



A strategic Review the Impact of Intellectual Capital Components on Organizational Performance in Sepah Bank Branches throughout Tehran Province

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ABSTRACT: The present study searches for determination of the relationship between Intellectual Capital (and its components) with performance of Sepah Bank branches all over Tehran Province. In fact, this investigation firstly tries to examine the relationship among the elements of intellectual Capital (IC) to each other and then relation between each of those components with Organizational Performance and test this relation. For this purpose, a sample was selected from Sepah Bank branches throughout Tehran Province and deputies or heads of those branches were asked to give comment about performance parameters and elements of Intellectual Capital. The results which came from Pearson's Correlation Test show that there is a positive, direct and also significant relationship at higher than average level among components of Intellectual Capital. Amid, the highest rate of correlation belongs to the relationship among the elements of Intellectual Capital with relation among Human Capital and Structural Capital ($r=0.72$, $P<0.01$) and Structural Capital and Relational (Customer) Capital ($r=0.718$, $P<0.01$) while the maximum rate of correlation is referred to the relationship of elements of Intellectual Components between Organizational Performance and Relational (Customer) Capital ($r=0.72$, $P<0.01$). On the other hand, the results came from regression test indicate that among elements of Intellectual Capital, Relational (Customer) Capital ($\beta=0.452$, $P<0.01$) has the highest impact on Organizational Performance of Sepah Bank branches throughout Tehran Province.

Keywords: Intellectual Capital, Human Capital, Relational (Customer) Capital, Structural Capital, Performance, Sepah Bank

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INTRODUCTION

With entering into Knowledge- Based Economy, in comparison with other production factors like plant, capital and machineries etc, knowledge has the higher preference than other agents; so that in such economy, knowledge is considered as production agent and it is called the foremost competitive privilege for organizations (Seetharaman et al., 2002). Of the most important characteristics of knowledge, one can refer to its invisibility or intangibility so this adds to difficulty in validation (value) and measurement of the given agent.

In the past, organizations might perfectly compute the value and size of their production factors by means of accounting techniques but today accounting method has not the sufficient efficiency for this purpose since previously most of organizations' properties were of tangible and visible assets while this day with emergence of knowledge- based economy, the main part of organizations' assets are of intangible type (Sullivan et al., 2000; Sanchez et al., 2000).

Accordingly, the subject matter of this study is the effectiveness and importance of Intellectual Capital

items organizational performance. As it mentioned above, in the past time, all people believed in that performance of any organization was owed by management of sumptuary and financial items of the given organization but today this approach has absolutely lost its meaning and it is assumed that about eighty percent of organization performance are referred to proper management over intellectual capital elements. Even many of experts argue that financial prosperity of organizations also depends on success of intellectual capital items; namely, elements of intellectual capital may also effect on financial performance of organizations. Alternatively, according to researchers, there is a type of interaction and coordination among internal elements of intellectual capital that positively effect on each other. Nevertheless, the present research is intended to give answer to the basic following questions:

1- Is there any significant and positive relationship among elements of intellectual capitals?

2- Do elements of intellectual capitals cause improvement in organizational performance in Sepah Bank branches?

Research Theoretical Bases

1- Definition of Intellectual Capital

In a study and by review the vast literature on intellectual capital, Angstrom et al. found that firstly, there is no identical definition about intellectual capital structure ; at the second, concept of value-creation may often occur i.e. intellectual capital might be useful when organizational value is increased dramatically. In this sense, knowledge is considered as capital when it creates increase in profit or gain for organization. Thirdly, definitions of intellectual capital include basically the, same terms: knowledge, skills, abilities, experiences, intangible assets, information, processes, and value- creation and it is not clear what the objective is for purposing this great deal of several terms.

Several definitions are presented for intellectual capital structure in theoretical literature of economy and management fields. This term integrates intellectual power idea (brain potential) into economic concept of economy. On the one hand, some have defined this structure as disclosure of financial values resulting from innovations, inventions and human intellect and talent in organization while some others also considered it as knowledge- based assets of organization that contributes to acquisition of occupational goals. Alternatively, this type of capital is

deemed as a group of intangible assets that include personnel's internal recognition from information processes, internal and external specialties, products, customers and rivals. Some researchers ascribe spread of market value and book value to intellectual capitals. At last, some have also considered cumulative value of experiences and knowledge in doing certain tasks or innovation for future as intellectual capital. These are all attitudes that exist about structure of intellectual capital in literature of this case study. But some of clichés as well as similar terms have caused researchers to tend to interpret some of mistakes (Edvinsson and Malone, 1997; Bontis et al., 2000).

