

The Impact of Intellectual Capital on Business Performance (Case Study: Shiraz Travel Agencies)

Jokar Payborji, Roghayeh

Department of Management, Najafabad Branch, Islamic Azad University, Najafabad,
Iran

Karnameh Haghghi, Hassan

Department of Management, Najafabad Branch, Islamic Azad University, Najafabad,
Iran

Assistant Professor of SheikhBahee University, Isfahan, Iran

Tel: 98-913-258549 E-mail: karnameh@yahoo.com

Received: Nov. 24, 2016 Accepted: Nov. 30, 2016 Published: December 19, 2016

doi:10.5296/bms.v7i2.10354 URL: <http://dx.doi.org/10.5296/bms.v7i2.10354>

Abstract

As the most important capital in today's global economy, knowledge has replaced physical and financial capitals, and the knowledge-based business environment needs an approach that encompasses new intangible organizational assets. In fact, responses that organizations have given to today's environments indicate that they must rely on intangible resources that were previously unattended. By asking whether the intellectual capital has an impact on business performance of travel agencies in Shiraz, we seek to prove the effect of intellectual capital components on the performance of these agencies.

The required statistics and information were collected and analyzed on the basis of empirical research in Shiraz and using a sample size of 142. According to the findings of this study, there is a significant relationship between intellectual capital and business performance and its components, and all aspects of intellectual capital positively and significantly influence productivity, profitability and reputation of the companies. In fact, it can be said that being aware of the importance of intellectual capital will bring about productivity and a better performance, and on the contrary, not paying enough attention to this important issue will

result in poor economic performance.

Keywords: Intellectual capital, Business performance, Productivity, Profitability, Market value, Travels agencies

1. Introduction

In the current era, knowledge is ruling communities and companies. Scientists knew the twentieth century as the century of industrial economy relying on tangible assets and resources, but the twenty-first century is known as the century of knowledge-based economy based on intellectual capital. In the knowledge-based economy, companies not only produce or provide their products or services, but also try to remain in the competitive economy by value creation and innovation. Many experts believe that intellectual capital is the most important factor in creating value as well as added value in companies and their acceptable performance. In today's world, capital, natural resources, work force, etc. are not the main economic resources anymore. Rather, knowledge will be the main economic resources. After the twentieth century which was the industrial economy century, the twenty-first century is the century of knowledge and information economy. In the industrial economy, the factors of producing economic wealth were a series of physical and tangible assets such as land, work force, money, etc. and the combination these economic factors would produce wealth. In this economy, the use of knowledge as a factor of production, has had little role but in the knowledge economy, knowledge or intellectual capital as a factor of wealth production becomes more preferable than other tangible and physical assets. Unlike the industrial economy, in the knowledge economy, intellectual property and human capital in particular are among the most important assets of the organization and the potential success of organizations roots in their intellectual ability. Therefore, how to manage the intellectual capital in organizations and their role in achieving competitive advantage can play a significant role in advancing organizational goals (Bethaei, 2006). Travel and tourism agencies act as an intermediary between the main supplier of the services such as tour operators or transportation companies and hotels on one hand and the applicant tourists for traveling on the other hand. They are in fact considered as the forehead of the with applicants' first encounter with the tourism industry. Success or failure of these intermediaries highly influence the success or failure of tourism destination programs and tourism service providers. Connecting the suppliers and the applicants, these offices are in fact shaping the tourism market, and in cases where the market has already been formed, they act as a factor to brisken and revolutionize the market (Ranjbarian, Zahedi, 2007). With the emergence of the knowledge-based economy, the knowledge of organizations has become more preferable in comparison with other production factors such as land, capital inputs, machinery, etc. so that in this economy, knowledge is regarded as the most important production factor and the most important competitive advantage of organizations (C.Sarman, 2002)

The intangible aspect of economy has been established based on intellectual capital, and its first and main material is knowledge and information. To participate in today's markets in any way, organizations need information and knowledge in order to improve their performance (Khavandkar and Motaghi, 2009). In addition, the survival and continuity of the activities of organizations and institutions depend on the performance of their staff. In any department, the role of the work force is important in all areas of activities. Therefore, people are known as the major component of working, as they make decisions, implement them, and predict the

continuity of future activities on the basis of those decisions. In today's knowledge-based societies, the role and importance of the intellectual capital income employed for sustained profitability of the corporates are greater than the financial capital income used (Rostami and Seraji, 2005). In the knowledge-based economy, intellectual capital is considered as an important part of companies' value. The ability to manage and control intellectual capital requires that companies can identify, measure and report intellectual capital (Mirkoystra et al, 2001).

The main objective of this study was to investigate the effect of Intellectual capital on business performance of travel agencies in Shiraz. In this regard, the following objectives will be pursued:

- Determining the relationship between intellectual capital and productivity of travel agencies
- Determining the relationship between intellectual capital and profitability of travel agencies
- Determining the relationship between intellectual capital and market valuation of travel agencies

Given that the performance and efficiency of service providers are always questioned by some people and organizations, in this study efforts have been done to investigate the relationship between intellectual capital and performance of travel agencies.

