

A Critical Investigation into the Impact of Social Capital on Workforce Productivity (Case Study: Niksan Refrigerator Firm in Saveh, Iran)

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Abstract: This study aims to investigate the impact of social capital on workforce productivity among the employees of Niksan Refrigerator Firm in Saveh, Iran. This research is qualitative and applicable regarding the data and nature, respectively. Also, it is categorized as a descriptive-surveying research. The statistical universe of the research includes all the 120 employees of Niksan Refrigerator Firm. Out of the entire sample, the sample size was estimated 92 individuals using Cochran's formula. In this study, standard questionnaires were utilized for data collection. The research data were analyzed using Spearman correlation as well as the regression analysis methods by the means of SPSS19 Software. The results demonstrate that, at 95% confidence interval, a significant positive association exists between social capital (structural relational cognitive) and productivity.

Key words: Social capital, workforce productivity, dimensions of social capital, relational, cognitive

INTRODUCTION

Since the advent of the human's collective life, they have been perpetually seeking out more productivity and efficiency. Anyhow, Mankind, after the elapse of a long time along with the emergence of the system analysis techniques and instruments, has discerned that he can take effective measures to improve the organizations and employee's productivity (Mahdizadi, 2009). In today's competitive world, productivity, as a philosophy based on efficiency improvement strategy, is premised as the foremost goal of any organization and is able to encompass the functions of the whole sectors of the society. In fact, productivity has penetrated into the focus of attentions in a way that managers' main aim is to efficiently apply the resources and facilities including workforce, capital, materials, energy and information. Recently, the social capital theory was derived from sociology as a potential force affecting the organizational performance. Social capital can be regarded as the available resources in social networks that individuals mostly apply; in addition, it is postulated as the individual's investment in the beneficial intrapersonal relationships within the markets. Coleman believes that

social capital and social relationships are of predictable capacity and can generate a value. Unlike the organization's traditional assets and human capital, social capital is exclusively the offspring of significant social relationships that people invest over time (Sabatini, 2005). One of the social capital impacts is considered as increasing the organization's workforce productivity. In business organizations, social capital is assumed as an important source of productivity. To achieve this, workers and specialists are required to take the other people's advices and support beyond the hierarchical structure of the company.

Undoubtedly, having a dynamic developed future along with the economic resistance in the current competitive world, we need to increase the productivity and make the maximum use of the minimum facilities. Today, all developed countries or developing countries have recognized the importance of productivity as one of the economic development necessities as well as competitive advantage. Respecting the fact that improving the productivity of an organization depends on its staff, the organization's productivity can be heightened by providing the employees with opportunities to participate in the decision-making

process. Productivity is made up of two components including effectiveness and efficiency. Due to the fact that the tasks are not adopted and performed accurately in line with the goals and the employees are not selected based on their qualification in today's organizations, productivity is not obtained, either. Since the tasks and operations are not accomplished by minimum resources and the maximum result is not achieved according to the spent resources, we observe a low degree of productivity in today's organizations. Hence, the organizations need to take the worker's, employee's and manager's viewpoint under consideration. Fulfilling the productivity, at the first stage, depends largely on the efforts of human resources within the organizations and institutions. At the second stage, an appropriate organizational structure along with the manager's authority to perform the decision-making process makes a significant impact on achieving the productivity. Due to the limited human resources and the unlimited human needs, population growth and intense merciless competition in the global economy, improving the productivity is not presumed as an option but an exigency. Indubitably, the economic development of the today's societies lies in their productivity growth rate. Efforts to increase the productivity rate are tantamount to efforts to realize a better life and well-being for individuals and society. To achieve a better future, productivity growth needs to be continuously pursued. In today's competitive world, the winners will be those countries being able to generate the knowledge, insight and behavior of productivity among their managers and employees. In fact, a kind of insight that can engender thinking, contemplation, innovation and creativity is supposed to be encouraged in organizations. As a result, this study seeks an answer to the following questions:

- Firstly, what role does social capital play in the workforce productivity of Niksan Refrigerator Firm?
- Secondly, how and why does social capital play this role?

Since this study aims at investigating the impact of social capital upon the workforce productivity of Niksan Refrigerator Firm, It is incumbent to be mentioned that the lack of productivity (i.e., adverse inefficient productivity) will result in horrible consequences. Companies are desperately in need of productivity to develop and improve their functions. Also, lack of knowledge and innovation as well as the employees' dissatisfaction will make a direct impact on the products and society. The weakness of efficiency, as another component of the productivity, deprives the companies of the up to date and effective information and the process of development takes place slowly.

