

Effect of Social Capital on Increasing Human Labor Productivity (Sobhan Oncology Pharmaceutical Company)

Seyed Aligholi Roshan, Abdolmalek Khare and Ehsan Namdar Joyami

University of Sistan and Baluchestan, Iran.

ABSTRACT

This research aims to study effect of social capital on human labor efficiency. Therefore, a main hypothesis and three minor hypotheses were presented that studied the effect of social capital on productivity and also dimensions of social capital (trust, integrity-participation) on efficiency, respectively which is 0.91, 0.58, 0.79 and 0.91. This research is applied in terms of purpose and descriptive survey. SPSS 19 and LISREL 8.8 were used for data analysis. Statistical population is Sobhan oncology pharmaceutical company (central office in Tehran) with 300 subjects. Sample size was determined by using Morgan table as 169. By increasing social capital among individuals inside organization, we can increase their efficiency. It means that if people trust each other, they share their resources including information and facilities. If individuals inside organizations transform from several people to one whole people, they can have synergy and can act individually or in groups. The higher the positive and constructive participation of people, they can have more synergy and show less negative political behaviors in the organization and organization can better and sooner reach to its predetermined goals and can increase its efficiency.

Keywords: Efficiency, Trust, Integrity, Participation, Social Capital.

1. INTRODUCTION

Since several decades ago, a revolutionary change occurred in the concept of capital and therefore, capital concept has developed. Pierr Bourdieu believes in three types of capital: economic capital concept which is seen as asset and saving; cultural capital which emerges as education and expertise and social capital which consists of potential and actual resources by forming a durable network of institutionalized relations of mutual familiarities among people (i.e. benefits that individual obtains by group participation). Capital can be classified into four categories: economic capital, social capital (valuable relations with others), cultural capital (legitimate knowledge) and symbolic capital (prestige and social honor). We live in an era in which we are surrounded by organizations and individuals. These organizations and individuals have special role and try to achieve a certain goal and compete with each other. Capital exists in the society such that we cannot consider availability of capital in the special part of society and we can say that society is covered with the capital, because these capitals are sometimes symbolic or social and sometimes cultural and in one hand, we cannot deny great importance of economic capital. On the other hand, capital is not limited to organization and society and it includes people. People have different capitals and we can say that society and individuals cannot be considered without capital. Organizations and people exist with low, high, negative and positive capital but there is no organization and individual without capital. In one hand, the most significant common findings in recent decades in the organization and management field is emphasis on the unique role of human resources and organizations, by providing positive, supporting and developing spaces, should gather smart and efficient people and retain them (Edrisi *et al*, 2012). In fact, human capital is the most vital strategic and essential element for increasing productivity and pursuing the development of society. Studies showed that suitable

conditions for safe work and availability of desired factors in the work place includes efficient people in the work place that among these factors, we can refer to trust, solidarity and participation (Bahreinizadeh, 2013). Qualitative and quantitative increase in social capital (trust, solidarity, participation) is the basic factor for productivity and using this capital and institutionalizing it in the organization can have important role in the organization and increase productivity (Panahi, 2012). Different parts of society are not free of capital and people and organizations have capital but its amount (low and high) and direction (negative and positive) is different. Formal and informal groups inside the organization can have goals in opposite direction of organizational goals and they can encounter management and organizations with challenge and even destruction. Therefore, we should know that how these groups can be aligned with organizational goals or develop new groups. Now we should consider that how can we use these capitals that have saturated organizations and create competitive advantage for organization with permanent increase in efficiency. Therefore, in this research, we studied effect of social capital on the productivity of organization in order to find that can we increase productivity of people by changing social capital that according to theory and studies of Hawthorne indicating that human is a social creature and social relations can increase his productivity and predicted that social capital has positive relationship with productivity in the organization.

Therefore, we test this hypothesis in this research in order to see that whether social capital has positive and significant effect on the productivity of organization and how much is this effect.

