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Effect of intellectual capital on the financial performance

Moussa Amirpoor, Mehrdad Moradi*

Department of Management, Yasoouj Branch, Islamic azad University, Yasoouj, Iran

Department of Economic, Yasoouj Branch, Islamic azad University, Yasoouj, Iran

Abstract

Intellectual capital consists of such things as knowledge, information, intellectual property and experience that can be used for wealth creation. Intellectual capital and acceptable in a broader view of three human-oriented, structure and communication. The aim of this study was to evaluate the effect of intellectual capital on the bank's financial performance kohgiluyeh and boyer- ahmad is stamped economic. Because the results can be applied in practice, and the way the survey is descriptive, As we review the situation with no manipulation, the data collected was used after events and panels Mehr Bank's economic. The population consisted of 68 bank branches kohgiluyeh and Boyer-Ahmad Mehr economic. To determine the number of samples we examined the entire population. In this study, the correlation coefficient, anisotropy White, F Limer, Hausman and regression relationship between the variables studied. And after the data were analyzed using Eviews software, the results showed that between intellectual capital and financial performance Kohgiluyeh and Boyer Bank seals economic there is a significant relationship.

Keywords: intellectual capital, financial performance, human, communication, customer

Introduction

In the new economic era of intellectual capital (IC) sources such as human resources and customer relations are the most important factor of business success and a key factor in maintaining competitive advantage and corporate value creation is transformed (Anderson, 2010).

The modern world relies on organizations as institutions to meet the needs of modern man, in various fields, so today human life is somehow tied up inseparably with the way organizations operate, so that every community where organizations wish to form their duties to the accomplish better living standards for their populations are provided. The most important areas for survival in today's society, the economy. economic aspects of modern life, like the rest of its functions related to the implementation of organizational, financial markets have been an important part in the modern world economic and the banking industry from leading industry and financial markets are important (Oppressed, 2013)

The performance of an organization, the success of an organization is to create value for different market segments; Because all efforts in all areas of an organization should be clear in its function and most organizations using various tools to improve their performance, For this purpose, the assessment of the performance of the important issues of interest to organizations(Lin et al., 2007)

Overall corporate performance as an indication that the measures achieve their goals justify a day, So organizations need to review their status to their financial and nonfinancial performance measures (Wagner, 2012).

Joshi, Cahill Vsydv in 2013 in research that one of the ways of improving the financial performance of organizations is based on intellectual capital (Joshi, 2013), Intellectual capital funds is recognized as an intangible asset an organization allegedly is a valuable asset to the organization (Shrvyk, 2008).

Intellectual capital consists of such things as knowledge, information, intellectual property and experience that can be used for wealth creation. Intellectual capital and acceptable in a broader view of three human-oriented, structure and communication. Human capital can include such things as knowledge, education, skills and innovation, problem-solving view available data rates, he said. Structural capital includes all deposits in non-science companies; and finally bridging capital lies in knowledge in marketing and communication channels with real customers. Accordingly, the potential to create long-term competitive advantage and the most efficient management of intellectual capital value of the tangible assets have been imposed. So, in knowledge-based industries such as the financial industry such as banks intangible and intellectual resources in this industry is in the nature correct. brand, systems and processes depend. Gu (2005) "physical capital requirements of banks are working through" is further described, intellectual capital determines the quality of services provided to customers, therefore, is essential for effective management of the bank as a track.

Increasing the gap between the actual value and corporate offices, banks and organizations, the attention of scientists to explain the value of the financial statements invisible Draynbyn trash has attracted. Value that we called it the class and in all dimensions of intellectual capital as a body of knowledge is present, but is ignored. The research was carried out among 500 companies and organizations from Taiwan, the market value (true) to their book value gradually from 1 to more than 5 times between 1997 and 2001 is increased. Studies have indicated that about 80% of the company's market value is not reflected in financial reports.

In this study, the effect of intellectual capital on the bank's financial performance Kohgiluyeh and Boyer-addressed stamped economic turns. In this context, the following question arises:

Do not between intellectual capital and financial performance in the October Bank Kohgiluyeh and Boyer economic there is a significant relationship?