Theoretical fundamentals and empirical literature

Social capital: Although, social capital is a new nascent concept in social studies, it is rooted in the social relations of mankind. Today, it is clear that development, civil society, universal standards and suitable condition of living is only achieved by the existence of social capital. Social capital is a sociological concept which is applied to indicate the associations within or among the groups in business, economics, humanity sciences and and public health. Although there are various definitions for this concept, social capital, overall, is presumed as a "Panacea" for the modern society (Portes, 1998). Social capital is supposed as those networks and norms enabling the people to act collectively (Chen *et al.*, 2008). Social capital refers to the total physical or non-physical, material or spiritual resources that it allows an individual or a group to have a stable network of more or less institutionalized relations of mutual acquaintance or recognition at its disposal. World Bank defined social capital as following: social capital in a given society involves the relationships and values that dominate the people's actions and reactions and contribute to the economic and social development. Danchev (2006) argues that Social capital acts as an artery transferring the social networks trust into the organization and thereby it leads to fulfilling the organizational goals along with creating and maintaining the competitive advantage.

Dimensions of social capital: Vilanova and Josa (2003) assume social capital as a management process which includes seven components: trust (norms), common values, relationships, cooperation, mutual commitment, mutual understanding and networks. Social capital so heavily relies on these dimensions that it is unconceivable by the absence of even one of these dimensions.

Network: Networks are of a paramount importance in developing the identity and self-concept. Through networks, individuals strike up connections with others; besides, employees can gain respect among their colleagues by means of social and organizational network. Networks generate commitment and loyalty among the members together with organizational support (Hassanpour and Niakan, 2007).

Trust: in a dynamic environment with incomplete information, trust equals the primary basis of honesty, willingness to take risks, collaboration and striving to achieve the goals and interests of the group (Weber and Weber, 2007).

Values: Social capital put emphasis on those cultural values and attitudes persuading the people toward

cooperation, understanding and empathy with each other. Values lead to connecting the organization members as well as changing the individuals from the selfish, egoistic, conscientious-lacking and commitment-lacking characters to such individuals who have a common conception about interests in social relations.

Relationships: Relationships among the people or groups can be bonded diversely as collaboration, exchange, marriage and friendship. The presence of pervasive emotional relationships in structuring the organization allows the employees to respond to the organizational values and capabilities through organized practices.

Collaboration: Collaboration is a collective action that the members of the organizations take with others in the society or their own group collective in common cases (Mohammadi, 2005).

Commitment: Commitment can be primarily defined as the group's or individual's psychological link with the organization in which the sense of occupational involvement, loyalty and the belief in the values of the organization exist.

Mutual understanding: Mutual understanding helps the people to accept and respect other people despite their differences. Mutual understanding improves the social relations and leads to creating supportive and receptive attitudes towards other human beings (Sayyadi, 2009).

Productivity: Productivity was applied by Kuizni in 1766's for the first time. Over a century later, around 1883, a man named Litter defined productivity as the ability and power of production. In many industrialized countries, productivity is premised as maximizing the use of resources, manpower, facilities, along with reducing the production costs, expanding the markets, increasing the employment, making efforts to increase the real wages and improving the living standards to the benefit of employees, management and individuals. Productivity means using the inputs or resources effectively so as to produce or present the outputs. Inputs are considered as diverse resources (such as energy, raw materials, capital and workforce) which are used to generate the output (i.e. goods and services produced by an organization); in other words, productivity includes achieving the maximum profit possible and the efficient use of workforce, power, talents and skills of the manpower, land, money, equipment, time, place, etc. in order to promote the welfare (Tangen, 2005). Productivity is regarded as a sort of factor ensuring the durability and survival of the organizations

in today's competitive world. The dominance of the productivity culture leads to the optimized use of all material and non-material capacities of the organizations; in addition, the power, talents and potential facilities of the organizations flourish (Soltani, 2007). Productivity is a comprehensive concept that in case of promotion indicates the growth and development of countries; also, it has been heeded by many scholars as an inevitable necessity to improve the humans' life and welfare. Productivity is deemed as a realistic notion toward life and as a culture in which human being, through his intelligence, adapts his activities with values and realities to obtain the best result in line with the material and non-material goals (Harmon, 2003). Today, productivity has risen beyond being a culture and notion toward work and life. Accordingly, improving and promoting this concept will result in the development of various social dimensions. Productivity is a realistic and intelligent attitude toward life (Mahammadi, 2005).

