THE EFFECT OF SOCIAL CAPITAL ON CREATIVITY OF EMPLOYEES A CASE STUDY: PRODUCTIVE FIRMS OF ELECTRICAL HOUSEHOLD APPLIANCES IN THE NORTH OF IRAN

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ABSTRACT

The general objective of this research is the study of the effect of social capital on creativity of employees of productive firms of electrical household appliances in the north of Iran. The statistical sample of this survey consists of (115) individual of three productive electrical household appliances firms in the north which were selected using convenient sampling method. For collecting the data of the survey questionnaire is used. In this research for studying of the hypothesis test, the Partial least squares and (Smart-Pls) is used. The results of the research shows that the dimensions of social capital (network and common norm, trust, mutual cooperation, social cohesion, empathy and participation, and social identity has positive and significant effect on creativity of employees.

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Keywords: Social capital, Creativity of employees, Electrical household appliances firms.

Contribution/Originality

This study is one of very few studies, which have investigated the effect of social capital on creativity of employees in electrical household appliances production companies in Iran. This research is the first study conducted in this area in Iran that shows the relationship between the dimensions of social capital and creativity.

1. INTRODUCTION

Process of changes and revolutions at the today society, is fast and quick in which its future different theories on economics have made a revolution in organizational performance during the past decade. This revolution has affected traditional capital forms such as constructions and equipments. These intangible capitals have a great role in development and growth of organization. The term “Capital” includes more variables day by day. Some of them embrace human capital,
customer capital, intelligence capital, health capital and social capital [1]. In this article, we discuss the issues regarding social capital and its related factors. According to some researchers, social capital is constituted of two words of capital and society. Which means this type of capital is not private and forms within the society [2]. Some other sociologists believe social capital as communication and social networks, which can create the sense of trust and cooperation among them by sharing information between the individuals of a society or organization [3-5]. Also we can by using social capital may realize why an organization or a group is moving forward successfully. Therefore, social capital beside economic and human capital can be accounted as a part of national treasure, which is considered as a proper basis for reaching success [6, 7]. Today’s world is the world of communication and advanced technology is the offspring of advanced communication, in this regard the managers of organizations shall prepare conditions in which employees become able to communicate broadly in the internal and external environment of the organization in order to reach more effectiveness, otherwise individuals may not exploit the huge capacities of their minds in order to reach creativity [8-10]. Since effective communications play a vital role in generation of innovation and creativity, therefore, setting effective communication among employees, colleagues and managers can cause the propagation of Culture team work among employees and lead them to become innovative [1].

In fact, ignorance of creativity and innovation of employees in development of social capital is one of the problems, which exists in our organizations; because economic studies have shown that a great share of economic advancement of each country is indebted of using creativity and initiative of employees of organizations in their economic arena of that country [11-13]. In this sense, for organizations to survive in the today’s changing and wavy world, creativity and innovation shall be used as the survival key of organizations [14, 15]. However, researchers have shown that one of the effective factors on creativity is the social environment, in many organizations it is observed that because of ignorance of forming proper social communications among the members of the organizations, individuals have no desire to cooperate in activities and show their creative ideas in order to improve the performance of organization. This issue has caused their job dissatisfaction of employees and employees feel that they are an unimportant person in the organization and their ideas are of no importance for the organization [16, 17] whilst by creating new ideas and transforming them to products, services and better and newer working processes, employees can help the exploitation and improvement of the performance of firm [18]. So by considering the role of social capital and creativity as the two important and effective factors on exploitation and effectiveness of organization, in this article it is tried to discuss and determine the relationship between these two variables in electrical household appliances firms.

2. THEORETICAL FOUNDATIONS AND LITERATURE REVIEW

2.1. Creativity

Creativity means the ability to mix ideas in a unique method or creating a bound between ideas, but innovation is the process of receiving creative idea and transforming it into the product, service and new methods of function [19]. Franken [20] in his book named (human motivation),
defines creativity as the desire to produce, cognition of ideas, options or Equipment's, which might be the beneficiary in solving problems and communication with others.

In his idea, something is called the offspring of creativity, which is, new and fresh to solve a problem or to rectify a need. In the idea of author of this book, creativity is in relation with more fundamental features rather than thinking, such as: flexibility, tolerance of ambiguity, and unpredictable issues and to enjoy things, which were unknown formerly. Jaoui [21] believes that the main tool for a successful strategy is practical creativity. Creativity is a method which enables individual to exploit his abilities in a proper manner.