2. Theoretical Framework

In general, intellectual capital is shown as an issue that has three basic interdependent components: human capital, structural capital and customer / relational capital (Ramirez et al., 2007), which are discussed below.

2.1 Human Capital

It includes qualifications, skills, experiences and intellectual capacity of employees (Stewart, 1997; Edwinston and Sullivan, 1996; Browking, 1996; Edwinston and Malone, 1997; Ross et al., 1997). Human capital represents the knowledge of people in an organization (Bontis and others quoted by Qelich Lee and Moshabaki, 2006).

Human capital is defined as combined knowledge, skills, experiences and abilities of every member of an organization (McGill, 2006). This capital is mobile and does not belong to a particular organization because employees are considered as owners of human capital. Stuart knows human capital as the source of creativity and insight. Besides, Bontis believes that human capital is important because it is considered as a strategic source of creativity for the organization (Nazari and Hermans, 2007).

2.2 Structural Capital

It includes processes, systems, structures, intellectual assets and other intangible assets that

are available to the company, but are not shown in the company's balance sheet (Benfor, 2002; Browking, 1996; Edwinson and Malone, 1997 ; Ross et al., 1997; Stewart, 1997). Structural capital consists of all non-human reservoirs of knowledge in the company (Rose and Rose quoted by Qelich Lee and Moshabaki, 2006). It includes proprietary software, computer programs, databases, organizational structure, exploitation and registration patent, trademark and similar assets that support organizational productivity (McGill, 2006). Structural capital is the representative of the assets which are that are distinct from the individuals within an organization (McGill, 2006). Human capital is the major factor in the development of structural capital; hence, structural capital is dependent on human capital. For example, a construction permit or license is created by human capital, but after the creation, they will belong to the company (Nazari and Hermans, 2007).

2.3 Customer Capital

The remaining of the intellectual capital is the customer capital that refers to individual and organizational levels. Customer capital is a subset of intellectual capital including group knowledge and knowledge network that co-exist and are derived from a communication network (Edwinson and Malone, 1997; Stewart, 1997; Ross et al., 1997). This communication is not limited to particular communications, but includes communications with customers, suppliers, shareholders and other individuals associated with the organization (Benfor 2002; Edwinson and Malone, 1997; Ross et al., 1997). Customer capital is the value that customers pay for the organization (McGill, 2006). This value is shaped by the communications between the organization and its customers (ibid.). Intellectual capital includes items such as the value of the concessions owned by the company, its relationships with people and organizations associated with customers, market share, customer retention or loss rates, and net profitability per customer (Muritsen and others quoted by Rostami and Rostami, 2003). In new definitions, the concept of customer capital has been developed to the capital of a relationship that includes the knowledge available in all relationships of the organization with the customers, competitors, suppliers, associations or government (Bontis quoted by Qelich Lee and Moshabaki, 2006). In all definitions, an obvious correlation is found between human, structural and customer capitals.

Many studies conducted on intellectual capital have considered this classification. In fact, the correlation between the subsets has caused them to have the same name: an organization's intellectual capital (Browking, 1996; Ross et al., 1977)

3. The relationship between Intellectual Capital and Performance

In the past, everyone believed that the performance of any organization depended on the management of its financial and expense items. But today, this approach has lost its absolute sense and has come to the assumption that eighty percent of organizational performance depends on proper management of intellectual capital items. Even, some believe that financial success of organizations depends on the success of intellectual capital items. This means that intellectual capital items also have affect financial performance of organizations.

On the other hand, according to researchers, there is some kind of interaction and alignment between internal components of intellectual capital that affect each other positively. A study conducted by the Danish Agency for Trade and Industry (1998) on companies active in the field of intellectual capital, showed that active measurement and management of intellectual capital was only important for future success of companies.

Companies that measured and managed their intellectual capital had clearly better and higher performance than other companies. Bontis's exploratory study (1998) on the relationship between companies' investment in intellectual capital and their performance represents a causal significant and substantial relationship between the aspects of intellectual capital and organizational performance. This relationship supports the idea of investing organizational resources to gain knowledge on how to increase intellectual capital assets. Bontis et al (2000) repeated their study using the data from Malaysia and found similar results.

Marr et al (2003) know the reasons for paying attention to and measuring intellectual capital as follows:

- helping organizations to adjust their strategies
- assessing the implementation of the strategies
- helping to make decisions on expansion and diversification
- Using the results of measuring intellectual capital as a basis for service compensation.
- conveying these assets to external stakeholders of the organizations

The study by Firer and McKinsey (1999) on Australian companies and the benefits they obtained as a result of taking intellectual capital into consideration is interesting as well. The two experts identified the most important advantaging areas as follows: improvements in the information that is provided to stakeholders to support the investments; more information for supporting and guiding the decision-making process; support and guidance for human resources management; support and guidance for customer relationship management. Firer and McKinsey (1999) believed that these benefits would highlight more information for us. They can be known as indirect results of taking intellectual capital into consideration and hence, it would be hard to interpret them logically as the results of measuring a company's intellectual capital. On the other hand, measuring and announcing the factors of intellectual capital have the following benefits for an organization's internal managers: They

- will find the company's ability to achieve its goals
- can plan and invest on research and development
- will make decisions to re-engineer their programs
- will consider education and training programs
- can evaluate the company's value for doing better comparisons and benchmarking

- Will develop institutional memory by identifying key resources and preventing reinvention.