In all dictionaries, term "Intellectual" stands for something which is originated from mental capacity; or in other words, capacity and potential of comprehension, thought and reasoning that is distinct from human emotion or wish ascribed to thinking. What is deemed important here, is juxtaposing intellectual adjective along with a financial noun. In fact, here it should be considered what is the intention and purpose of this application when an intellectual adjective is used with a financial noun. Searching into several glossaries and dictionaries, including Collins, Oxford etc, Marr and Mostafa have outlined the relevant concept to intellectual capital as follows (Diagram 1).

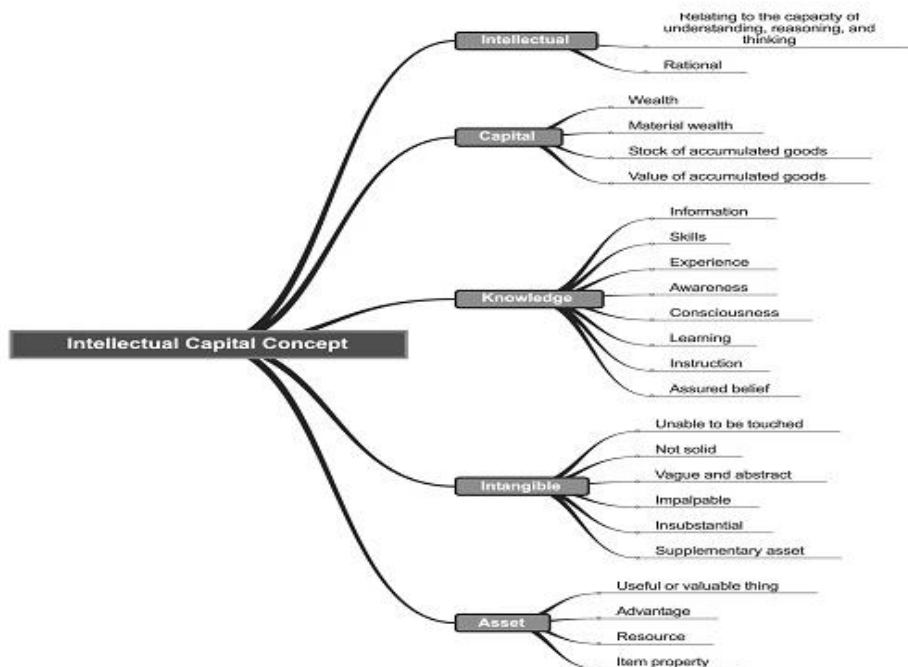


Diagram 1. Intellectual capital concepts

As it characterized from this chart, five concepts which are always purposed about Intellectual capital include: Intellectual, capital, knowledge, intangible nature and asset. Term intellectual means capacity and potential of understanding, reasoning and

thinking. Capital comprises of wealth, material wealth, stock of accumulated goods and value of accumulated goods. Knowledge consists of some cases like information, skills, experience, awareness, consciousness, learning, instruction and assured

belief. Intangibles include those items which are not able to be touched, not solid, vague and abstract, impalpable, insubstantial and supplementary assets. Eventually, of characteristics of assets one can refer to some attributes like useful or valuable thing, advantage, and resource and item property. After this preamble, now let's see what kind of concepts the practitioners and forerunners in intellectual capital field consider for these term.

Organization for Economic Cooperation and Development OECD (2000) defines intellectual capital as economic value of two topics from organizational intangible assets i.e. human and structure. In this definition, human may be customers, personnel, suppliers, rivals and governmental officials. From Bontis' view (1999), intellectual capital means collection of intangible assets and their flows. Bontis argues that by affecting on each other, elements of intellectual capital may identify the flow or path for corporative value- creation. Brooking (1997) considers the difference among book value and market values in enterprises caused by intellectual capital. Edvinsson (2000) supposes intellectual capital as a source of hidden or intangible assets that are not disclosed often in balance sheet. According to Harrison and Sullivan (1998), intellectual capital means a knowledge that is potentially converted into profit and gain. Intellectual capital is followed by a mass of organizational values like profitability, strategic positioning (market share, goodwill, leadership and excellence, reputation and fame), acquisition of innovations from other corporate, customers' loyalty, lowering of costs, and improvement in productivity etc.

From the viewpoint taken by Roos et al. (1997) sum of organizational members' knowledge and the real application of this knowledge in some cases like trademarks, patents and brands is called intellectual capital. According to Stewart (1997) intellectual materials like knowledge, information, intellectual ownership (copyright), and experience that could be used for wealth creation, are called intellectual capital. Anion Fenosa (manager of a Spanish leading enterprise) defines intellectual capital as a group of invisible values that develop current and future profitability capacities in organization. Kujansiv and Lankovist (2007) define intellectual capital value as total value of invisible sources in a certain corporation.

