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THE RELATIONSHIP BETWEEN SOCIAL CAPITAL AND FINANCIAL PERFORMANCE OF THE ORGANIZATION

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ABSTRACT

It is expected that organizations pursue better performances; a better organizational performance is highly dependent on intra-organizational resources and assets and its ability in using and applying these resources. Social capital is one of the intra-organizational intangible resources that had attracted the attention of many researchers in recent years. Here, the relationship between social capital and financial performance of the organization (using a balanced scorecard approach) is studied in of the rail industry companies located in the city of Tehran. The data collected by using a questionnaire (via random sampling from 399 people) and its own information and the use of structural equations indicate that there is a positive and significant relationship between the three dimensions of social capital (relational, structural and cognitive) and the financial performance of the organization. Since the company works under three subsets, in the following, it is tried to compare these three subsets based on hypotheses raised and some suggestions are provided for future research at the end of the study.

Keywords: *Communication Social Capital, Structural Social Capital, Cognitive Social Capital, Organizational Performance, Balanced Scorecard.*

INTRODUCTION

The increasing growth of competition between organizations in the current century has led them to seek opportunities for gaining competitive advantage. Nahapit and Ghosal (1998) believe that the social capital of a company is a vital source of sustained organizational advantage.

Researchers believe that social capital is valuable because it solves trust-based co-operation problems, reduces transaction costs and facilitates the flow of information among and between individuals (Lazega & Pattison, 2001; Lin, 2001). Similarly, Putnam (1993) points out that social capital facilitates collective labor and ultimately, facilitates the development of society and the economy. Recent researches of organizational researchers indicate that social capital dramatically contributes to organizational advantage (e.g., Adler & Kwon, 2002; Leana & Van Buren, 1999; Walker et al., 1997).

For example, Nahapit and Ghosal (1998) argue that social capital is essential for the development and dissemination of knowledge within organizations. In general, previous studies have demonstrated that social capital is an important source, because when people know each other, they rely on each other and trust each other and are identified through each other; they

can work more effectively and more efficiently. Nahapit and Ghosal (1998) apply the resource-based view of the firm to explain how social capital can increase organizational performance. No specific research has been done on the relationship between social capital and organizational performance. Therefore, examining the effect of social capital on the organizational performance of rail industry is the objective of this study. A balanced scorecard approach is used in order to examine organizational performance.

BACKGROUND AND THEORETICAL FRAMEWORK OF RESEARCH:

Social Capital

The concept of social capital was initially introduced by sociologists and was used in their research. This concept gradually attracted the attention of scholars in other social sciences and has found a lot of fans in recent decades in addition to being used in sociology and economics (Alvani and Shirvani, 2004).

Along with other capital resources that are effective in economic growth, social capital is considered as a kind of capital. Social capital is ignored in economic growth at first glance but this kind of capital is a necessary and essential condition in the economic growth of any society, because economic growth requires the regular relations of social activists (Souzi and Mohammadi, 2011). Bourdieu (1983) defined social capital as "the sum of true or potential sources that is related to having a stable network of more or less mutual acquaintance relations that are formalized or verified (Elgar et al., 2011)." A certain set of norms or unofficial values that the group members, with permissible cooperation and collaboration, share the parts of it (Ahmadi et al., 2010), the collective and common value of social networks that includes all the mutual relations' criteria and involves the desire to do the tasks related to network members (Goodarzvand et al., 2011), and powers that increase the potential of economic development in a society by creating and strengthening social relationships and social organization patterns" (Pirahi, 2009) are other definitions of social capital. Bourdieu, Coleman, Putnam and Fukuyama are known as social capital theorists.

Dimensions of organizational social capital:

In social capital literature, there are various models of social capital due to the existence of different approaches in social capital research and also, the multi-dimensional nature of this concept. Some models of social capital are presented in this part and ultimately, the model of Nahapit and Ghosal (1998) is described which forms the basis of this research.

Social capital dimensions from Bourdieu's point of view:

Bourdieu believes that social capital has these dimensions: the size of the group or network and the capital stock own by each of the network members (Bolino et al., 2002).

Dimensions of Social Capital from the Viewpoint of the Kennedy's Study Group at Harvard:

From their point of view, the dimensions of social capital are as follow: trust, political participation, civil participation and leadership, unofficial social ties, forgiveness and voluntary spirit, religious participation, and justice in civil participation (Alwani and Seyed Naghavi, 2002).