2. LITERATURE REVIEW

2.1 Social Capital

The term “social capital” used before 1916 in a paper written by Hanan Fan from West Virginia University. But Jean Jacob, in 1961, has used “social capital” in his book for the first time in United States. Application of social capital term became common from 1990s (Tavasoli, 2005). Social capital is defined as a set of regulations, norms, obligations, mutual relations and trust in social relations, social structure and institutional hierarchy of society which enables people to achieve their individual and collective goals (Oleman, 1999). Social capital indicated forms of organization like trust, rules and networks that can facilitate productivity in the society through suitable interactions (Azkia & Ghafari, 2004). Social capital is a desired element for inter-group cooperation and the higher the amount of it, achieving goals will have less costs. If participation and solidarity is not enough in a group due to features like trust and incentives, the costs of cooperation will increase and realization of performance depends on the establishment of social solidarity and mutual trust and costs of interactions and group cooperation and improves the result of performance (Shahhoseini, 2002).

2.2 Elements and Components of Social Capital

Regarding theories of experts like Bourdieu, Putnam, Coleman and Focoyama, we can define social components as social trust, social solidarity and social participation. These components are key concepts in sociology.

Social Trust: Antony Giddens considers trust and its effect on the development process as infrastructure and main ground in modern societies and where level of social justice is high, cooperation and donation of people in social fields is higher and social damages are low (Akbari, 2004). In fact, trust means belief or faith to honesty, integrity, authority and justice of an individual, group or whole society (Safdari, 1995). For measuring social trust of people, first we measure two types of separate trusts and then, by using it, we measure social trust variable. These two types of social trust are:

- i. interpersonal trust (personal): this index shows the tendency for trust among people and personal relations.
- ii. non-personal trust (institutional): this index show the tendency toward trust and good will and work completion of different subsystems of society (CHalabi, 2002). The higher the social radius of a social group, their social capital will be higher.

Social Solidarity: labor division transforms a society with traditional nature to an industrial society. The higher and more complex the labor division, agreement of ethical circles reduces and distinctions among people increases and consensus obtained by mechanical solidarity replaces with new consensus which originates from the organic solidarity of new order (Akbari, 2004).

Generally, we can consider solidarity as unity. In other words, solidarity means unity of people in the group which increases sympathy.

Social Participation: UNSECO considers participation as a process for social and civil self-learning, right of human and prerequisite of development and believes that development should begin from participation of people, what they want, think and believe (Ibid, 30). Participation means having share and contribution in something or participating in a group (Bireu, 1988).

Social participation is an organized process which has been done by people knowingly, voluntarily and collectively by considering determined and certain goals in order to share in power resources (Azkia & Ghafari, 2004).

2.3 Productivity

Productivity was presented in 1776 by Quisee. Adam Smith has talked about it in labor division but revolution in productivity has begun by Taylor in 1881 which can be considered as history of formal and scientific studies about productivity (Tavasoli, 2005).

Productivity=efficiency + effectiveness

Efficiency: efficiency means achieving determined goals with the lowest resources in least time. Peter Drucker states that efficiency is doing correct job.

Effectiveness: Peter Drucker states that effectiveness is doing correct job. On the other hand, effectiveness has some costs and increase in effectiveness is in conflict with efficiency.

Table 1 Different Definitions of Productivity

Year	Researcher	Definition of Productivity
1776	Francis Konde- mathematician & economist	Increase in productivity in agriculture sector
1833	Literreh	Production Knowledge and technology
1900	Taylor & Gilbert	Increase in workers' efficiency
1950	Europe economic cooperation organization	Fraction of dividing amount or value of product to value or amount
1955	Japan productivity center for economic& social development	Maximum use of resources by scientific methods by reduction of costs
1958	Europe productivity agency	Degree & intensity of effective use of production factors
1962	Fiber Kant	Output to input ratio
1965	Kendrick & Krimmer	Per capita production or GDP for each man/hour work

Year	Researcher	Definition of Productivity
1976	Siegel	Return to operating cost ratio
1979	Somant	Tangible output to tangible input ratio
1980	Mandel	Production return to consumption ratio compared to previous year

Source: Akbari, 2004.