2- Constituent elements of intellectual capital

To conceptualize intellectual capital, several classifications may be observed in theoretical literature. According to experts' viewpoints (Source-driven Approach, Knowledge- oriented and Capacity-oriented attitudes as well as from accounting, economic and management viewpoints) such

classifications vary. Most of classifications which have been originated from intellectual capital are unanimous on three aspects of Human Capital, Structural capital and Relational Capital (customer).

The major part of studies which have been conducted in recent years, are all focused on definition of intellectual capital and classification and measurement of models (e.g. Brooking (1996; Edvinsson and Malone, 1997; Sveiby, 1997; Roos et al., 1997). Some classification schemas divide intellectual capital into subjects of external capital (customers), internal capital (structural) and human capital. Classification of intellectual capital into three topics (human, structural and customers / relational) may contribute enterprises to understand it well.

2-1- Human Capital

Human Capital is the first subject from elements of intellectual capital. In particular, human capital denotes storage (saving) of knowledge in corporative collective capacity to extract and exploit the optimal solutions from each of personnel's minds and properties (Bontis, 2001). Edvinsson and Malone (1997) define human capital as knowledge, skill, innovation and cumulative competence of each of personnel in the given enterprise to fulfill in- progress tasks. Similarly, from their views, human capital also incorporates corporative values, culture and philosophy. Stewart (1995) illustrates human capital as individual competences from which innovations and reconstruction may be originated in organization.

Seetharaman et al. (2004) deem human capital as competence and then define personnel's competence (merit) as capacity for doing tasks in a mass of conditions to create tangible and intangible assets. All personnel are included in human capital but certainly all personnel are not knowledgeable. Person who works in a production line is certainly considered as a human capital because of his/ her capacity for process improvement, but one who spends all his/ her efforts and time to for acquisition, management, application and conversion of knowledge into value , is considered as knowledgeable (knowledge- practitioner). Employee is an asset but moving and fluid and one could perfectly seize him/ her. One can observe the progressive importance of workers in modern economy (knowledge- oriented economy) in all experts' compensatory services plans and personnel's esteem and prosperity plans in an organizational place or position. To reduce personnel's quitting from job or leaving their services, many enterprises put this portfolio on their agenda to execute plans to distribute equity and stock profit among their personnel. Edvinsson and Malone (1997) define human capital as knowledge, skill, innovation and

accumulated competence of each of corporate personnel to fulfill in-progress tasks.

Stewart (1994) illustrates human capital as capacities of those personnel that are considered as origin for innovation and reconstruction (renewal) in certain organization. In this regard by taking Source-driven approach. According to their view, human capital may cover the area wider than directors' assembly and other elites.

2-2- Structural Capital

Structural capital is the second subject from classification of intellectual capital elements. Structural capital includes all non-human knowledge reserves in organizations. According to Stewart's view (1997), structural capital is the existing knowledge in IT, right of registration of products, brands and trademarks. Edvinsson and Malone (1997) describe structural capital including hardware, software, databases, structure, patent, trademarks, and all organizational capacities that support productivity in organization. Similarly, Brooking (1996) argues that structural capital comprises of infrastructural assets like technology, occupational processes and methods as well as intellectual assets such as know-how, trademarks and products registration right (copyright).

While structural capital and organizational capital are utilized usually instead of each other but among of them, Pondent prefers to use term Organizational Capital. He considers organizational capital as an established knowledge in organization that is stored in database, instructions and etc. Concerning to such distinction, Pondent believes in that organizational capital interpret more clearly that in fact such knowledge belongs to organization. Roos et al. (1997) argue that structural capital includes whatever remained in an organization after the time when personnel leave it to go home at night like innovation, processes and culture, renewal and development capital, right of products registration and training efforts. In their opinion, structural capital also covers organizational capital. In general, one can consider structural capital including some components like culture, copyright or intellectual ownership, database(s), computerized systems, intranet, processes, Research and Development (R&D), efficiency and effectiveness, procedures, policies, structure, organizational chart and strategies.

3-2-Relational Capital (Customer)

Customer capital or Relational Capital is the third topic that is purposed in classification of intellectual capital. Relational capital covers both the current value of organizational relations with their customers and potential value derived from such relations in the future. Thus, essence of customers' capital has occurred in latent knowledge within marketing canals

and Customer- Relationship that an organization may design during its emergence (so-called spread) (Bontis et al., 2000). Relational capital reflects a potential that an organization has for extra-organizational invisible cases. In fact, relational capital comprises of the external dimensions of corporate income-earning. Trade-off, fame and reputation, strategic accords, networks, customers and suppliers relationships all have potential for income-earning.