Dimensions of Organizational Social Capital from the Viewpoint of Vilanova and Josa:

Vilanova and Josa considered social capital as a management phenomenon, which include seven categories: trust, common values, relations, cooperation, mutual commitment, mutual understanding and networks (Vilanova & Josa, 2003).



The Dimensions of Organizational Social Capital from the Perspective of Nahapit and Ghosal:

Based on an organizational approach, they consider three dimensions for intra-organizational social capital which are: structural dimension, relational dimension, cognitive dimension.

- ***Structural Social Capital***

Nahapit and Ghosal (1998) conceptualized the structural dimension of social capital in a way that includes the network ties, network configuration and network appropriability. Network ties are communications between members of the organization. Early researches that used network analysis indicated that these relations can have a significant effect on data transfer (Krackhardt & Hanson, 1993), Organizational Learning (Fisher & White, 2000) and conducting organizational activities (Shah, 2000). For example, when employees are dependent on each other, knowledge and information transfer is more likely to occur within an organization (Coleman, 1990).

So, when employees know each other in the company organizational activities may be done more efficiently.

Individual relations are important among members of the organization; however, the overall arrangements of these ties are also very important within the organization. Both formal and informal networks can play an important role in the overall arrangements of interpersonal relationships (Ibarra, 1992), but important factors in understanding the arrangements of a network rotate on the basis of features such as structural nests (for instance: lack of connections between employees), focus the (example: the extent to which communications are a bit concentrated among employees and congestion (example: the degree of employee's integrity compared to the total number of potential connections among employees). These attributes are often the determining factor of the level of information flow, knowledge and participation within an organization- apart from what can be easily attributed to individual relationships (Krackhardt & Hanson, 1993; Seibert et al., 2001; Walker et al., 1997).

In the end, network appropriability can dramatically affect the information flow and individuals' participation within the network (Nahapit and Vegas, 1998). Network appropriability relates to its feasibility to make the transmission possible for different types of relations within the network. For example, an employee may be able to do a task readily, because he has a friend who is an expert in completing such tasks. Similarly, relationships that are formed among people in informal environments (like the community) may be related to formal fields (such as work). Therefore, networks that are created for a purpose may often be useful for other purposes (Fukuyama, 1995; Putnam, 1993).

So, generally, the structural dimension of social capital involves the field check in which organizational individuals interacts with one another, communication patterns are described among employees and the usefulness of such relations among tissues will be examined.

- ***Relative social capital***

In accordance with Nahapit and Ghosal (1998), the features of relational dimension of social capital include high levels of trust, common norms and perceived requirements and a sense of mutual identity. Therefore, their conceptualization about social capital is quite similar to Granovetter's notion of strong ties (1973). He describes connections among people who have some kinds of characteristics like: trust, mutual action and emotional intensity. Researchers do not have a common opinion on the definition of relational dimension of social capital but it is



completely clear that what is described is a type of interpersonal relationships that are intrinsically effective in nature (Krackhardt, 1992).

Therefore, the relational dimension of social capital relates to effective relationships among employees in which colleagues like each other, trust one other and are identified through each other.

Previous researches indicate that interpersonal attraction is often associated with dimensions of group performance. For example, Lockheart's study (1992) suggests that when individuals of a group like each another, they are more comfortable in facing states of uncertainty and show less resistant to changes. In addition, interpersonal attraction is an important component, especially in smaller groups, which helps group performance (Lott & Lott, 1965; Mullen & Copper, 1994). In general, working groups who like each other may be more flexible and show a better ability to adapt to changing environments and have higher performance.

Interpersonal trust originates from belief in good intentions, openness, competence and trust others (Mishra, 1996). Besides, high levels of trust lead to vulnerability to other people's activities (Mayer et al., 1995). Former researches suggest that trust facilitates exchange of resources and friendship and improves communication and enhances trust-based collaboration among individuals (Jones & George, 1998; Misztal, 1996; Putnam, 1993; Tsai & Ghoshal, 1998). Therefore, high levels of trust may finally increase innovation and team work and improves organizational performance (Bouty, 2000; Jones & George, 1998).

In the end, individuals with strong ties are often identified by one another or identify themselves in terms of the members of their group. Previous studies point out that level of group identity is positively associated with relations and collaboration based on in-group trust and the importance and attention given to activities and outputs of the group (Campion et al., 1996; Kramer et al., 1996; Wit & Wilke, 1992). Therefore, identity is likely to contribute to employees' effective cooperation in organizations. Therefore, in brief, relational dimension of social capital describes interest, trust, and identity among individuals in an organization.