3. RESEARCH BACKGROUND

A research was conducted by Imamjomezadeh *et al.* (2013) titled "relationship between social capital and political consumerisms among Isfahan University Students". Studied sample in this research includes 250 male and female students of Isfahan University Students. By dividing social capital into two variables (social trust and social networks), by considering three aspects of political consumerisms i.e. behaviors, motivations and habits that there is significant correlation between social capital dimensions and political consumerisms of respondents. Among this, political consumerisms influences more by social solidarity and social network components and least influence from generalized trust of social trust.

A research was conducted by Nooghani *et al.* (2011) titled "effect of economic, social and cultural capital on the success in university acceptance exam". This research conducted among samples including 400 male and female students of pre-university in non-government schools of Isfahan. Based on the results of logistic regression analysis, they found that variables social, economic and cultural variables have significant contribution among exam volunteers.

Rahmati and Moradi (2010) conducted a research titled "social distribution of consumption model". In this research, they referred to importance of consumption as an important research subject in sociology and this research seeks to study the artistic tastes in Tehran. In theoretical section, Bourdieu and post-modernist theories were used. This survey was done by using questionnaire with multistage cluster sampling among 410 individuals from 15 to 45 years ago. According to research findings, artistic tastes of people have significant relationship with variables like age, gender, ethnicity and job. On the other hand, confusion among consumption model of cultural and artistic products was seen among study population.

A research in 2009 by Hasan Rouhani, president of Islamic Republic of Iran, was conducted titled "introduction to cultural capital theory" in which concept of social capital and cultural capital and theorists and its position in development of human resources was considered (this research emphasizes important theorists like Bourdieu and Putnam). After definition of types of cultural capital and interaction of capitals, Bourdieu view is described and complementary views were described and relationship between cultural capital and education was noted which is significant.

A research by Emil Dinga (2014) was done titled "social capital and social justice". In this research, researcher deals with implementation of social justice in a society with democratic regulations and here, important role of social capital was considered. This research is a typology and nature of social capital and dimensions of social capital are considered with trust, solidarity and participation. Results of research indicates that there is a significant relationship between social justice and social capital and considers certain typology for measuring social capital.

A research by Alessandra Reigee (2013) titled "social capital measurement" is formal statistical research plan in Italy. In this research, researcher studied theoretical and international literature about social capital. Researchers points out that the main problem in measuring social capital variable is its multi-dimensions. Finally, researcher concludes that dimensions of social

capital can be measured and ends the paper with three dimensions trust, solidarity and participation.

A research was conducted by Besoglo (2013) titled "effect of social capital on credit management". This research was conducted on 28 managers in Turkey who were wealthy. Results of research indicated that structural dimension of social capital has great effects on the family credit and relational dimension of social capital influences individual credit. In this research, exchanging strategic resources in organization is considered as a key factor for developing behavioral value. This factor has caused better and deeper understanding of social capital effect on the strategic resources.

4. METHODOLOGY

This research is applied in terms of purpose and it is descriptive survey. SPSS19 and LISREL 8.8 were used for data analysis. Study population was Sobhan Oncology Pharmaceutical company (central office in Tehran) consisting of 300 employees. Sample size in 169 by using Morgan table and by using Cochran formula in 0.05 error and it is 168. We considered sample size as 20 for higher confidence. Data gathering tool is questionnaire (5-point Likert type) which is randomly distributed among population. Questionnaire includes 20 items that 5 items were for each dimension of social capital and 5 5 dimension for measuring productivity in human labor. Validity of questionnaire was confirmed by experts (1 sociology assistant professor, 1 management assistant professor). Reliability of questionnaire was evaluated by SPSS 19 using Cronbach alpha that its values are presented in following:

Table 2 Cronbach alpha values

Symbolic capital	Productivity	Social trust	Social participation	Social solidarity
0.875	0.762	0.89	0.83	0.877

4.1 Research Hypotheses

4.1.1 Main Hypothesis

Social capital has positive influence on human labor productivity.

4.1.2 Research Sub-Hypotheses

1. Social trust has positive influence on human labor productivity.
2. Social solidarity has positive influence on human labor productivity.
3. Social participation has positive influence on human labor productivity.