In the section of marketplace assets, Brooking (1996) refers to customers, their loyalty and distribution canals that are relevant to relational capital. Similarly, Stewart (1997) declares that relational capital includes market information to use in attraction and keeping customers. The existing knowledge in marketing canals and customers' relations is the main topic in relational capital. Relational capital indicates the potential ability of an organization against external intangible factors. Although term relational capital was purposed by Hubert Scientonzh for the first time, new definitions have developed its concept to relational capital that consists of the existing knowledge in all relationships that an organization establishes with customers, rivals, suppliers, trade and public unions (Bontis, 1999). Additionally, Roos et al. (1997) underline that relational capital includes establishing the relation among intra- and extra-organizational beneficiaries. According to viewpoint by Kohl and Javorski, the relational capital is the creation of smart marketplace at organizational level to the existing and future requirements for customers. Finally, such intelligence should be horizontally and vertically created inside organization so that to create competence of responsiveness to variations in market at organizational levels (Bontis, 1999). Similarly, Chen et al. (2004) classify relational capital within marketing capacity, penetration into market and loyalty. Based on marketing capacity, an enterprise may manage its human capital. With market intensity trend and customers' loyalty, the given corporate should first increase its basic marketing competence like servicing capacity and ability to collect and use customers' data. Market intensity denotes the final limit for relational capital. It refers to status quo in market construction and its elasticity. Customer's loyalty plays a very crucial role in today intensive competition. The enterprise, which lacks loyal customers, should design again several promotional policies in order to attract those customers, who are sometimes non-profitable for the given corporation. Accordingly, the enterprise should made many efforts to improve quality of the relevant products and services to the current and future requirements for customers and increase their satisfaction and thus loyalty.

3- Intellectual Capital and Organizational Performance

Traditional performance criteria, which are based on the prevalent accounting principles for determination of income, may not be proportional to modern economic world where competitive advantage is derived from the core of intellectual capital topics. Adoption of traditional criteria may cause investors and other relevant beneficiaries to make improper decisions upon allocation of rare sources. These attitudes may be implied with the given following framework: Suppose this point that knowledge is the success key in the future but it is not adequately reflected in financial traditional criteria and on the other hand, financial criteria are considered as the main drivers for decisions made by high ranking directors. What system meets requirements of modern economy and needs of new enterprises?

There are a lot of causes (Whys) to interpret the reason for measurement of intellectual capital among the large number of subjects in literature of case study. The major part of these causes is concepts and hypotheses that have been purposed by academic professors and executive practitioners. Only a little quantity of valid studies has been carried out to measure real impacts of corporative intellectual capital. In a study done by Danish Confederation of Trade Union on enterprises active in the field of intellectual capital, it was found that it was vitally important to evaluate and manage intellectual capital actively only for future success in enterprises. Those corporations, which evaluated and managed intellectual capital, had better and higher performance than other enterprises. The exploratory study done by Bontis (1998) about the relationship among corporative investment in intellectual capital and their performance indicated the significant and substantial cause- and- effect relationship among intellectual capital dimensions and organizational performance. This relation supports from the idea of organizational sources investment in acquisition of knowledge about way of increasing assets of intellectual capital. Bontis et al. (2000) repeated this study by means of data from Malaysia and obtained the similar results. Marr et al. express the reasons for paying attention to and measurement of intellectual capitals as follows:

- 1- To contribute to organization to formulate their strategies;
- 2- To evaluate execution of strategies;
- 3- To assist to decisions for development and variation;
- 4- Application of results from intellectual capitals measurement as a basis for service compensation.
- 5- To purpose these assets to external beneficiaries of these organization.

The study done by Firer and McKinsey (1999) on Australian enterprises and those benefits which they acquired by paying attention to intellectual capital may also be interestingly taken into consideration. These two experts identified the foremost advantageous fields as follows: Improvements in information that is provided for beneficiaries to support from the investments; further information to support and lead decision- making trend; to support and guide for Human Resources management sector. According to viewpoint taken by Firer and McKinsey (1999), these advantages reflect us more information in this regard. One can consider them as indirect consequents of focusing on intellectual capital and for this reason, it is difficult to describe them logically as the results of intellectual capital measurement in an enterprise. Alternatively, the advantage for measurement and declaration of intellectual capital parameters for managers inside and organization is in that:

- To find the corporative ability to achieve its goals;
- To plan and invest in Research and Development (R and) field;
- To make decisions about re- reengineering on plans;
- To pay attention to educational and training programs;
- To evaluate corporate value in order to conduct better comparisons and modeling;
- To extend organizational memory by identifying key sources and prevention from re- invention;