A review of the literature was performed and it was observed that the research on measuring the impact of intellectual capital on organizational performance has generally three functional components namely profitability, productivity and market value (though a company's performance is not a direct consequence of intellectual capital and hence, in any theoretical model, these factors should be distinct from those that play a role in the performance) and three modes of human capital, structural capital, and customer-based capital are considered for intellectual capital. For example, Yant et al. (1996) tested the relationship between human resource management, production strategy and performance of a company and found a significant relationship between these three components. Miller et al (1999) tested the managers' perceptions of the usefulness and potential application of capital assets. In their study, it was concluded that managers emphasized too much on intellectual capital (regardless of the type of industry).

Van (1999) studied the relationship between the main set of intellectual capital factors and the performance of companies. His study aimed to link the intellectual capital and the performance of companies, and concluded that intellectual capital was coupled with the performance of companies. Lowe (2000) determined the value and importance of intangible and non-financial resources and investigated their role in the company's performance. His results showed that advances or improvements in critical intangible resources would generate great market value. Bontis et al (2000) examined three components of intellectual capital, including human, structural and customer-based component. The results of their study confirmed the assumption that intellectual capital was positively related to the financial performance of companies. Overall, given the importance of intellectual capital to create and maintain competitive advantage of companies and features that will affect their performance, three hypotheses are presented as follows:

In a particular industry and by controlling discrepancies among the factors in an organization, the greater the value or performance of intellectual capital,

1. The higher the company's productivity will be.
2. The more the profitability will increase.
3. The company's market value will become more than the value of its physical and financial assets.

Meanwhile, the effects of intellectual capital management on organizational performance has been proven in numerous studies, most of which suggested that about 80% of the market's successful performance can be attributed to intangible assets. The results have been obtained in sectors such as banks, dot-com companies, information technology institutions and so on.

4. Literature Review

So far, extensive research has been done on intellectual capital and organizational performance. In this section, the most important studies conducted on intellectual capital inside and outside the country will be discussed. Some studies have been done inside and outside the country on intellectual capital and its relationship with various aspects of performance and value of companies, some of which are presented in this section.

Table 1. Domestic and foreign research on intellectual capital and performance

foreign research		
Researcher	Subject	Result
Firer Williams (2003)	The relationship between the efficiency of intellectual capital and the performance transparency of companies	No stable relationship was found between these two, although in high levels of intellectual capital it seemed that the transparency of intellectual capital had significantly decreased.
Bentis et al (2003)	Investigating the relationship between intellectual capital and business performance in manufacturing and service industries of Malaysia	There are mutual relationships among the components of intellectual capital and the capital has an impact on business performance.
-Lev Radharkrishnan (2003)	Measurement criteria for organizational capital through sale modeling	Studying about 250 companies showed that beyond the assets, organizational capital will definitely estimate the market value as well as the company's potential position and growth.
George Kelodue (2006)	Evaluation of intellectual capital	The challenges facing organizations in a dynamic economy requires the use of intangible assets for a competitive position in the market. The increasing importance of intellectual capital has challenged the conventional financial reporting system and has shown that it can no longer meet informational needs.
Ehard aman (2008)	Development of intellectual capital through the change of knowledge	Firstly, knowledge management will cause the intellectual capital to appear. Secondly, all aspects of intellectual capital can be

		identified by knowledge manage and these components can be strengthened. In general, intellectual capital is totally affected by knowledge management.
Isabel Martins and Anna Martins (2009)	The importance of intellectual capital for durability of an organization	Intellectual capital is the most important element in promoting organizational effectiveness indicators and performance. Eventually, intellectual capital is the most important key to the survival of any organization and institution.
Philippa Lopesdas (2010)	A model for intellectual capital approach in human capital approach	They act more successfully in looking at human capital and transforming it into a tool for improving their organization's financial and credit capitals.
Domestic research		
Nikoomaram and Yari (2008)	The relationship between intellectual capital and investment return and value added	There is a significant relationship between intellectual capital and investment return and value added, and intellectual capital has influenced these indicators.
Davood Khan Hosseini and Mohammad Nikoonesbati (2013)	Examining the relationship between intellectual capital and market value of the companies listed in Tehran Stock Exchange	There is a significant relationship between intellectual capital and market value of the company. In addition, among the constituent elements of intellectual capital, human capital efficiency has the greatest impact on the company's market value.
Majid Ahmadian and Rahim Ghorbani (2013)	The relationship between intellectual capital and organizational performance	There is a significant relationship between intellectual capital and its components are organizational performance.
Seyyed Abbas Mousavi et al (2013)	The effect of intellectual capital on performance of knowledge-based companies	Intellectual capital has a positive and significant effect on enablers, and this in turn influences the performance of knowledge-based companies located in the Science and Technology Park of Bushehr city.