Background Research

Prayer and Abraham (2010) in a research study of the effect of intellectual capital on current and future financial performance of listed companies in Tehran Stock Exchange to investigate the effect of intellectual capital on current and future performance of listed companies on the Stock Exchange began. Research period 2002 to 2004 and was selected sample of 120 companies. The result of the study hypotheses using partial least squares regression, Suggests

that regardless of firm size, debt structure and financial performance of the past, between intellectual capital and current and future financial performance of the company and significant positive relationship between firm size and performance of current and future positively and significantly.

Shams and colleagues (2012) in a study titled investigate the relationship between intellectual capital and financial performance of listed companies on the Stock Exchange began today as the most important knowledge capital, replacement capital and technology is the material, especially in the competitive environment. The concept of intellectual capital is important applications and spread. Customers intellectual capital, processes, information, trademark, human resources and organizational systems manifested an increasing role in the creation and sustainable competitive advantages plays. This study examines the relationship between intellectual capital and performance of listed companies on the Stock Exchange is investigated. financial performance indicators have been evaluated using linear regression model. The results of this study show that intellectual capital rate of return on equity indices, staff productivity and the ratio of market value to book value per share, return on assets and earnings per share is directly related.

The study, people in the banks gilan province is aware that non-probability sampling, sampling is available between all branch banks guilan province. Information collected using standard questionnaires and field method was actually used. SPSS.19 software for data analysis regression techniques were used to test research hypotheses. Hypotheses indicate that the effects of intellectual capital and its dimensions on the financial performance of banks is a positive and significant Gilan Province.

Tan and colleagues (2007) in a study to investigate the relationship between intellectual capital and financial performance of 150 companies from Singapore's stock exchange between 2000 and 2002. The results in the different sectors was significant. Including the intellectual capital and financial performance of these companies are so significant positive correlation. The company's future performance, as well as intellectual capital and intellectual capital growth rates were positively associated with firm performance. On the other hand, the share of intellectual capital in companies' performance varied by industry.

Kayvng Ting and Lin (2009) examined the relationship between intellectual capital and financial performance in the period 2007-1999 in Malaysia's financial institutions. Factor analysis showed that the intellectual added value and return on assets is a significant positive relationship. Also, the efficiency of capital and human capital there is a significant positive relationship Bakar taken with profitability, while a negative effect on the profitability of structural capital efficiency.

there was a positive correlation with company performance and financial sectors of the Malaysian market value taken by invested capital (physical and financial) to the creation of intellectual capital.

Zgal and Malvl (2010) to the effect of intellectual capital on economic performance, financial and Great Britain's stock market into three industry groups (hi-tech industries, traditional industries and service industries) is divided. ROA as an indicator of financial performance, the ratio of market value to book value of net assets Total assets as an indicator of stock market performance and the ratio of operating income as an indicator of economic performance were completely sold. Financial leverage and control variables include firm size was used. Multiple regression analysis revealed a positive correlation between economic performance and significant intellectual added value factor there. Also, the rate of value added intellectual capital and financial performance and there is a significant positive relationship. The relationship between intellectual capital and value added factor of a company's stock market performance is positive and significant only for high-technology industries. The rate of value added intellectual capital to financial performance and stock market performance has taken a positive and significant relationship was observed.

Fryha and colleagues (2012) examined the relationship between intellectual capital and the Government of Malaysia's largest companies. The results of their study showed that large companies are Malaysian government or the importance of intellectual capital in their own organizations. The results showed the importance of all aspects of intellectual capital, intellectual capital, so that all three subsidiaries, had a positive correlation with company performance and investor relations as part of the intellectual capital, the strongest correlation with the performance of large state-owned companies.

Karim et al (2014) in a study as intellectual capital and its impact on the performance of banks: evidence it is Saudi Arabia's banks: study intellectual capital (IC) performance of listed banks in Saudi Arabia using the principles of value added intellectual coefficient the effect of intellectual capital on financial performance is assessed. However, when using value added intellectual coefficient (VAIC) is divided into two parts: the relationship between these components and the bank's financial performance indicator changes.