By conducting a review on literature of this topic, it was observed that in general the studies which related to measurement of intellectual capital impact on organizational performance had three practical elements under titles of profitability, productivity and market value (although performance of an enterprise is not a direct consequent from intellectual capital and thus they are separated and distinct from other factors that play role in this sense) and three aspects of human capital, structural capital and customer-oriented capital (relational) were considered for intellectual capital. For example, Yant et al. tested the relationship among management of Human Resources (HR), production strategy and corporate performance and found the significant relation among these three elements. Miller et al. (1999) tested managers' insights on potential benefit and application capital assets. In this study, it was concluded that managers highly focused on intellectual capitals (regardless of industry type). Van Buren (1999) examined the relation among main group of intellectual capital parameters and corporate performance. Aimed at relating intellectual capital to corporate performance, this study came to the result that intellectual capital is matched and along with

corporate performance. Law, determined importance and value of intangible and non-financial sources and tested their role in the field of corporate performance. His findings suggest that progresses or improvements in critical intangible sources might create market higher value.

Bontis et al. (2000) have explored three elements of intellectual capitals under titles of human, structural and customer-oriented (relational) components. They examined the bilateral relations among these elements. The most important outcomes which can be derived from their survey are in that human capital and customer-oriented capital are the outstanding factors in business constant trend; and on the hand, structural capital may affect positively on business performance.

Reid, tests the correlation among intellectual capital and corporate performance in banking industry. His findings interpret that intellectual capital is a strong parameter in corporate performance. Riahi-Belkhoui (2003) also tested the relationship among the intellectual capital and performance of multinational enterprises in USA. The results of their survey have supported this assumption that intellectual capital positively relates to corporate financial performance.

Totally, rather than the existing importance of intellectual capital in creation and restoring organizational competitive advantage and capacities which will effect on this performance, three following hypotheses are purposed: In a certain industry and by controlling over differences and contradictions among factors at organizational level, the higher value or performance exists for intellectual capital:

- 1- The higher corporate productivity will grow.
- 2- The greater productivity will increase.

3- The higher ratio of corporate market value will be to value of its physical and financial assets.

Furthermore, the impacts of intellectual capitals on organizations' performance have also been demonstrated by several studies where the common aspect in many studies is in this point that one could ascribe approximately 80% of successful performance in market to intangible assets. These results have been obtained from some sectors like banks, dot.com enterprises, IT institutions etc.

MATERIALS AND METHODS

The present study seeks for identifying the relationship between intellectual capital (and its components) with performance of Sepah Bank branches all over Tehran Province. In fact, this study tries at first place to examine the relation among elements of intellectual capital to each other and then to test relation between each of those elements with organizational performance. Nevertheless, the current

research is of applied type in terms of goal and it is of descriptive-survey kind in terms of execution and of field study and at the same time it is tried to generalize the results of findings of sample to all statistical population by application of data in status quo that were derived from sample space with certain size.

There are two types of variable in this study: Independent and dependent variables. Human capital, structural capital and relational capital are of independent variables while manipulation of these variables may effect on quantity of dependent variable. Performance of Sepah Bank has been considered as dependent variable in this survey where as it implied above; it has been overshadowed by independent variables. Here, it is assumed that rather than the existing interrelation among them, intellectual capital items may effect on organizational general performance (Diagram 2):

Main Hypothesis I: Triple elements of intellectual capital may have positive and significant effect on Sepah Bank performance.

- There is a positive and significant relationship between human capitals of Sepah Banks with their organizational performance.
- There is positive and significant relationship among structural capital of Sepah Banks and their performance.
- There is a positive and significant relationship between relational capital in Sepah banks and their performance.

Main Hypothesis II: There is a positive and significant relation among elements of intellectual capital (human, structural and customer/ relational).

- There is a significant and positive relationship between human capitals with relational capital level in Sepah Bank.
- There is a significant and positive relationship between human capitals with structural capital level in Sepah Bank.
- There is a significant and positive relationship between structural capitals with relational capital level in Sepah Bank.
- There is a significant and positive relationship among human and structural capitals with relational capital level in Sepah Bank.

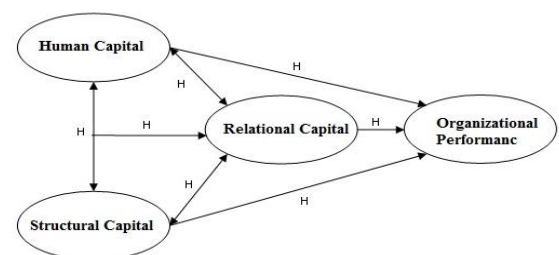


Diagram 2. Research Conceptual Model

Bontis Standard Questionnaire has been used as measurement tool in this study, which has been administered and designed by Nick Bontis (2000), a salient expert who has conducted several studies in the field of relationship among and organizational performance. This tool includes 52 main questions (rather than demographic specifications) in English and it has been utilized in two similar Iranian studies to test the relation among intellectual capital and organizational performance.