- *Cognitive Social Capital*

Weick and Roberts' "collective mind" and Mohammed's "team mental model" provide some similarities for a common view that is portrayed by the cognitive dimension of social capital. According to Nahapiet and Ghosal (1998), mutual understanding among employees can be achieved through the existence of a shared language and the exchange of shared narratives. Where shared language and shared narratives exist, employees can easily discuss problems, transfer their ideas, share their knowledge, and offer more effective assistance to each other (Klimoski & Mohammed, 1994; Nahapiet & Ghoshal, 1998).

Shared language enables members of the organization to communicate more effectively (Boisot, 1995). For example, when members of the organization share a language with each other, they can exchange information more effectively and make it possible to help other employees. In addition, high levels of cognitive social capital give a common perspective to employees that enable them to understand and interpret events in a common way (Nohria, 1992). Shared narratives include legends, stories, and metaphors that are transmitted by the members of the organization (Nahapiet & Ghoshal, 1998). Therefore, shared language and shared narratives are both used to increase the comprehension level among members of the organization. These assets also increase the ability of employees to anticipate workers' actions which can also facilitate the input of various members, successful coordination of activities and adaptation to changing



circumstances (Klimoski & Mohammed, 1994; Krackhardt, 1992). Therefore, the cognitive dimension of social capital is related to the degree which employees have shared language and shared narratives.

Organizational performance using a balanced scorecard approach

In the present century, the issue of performance evaluation is of particular importance to organizations and managers. According to the challenges they face, organizations are trying to intensify their effort in using capabilities and talents they possess to minimize the losses encountering unforeseen changes and earn the greatest possible profit. Therefore, researchers developed different financial and non-financial methods by understanding the importance of the process of measuring and evaluating the performance of the organizations. Balanced scorecard approach is one of the most popular performance measurement methods that are based on financial and non-financial evaluation.

The Balanced Scorecard model was first presented by Professor Kaplan and Norton (1996), which provides a framework for controlling and evaluating the firm's performance. In this model, four aspects are defined to evaluate each organization. These four aspects are as follows: the financial aspect, customer's aspect, the processes' attention and the aspect of learning and growth.

A balanced scorecard is a framework for explaining the activities of an organization from four different aspects that is conducted through using a number of indicators. A good scorecard documents a strategic logic or cause-and-effect relationships between current activities and long-term success. A daily increase can be seen in the affiliations of companies and organizations to their intangible assets, therefore, scorecards are turning into important tools for controlling the management (Wongrassam et al., 2003).

Financial criteria: considers the balanced assessment of the financial aspect and maximizing the profits as the ultimate goal of a business establishment. Financial measures are those that are considered as a criterion for determining performance by the stakeholders of the organization. The methods of spending the organization's funds is considered in the financial aspect that is achievable through measuring the amount of profit, cash flow, return on investment, economic value added, return on total assets and financial ratios (Kaplan & Norton, 1996b).

Customer criteria: In business strategy, the way of creating a competitive distinction in an organization for attracting, retaining, and deepen relationships with customers is of great importance. Paying attention to the customer is of particular importance in the balanced scorecard model and refers to items such as customer satisfaction with products, consideration of complaints, on time delivery of products to customers and reduction in customer complaint (Kaplan & Norton, 1996b).

Internal Process Criteria: These are those criteria that should be existed in the internal process of the company to satisfy stakeholders and customers. This dimension strengthens the two previous dimensions and refers to some points such as the ratio of income to marketing costs, the ratio of net profit to the number of full-time staff, total income to the number of staff, the time cycle of converting ideas into product and expenditure growth over the year (Kaplan & Norton, 1996b).

Growth and learning Criteria: that means those measures that should be applied in the field of growth, learning and training of employees in order to realize a favorable situation for both stakeholders and clients. The growth and learning criteria deal with the staff's ability, the quality



of the organization's information system and the arrangement of its tools and equipment to achieve the goals of the organization. In the present research, this aspect is mentioned as "infrastructure" (Kaplan & Norton, 1996b).

HYPOTHESES:

The main hypothesis

- There is a significant relationship between intra-organizational social capital and organizational performance.

Sub-hypotheses

Sub-hypothesis 1: There is a significant relationship between the structural dimension of intra-organizational social capital and organizational performance.

Sub-hypothesis 2: There is a significant relationship between the relational dimension of intra-organizational social capital and organizational performance.

Sub-hypothesis 3: There is a significant relationship between the cognitive dimension of intra-organizational social capital and organizational performance.