The objective of creativity is to help to discover and increase individual resources and to declare goals for decision making and expand the strategy of success. Also some researchers described creativity as the ability to produce new solutions and to bind the irrelevant incidents together instead of using an intellectual process [22]. Sahlberg [23] in his studies found out that, creative individuals have the ingenuity, innovation and entrepreneurship.

However forming groups and creative association in the working and educational environment is one of the methods which helps training the creativity of people. It means often people need to stay inside a group and communicate their information and knowledge. In this case, the foundations of creativity are generated in individuals. This issue is of importance for productive firms, which are in need of creativity [12, 24].

2.2. Social Capital

Social capital includes opportunities and relations inside the groups and social networks, which increases the ability to access to job opportunities, information, guidelines, power and infiltration, sensual support, trust and cooperation, materialistic resources and social positions [13, 25, 26]. Portes [27] believes that social capital is a sociological concept which is used in business politics, humanities and social health to refer to inter and intra group interactions. Social capital as a social phenomenon causes creativity, idea generation, and facilitation of innovative behaviors, risk taking at organizations or companies [28].

Also Putnam, the political scientist of U.S.A, states in describing the social capital that social capital is like glue, which sticks societies to gather and the social capital theory is created in order to describe powers for forming quality and quantity of social interactions and social firms in the society [29].

Finally, we need to mention that social capital is created out of a set of norms, that These norms and values have features such as close relations, development of social cohesion, development of social participation, mutual trust, comprehensive development of mutual norms, mutual cooperation, empathy, social identity, voluntary participation, collective spirit, communication and mutual respect, collective benefits and sharing knowledge and information [4, 30]. Some of the important dimensions of social capital are as follows:
A. Empathy and Participation

Empathy or Mutual understanding improves the social relations, in fact empathy causing mutual friendship between the members of the group so that becomes stronger the bonds between the members in the network [31].

B. Networks and Common Norm

Social network is one of the necessary forms of social capital in today’s work. Social networks are like different paths which people can talk about different things while passing them and share and show the general or private information in with a specific person or a specific group.

The objective of social networks is to help the improvement and facilitate the relations, cooperation, and interaction between individuals and organizations in different subjects such as business, educational issues and …for a positive change [8, 25, 32].

One of the characteristics of social networks is the existence of norms of trust and cooperation. Norm means the acceptable standards in a group which the members of the group have a share in that and observe it Egeland and Birkeland [33].

C. Trust

Fukuyama believes the trust network as one of the important concepts in determination of social capital, network of trust includes a group which uses the information, norms and equal values in the transactions among each other based on mutual trust and share their information. Therefore, the interpersonal trust has a great role in facilitating the processes and decreasing the expenses regarding these transactions the network of trust can be formed between the members of group or groups and different organizations.

D. Social Cohesion

Cohesion means collective acceptance among individuals who is the result of receiving and accepting values and common to do and not to do of that society. This means that individuals save their unity and integration and try to make the effort together to reach common goals [3, 34].

E. Mutual Cooperation

Mutual cooperation represents a collective action that the members of the organization with others in the community or group in common in order to gain mutual benefit act [31].

F. Social Identity

The concept of identity means the cognition of one’s self considering the specific values and to introduce one’s self to others based on those values. Social identity causes social mobilization and stimulation regarding public objectives [35].
2.3. Literature Review