Models of workforce productivity

Joseph M. Petit Model: Joseph M. Petit presented this model in 1985. In this model, the main factors influencing the employees' are stated as following: training the employees, providing job satisfaction and good relationships between the employees and the employers (Najafi, 2006).

Keith Davis and John new storm Model: This model was presented by Keith Davis and John New storm in 1986. In this model, the main factors affecting the employees' productivity include the quality of leadership, the mutual trust between the employee and employer, mutual relations, the fairness of the bonuses, the clarity of jobs, employees' contribution and the possibility of growth and development of the employees.

Hersey and Goldsmith Model: Hersey and Goldsmith presented the ACHIEVE model about the factors affecting the performance of manpower. Through this model and analyzing its components, managers will be able to identify the low performance problem and make attempts to obviate the problem through performance improvement measures and plans. The seven factors of "ACHIEVE Model" include: Ability (knowledge and skills), clarity (understanding the role), help (organizational support), incentive (motivation and willingness), evaluation (coaching and performance feedback), validity (valid and legal personnel practices), environment (environmental fit).

Literature review: Mehregan and Daliri in a study titled as "The relationship between social capital and human

development in the provinces of Iran (2000-2009)", found that social capital makes a positive effect on human development in the provinces of Iran. On the other hand, human development makes the layers of social capital form in these provinces.

Tamaschkh (2003), in a theoretical discussion, introduces the importance of social capital in creating innovation at the national, intercompany and intracompany. According to him, social capital is presumed as an internal consociate at the intracompany level; besides, it is considered as a critical factor for innovation among the different units of the organizations such as developing, researching, engineering and marketing units. In a study titled as "The relationship among social capital, entrepreneurial orientation, organizational resources and the entrepreneurial performance", Stone (2001) demonstrated that a significant relationship exists among social capital, entrepreneurial orientation and organizational resources. Also, social capital refers to the relations and consociations among the members of a network as an invaluable resource which leads to realizing the members' aims by creating mutual trust and norms. Hoffman *et al.* (2005) showed the relationship among social capital, knowledge management and achieving higher performance by the organizations. Their findings showed that organizations having high levels of social capital, in comparison with organizations having low levels of social capital, enjoy more knowledge management capabilities. Thus, social capital, by creating information and communication channels and social networks in

organizations, lead to developing the interpersonal relationships which facilitate and accelerate creating, sharing and applying knowledge among the members of the organization. Verdy *et al.* (2010), in a study titled as "prioritizing the factors affecting the productivity of human resources from the perspective of managers in Isfahan University of Medical Sciences", showed that reforming the employment and organizational structures, job enrichment, educational planning based on the needs, bestowing authority and supervisory for decision-making to middle-level managers and implementing the incentive programs can increase the workforce productivity which results in improving the effective health system (Table 1).

The conceptual model of research: The conceptual model shows the relationship between social capital and human resources productivity through the components of these two variables derived from social capital model of Vilanova and Josa (2003), Nahapiet and Ghoshal (1998) and Noble the human resources productivity derived from Hersey and Goldsmith model. Hence, the overall structure of the research is in accordance with the Fig. 1.

The main hypothesis: A significant positive relationship exists between social capital and workforce productivity.

The Sub-hypotheses: A significant positive relationship exists among the structural dimensions of social capital and workforce productivity. A significant positive relationship exists among the relational dimensions of social capital and workforce productivity.

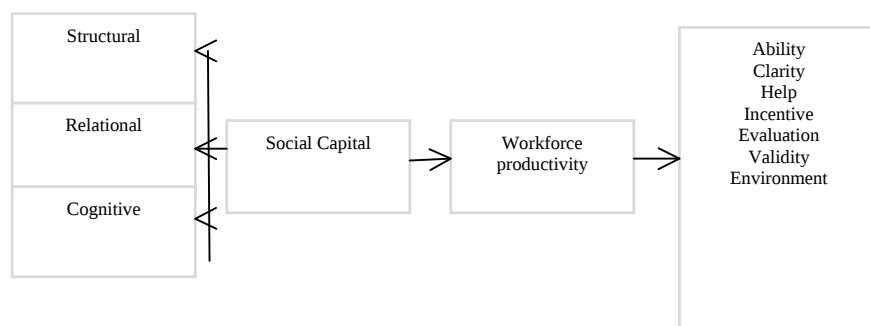


Fig. 1: Conceptual model of research

Table 1: Dimensions of social capital considered from the perspective of Sherif *et al.* (2006) and Nahapiet and Ghoshal (1998)