4.1 Research Hypotheses

There is a significant relationship between intellectual capital (human capital, structural capital, customer capital) and business performance of travel agencies. Minor hypotheses include the following:

1. There is a significant relationship between intellectual capital and productivity.
2. There is a significant relationship between intellectual capital and profitability.
3. There is a significant relationship between intellectual capital and market valuation.

4.2 Methodology

This research is a quantitative study. To gather the required data, a survey was done as one of the techniques of the quantitative method. For this purpose, using written sources such as books and scientific articles, we studied intellectual capital and its subcategories. Then a questionnaire was used to investigate the responses provided by the employees of travel agencies. Regarding the objective, this study is an applied and correlation research. To collect the data, a survey as well as the available documents was used.

The sample considered in this study included the travel agencies in Shiraz. After acquiring the latest statistics, the total number of the population was 229. Using Cochran sampling formula and taking into account 5% error, the sample size of 142 was obtained.

$$n = \frac{N \times z_{\alpha/2}^2 pq}{Nd^2 + (z_{\alpha/2}^2 pq)}$$

The Cronbach's alpha calculated for the questionnaire and the studied variables is presented in Table 2 and indicates the high reliability of the questionnaire. The reliability coefficient ranges from zero to one.

Table 2. Cronbach's alpha of research variables

variable	Cronbach's alpha
Business Performance	780/
productivity	720/
Profitability	770/
Market valuation	750/
Intellectual Capital	810/
Human Capital	790/

relative capital	750/

4.3 Data Analysis

Data processing, statistical parameter determination, tables and diagrams, the relationship between the variables, and other statistical analyses were performed using the SPSS software. Kolmogorov-Smirnov test, multiple linear regression, Pearson's correlation, and analysis of variance were used for inferential statistics. To analyze the data and select the appropriate tests, the normality of variables had to be first examined. The test used to assess the normality of the variables was the Kolmogorov-Smirnov (KS) test. If the significance level of the test is higher than 0/05, the null hypothesis of the normality of the data will not be rejected. Therefore, the following statistical assumptions can be assessed:

The null hypothesis: there is a significant difference between the data distribution and a normal distribution.

Alternative hypothesis: there is no significant difference between the data distribution and a normal distribution.

Table 3. The normality test for the data on available variables

Status	Sig	Kolmogorov-Smirnov	Variables
Normal	0/636	0/745	Business Performance
Normal	0/095	1/235	Productivity
Normal	0/154	1/132	Profitability
Normal	0/077	1/277	Market valuation
Normal	0/342	0/938	Intellectual Capital
Normal	0/116	1/193	Human Capital
Normal	0/107	1/986	Structural capital
Normal	0/066	1/306	Relational capital

Researcher-made

The main-general hypothesis: Aspects of intellectual capital (relative capital-human capital-structural capital) have the capability to explain the business performance of travel agencies in Shiraz city.

According to the tests and analyses using multi-linear regression, all estimated coefficients were statistically significant at the significance level of 5%. Also, according to the regression model it was founded that in a multi-regression model, business performance was 1/159 without the impacts of independent variables.

Besides, a change in the standard deviation of human capital and relational capital would

alter a standard deviation value in the business performance variable. Furthermore, it was found that relational capital variable had the maximum (positive) effect on the dependent variable, and human capital variable had the least positive impact on business performance variable.

In general, it can be concluded that, as observed in recent studies, the most important asset of an organization in the present era is knowledge as well as intellectual, human and relational capitals. Intellectual capital is of fundamental importance in innovation, productivity, growth and development, competitiveness and performance of the organization.

Accordingly, with respect to the results obtained in this study, the role of intellectual capital in business performance has high profitability, and intellectual capital in an organization should be taken into special consideration. This is consistent with the results of the studies by Lim and Dalimor (2004) and Philippa Lepzdas (2010) which are all evidence of the positive effects of intellectual capital as the most important element in promoting the performance and effectiveness indicators of an organization, and ultimately, relational capital is the most important key to the survival of any organization and institution. It is also consistent with the results of the studies by Buzbura (2004), Isabel Martinez and Ana Martinez (2009), Ihardaman (2008), Anvari and Rostami and Seraji (2005), Bathaei (2006), Beigi (2008), Seyyed Abbas Mousavi, and Sayyed Yaghub Hosseini (2013) who concluded that the aspects of intellectual capital (relational capital - human capital, structural capital) had the ability to predict business performance in organizations and companies.

Main hypothesis: There is a significant relationship between intellectual capital and business performance.

According to the tests and analyses done through the use of Pearson's correlation coefficient, the estimated coefficients were statistically significant at a significance level of 5%. It was concluded that there was a significant relationship (significant correlation) between intellectual capital and business performance in the entire sample. And as the correlation coefficient was positive, there was a direct relationship between intellectual capital and business performance. Perhaps the reason for this relationship is the increasing success and efficiency of travel agencies examined in this study and, in general, most organizations that were studied in previous research. Their success and efficiency are due to paying attention to knowledge and intellectual capital.