4.1.3 Research Conceptual Model

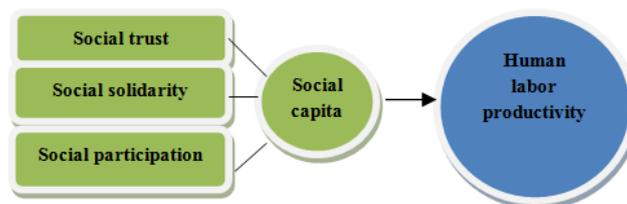


Figure 1. Research conceptual model.

5. DATA ANALYSIS

5.1 Research Main Hypothesis in Standard Estimation State

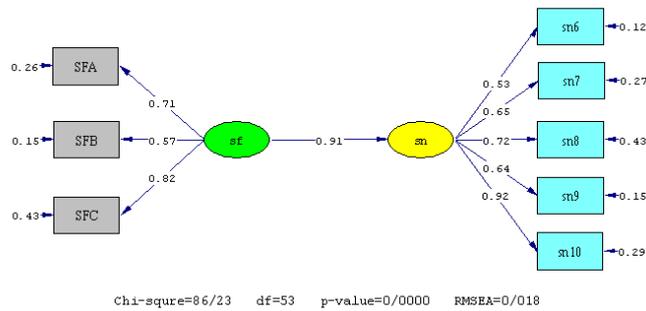


Figure 2. Main hypothesis model in standard estimation state.

5.2 Main Hypothesis Model in Significance Coefficient

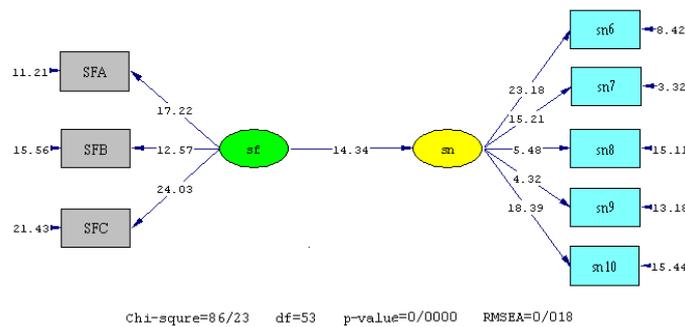


Figure 3. Main hypothesis model in significance coefficient state.

5.3 Sub-Hypothesis Model in Standard Estimation

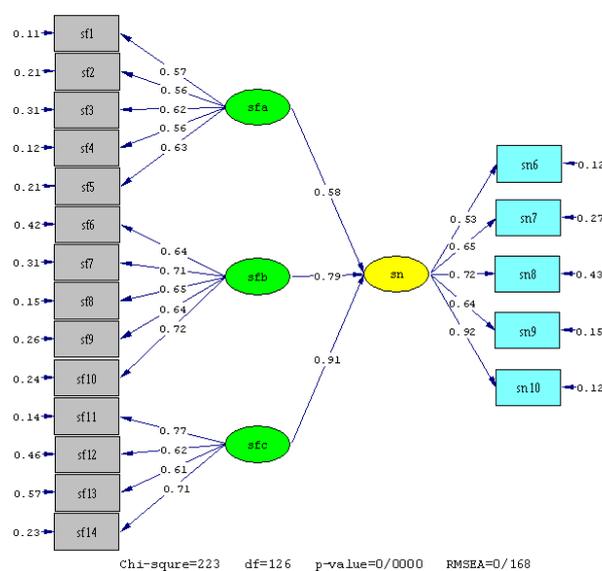


Figure 4. Sub-hypothesis model in standard estimation state.