THEORETICAL FRAMEWORK:

In this research, we intend to investigate the relationship of social capital whose components, based on Nahapiet and Ghoshal model are the cognitive, relational and structural social capital, with the organizational performance of an existing company in the rail industry. Relations noted in the research model are presented in the theoretical framework that was established among the research variables.

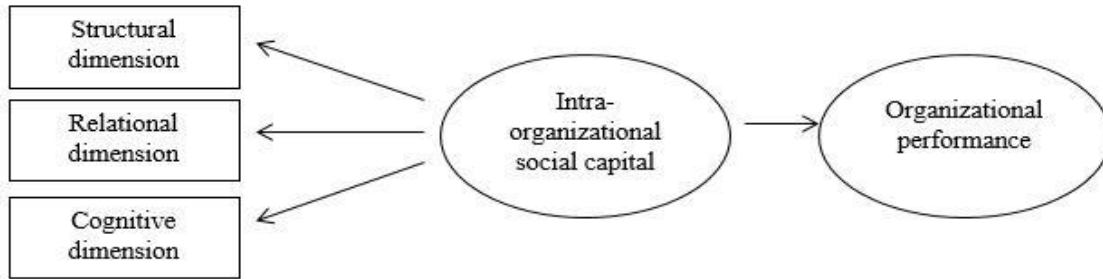


Figure 1: Theoretical framework

METHODOLOGY:

Considering that the present research is concerned with the development of applied knowledge in a particular field, it can be classified as an applied research and it can also be considered as a descriptive (non-experimental) research which is based on methods used to obtain required information. The research's goal is used as a basis for analyzing the relationship between variables of the present research, therefore, it can be considered as a correlation research method.

In this research, the questionnaire and information of the firm related to the organizational performance which is available using the balanced scorecard approach has been used to collect data.

The research questionnaire was prepared by conducting library studies and evaluating internal and external resources. Then, the reliability and validity of the questionnaire were assessed using content validity and Cronbach's alpha coefficient. The completed questionnaire has two main sections, the first part of which contains demographic questions such as gender, age, education, and work experience, and the second part contains the main questions which present a total of 22 questions for measuring the dimensions of intra-organizational social capital which is scored based on the Likert spectrum from Number 5 (totally agree) to Number 1 (absolutely disagree). The considered research community include: collections of "A", "B", "C," and "an active company in the field of railways located in the city of Tehran". Morgan table was used to determine the sample size (n) and regarding the number of employees in each collection, 153, 263 and 213 people respectively, a sample size of 108, 155 and 136 people was estimated respectively (a total of 399 People). A random sampling method was used. 450 questionnaires were distributed among the staff, and finally 427 questionnaires were collected and 399 completed and valid questionnaires along with the firm's performance information were analyzed using a balanced scorecard approach.

Table 1: Cronbach's alpha coefficients of the questionnaire

Variables	Cronbach's alpha
Social capital	0.926
structural dimension	0.740
relational dimension	0.870
Cognitive dimension	0.849



Data analysis:

Descriptive statistics

The under study demographic features are shown in Table 2. The statistical sample indicates that in terms of gender, men with 79.2% form the majority of the sample size. The most frequent random sample members selected are in the range of 40- 41 years old (39.9% of random sample members). In terms of educational qualifications, most people have a bachelor's degree and 0-5 years of work experience behind.

Table 2: The under study demographic characteristics

Gender	Men (79.2%)		Women (20.8)		
Age	Under 30 (34.1)	31-40 (39.9)	41-50 years (19.5)	51 and more (6.5)	
Work experience	5 and less than 5 years	6-10 years (23.6)	11-15 years (9.5)	15 years and more (28.3)	
Educational degree	Diploma	Associate degree	Bachelor's degree (73.2)	Master's degree (11.8)	Ph.D. degree and higher(2.2)

Pearson correlation test results

Table 3: Correlation between research variables

research variables	1	2	3	4	5
Organizational Performance	1.00				
Social capital	0.791**	1.00			
Structural dimension	0.539**	0.717**	1.00		

Relational dimension	0.744**	0.963**	0.661**	1.00	
Cognitive dimension	0.756**	0.913**	0.538**	0.789**	1.00

**P<0.01 *P<0.05

According to the results obtained from Pearson correlation coefficient, there is a positive and significant relationship between the triple dimensions of intra-organizational social capital and organizational performance at 99% confidence level. Based on the correlation analysis between these variables, it can be concluded that any improvement in the structural relational and cognitive dimensions of social capital can lead to a better organizational performance.