The results of this hypothesis are consistent with those obtained by Buzbura (2004), Isabel Martinez and Ana Martinez (2009), Ihardaman (2008), Anvari, Rostam and Seraji (2005), Bathaie (2006), Beigi (2008), Seyyed Abbas Mousavi and Seyyed Yaghub Hosseini (2013) who concluded that there was a significant relationship between intellectual capital and business performance in general, and intellectual capital had the highest impact on business performance.

The first subsidiary hypothesis of this study suggests that, "the dimensions of intellectual capital (relational capital - human capital, structural capital) are capable of explaining

productivity of the travel agencies in Shiraz."

According to the tests and analyses using multi-linear regression, all estimated coefficients were statistically significant at the significance level of 5%. Also, according to the regression model it was founded that in a multi-regression model, business performance was 0/938 without the impacts of independent variables.

Besides, a change in the standard deviation of human capital and relational capital would alter a standard deviation value in the business performance variable. Furthermore, it was found that relational capital variable had the maximum (positive) effect on the dependent variable, and human capital variable had the least positive impact on business performance variable.

In general it can be concluded that since intellectual capital is classified as human capital, structural capital and relational capital, each of these capitals play a significant role in the development, modernization and productivity. In fact, intellectual capital management is clearly associated with productivity of travel agencies in Shiraz, and their productivity might be increased through effective management of intellectual capital. It can significantly improve the competitive position and productivity of travel agencies.

Pearson's correlation coefficient between intellectual capital and productivity in the population under study is ρ . Since the variables of the present study are quantitative, the following hypotheses should be tested by Pearson's correlation coefficient. Test hypotheses are as follows:

$$\begin{cases} H_0 : \rho = 0 \\ H_1 : \rho \neq 0 \end{cases}$$

The null hypothesis means the lack of relationship between two variables X and Y, and hypothesis 1 means that there is a significant relationship between the two variables. The rule for testing the null hypothesis against hypothesis 1 is as follows. If the significance multiplier is below 0.05, the hypothesis could be accepted.

Table 4. Pearson's correlation coefficient between intellectual capital and productivity

value	productivity	Variable
0/783	correlation coefficient	intellectual capital
0/000	Significance level	

Researcher-made

As can be seen in the table above, Pearson's correlation coefficient between the two variables in the entire sample is equivalent to 0/783, and the significance level of Pearson's correlation test is 0.000 less than 0/05. Therefore, according to Pearson's correlation test, the null hypothesis is rejected and the hypothesis 1 is accepted. It means, there is a significant relationship (significant correlation) between intellectual capital and productivity in the entire sample. Since the correlation coefficient value is positive, there is a direct relationship between intellectual capital and productivity.

According to the tests and analyses done through Pearson's correlation coefficient and as can be seen, the estimated coefficients are statistically significant at 5% significance level. Hence, it is concluded that there is a significant relationship (significant correlation) between intellectual capital and productivity in the entire sample. As the correlation coefficient value is positive, it can be said that there is a direct relationship between intellectual capital and productivity. This might be due to the important role of intellectual capital management in the productivity of the organization. In fact the existence of intellectual capital is a serious requirement in the development and productivity of a business (Professor Sobooti, 2014). Results of this hypothesis are consistent with the ones obtained by Buzbura (2004), Isabel Martinez and Ana Martinez (2009), Ihardaman (2008), Anvari, Rostami and Seraji (2005), Bathaie (2006), Beigai (2006), Seyyed Abbas Mousavi and Seyyed Yaghub Hosseini (2013) who concluded that there was a significant relationship between intellectual capital and productivity in general.

C) Second hypothesis - general: The dimensions of intellectual capital (relational capital - human capital - structural capital) have the capability to explain the profitability of travel agencies in Shiraz.

According to the tests and analyses using multi-linear regression, all estimated coefficients are statistically significant at the significance level of 5%. Also, as the regression model indicates, in a multi-regression model, profitability of travel agencies is 1/219 without the impacts of independent variables. Besides, a change in the standard deviation of human capital and relational capital would alter a standard deviation value in the profitability variable. Furthermore, it was found that relational capital variable with the standard coefficient 0/702 had a positive effect on the dependent variable.

Perhaps the reason is that any organization or agency that has more knowledgeable employees, more agile structure, better management, better functionality, more developed culture, valuable relationships and more learning, will make more profits. As a result, intangible assets of organizations and agencies are not limited to knowledge capital. Hence, today's organizations and agencies, and especially managers in developed countries are thinking of intellectual capital management that plays a significant role in their profitability (Sobooti, 2014).

Results of the present hypothesis are consistent with those of the studies by Buzbura (2004), Isabel Martinez and Ana Martinez (2009), Ihardaman (2008), Anvari, Rostami and Seraji

(2005), Bathaie (2006), Beigai (2006), Seyyed Abbas Mousavi and Seyyed Yaghub Hosseini (2013) who concluded that there was a significant relationship between intellectual capital and profitability in general, and intellectual capital had the highest impact on profitability.