5.4 Sub-Hypothesis Model in Significance Coefficient

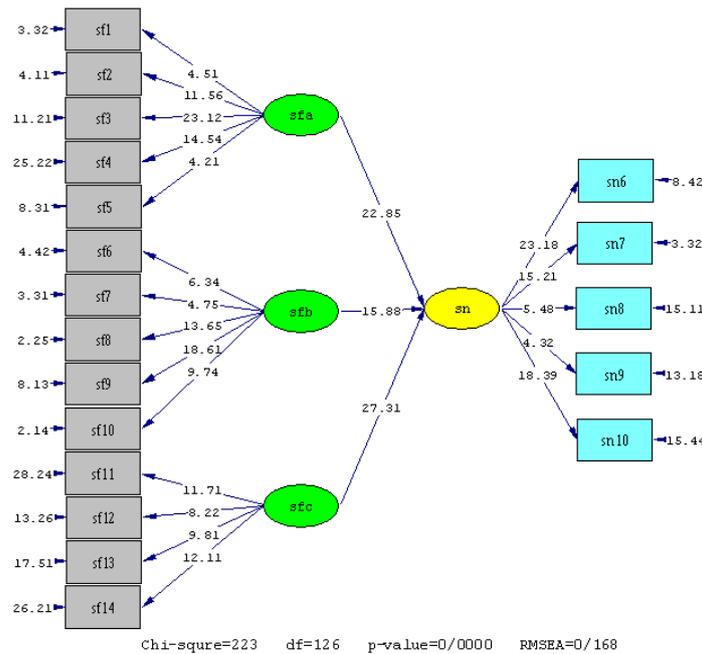


Figure 5. Sub-hypothesis model in significance coefficient state.

5.5 Research Findings and Hypotheses by using Structural Equations

In this section, we want to prove research hypotheses, a main hypothesis and sub-hypotheses which are explained in detail. Following table shows fitness indicators like Chi-square, RMSEA, GFI and etc. In case of low value for χ^2 , ratio of χ^2 to the degree of freedom (df) smaller than 3, RMSEA smaller than 1 and GFI and AGFI greater than 90%, we can conclude that the implemented model is properly fitted. If the value of t is larger than 1.96 or smaller than -1.96, the standard coefficient of the existing relationship would be significant at confidence level of 99%.

Table 3 Main hypothesis structural equations model

Structural Equation Model			
Significance Coefficient Result	Relation (factor load)		
Confirmed 14.34	0.91		Main hypothesis
Sub-hypothesis fitness model			
RMSEA	p-value	d.f	Chi-square
0.018	0.0000	53	86.23
NFI	CFI	AGFI	GFI
0.89	0.92	0.91	0.92

Table 4 Sub-hypothesis structural equation model

Structural Equation Model			
Significance Coefficient Result	Relation (factor load)		
confirmed 22.85	0.58		Hypothesis 1
confirmed 15.88	0.79		Hypothesis 2
confirmed 27.31	0.91		Hypothesis 3
Sub-hypothesis Fitness Model			
RMSEA	p-value	d.f	Chi-square

0.168	0.0000	126	223
NFI	CFI	AGFI	GFI
0.91	0.89	0.92	0.91

As seen, regarding significance of t, validity and suitable fitness of model confirms because Chi-square, RMSEA and low Chi-square to degree of freedom ratio and values of GFI and AGFI are higher than %90.

6. RESEARCH FINDINGS

6.1 Main Hypothesis

Social capital has positive influence on the productivity of human labor. Confirmed.

6.2 Sub-Hypothesis

- i. Social trust has positive influence on the productivity of human labor. Confirmed.
- ii. Social solidarity has positive influence on the productivity of human labor. Confirmed.
- iii. Social participation has positive influence on the productivity of human labor. Confirmed.

7. DISCUSSION AND CONCLUSION

This research aims to study the effect of social capital on productivity of human labor. Therefore, a main hypothesis and three sub-hypotheses were formed that effect of social capital and productivity and also dimensions of social capital (trust-solidarity-participation) on productivity was studies which was 0.91, 0.58, 0.79 and 0.9, respectively. Therefore, all questions in this research were confirmed and this indicates that by one unit increase in social capital, productivity increases as 0.91 unit which is very considerable and indicates intensity of this effect. With this finding, we can say that by increasing social capital among people in the organization, we can increase their productivity. This means that if people trust each other and ensure that they are not damaged by others, all resources include information and facilities which share it with others and use it. On the other hand, individuals inside organizations transform to a whole and have synergy and can act as a group and team and therefore, productivity increase. We should notethat the higher the positive and constructive participation of an individual and show less negative political behaviors, organization achieve better and sooner to their predetermined goal and can increase their productivity.