Conceptual Model Research

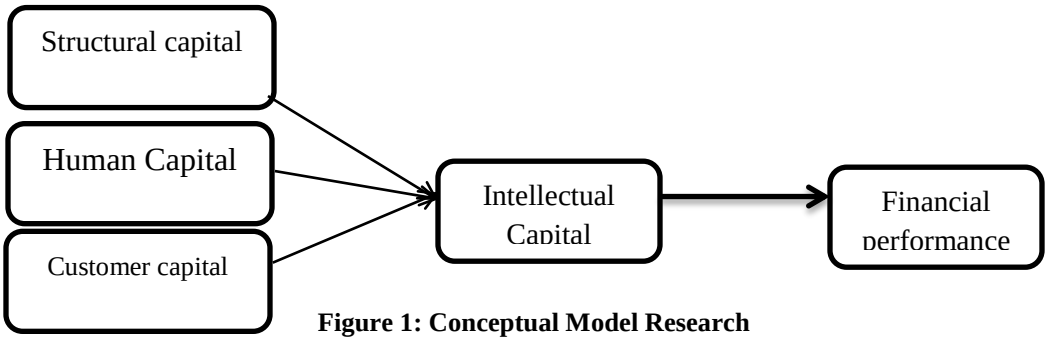


Figure 1: Conceptual Model Research

Research Methodology

The research method in terms of purpose because the results can be applied in practice, And in terms of descriptive-survey method, as we review the situation with no manipulation, the data collected will be used after events and panels Mehr Bank economic. Or can detect objects that can be shared by one or more attributes considered together, are constituting a population. The population of this study included all branches economic Kohgiluyeh and Boyer seal is a total of 8 branches. During the period 1389-1394 financial statements have been collected. To determine the total sample as the sample population studied.

Model and variables

Pattern value added intellectual coefficient based on several stages. In the model begins by calculating the Bank's ability to create added value VA. VA difference between the value of outputs and inputs company that has shown the following equation:

$$VA = OUT - IN$$

Depreciation - cost of goods and services sold - total revenue

Output (OUT) total income and gains resulting from the sale of goods and services in the market demonstrates and applies to all products and services sold on the market. Inputs (IN) also earn the expenses that come into existence except labor costs are included. It is important to note that in this model, human resources is seen as a key source, in this case the payment is considered as an investment rather than a cost factor. In other words, employees who participate in the knowledge and skills valued by the market, investing. In fact, your company or organization with paid labor in the effort, creativity, loyalty and competence invests (Pulic, 2004). Therefore, a key aspect in the work force as a role model Pulic available input value that does not fit in.

Second, the relationship between value added and human capital to be taken. As noted, labor costs, the wages paid to employees of capital and human resources.

Labor costs HC = VAHU = VA / HC

VAHU shows that for every unit of money compensation, what the added value is created.

Further information required, the share of structural capital (SC) to create value in a period. According to, structural capital, human capital is equal to the value added minus. When the share capital is increased, the structure of the added value that human capital is reduced. HC lower share in value creation, increasing the share of SC. It has also been demonstrated in empirical studies (Pulic, 2000). The research has shown that traditional industries in sectors such as heavy industry and mining industries, VA slightly larger than the HC and comes with a small part of SC's. In contrast, the pharmaceutical industry and security, investigators found that awful entirely different situation. In these areas, only 25 to 40 percent of the total value of HC's main contribution was the creation of the SC is. In some cases where VA is lower than the investment in HC, SC realized either.

Third, the relationship between VA and structural capital is taken due to the fact reverse HC and SC, will be calculated so different, because if the SC as well as the method of calculating human capital efficiency (VA / HC) calculation, a non-sequitur When we won. This means that the development of human capital and structural capital efficiency means the efficiency loss would be impossible because it is logical that the capital efficiency of both HC and SC together to increase the efficiency of intellectual capital (Pulic 2000).

SCVA factor in creating new value shows the share of SC.

SC = VA - HC

SCVA = SC / VA

In the next step, the efficiency of intellectual capital (ICE) by adding human capital and structural capital efficiency can be achieved.

ICE =VAHU +SCVA

The role of intellectual capital efficiency or ICE to work knowledge and knowledge workers, as the role of labor productivity is iodine and manual workers. VA is caused by physical capital, financial and intellectual capital. The goal of any business is obvious; to create more added value as much as possible through a certain amount of capital at our disposal are physical, financial and intellectual. Therefore, the result of the value-added business, the resources used in physical capital, human capital, structural capital and business performance in order to create value is created for each source. After gaining holistic view of resource efficiency to create value, it is necessary to also count as physical and financial capital because this resource position of influence in the new economy should not be underestimated. In fact, intellectual capital can create value, not owned resources and physical capital performance information thus captured is needed.