LIKERT spectrum with two types of 7- scale (1= totally disagreed, and 7= totally agreed), and 10- scale criteria was utilized to answer to questions in this inventory where these criteria are also given in Bontis Standard Tool with the same outline. Participants were asked to give response to these questions by means of these spectra. It is worthy to note that some questions were purposed about demographic characteristics at the beginning of research tool (including age, education, occupational experience, and gender).

Statistical population of this study comprised of all chairmen and deputies of Sepah Bank branches stationed in Tehran Province. In addition to identifying total number of deputies and chairmen of bank branches and by considering simple randomized sampling method as well as using Kukran Formula, it was determined that sample space should include 221 participants. Although about 280 questionnaires were distributed but only about 261 samples were applicable.

In this survey, data were analyzed based on both descriptive and inferential statistics. In descriptive statistics, some parameters were taken into consideration such as mean, frequency, variance and standard deviation while in inferential statistics; some

tests were adopted like ANOVA, correlation analysis, multiple regression analysis.

Data Analysis

Characteristics of statistical sample of this study are given in Table 1-4. The maximum number of participants was at ages of 36-45; most of them were males with education at diploma and BA degrees and work experience between 11 through 14 years.

To test major and minor hypotheses of this study, Pearson's Correlation Test was administered and multiple regression method was used to find variables cause direction so their results are given respectively in the following.

Results of statistical analyses show a strong positive and direct significant relationship among the constituent elements of intellectual capital. Meanwhile, the maximum level of mutual relation is referred to relationship among human capital and structural capital ($r=0.720$, $P<0.01$) and structural capital and relational capital ($r=0.718$, $P<0.01$). Furthermore, results of correlation test indicate that there is a positive strong and significant relationship among levels of intellectual capital and organizational performance. In the other words, by rising level of human, structural and relational or customer capitals in organization it can be expected that to improve their performance as well. Since correlation coefficient only identifies intensity and type of relation then it can be implied that intellectual capital level has also increased and vice versa.

Among correlation coefficients of intellectual capital coefficients with organizational performance, the maximum rate of correlation belongs to structural capital (Table 2).

Table 1. Characteristics of case study

Characteristics	Range	Frequency	Percentage	Cumulative
Age	25-30	24	9.2	9.2
	31-35	36	13.8	23
	36-40	88	33.8	56.7
	41-45	84	32.2	88.9
	Higher than 45	29	11.1	100
Gender	Male	205	78.5	78.5
	Female	56	21.5	100
Education	Diploma	109	41.8	41.8
	Associate's Degree	47	18	59.8
	Bachelor's Degree	101	38.7	98.5
	Master's Degree	4	1.5	100
Work Experience	3-6	30	11.5	11.5
	7-10	60	23	34.5
	11-14	129	49.4	83.9
	Higher than 14	42	16.1	100

Table 2. Correlation coefficients among research variables

Variables	1	2	3	4
Structural Capital	1			
Relational (customer) Capital	0.718	1		
Human Capital	0.720	0.691	1	
Organizational Performance	0.517	0.588	0.502	1

On the other hand, results of regression analysis show that the rate of multiple correlation coefficient among elements of intellectual capital and organizational performance was 0.59 in Sepah Bank branches so one can ascribe about 35% of variance in organizational performance to variations in intellectual capital and its components; and namely, rather than intellectual capital, some other factors also effect on organizational performance in Sepah Bank branches throughout Tehran Province. Unlike some studies in which it is argued that intellectual capital is determinant factor in organizational performance up to 80%; but unfortunately, it is observed in this study that the rate of impact by elements of intellectual capital on organizational performance in Sepah Bank branches is remarkably and totally different from the quantity that was reported in Book of Nariman Al Ali (2004). The reason may be summarized in some points: Like other studies, measurement tool in this survey has attitudinal nature not real or quantitative one; on the other hand, it is possible that some bank chairmen and deputies have overlooked to interpret real quantitative parameters in order to prevent from trouble for them; an also it is likely for researcher to make mistake in translation and formulation of study tool. Nevertheless, among elements of intellectual capital, the maximum rate of impact belongs to relational capital variable ($P < 0.01$; $\beta = 0.452$) and then variables of structural capital ($P < 0.01$; $\beta = 0.171$) and human capital ($P < 0.01$; $\beta = 0.151$). Here one may find viewpoint of those practitioners, who believed in that intellectual capital in an enterprise or organization is determined by its marketplace condition not by the organization itself.