Research Pattern Based on Structural Equations

The Research Pattern is shown in the following figure based on the structural equations using the LISREL software.

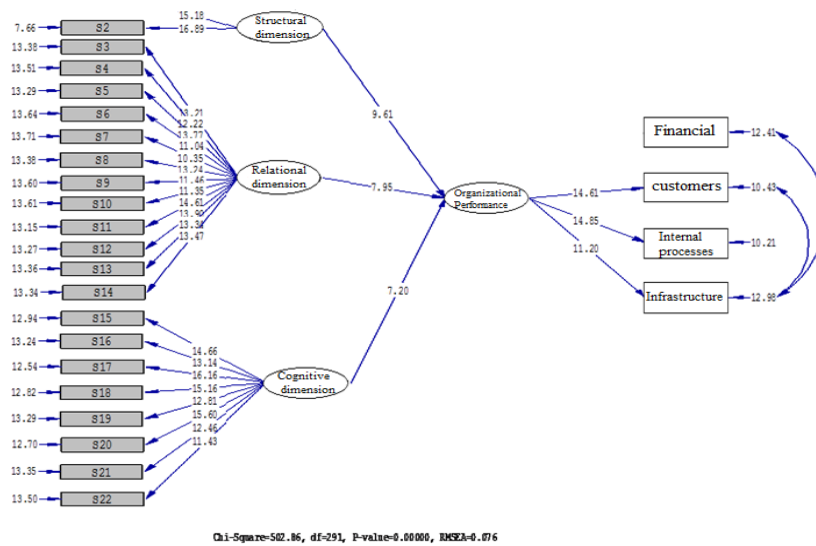


Figure 2: Modeling the Structural Equations of the Theoretical framework (coefficients' significance)

We take advantage from the following indicators for the overall fitness of the research pattern based on structural equations:

Table 4: Fitting indicators of the theoretical framework

Name of indicator	Allowed	Total community	Part A	Part B	Part C
X ² /df	3 and fewer	2.32	2.49	2.29	2.33
NFI	0.9 and higher	0.94	0.92	0.93	0.94
NNFI	0.9 and higher	0.93	0.90	0.91	0.92
CFI	0.9 and higher	0.94	0.91	0.93	0.92
GFI	0.9 and higher	0.93	0.94	0.91	0.92
GFI	0.9 and higher	0.91	0.92	0.89	0.90
RMSEA	Fewer than 0.08	0.071	0.078	0.077	0.073

The main hypothesis test: There is a significant relationship between intra-organizational social capital and organizational performance.

The results of the structural equation analysis are provided in Table 5. Regarding the path coefficient of 0.92 and also the t statistic (14.12), it can be said that intra-organizational social capital has a positive and significant relationship with the organizational performance in the whole organization at 99% confidence level. As can be seen, this relationship (the relation of social capital with organizational performance) in collection "B" is stronger than other sectors.

Table 5: The results of the confirmatory factor analysis of the main hypothesis

Collection	Path coefficient (β)	t	Relation	Explanation
The whole organization	0.92	14.21	social capital \longrightarrow organizational performance	Verified
Collection "A"	0.90	7.32		Verified
Collection "B"	0.96	10.80		Verified
Collection "C"	0.91	8.42		Verified

Sub-hypothesis test No.1: There is a significant relationship between the structural dimension of intra-organizational social capital and organizational performance.

The results of structural equation analysis are shown in Table 6. According to the path coefficient of 0.89 and also, the t statistic (9.61), it can be said that the structural dimension of intra-organizational social capital in the 99% confidence level has a positive and significant relationship with organizational performance in the whole organization. It can be noticed that the relationship between the structural dimension of social capital and organizational performance in "c" collection is stronger than other sectors.



Table 6: The results of the confirmatory factor analysis for the Sub-Hypothesis No.1

Collection	Path coefficient (β)	t	Relation	Explanation
The whole organization	0.89	9.61	structural dimension \longrightarrow organizational performance	Verified
Collection "A"	0.83	8.84		Verified
Collection "B"	0.92	10.28		Verified
Collection "C"	0.95	11.15		Verified

Sub-hypothesis test No.2: There is a significant relationship between the relational dimension of intra-organizational social capital and organizational performance.

The results of the structural equation analysis are shown in Table 7. According to the path coefficient of 0.73 and also the t-statistic (7.95), it can be said that the relational dimension of intra-organizational social capital at the 99% confidence level has a positive and significant relationship with organizational performance in the whole organization. In addition, this relationship (the relationship between the relational dimension of social capital and organizational performance) is stronger in the "B" collection than other parts of the organization.