In a survey, done on 86 members of Iran’s foundry industries at the industrial city of Kaveh, the results show that social capital has the positive and significant effect on the creativity of employees [36]. In some of the studies of regarding the analysis of the relationship between social capital and desire to innovation in employees, it is stated that the interpersonal trust and respect can strengthen and encourage ideas, sharing knowledge and problem solving [37, 38]. Also Ebili, et al. [37] have stated that, social exchanges and trust gained by interaction of resources between units have significant effect creation of value and productive innovation. Camps and Marques [39] have found out in their studies that social capital propagates risk taking in developing new things. Therefore, social capital brings about the sense of security and acceptance of new challenges by trust and stability in employees and lets them present their suggestions. According to the Rajaeepour, et al. [31] social capital affects innovative activity and dimensions of social capital differently and dissimilarly. Among the dimension of social capital, social cooperation has a more positive effect on innovative activity. Organizational trust through devoting more time on innovative activities facilitates innovation. Moqbel [40] has conducted a study in two countries of U.S.A and Yamane. The objective of this study was identifying the effects of using social sites on creativity of employees and innovative activities, job satisfaction and their performance and etc. During this survey, results have shown that, using social network sites is transformed as an acceptable tool for sharing career issues and no career issues with friends and colleagues. The results of this research concluded that, those employees who use social network sites more at their workplace enjoy more support and can be interacted with their coworkers and friends and participate in transaction of knowledge and reach creativity by this method and finally this can lead to innovative behavior in them. Haslam, et al. [41] presented that, when the social identity was prominent and the group norm conservative, was formed creative behavior in group. In fact, when people know themselves as belonging to a group and they have Features related to the same class to find more motivated to interact constructively with each other that this will affect their innovative behavior. Among this, norms that attend of the group as a guide in the group, Cause everyone to be directed. In fact, there are standards of acceptable behavior that is an effective agent for coordinating and guidance of innovative groups and will cause innovative behavior among in employees. In the research of Rajaeepour, et al. [31] the results showed that the dimensions of social capital (social trust, network and common norm, mutual cooperation, empathy and mutual participation) have the positive and significant effects on innovation and creativity of employees. The presence of creative people is very much valuable. One of the ways to use creative people is the business networks, which these networks pave the way for freedom of thought and creation of innovations. In a research done by Chung and Jackson [42] on 194 scientists occupied to work in 48 teams, results have shown that whenever the members of the team are trusted rigidly by colleagues, there would be higher probability to create knowledge among them. It means generally there is a positive relationship between trust in group and creation of knowledge among members of the group. Some researchers have found out that when people live in a society with the high
level of social capital, they have the greater desire to cooperate with each other and are more risk takers. Therefore, rich social capital can be a stimulator for reaching innovation [43].

Also in a survey of a 54 sample in companies with high technology in Taiwan analyzed the effect of social capacity on creativity in projective teams. Findings have shown that social interaction and network relations have positive and considerable effects on the creativity of projective teams, but mutual trust and common objective do not have these effects [44]. In the studies of Farsi, et al. [45] regarding the analysis of the relationship between social capital and desire to innovation, it is stated that when employees cooperating with each other, they are more in touch, and they can share their own ideas and information and knowledge. This issue will cause the creation of creativity and innovation in organizations.

3. HYPOTHESES AND CONCEPTUAL MODEL OF THE RESEARCH

The main hypothesis of this research is:

Social capital has a significant effect on the creativity of employees.

Also six Subsidiary hypotheses have been analyzed in this research. These Hypotheses are:

1. Trust has a significant effect on creativity of employees.
2. Social cohesion has a significant effect on the creativity of employees.
3. Network and common norm has a significant effect on creativity of employees.
4. Participation and empathy has a significant effect on creativity of employees.
5. Mutual cooperation has a significant effect on the creativity of employees.
6. Social identity has a significant effect on the creativity of employees.

3.1. Conceptual Model of the Research

In this study, the conceptual model has been developed based on Social capital as the independent variable and Individual creativity as the dependent variable. Figure 1, shows the model used in this research. Social capital as the independent variable consists of six dimensions of; network and common norm, trust, empathy and participation, social cohesion, mutual cooperation and social identity. Dimensions of social capital as the independent variable is used in this model based on Shiri, et al. [46] researches, and Creativity of employees as the dependent variable is used in this model based on Moghimi [47] research.

Figure 1. Conceptual model of research
4. METHODOLOGY

This research is an applied research and quantitative methods were used to perform it. Smart PLS 2.0 Software was used in order to test hypothesis based on the Partial least square methods. The samples of this survey were 115 employees of three productive electrical household appliances firms at the north of Iran and were selected according to convenient sampling method.

4.1. Instruments

The questionnaire used in this research consists of 3 sections. At the first section of this questionnaire, the questions were about population cognition features such as age, sex, experience of work.

The second section of this questionnaire consists of 31 questions for evaluation of different dimensions of social capital. In this section, the questions of standard social capital questionnaire were used which had developed by Shiri, et al. [46]. The third part of this questionnaire consists of 9 questions which measure the employees’ creativity at the organizations. In this section, Moghimi [47] standard questionnaire of creativity was used.

The Likert scale from 1 to 5 (1 = completely disagree and 5= completely agree) has been used in the section 2 and 3 of the questionnaire. Numbers of 115 questionnaires were distributed as per convenient sampling between samples, and 106 questionnaires were completely answered and returned.

4.2. Analysis of Data

In this research for analysis of the data mentioned, the modeling method for structural equations which the concept of (PLS) were used. The software used in this research for calculations and analysis of data was Smart-Pls.