Pearson's real correlation coefficient between intellectual capital and profitability in the population under study is ρ . Since the variables of the present study are quantitative, the following hypotheses should be tested by Pearson's correlation coefficient. Test hypotheses are as follows:

$$\begin{cases} H_0 : \rho = 0 \\ H_1 : \rho \neq 0 \end{cases}$$

Table 5. Pearson's correlation coefficient between intellectual capital and profitability

value	profitability	Variable
0/680	Correlation coefficient	intellectual capital
0/000	Significance level	

Researcher-made

As can be seen in the table above, Pearson's correlation coefficient between the two variables is 0/680 in the entire sample, and the significance level of Pearson's correlation coefficient 0.000 is less than 0/05. Therefore, according to Pearson's correlation coefficient, the null hypothesis is rejected and the hypothesis 1 is accepted. It means, there is a significant relationship (significant correlation) between intellectual capital and profitability in the entire sample. As the correlation coefficient has a positive value, there is a direct relationship between intellectual capital and profitability.

According to the tests and analyses done through Pearson's correlation coefficient and as can be seen, the estimated coefficients are statistically significant at 5% significance level. Hence, it is concluded that there is a significant relationship (significant correlation) between intellectual capital and productivity in the entire sample. As the correlation coefficient value is positive, it can be said that there is a direct relationship between intellectual capital and productivity.

In fact, it is generally concluded that being familiar with knowledge and gaining skills of identifying, evaluating and accounting intellectual capital are the first step in the success of intellectual capital management which can be followed by development and profitability. Results of the present hypothesis are consistent with those of the studies by Buzbura (2004), Isabel Martinez and Ana Martinez (2009), Ihardaman (2008), Anvari, Rostami and Seraji

(2005), Bathaie (2006), Beigai (2006), Seyyed Abbas Mousavi and Seyyed Yaghub Hosseini (2013) who concluded that there was a significant relationship between intellectual capital and profitability in general, and intellectual capital had the highest impact on profitability.

C) The third subsidiary hypothesis- general: The dimensions of intellectual capital (relational capital - human capital - structural capital) are capable of explaining market valuation of the travel agencies in Shiraz.

Table 6. Pearson's correlation coefficient between intellectual capital and market valuation

value	market valuation	Variable
0/766	correlation coefficient	intellectual capital
0.000	Significance level	

Researcher-made

As can be seen in the table above, Pearson's correlation coefficient between the two variables is 0/766 in the entire sample, and the significance level of Pearson's correlation coefficient 0.000 is less than 0/05. Therefore, according to Pearson's correlation coefficient, the null hypothesis is rejected and the hypothesis 1 is accepted. It means, there is a significant relationship (significant correlation) between intellectual capital and market valuation in the entire sample. As the correlation coefficient has a positive value, there is a direct relationship between intellectual capital and market valuation.

According to the tests and analyses using multi-linear regression, all estimated coefficients are statistically significant at the significance level of 5%. Also, as the regression model indicates, in a multi-regression model, market valuation of travel agencies is 1/068 without the impacts of independent variables. Besides, a change in the standard deviation of human capital and relational capital would alter a standard deviation value in the market valuation variable.

According to the tests and analyses done through Pearson's correlation coefficient and as can be seen, the estimated coefficients are statistically significant at 5% significance level. Hence, it is concluded that there is a significant relationship (significant correlation) between intellectual capital and market valuation in the entire sample. As the correlation coefficient value is positive, it can be said that there is a direct relationship between intellectual capital and market valuation.

According to the obtained results, it is concluded that these agencies are in fact forming the tourism market by joining the suppliers and the applicants, and in cases where the market has already been formed, they act as a factor to brisken and revolutionize the market. Being in touch with tour operators, travel and tourism agencies sell tour packages they have prepared. These agencies also sell separate traveling components on behalf of individual providers such as airlines, railways or hotels and tour guides. In fact, the diversity and range of services

offered by travel and tourism agencies depends greatly on the nature of the market in front of them. So, market valuation will be remarkably affected if intellectual capital is taken into consideration (Ranjbarian, Zahedi, p 45, 2007). Results of the present hypothesis are consistent with those of the studies by Buzbura (2004), Isabel Martinez and Ana Martinez (2009), Ihardaman (2008), Anvari, Rostami and Seraji (2005), Bathaie (2006), Beigai (2006), Seyyed Abbas Mousavi and Seyyed Yaghub Hosseini (2013) who concluded that there was a significant relationship between intellectual capital and market valuation in general, and intellectual capital had the highest impact on market valuation.

5. Conclusion and Recommendations

It can be said that information is an important strategic source for organizations. In travel agencies, this capital is used under different names that are sometimes worth much higher than physical capitals of the agencies. The results obtained from studying 142 travel agencies in Shiraz indicated that special attention is paid to intellectual capital and its dimensions. In fact, recognizing the value of intellectual capital can play a significant role in the development of business performance of these agencies and they really owe their success to this capital. Furthermore, attracting the trust of managers in the field of intellectual capital management seems essential.