Dimensions	Emphasized features	Definition
Structural	Number of networks Congestion of relationships	The ability to create relationship with others The number of relationships and contacts
Relational	Collaboration Collaboration	The degree of the people's inclination to perform team and group works individuals' duties and what they expect others
Cognitive	Common values and aims Common language	The sameness of the individual's and organization's aims and the common values that individuals use to transfer the information The common words that individuals use to transfer the information

Table 2: The results of reliability test and the calculated KMO coefficient

Latent constructs	Variables (manifest indices)	KMO coefficients	Cronbach's alpha coefficients
Social capital			
Structural	Networks	0.97	0.79
	relationships	0.99	0.74
Relational	Cooperation	0.99	0.74
	commitments	0.99	0.79
	trust	0.97	0.83
Cognitive			
	Goals and values	0.98	0.88
	Mutual understanding	0.96	0.89
Productivity			
	Ability	0.98	0.88
	Job recognition	0.99	0.78
	Organizational	0.97	0.85
	Motivation	0.97	0.89
	Performance feedback	0.91	0.88
	Validity of decisions	0.96	0.89
	environment	0.99	0.89

A significant positive relationship exists among the cognitive dimensions of social capital and workforce productivity.

MATERIALS AND METHODS

The research methodology: This study is premised applicable and descriptive-surveying in terms of purpose and data collection, respectively. Also, it is included in the correlation researching domain. In this study, social capital and productivity are regarded as independent and dependent variables, in turn. The statistical universe of the study consists of 120 individuals working in the refrigerator factory of Niksan in Saveh. Besides, Simple random sampling is used in this research. According to Cochran formula, the sample size consists of 92 individuals. To nullify the effects of the incomplete questionnaires, the number of questionnaires was increased to 100. In this study, questionnaires are utilized as the main tool of data collection. To measure the variables, Onagh's standard questionnaire was applied for social capital. Also, Jahed's standard questionnaire was used for measuring the productivity. To test the validity, questionnaires were analyzed using the confirmatory factor analysis and KMO index. To test the reliability of questionnaires, Cronbach's alpha coefficient was applied. The reliability coefficients of the research variables are described in Table 2.

In all cases, $KMO = 0.9$ which shows that dismembering the indices into factors are very useful. Besides, the Cronbach's alpha values which are >0.7 indicate adequate reliability. Moreover, the

correlation and parametric regression methods were employed for analyzing the data through SPSS19.

RESULTS AND DISCUSSION

The descriptive results of the research pertinent to examining the status of the members based on the demographic variables of gender, age, work experience and education level are fully described in Table 3. As the Table 4 shows, men constitute the total frequency of the sample. In terms of educational degree, the graduates incorporate the major percentage of the sample. Concerning the age, the highest percentage of the respondents refers to those ranging from 30 to 40 years old. At last, the greatest ratio of the respondents' work experience refers to 5-10 years of service encompassing 75% of the sample. All variables are of a mean higher than the average. On the other hand, social capital and workforce productivity are of a satisfactory plausible status.

To respond to the main hypothesis of the study (the existence of a significant positive relationship was observed between social capital and workforce productivity among the employees of Niksan refrigerator firm), Pearson correlation test was used. The results are presented in Table 5.

A direct positive relationship ($r = 0.308$) exists between social capital and workforce productivity. This relationship is significant in $p = 0.05$ limit. In other words, the existence of social capital leads to facilitating and accelerating the productivity. Besides, the calculated determination coefficient shows that social capital explains about 10% of the workforce productivity.

To response to the research sub-hypotheses (i.e.,). A significant positive relationship exists among the structural dimensions of social capital and workforce productivity. A significant positive relationship exists among the relational dimensions of social capital and workforce productivity. A significant positive relationship exists among the cognitive dimensions of social capital and workforce productivity), Pearson correlation test was used. The results are presented in Table 6.

According to Table 6, it is inferred that all social capital dimensions have a significant positive relationship with workforce productivity at Niksan firm. The correlation degree of each variable, respectively, equals 0.291, 0.278 and 0.234 which are significant at the alpha level of 0.000. In other words, social capital dimensions lead to the individual productivity at the company.

