In previous studies carried out by Hills et al. (1997) they report that people learn how to identify opportunities using resources in the social networks.

Relationships and connections between networks provides access to resources, data and knowledge as social capitals that are the most important channels of recognizing opportunity as one of the elements of entrepreneurial process. Every social network in order to achieve its objectives in addition to knowledgeable, experienced people, facilities, and financial tools needs factors such as: trust, commitment, responsibility and so on.

The size of the network has a positive meaningful relationship with opportunity recognition (Sieg, 2000). The connections and relationships between the members of a network are referred to as a valuable source. As social capital creating norms and mutual trust results in discovery of opportunities and thus, fulfillment of objectives.

3) The link between Cognitive Social Capital and Opportunity Recognition Cognitive social capital refers to those resources providing shared representations, interpretations, and systems of meaning among parties (Bakker et al, 2006). The cognitive dimension that focuses around mental, rational, and intellectual activities uses shared language and insight of people to provide value for network members and paves the ground for their efficient operation in the social system. Bourdieu says that social capital is the set of actual or potential resources, which is the result of a more or less durable network of institutionalized relationships of knowledge and mutual understanding, or in other words, membership in the group; a network that supports each one of the members with a collective capital and gives them credit.

Therefore, according to Hills et al. (1997) in some cases there is a meaningful difference between an individual and social network. Meanwhile, the findings of the previous studies showed that social networks achieve more significant number of opportunities compared with an individual alone. Also, it is less likely for an individual to achieve that by an official search. An individual alone believes that prior to employment and engagement in an industry you should first identify the opportunities, while social networks prefer to enter a market and then try to find the opportunities.

4. RESEARCH METHODOLOGY

Research method is applied in terms of objective and descriptive-survey in terms of data collection. In this paper the effect of social capital on opportunity recognition was examined, social capital comprising of three components (structural, relational, and cognitive) (Ghoshal and Nahapiet, 1999). For study model, the social network was used as adjusting variable (second independent). For measuring relational social capital four items were used, structural (4 items), cognitive (4 items), and for measuring social network (4 items) were used. Social network consists of network hierarchy and amount of communication capability among individuals with each other (Sieg, 2000).And recognizing opportunity is that ambiguous need of market and/pr resources and capabilities that have not been made use of (Ardichvili et al., 2003).For measuring each one of the indicators we used 5 point Likert scale (from strongly agree to strongly disagree). Finally, to identify each of the indicators, the sum of all items related to each of the indicators was divided by its number with interval measurement level was used for analysis. The statistical population of this paper involves all directors of the companies deployed in the Science and Technology Park – 60 managers. For high statistical precision and reducing errors census method (N=n) was used in this paper and in the census population size and sample size are equal. For analyzing the data the two methods of descriptive and inferential
statistics was used. For descriptive statistics including descriptive part (percentage and frequency) of the demographic items were used; mean and standard deviation were used for descriptive statistics of the research indicators; for testing the assumptions and the theoretical model PLS software was used.

4.1 Validity and Reliability
First for validity of the views of the academic experts, the items were confirmed in the areas of social capital and opportunity recognition. The reliability population is as follows:

Table 1: Cronbach's Alpha value for indicators of the study

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Number of Items</th>
<th>Cronbach's Alpha Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structural social capital</td>
<td>4</td>
<td>86%</td>
</tr>
<tr>
<td>Relational social capital</td>
<td>4</td>
<td>83%</td>
</tr>
<tr>
<td>Cognitive social capital</td>
<td>4</td>
<td>82%</td>
</tr>
<tr>
<td>Social networks</td>
<td>4</td>
<td>81%</td>
</tr>
<tr>
<td>Opportunity recognition</td>
<td>4</td>
<td>92%</td>
</tr>
</tbody>
</table>

5. DATA ANALYSIS

5.1 Descriptive Statistics

5.1.1 Demographic Description

In this study 85 percent of responders are men and 15 percent women; 30 percent of the managers are under 30 years old and 10 percent over 60; the people between 31 and 40 have the greatest frequency, i.e. 40 percent; 20% of participants are between 41-50 years old.