Table 7: The results of the confirmatory factor analysis for the Sub-Hypothesis No.2

Collection	Path coefficient (β)	t	Relation	Explanation
The whole organization	0.73	7.95	relational dimension \longrightarrow organizational performance	Verified
Collection "A"	0.80	8.36		Verified

Collection "B"	0.86	9.40	Verified
Collection "C"	0.68	7.32	Verified

Sub-hypothesis test No.3: There is a significant relationship between the cognitive dimension of intra-organizational social capital and organizational performance.

The results of the structural equation analysis are presented in Table 8. Considering the path coefficient of 0.75 and the t-statistic of 7.20, it can be concluded that the cognitive dimension of intra-organizational social capital at the 99% confidence level has a positive and significant relationship with organizational performance in the whole organization. In general, the relationship between the cognitive dimension of social capital and organizational performance is weaker than other relationships.

Table 8: The results of the confirmatory factor analysis for the Sub-Hypothesis No.3

Collection	Path coefficient (β)	t	Relation	Explanation
The whole organization	0.70	7.20	cognitive dimension \longrightarrow organizational performance	Verified
Collection "A"	0.67	7.03		Verified
Collection "B"	0.79	8.86		Verified
Collection "C"	0.58	6.80		Verified

DISCUSSION AND CONCLUSION:

The importance of research in any field of science can be described by the purpose it pursues. Since the objective of science is to increase productivity, therefore, if it can be demonstrated that the subject of social capital paves the way of the organization for reaching productivity or it can be a factor in improving productivity in organizations, the important and necessity of The research has been explained implicitly (Rahman Seresht, 2013, p. 261). This research has also tried to study the relationship between social capital and organizational performance to investigate the function of the triple dimensions of social capital on the promotion of various aspects of the organization's performance. The findings of this study confirm all of its hypotheses. Based on the findings of the main hypothesis of this study, there is a positive and significant relationship between intra-organizational social capital and organizational performance. Many scholars in the social capital literature also believe that social capital contributes to organizational performance. As a result, efforts should be made to improve this intangible asset (social capital) in organizations and use it to improve the organization's performance.

The findings of sub-hypothesis (1) indicate that there is a positive and significant relationship between network ties, network configuration and network appropriability and organizational performance. Or to put it in better words, the communication patterns between employees, as well as the accessibility of network members that give flexibility and facilitate the exchange of information contributed to the organization's performance.

The findings of sub-hypothesis (2) indicate that if there is a high level of trust among the relations of employees, norms of cooperation are spread between them and the feel the sense of similarity with the group, a good organizational performance can be expect from the unit or part in which those employees work.

The findings of sub-hypothesis (3) indicate that when the shared language and codes provide a reference framework for observing and interpreting the desired environment and also, there are

shared narratives in the unit for the creation, exchange and maintenance of meanings, the organization has a better organizational performance.

Generally, based on the findings and according to the path coefficients obtained, it can be said that in the relationship between dimensions of social capital and organizational performance, the relationship between structural dimension and organizational performance is the strongest while the relationship between cognitive dimension of Social capital and organizational performance is the weakest.

This weakness may be justified by the history of subsidiary units' activities in the considered organization. Since this is a newly established organization and has been recently built in the past few years, it can be said that compared to other organizations, not much opportunity for developing, maintaining, language exchange and shared narrates among its employees has been created yet.

In summary, the findings of this research clarify the importance of the triple dimensions of intra-organizational social capital (structural, relational, and cognitive) in the conclusions of organizational performance. It can be concluded that social capital, as an intangible asset significantly contributes to organizational performance. It should be tied to create a suitable context for the growth of this asset to help improving the organizational performance more than before.

RESEARCH LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

- The research data is collected in two ways: Part of it by questionnaire and the other part by the company's information through a balanced scorecard for evaluating the organizational performance. Considering that other models have also been designed to measure organizational performance, they can be used in subsequent researches and since the social capital in this research was a cross-sectional variable, some longitudinal analyses can be used in later studies to increase the accuracy of the study.
- The statistical population of this research is three of the subsidiary units of an organization in the rail industry which reduces the generalizability of the findings. Studying in other industries with more samples is recommended to increase the universality of this research.
- In this research, the intra-organizational dimension of social capital was studied, while in later studies, the outer-organizational dimension of social capital could also be considered and since we have used the Nahapit and Ghazal's social capital dimensions, other social capital models can be used in subsequent researches.

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