Table 3: Demographic characteristics of the sample

Demographic variables	Types	Frequency
Gender	Male	100
	Female	-
Marital status	Single	26
	Married	74
Educational degree	Diploma	44
	BA/BS	56
Age	20-30	20
	30-40	48
	40-50	20
Work experience	5-10 years	75
	15-Oct	15
	15-20	3
	20-25	2

Table 4: Mean and standard deviation of variables

Variables	Mean	SD
The cognitive dimension of social capital	11.739	2.60
The structural dimension of social capital	10.994	1.81
The relational dimension of social capital	17.226	3.90
Social capital	32.133	5.60
productivity	35.561	5.60

Table 5: The correlation between social capital and workforce productivity at Niksan firm

Variables	Type of correlation	Degree of correlation	R ²	Direction of correlation	Significance limit
Social capital and workforce productivity	Pearson	0.308	0.095	Positive	0.000

Table 6: The Correlation between the social capital dimensions and workforce productivity at Niksan firm

Variable	Structural dimension	Relational dimension	Cognitive dimension	Significance level
Workforce productivity	0.291	0.278	0.234	0.000

Table 7: Results of stepwise regression so as to examine the relationship between social capital and workforce productivity

Steps	Dimensions	R	R ²	B	Beta	t-value	p-values
The first	Structural	0.291	0.085	0.906	0.291	5.949	0.000
The second	Relational	0.278	0.078	0.395	0.278	5.666	0.000
The third	Cognitive	0.234	0.055	0.678	0.234	4.695	0.000

Moreover, to demonstrate the impact of social capital on workforce productivity, stepwise multiple regression analysis was used. The results are illustrated in Table 7.

The results of the table above indicate that, out of different dimensions of social capital, “the structural dimension with the beta coefficient of 0.291, the relational dimension with a beta coefficient of 0.278 and the cognitive dimension with the beta coefficient of 0.234 make a significant contribution to the workforce productivity. In addition, the t-statistics for all three dimensions of social capital are as following: 5.949, 5.666 and 4.695 which are greater than the critical value of 96.1. Thus, the observed beta coefficient is significant and the normal significance value is also smaller than the error limit. Hence, social capital dimensions make a positive impact on the workforce productivity at Niksan firm.

CONCLUSION

Social capital is conceived as the resource of facilitating the relationships among people. It includes

institutions, norms, trust, contribution, awareness and etc. which govern the individuals’ relationships and interactions. Also, it can make different impacts on individuals and societies. Social capital can lead to increasing the workforce productivity by increasing the level of trust, mutual cooperation and voluntary participation in social activities, by reducing the costs of monitoring and controlling the production processes, by reducing the costs of the complex contracts and by sharing the knowledge and innovation. Through disseminating the knowledge and information among employees, social capital can lead to the workforce productivity. On the other hand, social interactions can influence the motivation as well as the workforce attempts. Since social capital makes an undeniable impact on workforce productivity, an especial attention needs to be paid to maintaining and improving the individuals’ social capital in the government’s legislation. The results of the relationship between social capital and the workforce productivity, at Niksan refrigerator firm at the significance level of $p = 0.05$, showed that a significant positive association exists between these two variables.

In other words, despite the presence of social capital in the company, the individuals' productivity increases in the organization. In fact, it could be alleged that the more the social capital increases, the more productively the individuals will perform their tasks which will ultimately lead to productivity and effectiveness. This result is consistent with the findings of Farahani and Nazari, Nasiri, Samadi and Karimi, Najafi, Mehrabian, Mehregan and Daliri, March and Simon, Sumynanda and Mirkamali and Jafari. Many researchers have emphasized the importance of social capital in the individuals' productivity in the organizations. The results of this study showed a significant relationship between the social capital dimensions (structural, relational and cognitive dimension) and the workforce productivity.

RECOMMENDATIONS

Based on the results acquired from the collected data and statistical analyses, the following recommendations are offered:

- Companies and their managers are suggested to support their employees emotionally and socially.
- Company executives need to attempt to make individuals participate in group activities so that they consider themselves as a part of the team
- Managers should strive to hold training courses, public meetings and programs in order to make the individuals understand the culture so that they trust and respect their workplace
- Based on the relational dimension, managers are supposed to create trust, commitment and cooperation among the employees
- Managers should strive to make understandable the goals and values of the company for the employees.
- Managers should try to adapt the individuals' tasks with their experience, talent and ability
- Managers should devise plans to encourage, support and persuade the employees

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