B) Description of Indicators

Table 2: Descriptive statistics based on the indicator

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Frequency</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive Social Capital</td>
<td>60</td>
<td>4.50</td>
<td>11.75</td>
<td>7.1812</td>
<td>1.84146</td>
</tr>
<tr>
<td>Relational Social Capital</td>
<td>60</td>
<td>4.50</td>
<td>14.50</td>
<td>8.1812</td>
<td>2.22960</td>
</tr>
<tr>
<td>Structural Social Capital</td>
<td>60</td>
<td>4.50</td>
<td>13.50</td>
<td>8.1438</td>
<td>2.03644</td>
</tr>
<tr>
<td>Opportunity Recognition</td>
<td>60</td>
<td>3.25</td>
<td>12.75</td>
<td>6.9000</td>
<td>2.19396</td>
</tr>
<tr>
<td>Social Network</td>
<td>60</td>
<td>4.25</td>
<td>16.25</td>
<td>8.2750</td>
<td>2.56067</td>
</tr>
</tbody>
</table>

5.2 Referential Statistics

5.2.1 Secondary Hypothesis Test

Table 3: Correlation coefficients

<table>
<thead>
<tr>
<th>No.</th>
<th>Assumption</th>
<th>Value of Meaningfulness</th>
<th>Level of Meaningfulness</th>
<th>Value of Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Structural Social Capital – Social Network</td>
<td>1.96</td>
<td>1.62</td>
<td>0.10</td>
</tr>
<tr>
<td>2</td>
<td>Relational Social Capital – Social Network</td>
<td>1.96</td>
<td>4.16</td>
<td>0.40</td>
</tr>
<tr>
<td>3</td>
<td>Cognitive Social Capital – Social Network</td>
<td>1.96</td>
<td>1.17</td>
<td>0.09</td>
</tr>
<tr>
<td>4</td>
<td>Structural Social Capital-Opportunity Recognition</td>
<td>1.96</td>
<td>4.59</td>
<td>0.36</td>
</tr>
<tr>
<td>5</td>
<td>Relational Social Capital- Opportunity Recognition</td>
<td>1.96</td>
<td>0.47</td>
<td>0.06</td>
</tr>
<tr>
<td>6</td>
<td>Cognitive Social Capital-Opportunity Recognition</td>
<td>1.96</td>
<td>5.03</td>
<td>0.41</td>
</tr>
<tr>
<td>7</td>
<td>Social Network- Opportunity Recognition</td>
<td>1.96</td>
<td>4.19</td>
<td>0.48</td>
</tr>
</tbody>
</table>

With respect to the results in table 3 it was clear that structural social capital has no direct linear relation with social network. While relational social capital and cognitive social capital have direct linear relation with social network. Structural social capital and cognitive social capital have direct linear relation with opportunity recognition. Relational social capital has no direct linear relation with opportunity recognition. Social network has a direct linear relation with opportunity recognition.
6. DISCUSSION AND CONCLUSION

In the present study we addressed the effect of social capital on opportunity recognition among all managers present in the Science and Technology Park. Now evidence shows that people in social networks have an important role in the process of identifying opportunities. Overall results indicate that the dimension of structural social capital and cognitive social capital are effective on entrepreneurial opportunity recognition. Singh (1998) also sees the role of social capital on identifying opportunity as positive. Social network has a meaningful effect on opportunity recognition (Elyasi et al., 2011). Relational social capital and cognitive social capital affect the social network. According to the study results, structural social capital has no meaningful effect on opportunity recognition. Network size has positive and meaningful relationship with opportunity recognition (Sine, 2000).

We can sum up the central idea behind the social capital in the term social relations. People in the society by establishing relations and sustaining them are able to cooperate with each other and obtain things that they cannot achieve alone otherwise (Ghaffari and Ramezani, 2009:7). Social capital denotes to the characteristics of social organization such as networks, norms and trust that facilitate coordination and cooperation for attaining mutual benefit, and by creating shared norms and mutual trust helps to realize the objectives and advance the affairs (Ghasemi et al., 2010). The greater the amount of trust in a social group, the greater will be the social capital, and consequently, the amount cooperation and mutual trust among group members will increase. As a result, the trust in the relations among people makes the flow of information among people easier and finally leads to recognition of opportunities (Hoang & Antoncic, 2003; Levin & Cross, 2004). The amount of interaction between entrepreneur and social environment, which includes strong connection and relations between people, leads to evolution of idea. Preliminary understanding of opportunity recognition depends on the social environment or the type of social capital, and in the end it should be said that creating social capital require establishment of social networks. Scientific and technological parks need the three dimensions of social capital to meet the entrepreneurial needs of the society, and the stronger is the relationship between the variables, the more possible it will be to identify business needs and opportunities. Academic institutions need to establish networks of experts from different disciplines to identify and introduce businesses.
REFERENCES