Managers and authorities in organization should try to increase trust among people and socialize people inside the organization and encourage employees to work as group and team and participate in determining the goal and consider organizational goals and try to reach to goals of organizations. It is suggested to managers and employers that provide social education for their employees and managers and held classes for this and use books and brochures to remember this education. Atmosphere and participatory culture should be institutionalized in the organization and they should try to transform individuals to an integrated whole in order to implement all activities with each other.

In this research, we encountered limitations such as:

- i. During distribution of questionnaire among employees, some employees did not participate and we were forced to ask them to answer the questionnaires and most people received questionnaires in a work day and returned it in next day that encountered with problem.
- ii. Time and space involvement in this research caused that we conduct a research in the time interval in 2015 among employees of Sobhan Oncology Pharmaceutical Company and it is suggested that researchers conduct this research in other times and places.

It is suggested to future researchers that they study variables of this research by other organizational and social variables. Other capitals like economic and cultural capitals can be added to this research and tested. Using standard questionnaires in this research is also suggested. It is suggested that social capital variable measured by using Nahapit and Gooshal model and their results are compared with each other.

REFERENCES

- Akbari, A. (2004). Role of social capital in participation: effect of social-political capital (case study: Farseng village). Social Sciences University, Tehran University.
- Azkian, M., & Ghaffari, G. H. (2004). *Rural development with emphasis on the Iran rural society*. Tehran: Nay Publication.
- Bahreinizadeh, M. & Tavasoli, L. (2013). A model for explaining customer loyalty based on the special value and customer satisfaction: Iran mobile service industry in Booshehr. *Scientific-research Journal*, 3 (3), 21-38.
- Biro, A. (1988). *Social sciences dictionary*. Translated by Sarookhani, B. Tehran: Kian Publication.
- Chalabi, M. (2002). *Order sociology and social order analysis*. Tehran: Nay Publication.
- Dinga, E. (2014). Social capital and social justice. *Procidia Economic and Finance*, 246-253.
- Edrisi, A., Rahmani Khalili, E, Husseiniamin, S. N. (2002). Cultural capital of family and leisure taste of students with Bourdieu theoretical approach (case study: Tehran University Students). *Sociology Journal*, 5, 27-50.
- Gavereliuc, D. & Gavereliuc, A. (2014). Symbolic capital and cultural dimensions in Romanian educational organizations. *Procidia, Social and Behavior Sciences*, 127, 392- 395.
- Imamjomezadeh, S. J., Rahbarqazi, M. Mahmoodoghli, S, Rohani, H. & Beigi, M. (2013). Relation of social capital and political consumerisms in Isfahan University Students. *Applied Sociology*, 24, 37-53.
- Kirkbesoglu, E. (2013). The impact of social capital on managerial reputation. *Procedia-Social Behavioral Science*, 99, 439-445.
- Nooghani, M., Ahanchian, M. & Rafiee, M. T. (2011). Effect of social, cultural and economic capitals on the success in the university exam. *Education Sociology*, 1, 191-218.
- Oleman, A. (1999). *Modernity and self-identity: Self and society in the late modern age*. Stanford, CA: Stanford University Press.
- Panahi, M. H. & Amiri, M. (2012). Relations of economic-social base with cultural capital (case study of Tehran city). Islamic Azad University, Shooshtar, no. 17. Summer. Pp.33-66.
- Rahmati, M. M., & Moradi, S. (2010). Social distribution of consumption model. *Art and Literature Sociology*, 2 (1), 5-32.
- Righi, A. (2013). Measuring social capital: official statistics initiative in Italy. *Procidia, Social and Behavior Science*, 72, 4-22.
- Rouhani, H. (2009). An introduction to cultural capital theory. *Strategy Journal*, 18(53), 35-7.
- Safdari, S. (1995). Social satisfaction and effective factors. M.A. thesis, Shahid Beheshti University.
- Shahhuseini, M. (2002). Effect of social capital on the performance of credit in Tehran. Islamic Azad University (Science and Research Branch).

Tavasoli, G. H. (2005). Social capital, invisible wealth. *Economic journal*.