After the next step, the relationship between value added and physical capital is taken.

The company's total tangible assets CA = VACA = VA / CA

VACA shows that physical capital per unit captured what the new value is created. When a group of companies are compared with each other, VACA as an indicator of the ability to participate in physical capital is to harness better.

Indices VACA, VAHU and SCVA criteria that are objective and accurate information derived from the balance sheet. They will be able to manage the performance of key sources of capital and intellectual capital value creation to the visualization is taken.

At the final stage to measure the overall efficiency of value creation, three indexes are summed up:

Value added intellectual coefficient (VAIC) = VAHU + SCVA + VACA

data analysis

Check heterogeneity of variance

In this test the hypotheses are defined as follows:

H0: the homogeneity of variance

H1: heterogeneity of variance

Using the statistic F (Fisher) can be easily judged to be the model, dissonance or not. This means that if the probability of statistic F (Prob (F- Static)) More than the error level (alpha), the hypothesis H0 is accepted and thus the homogeneity of variance will be accepted. In contrast, if the condition is met and to fix its inconsistency model can be generalized method of least squares (GLS) used.

To check for heterogeneity of variance of residuals, the white test ((White is used. The results of variance heterogeneity White, is as follows:

Table 1: Test results dissonance White

probability	value	Description of the
0.00000	62.45587	F-statistic
0.00000	232.1854	Obs*R-squared

According to the statistics of this test is significant at the 5% level, so the assumption of homogeneity of variance was rejected and heteroscedasticity of residuals will be accepted.

This is due to the assumption of violation. Such problems may cause the results of OLS regression is not the most efficient. To fix the problem of generalized method of least squares is used.

F test test Hausman

F test to test the equality of different grades and intercept coefficients Hausman test also In order to explain fixed effects model and random effects estimate that between these tests are shown in Table 2 and 3.

Given that the F-Limmer test p-value obtained is equal to zero, the null hypothesis is rejected (p-value ≤ 0.05) and panel data methods accepted. F-Limmer to test the null hypothesis and the alternative hypothesis is as follows:

Ho: panel approach

H1: Panel data

Table 2: F Limer test

F-Limmer statistics	p-value
5.85	0.00

According to the obtained p-value equal to zero is the Hausman test, the null hypothesis was rejected Hausman test (p-value ≤ 0.05) and fixed effects approach is acceptable.

The null and alternative hypothesis for the Hausman test as follows:

Ho: random effects model

H1: fixed effects approach

Table 3: Test Hausman

Hausman test	p-value
65.28	0.00

To test the hypotheses using panel data regression analysis was used to summarize the results using software Eviews, is given in Table 4. In other words, the following relationship is tested.

Table 4: Results of regression

The level of significance	Type of Relationship	p	T-statistic	Standard error	Coefficient	The independent variable
٪95	Significant positive	0/0000	7/630339	0/009991	0/076232	Return on assets
٪95	Significant positive	0/0050	2/821693	0/172971	0/487072	Economic Value Added
–	Meaningless	0/8983	-0/127871	0/198095	-0/025331	Value added intellectual coefficient
٪95	Significant positive	0/0030	2/984385	0/173745	0/518522	Intellectual capital efficiency
٪95	Significant positive	0/0000	4/841540	0/083271	0/403161	Relational capital efficiency
٪95	Significant positive	0/0000	4/751639	0/083956	0/398928	Human capital performance
٪95	Significant positive	0/0000	4/458154	0/026170	0/116669	Structural capital efficiency
A camera - Vatsvn D-W	The probability statistic F	F statistic	Deviation from the mean regression	Adjusted coefficient of determination	The coefficient of determinatio n	
1.952147	0.000	8.401257	0.632018	0.625412	0.852145	Weighted statistics
1.965844	-	--	--	--	0.286875	No statistics Weight

According to the results of the test model as Table 4.5, it is observed that the P-Value of the statistic F (prob (F-statistic)) which indicates the significance of the regression analysis, 0.000 times, and indicate that the model is significant at the level of 95%. Adjusted coefficient of determination R2 is equal to 0.625412 indicates that approximately 62% of the variability can be explained by independent variables Which represents a good explanatory power of the regression.