Results of the present hypothesis are consistent with those of the studies by Buzbura (2004), Isabel Martinez and Ana Martinez (2009), Ihardaman (2008), Anvari, Rostami and Seraji (2005), Bathaie (2006), Beigai (2006), Seyyed Abbas Mousavi and Seyyed Yaghub Hosseini (2013) who concluded that there was a significant relationship between intellectual capital and business performance in general, and intellectual capital had the highest impact on business performance.

It is recommended to implement this project in other agencies as well as other institutions and organizations. On the other hand, further studies are suggested to be done on how to enhance the quality of intellectual capital in the implementation of business performance and meta-analysis of the factors affecting productivity, profitability and market valuation. Given that the dimensions of intellectual capital such as human capital and relational capital affect business performance, productivity and profitability of travel agencies, it is suggested that the agencies consider the evaluation of intellectual capital dimensions. Using the aspects of intellectual capital, the he travel agencies in Shiraz have been able to enhance the level of business performance. Hence, no special suggestion can be provided to the travel agencies examined in this study, except on the results obtained about the factors that were more influential on the aspects of intellectual capital. Alternatively, it is recommended that the staff get informed of the results of their performance in order to realize their strengths and weaknesses. Evaluating business performance, profitability, productivity and market valuation, and making the staff aware of their own performance will cause them to do their best without being frequently monitored. It may also enhance business performance and motivate the staff and officials.

According to the results obtained from the evaluation of intellectual capital dimensions, proper solutions have to be provided to solve the problems of business performance. To do so, managers of organizations or agencies should review the books containing the results of annual evaluation of business performance obtained through the use of relevant forms. Therefore it is recommended that managers pay special attention to human and relational aspects and this might increase the staff's motivation and, consequently, productivity and market valuation.

Another suggestion is to pay attention to the importance of intellectual dimensions in all travel agencies and other state and private institutions. As far as management science, human resources and its measurement, and the ways to increase productivity and profitability are concerned, it should be noted that nowadays newer and more appropriate techniques have been provided compare to the past. Therefore, the researcher recommends the use of such methods for other agencies, particularly the centers that have the most communications with people. This (the use of new models in the evaluation of business performance) will reduce the amount of discouragement among human resources in different organizations on the one hand, and can make an organization or travel agency more dynamic on the other hand.

References

- Abdel-Aziz Ahmad Sharabati & Shawqi Naji Jawad (2010). Intellectual capital and business performance in the pharmaceutical sector. *Jordan Management Decision*, 48(1), 201.
- Ahmadian, M., & Ghorbani, R. (2013). The relationship between intellectual capital and organizational performance. Master's thesis, Tehran University.
- Akal, Z. (1992). Performance Measurement and Control in Business, MPM, No. 473. Ankara.
- Amiri (2009). Increase of intellectual capital in an organization and the Role of organizational learning. Master's thesis, Tehran University.
- Anvari Rostami, A. A., & Rostami, M. (2003). Evaluation of the models and methods of assessment and valuation of intellectual capital of companies. *Journal of accounting and auditing reviews*, 34, 51-75.
- Anvari Rostami, A. A., & Seraji, H. (2005). Measuring intellectual capital and investigating the relationship between intellectual capital and market value of shares of companies in Tehran Stock Exchange. *Journal of accounting and auditing reviews*, (39), 49-62.
- Arenas, Terestia, & Lavanderos, Leonardo (2008). Intellectual capital: object or process?. *Journal of Intellectual Capital*, No. 1. pp. 77-88
- Barney, J. (1991). Firm Resources and Sustainable Competitive Advantage. *Journal of Management*, 1, 99-120.

- Bathaie, A. (2006). The effects of intellectual capital on organizational performance of the companies covered by Development and Innovation of Industries and Mines Organization . Master Thesis, School of Management and Accounting, Shahid Beheshti University.
- Beigi (2006). A comparative study of the effects of intellectual capital on organizational performance of Banking Industry. Master's thesis, Bu-Ali Sina University in Hamedan.
- Bontis, N. (1996). There is a Price on Your Head: Managing Intellectual Capital Strategically. *Ivey Business Journal (Formerly Business Quarterly)*, Summer, 7-40.
- Bontis, N. (1999). Managing Organizational Knowledge by Diagnosing Intellectual Capital: Framing and Advancing the State of the Field. *International Journal of Technology Managing*, Nos 5/6/7/8, 62-433.
- Brooking, Annie. (1996). Intellectual capital: Core Asset fore the Third Millenium Enterprise. Intellectual Thomson Business.Press.Newyork.
- Chen, M. Chin., Cheng, S. J., & Hwang, Y. (2005). An Empirical – Investigation of the Relationship Between Intellectual Capital and Firm Market Value and Financial Performance. *Journal of Intellectual Capital*, 2, 159-176.
- Cho, Po Young& et al (2006). Intellectual capital: An empirical study of ITRI. *Technological Forecasting & social change*, No. 73, pp.889-902.
- Developing a Model for Managing Intellectual Capital. *European Management Journal*, 14, 346-364.
- Donalson, T., & Preston, L. E. (1995). The Stakeholders Theory of the Corporation: Concepts, Evidence and Implications. *Academy of Management Review*. No 1. 65-91.Edvinsson, L., Patriek, S. (1996).
- Firer, S., & Williams, S. M. (2003). Intellectual Capital and Traditional Measures of Corporate Performance. *Journal of Intellectual Capital*, 3, 348-360.
- Ghaderpour, H., & Afjeh, A. A. (2011). The Effect of Intellectual Capital Management on Organizational performance. *Quarterly Journal of Public Administration*, 1(3).
- Hosseini, D., & Nikoonesbati, M. (2013). The Relationship between intellectual capital and market value of the companies listed in Tehran Stock Exchange. Master's thesis, Tehran University.
- Huang,Ching Choo & Luther, Robert & Tayles, Michael(2007). An evidence-based taxonomy of intellectual capital. *Journal of Intellectual Capital*, No. 7, pp.386-408.
- Johannessen, Jon-Arild & Olsen, Bjorn & Olaisen, Johan(2005). Intellectual capital as a holistic management philosophy: a theoretical perspective. *International Journal of Information Management*, No. 24, pp.151-171