RESULTS

1- Results of study hypotheses

The results came from Pearson's Correlation Test indicate that rate of correlation coefficient is 0.502 ($P < 0.01$, probability) among variable human capital and organizational performance. Namely, by rising human capital, rate of organizational performance increases. Inversely, if organizational performance increases, human capital also improves. Since direction and cause- and effect relation are not mentioned in correlation analysis so by considering human capital as an independent variable, the results of regression analysis indicated that one can ascribe about 15% of variations in organizational performance of Sepah Bank branches to variations in variable human capital.

Results of this study about the aforesaid hypothesis are complied with findings from studies that conducted by Yazdani (2004), Bontis et al. (2000), and Chen et al. (2004); although rate of correlation in

this study is almost lesser and lower than in all relevant studies. For instance, rate of relationship among human capital and performance in studies done by Chen et al. (2004) and Sofian et al (2003) are 0.678 and 0.435 respectively. However, in the study that was conducted direct relation among human capital and performance (0.048) was not significant. Moreover, Yazdani (2004) found that correlation coefficient among human capital and performance in Mellat Bank branches was a negative figure (-0.091) and significant at level (0.05) while the reason for negative sign in this relation has not been almost explained in the aforesaid study.

Regarding second hypothesis, results came from Pearson's Correlation Test show that rate of correlation coefficient among variable of structural capital and organizational performance in Sepah Bank branches is 0.517 (probability: $P < 0.01$) and this indicates strong and positive relationship among these two factors. Namely, rising in structural capital may increase organizational performance. Inversely, if organizational performance increases, structural capital will improve as well. Since direction and cause-and- effect relations are not mentioned in correlation analysis so given that variable of structural capital as an independent variable and organizational performance as dependent one, results of regression analysis indicate approximately 17% of variance in organizational performance of Sepah Bank branches could be attributed to variations in variable structural capital.

Findings of present study about the aforesaid hypothesis correspond to results came from studies which have been carried out by Yazdani (2004), Bontis et al. (2000) and Chen et al. (2004).

For example, rates of correlation coefficient among structural capital and performance in studies done by Chen et al. (2004) are 0.733, 0.458 and 0.64 respectively; although, it is also seen that correlation level in this study is lower than in other studies . Additionally, Yazdani found that rate of correlation coefficient is a negative figure (-0.051) among structural capital and performance in Mellat Bank branches.

Concerning to third hypothesis, the results from Pearson's Correlation Test show that rate of correlation coefficient is 0.558 (probability: $p < 0.01$) among variable of relational capital and organizational performance in Sepah Bank branches and this reflects a strong and positive relation among these two factors. In other words, by rising relational capital, rate of organizational performance also improves. Inversely, if organizational performance increases, relational capital also improves. Since direction and cause- and -effect relation are not implied in

correlation analysis so by considering variable of relational capital as independent variable and organizational performance as dependent one, results of regression analysis indicated that one could attribute about 17% of variations of organizational performance in Sepah Bank branches to variance in variable relational capital.

Findings of this study about the given hypothesis are in compliance with results of studies done by Yazdani (2004), Bontis et al. (2000), and Chen et al. (2004). For example, rate of correlation for relationship among relational capital and performance in studies done by Chen et al. (2004), Sofian et al. (2003) and Wang and Chung (2005) are 0.798, 0.544 and 0.222 respectively. As it seen, rate of correlation in this survey is greater than studies of but lower than Chen et al. (2004). Furthermore, Yazdani (2004) found that rate of correlation coefficient among relational capital and performance is a negative figure (-0.054) in Mellat Bank branches.

About fourth hypothesis, findings came from Pearson's Correlation Test indicate that there is a direct, strong and positive relationship with quantity of 0.691 (probability: $p < 0.01$) among human capital and relational capital in Sepah Bank branches.

Findings of this study about the given hypothesis are complied with results came from studies like ones done by Yazdani (2004), Bontis et al. (2000) and Chen et al. (2004). For instance, rates of correlation in relationship among human and relational capitals in studies done by Chen et al. (2004), Bontis et al. (2000), and Wang and Chung (2005) are 0.833, 0.798 and 0.695 respectively where rate of correlation in this study is lower than correlation coefficient in other

surveys. Besides, Yazdani (2004) noticed that correlation coefficient among human capital and relational capital is positive figure (0.744) in Mellat Bank branches. Concerning to fifth hypothesis, the findings from Pearson's Correlation Test show that there is a strong, direct and positive relation with quantity of 0.720 (probability: $p < 0.01$) among human capital and structural capital in Sepah Bank branches. Results of the present research about the aforesaid hypothesis are in conformity with findings of studies done by Yazdani (2004), Bontis et al. (2000) and Chen et al. (2004). For example, rates of correlation coefficient for relationship among human and structural capitals in studies done by Chen et al. (2004), Bontis et al. (2000), and Wang and Chung (2005) are 0.748, 0.483 and 0.748 respectively. Moreover, Yazdani (2004) found that correlation coefficient among human capital and structural capital is a positive figure (0.722) in Mellat Bank branches.