Reviews and test hypotheses.

Hypothesis 1: between intellectual capital and financial performance of the economy Kohgiluyeh and Boyer-Ahmad Bank¬ October there is a significant relationship.

As can be seen in Table 4, variable coefficient significant number of intellectual capital equal to 2.98 and 0.005, respectively. According to the statistic t and p-Value of this variable, the results showed a significant factor in the level of 5 percent.

hypothesis 1-1: between human capital and financial performance of the economy Kohgiluyeh and Boyer-Ahmad Bank¬ October there is a significant relationship.

As can be seen in Table 4, the coefficient of the independent variable of human capital, equal to 4.75 and the number of 0.0050 is significant. According to the statistic t and p-Value of this variable, the results showed a significant factor in the level of 5 percent. These findings indicate that human capital and financial performance of the economy Kohgiluyeh and Boyer-Ahmad Bank¬ October there is a significant positive relationship and thus assume first sub-study hypothesis H1 is accepted.

Hypothesis2-1: between capital structure and financial performance of the economy Kohgiluyeh and Boyer-Ahmad Bank¬ October there is a significant relationship.

As can be seen in Table 4, the coefficient of the independent variable significant number of structural capital equal to 4.45 and 0.0050, respectively. According to the statistic t and p-Value of this variable, the results showed a significant factor in the level of 5 percent. These findings show that the capital structure and financial performance of the economy Kohgiluyeh and Boyer-Ahmad Bank¬ October there is a significant positive relationship and thus assume first sub-study hypothesis H1 is accepted.

Hypothesis3-1: between customer capital (communication) with the bank's financial performance Kohgiluyeh and Boyer-Ahmad Mehr economy there is a significant relationship.

As can be seen in Table 4, the coefficient of the independent variable customer funds (communication) is equal to 4.84 and 0.0050 is a significant number. According to the statistic t and p-Value of this variable, the results showed a significant factor in the level of 5 percent. These findings indicate that customer funds (communication) with the bank's financial performance Kohgiluyeh and Boyer-Ahmad Mehr economy there is a significant positive relationship and thus assume first sub-study hypothesis H1 is accepted.

Conclusion

After evaluating the intellectual capital index and its components using value added intellectual capital model (VAIC) provided by Pulic, their impact on financial performance indicator defined in this study were tested using regression analysis revealed that all three indicators intellectual capital on the bank's financial performance has a direct relationship are stamped economy.

Can pay more attention to intellectual capital in organizations and understand the importance and impact of these factors on overall organizational performance And has positive effects in the process of value creation in organizations as a factor in improving the financial performance of organizations advised. Since the study of human capital as a key factor in determining the role of intellectual capital, Providing a competitive edge in order to determine the level of employee salary, greatly increases the efficiency of your research paradigm.

The findings similar foreign research results, such as research and Malvl Zgal (2010) to the effect of intellectual capital on economic performance, financial and stock markets Great Britain, as well as with the results of your research and co-workers (2007), which examines the relationship between financial performance and intellectual capital firms also corresponded to the Singapore stock exchange was paid. On the other hand, the results of this research study, Salehi and colleagues (1393) Khaza'i lankarani et al (1394) also agrees.

Based on the results of the test research hypotheses and taking into account the importance of recommendations in relation to the subject as provided below:

According to the first hypothesis suggested that greater attention and emphasis on intellectual capital in the Bank and recognize the importance and impact of this factor function Bank-and its positive impact in the process of value creation in banks as a factor in improving the financial performance of the bank advised.

According to the second hypothesis suggested that the focus on structural capabilities of employees and the time they become strategic alliances Daily programs will need to be redefined capabilities in a way that preserved and integrated into personal skills and competencies.

According to the third hypothesis is proposed that a structure should be created where intellectual capital is constantly updated. Measures and criteria must somehow be related to organizational strategy to ensure the success of these traditional criteria (economic) and intangible criteria (people think) well.

According to the fourth hypothesis is proposed that the organization should be effective procedures for staff activity providers and customers outside the organization to be applied. This will create educational opportunities with a view of the value chain and suppliers, employees and customers as a group-specific value chain.

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