- Lev, B., & Radhakrishnan, S. (2003). The measurement of Firm-Specific Organization Capital. NBER Working Paper. No 9581. available at: www.nber.org/papers/w9581 (accessed 7 August 2004).
- Lim, Lunn L. K., & Dallimore, Peter (2004). Intellectual capital: management attitude in service industries. *Journal of Intellectual Capital*, 1, 181-194.
- Marr, Bernard Glay, Diana & Neely, Andy (2003). Why do firm measure their intellectual capital? *Journal of Intellectual Capital*, 4, 441-464.
- Mavridis, D. G. (2004). The Intellectual Capital Performance of the Japanese Banking Sector. *Journal of Intellectual Capital*, 1, 92-115.
- McGill, Terrene P. (2006). Harnessing Intellectual Capital: A Study of Organizational Knowledge Transfer. Ph.D. Dissertation, Touro University.
- Meer-Kooistra, Jetje van dan & Zijlstra, Siebren (2001). Reporting on intellectual capital. *Accounting, Auditing & Accountability Journal*, 14, 456-476.
- Mousavi, S. A., Hosseini, S. Y, Mosleh, A. M., & Bahrami, P. (2013). The effect of intellectual capital on the performance of knowledge-based companies. Master's thesis, Persian Gulf University, Bushehr.
- Namazi, M., & Ebrahimi, Sh. (2009). The Effect of Intellectual Capital on the current and future financial performance of the companies listed in Tehran Stock Exchange. *Accounting Research*, 1(4).
- Nazari, Jamal A., & Herremans, Irenem (2007). Extended VAIC model: measuring intellectual capital components. *Journal of Intellectual Capital*, No. 8. pp. 595-609.
- Nikoomaram, H., Yari, M. (2008). The relationship between intellectual capital and return per investment (RPI) and economic value added of the companies listed in Tehran Stock Exchange. *Fiscal Studies*, 1(2).
- Pew Tong, hong, Plowman, David & Hancock, Phil (2007). Intellectual capital and financial returns of companies. *Journal of Intellectual Capital*, No. 1. pp. 76-95.
- Pulic, A. (2000). VAIC – an Accounting Tool for IC Management. Available online: <http://www.measuring-ip.at/papers/ham99txt.htm>.
- Pulic, A. (2004). National IC-efficiency Report of Creation Economy. Available at: www.vaic-on.net.
- Qelich Lee, B., Moshabaki, A. (2006). The role of social capital in developing intellectual capital of an organization (studying two Iranian automobile manufacturers). *Quarterly journal of Knowledge Management*, (75), 125-147.
- Ramirez, Yolanda & et al (2007). Intellectual Capital in Spanish University. *Journal of Intellectual Capital*, No. 8. pp. 732-748.

Ranjbarian, B., & Zahedi, M. (2007) *Tourism Industry Services*, first edition, Isfahan, Chahar Bagh publication.

Robinson, George, & Kleiner, Brian H. (1996). How to Measure an Organization's Intellectual Capital. *Managerial Auditing Journal*. Pp.36-39.

Rodov, I., & Philippe, L. (2002). FIMIAN: Financial Method of Intangible Assets Measurement. *Journal of Intellectual Capital*, 3, 323-336.

Ruekert, R. W., Walker, O. C., & Roering, K. J. (1985). The organization of structure and performance. *Journal of Marketing*, 49.

Setayesh & Kazemnejad (2009). "The effect of intellectual capital on the performance of companies listed in Tehran Stock Exchange". Master's thesis, Tehran University.

Soler, Luis Enrique Valladares & Oro Celestino, Diego Jesus Cuello(2007). Evaluating the scope of IC in firm's value. *Journal of Intellectual Capital*, No.3. pp.470-492.

Sudarsanam, Sudi, Sorar, Ghulam & Marr, Bernard(2006). Real options and the impact of intellectual capital on corporate value. *Journal of Intellectual Capital*, No.3. pp.291-308.

Tan, H. P., Plowman, D., & Hancock, P. (2007). Intellectual Capital and Financial Returns of Companies. *Journal of Intellectual Capital*, 1, 76-95

Copyright Disclaimer

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/3.0/>).