4.3. Reliability and Validity of Measurement Tools

The PLS software has this ability to analyze internal consistent reliability, composite reliability, Indicator reliability, convergent validity, divergent validity, Goodness of Fit test (GOF). Table 1 shows the Cronbach's Alpha coefficient, composite reliability and coefficient of Average Variance Extracted (AVE).

As it can be observed the values of Cronbach's Alpha are bigger than 0.7 for all components which show that the model has proper internal consistent reliability. Also all values related to composite reliability (CR) are more than 0.7, and the reliability of the questionnaire can be confirmed.

In analysis of factor loading as it is observed the amount of factor loadings for all items are higher than 0.7, which show the questions are appropriate for evaluation of the variable which is presented in figure 2 and 3.
Table 1. The value of Cronbach’s Alpha values, Composite reliability, Variance median, GOF

<table>
<thead>
<tr>
<th></th>
<th>Trust</th>
<th>Social Cohesion</th>
<th>Creativity</th>
<th>Network</th>
<th>Participate</th>
<th>Cooperate</th>
<th>Social Identity</th>
</tr>
</thead>
<tbody>
<tr>
<td>AVE</td>
<td>0.663</td>
<td>0.750</td>
<td>0.686</td>
<td>0.715</td>
<td>0.772</td>
<td>0.665</td>
<td>0.747</td>
</tr>
<tr>
<td>Composite Reliability</td>
<td>0.908</td>
<td>0.937</td>
<td>0.951</td>
<td>0.926</td>
<td>0.964</td>
<td>0.888</td>
<td>0.921</td>
</tr>
<tr>
<td>Cronbach’s Alpha</td>
<td>0.874</td>
<td>0.916</td>
<td>0.924</td>
<td>0.901</td>
<td>0.958</td>
<td>0.832</td>
<td>0.887</td>
</tr>
</tbody>
</table>

Goodness of Fit (GOF) = 0.733

Also in analysis of convergent validity, when the average variance extracted (AVE) for all variables of the research were bigger than 0.5 convergent validity of the model is confirmed. In analysis of discriminant validity based on Fornell and Larcker [48] the amount of the squares of AVE for main variables of this research, which are located at the main diagonal of the matrix are greater than the coefficient between variables located at the lower cells and are at the left of the main diagonal. Therefore, it can be stated that in the present survey, the variables of the research have more interaction with their indexes rather than the indexes of other variables. In other words, the divergent validity of the model is confirmed. The value of GOF = 0.733 > 0.36 indicates that the model has a better prediction power in comparison with the baseline values.

5. ANALYSIS OF THE HYPOTHESIZES OF THE RESEARCH

5.1. Analysis the Main Hypothesis of the Research

In analysis of the main hypothesis of the research, it means: the significance of effect of social capital on creativity, figure 2 and table 2, since T-Value achieved is bigger than 1.96, therefore, it can be concluded that the variable of social capital has a significant effect on creativity and the hypothesis of effectiveness of social capital on creativity is accepted. The path coefficient between social capital and creativity is 0.867. Also the amount of r Square ($R^2$) in analysis of this hypothesis is equal to 0.752, which shows that the variable of social capital determines approximately about 75% of the changes of the variable of creativity.

Figure 2. The value of Factors loading, standardized path coefficients (B), T- Values
5.2. Analysis Subsidiary Hypothesis of the Research

Figure 3 and table 3 state the results of subsidiary hypotheses. Since *T*-Value for the six hypotheses is higher than 1.96, all six hypotheses of this research were accepted. The path coefficient between the networks and common norm, trust, mutual cooperation, participation and empathy, social cohesion and Social identity with the dependent variable of creativity equals to [0.196, 0.290, 0.271, 0.173, 0.231, 0.121] respectively. Also the amount of *r* Square (R²) is 0.804, which states that about %80 of creativity variances is predicted by six dimensions of social capital.

![Figure-3. The value of Factor loading. Standardized path coefficients (B), *T*- Values](image)

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Standardized path coefficients (B)</th>
<th><em>T</em>-Value</th>
<th>Significance Level</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social capital → Creativity</td>
<td>0.867</td>
<td>43.58</td>
<td>Sig&lt;0.05</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

6. DISCUSSION AND CONCLUSIONS

Base on the results gained from the test of research model, it was shown that social capital can have significant effect on creativity. The results of the present study are consistent with Goldahan, et al. [44]; Darabeigi and Ajili [43]; Piran, et al. [36]; Rajaeepour, et al. [31]; Ebili, et al. [37];
Rezvani and Toghræe [24]; Farsi, et al. [45]. Social capital would be also effective on improvement of organization, improvement in quality of productions and services.