Regarding sixth hypothesis, results came from Pearson Correlation Test indicate that there is strong, direct and positive relationship with quantity of 0.718 (probability: $p < 0.01$) among structural capital and relational capital in Sepah Bank branches. Findings of this study about the given hypothesis correspond to results of studies done by Yazdani (2004), Bontis et al. (2000) and Chen et al. (2004). For example, rates of correlation coefficient for relationship among human capital and relational capital in studies conducted by Chen et al. (2004) and Bontis et al. (2000) are 0.858 and 0.496 respectively. Additionally, Yazdani (2004) found that correlation coefficient among structural capital and relational capital is a positive figure (0.767) in Mellat bank branches.

Table 3. Comparison among correlation coefficients in the aforesaid studies

Studies	Human Vs. Performance	Structural Vs. Performance	Relational Vs. Performance	Human Vs. Structural	Human Vs. relational	Relational Vs. Structural	Intellectual Vs. Performance
Wang & Chung	0.048	0.64	0.222	0.79	0.695	-	-
Sofian	0.435	0.458	0.544	-	-	-	-
Bontis	-	-	-	0.483	0.798	0.496	-
Chen	0.678	0.733	0.798	0.748	0.833	0.858	0.928
Yazdani	0.091	-0.051	0.054	0.722	0.744	0.767	-
Promotional	0.502	0.817	0.558	0.720	0.691	0.718	0.588

2- Applied Suggestions

The following suggestions are purposed for training intellectual capital in Sepah bank branches and similar organizations:

1) Relational capital

1- Customer- orientation

- Distribution of feedback all over the organization
- Identifying target marketplace
- Recognition of customers' requirements

- Improvement of customer- oriented approach

2- Administration of customers' affairs

- Automation and automatic system for customers' affairs
- Application of E- banking
- Facility for transmitting of complaints by customers via web
- Constant and on time responsiveness and follow-up customers' complaints and expectations;

3- Loyalty of customers

- Revision of customers' expectations
- Creation of system for addressing complaints and proposals
- Behavioral training for personnel when exposed to customers
- Analysis on customers' comments

4- Market- orientation

- Creation of a purposeful market- oriented space and atmosphere throughout organization (internal marketing)
- Using wide promotion and application of technological tools including Short- Message- Service (SMS)
- Establishment of strategic planning and identifying opportunities and threats.

II) Human Capital

1- Personnel's competence level

- Identifying strategic jobs in organization (those jobs to which organizational goals are owed)
- Preparation of competence schema of strategic positions

2- Personnel's satisfaction

- Constant evaluation of personnel's occupational satisfaction within time intervals
- Design and creation of measurement and survey system for job satisfaction in organization

3- Personnel's performance

- Taking systemic attitude
- Formulation of practical balanced plans and objectives
- Constant measurement of personnel's performance within time intervals
- Analysis on information resulting from performance measurement and comparison with performance standard

4- Personnel's improvement systems

- Preparation of occupational routes and substitution tables
- Using individuals' performance information upon their promotion
- Purposing the trainings and consultations to improve the future condition

III) Structural Capital

1- Team- working

- Training of team- working and the relevant techniques
- Acknowledgement and giving bonus (reward) for team- working
- Taking care in election and employment of individuals that possess team, technical and collective skills

2- Process improvement

- Recognition of the key processes which are more valuable for customers

- Re- engineering of processes

- Processes documentation and adoption of the best experiences from domestic and foreign rivals

3- Systems and structures

- Application of advanced and modern structure like team- working and project- driven

- Application of information systems that facilitate access to information

4- Renewal (reconstruction) and improvement

- Allocation of budget and more time for research and development (R&D)

- Application and coordination with total scientific procedure

- Adoption proposals system inside organization for receiving personnel's comments and outside organization to receive customers' views

5-3- Suggestions for future studies

The following cases are suggested to the interested readers about subject of intellectual capital for future studies:

- Application of quantitative and mathematical models to determine relationship among intellectual capital and organizational performance: This study dealt with relationship among intellectual capital and organizational performance only by means of some attitudes and views from deputies and chairmen of bank branches.

- Using of models other than intellectual capital three- facet model for measurement of intellectual capital dimensions (In new models, social capital and innovation capital are also added to human, structural and relational dimensions.)

- Increase in number of samples in order to enhance accuracy and correctness of research findings

- Comparison among findings from this study which done in Services Sector with results of studies done in other public and private banks

- Comparison between findings from the current study which conducted in Services Sector or with results came from conducted studies in manufacturing and production sector

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