By social capital functionality and exploitation of employees would grow higher and creativity would be generated. Among six factors of social capital, social trust with the path ratio of about 0.290 has the highest and positive significant effect on the creativity of employees. The results of the present study are consistent with Fukuyama [49]; Chung and Jackson [42]. The existence of social trust is the most important foundation of trust and the first step for interpersonal relations. Furthermore, social trust causes that individuals become honest at the working environment with each other and share the important information in this regard which it causes the emerge of new ideas between them. Also the existence of trust at business and trading environments causes the improvement of mutual cooperation among employees or employees with managers and in some cases will lead to important changes at the essence of cooperation which in this case it would appear in the form of voluntary cooperation and cooperatives. Cohesion is the second stated variable of the research which with the path ratio of 0.231 has a significant and positive effect on creativity, so the second hypothesis is also confirmed. The results of the present study are consistent with Sarlak and Salamzadeh [50]; Shahbazi and Ghorbani [34]. When cohesion exists in a working environment, employees act more sympathetic with each other and have collective agreement on working and value issues. Cohesion causes the safe keeping of the relationships between the members of the group and prevents the breakup of the group. In fact, when individuals have cohesion, they can reach the objectives of the organization very fast, and these regulations and consultations in the group can bring the motivation to create new ideas in them. Common network and norm in the third variable in the hypothesis of the research which has a positive and significant effect on creativity by a path ratio of 0.196 and therefore, the third hypothesis is confirmed. The results of the present study are consistent with Agrifoglio and Metallo [8]; Cadima, et al. [25]; Dolgova, et al. [18]; Egeland and Birkeland [33]. Through social networks, we may reach millions of people and distribute information with a high rate among them. The existence of social networks such as the Internet removes geographical limitation, for example, connecting with some trading companies through video conference at different parts of the globe causes employees to communicate with different people with social position and knowledge about one or more subject from their workplace and mention their ideas and exploit each other’s information and finally crest new ideas. Finally we need to mention that, managers who run the organization with inflexible culture and structure will not be able to use cohesion and cooperation of employees at the time of crises, because managers can create positive and effective factors for encouraging and growth of creativity and innovation at their. Also the existence of values and common norms as the acceptable behavioral standards inside the organizations can be a factor for supporting or an obstacle for reaching creativity and innovation. In fact, employees learn these values inside the organizations. These organizational norms which are accepted among employees and are improved can be executed as the methods and ways in the organization. Therefore, common norms have much effect on creativity at work. The fourth variable which is analyzed is participation and empathy which
with a path ratio of about 0.173 has a significant effect on creativity, and the fourth hypothesis is confirmed. Participation is working creatively with each other. The results of the present study are consistent with Veismoradi, et al. [3]; Rajaeepour, et al. [31]. Employees with each other and employees with managers can participate in a team for economic improvement and enjoy each other’s ideas. In fact managers strengthen the sense of obligation by participation with employees and generating motivation. They conceives the power of creativity and in this case, voluntary participations and spontaneous actions will happen in the environment for improvement of organization. Furthermore, the sense of empathy causes the solidarity of human networks, and as a result we would observe more participation and cooperative at the organization. In fact, when there is empathy between the members, they do not use their knowledge and awareness in an immoral way. The fifth variable analyzed in the research was mutual cooperation, which with a path ratio of 0.271 has a positive and significant effect on creativity of employees and therefore, the fifth method is also confirmed. The results of the present study are consistent with Rajaeepour, et al. [31]; Rezvani and Toghraee [24]. The agreed work of individuals with each other is called mutual cooperation. Since having the sprite of unity and cooperative and close relations and interactions causes the creative atmosphere, so cooperation and unity, moreover, than generating the intimate atmosphere, generates peace of mind for employees and leads to growth and economic development of company and saving that and prohibition of chaos at the time of crisis. Social identity was the last variable which was analyzed in the research which with the path ratio of 0.121 has a positive and significant effect on creativity of employees. The results of the present study are consistent with Haslam, et al. [41]. Social identity is a process that individuals feel that they are in one group with other people or group of people, and so they share knowledge which this sharing of knowledge causes the creation of new ideas. Whenever the working environment makes conditions for employees in order to value their demands, thoughts, personality and knowledge and relation of employees, individuals would reach a kind of self-awareness and self-esteem which result in creativity.

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