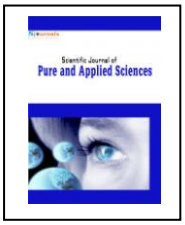
Sjournals
Scientific Journals
Scientific Journal of Pure and Applied Sciences (2013) 2(12) 379-385
ISSN 2322-2956
doi: 10.14196/sjpas.v2i12.1105

Contents lists available at Sjournals
Scientific Journal of
Pure and Applied Sciences
Journal homepage: www.Sjournals.com



Original article

Investigate the relationship between intellectual capital and company performance (Dairy Industry of Kermanshah Province)

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ARTICLE INFO

Article history:
Received 09 December 2013
Accepted 25 December 2013
Available online 31 December 2013

Keywords:
Intellectual capital
Company performance
Dairy industry
Kermanshah province

ABSTRACT

The purpose of present study was to examine the relationship between intellectual capital and company performance in the dairy industry of Kermanshah Province. Therefore, the present study methods, is descriptive - survey of correlation type and in terms of purpose is applied research. The statistical population is including managers and employees in the dairy industry of Kermanshah Province. That their numbers is about 180, 120 people were selected by using Cochran formula. To collect data is used a questionnaire of 34 questions (Intellectual Capital (15 questions), company performance (19 questions)) and Cronbach's alpha showed that reliability of the first and second questionnaire were determined respectively 0.83 and 0.81. In addition, for the validity has been used opinion of three of the professors in this field. Data analysis utilizes SPSS software and was performed in two parts of descriptive and inferential statistics (correlation) and the results showed that intellectual capital (human, structural and relational) and company performance (nonfinancial and market) have a meaningful relationship together. Also, there is no significant relationship intellectual capital (human, structural and relational) on company performance (financial, product and customer).

1. Introduction

Knowledge is the main core of production and human growth, as the power of production society, is based on knowledge and establishment based on thinking. However, the current evaluation system do not have the ability to calculate and measure the knowledge given its prominent role in evaluating the performance of business units, so lack of ability to calculate and measure it, can lead to irrational decisions for investors. Managers' optimistic view of the nature of the staff to encourage them will be investment to upgrade staff skills and grow their capabilities. Organizational intellectual capital, indicate technologies, and other mechanisms that will help staff to generate revenue for the company (Isaac et al, 2010). So in order to improve product performance and new products is important intellectual capital in the organization. Hence, organization management is always consideration into this matter. In other words, it is no doubt that in the twentieth century we witnessed some changes in the value creation process by companies. Extension of Powerful technologies, communication systems fast, fast access to the Internet and globalization, is some of changes that present in this century if want to improve the quality of life should apply them (Arenas, 2008). During the Industrial Revolution and until recently creating value in business is achieved principally through the effective use of physical resources. So Nowadays is increasingly values in organizations are achieved through the technical use of human factors and relatively obvious factors such as brand or information systems. It is defined the production value of this new resource as general knowledge. The significant point is that knowledge is a notion that has always existed, but recently, these assets have been introduced as the main creator of value, (Stewart, 1997). According to his theory, there are two main reasons for this change in attitude:

- Increasing competition resulting from globalization and the rise of privatization
- Emerging new information systems and technological advances

Knowledge of doing the work of an organization are named by various titles among these, the most common names that appear are the titles of intangible assets and intellectual capital. Due to, many use the two words are known synonymous them but in fact intellectual capital should be considered as a subset of intangible assets. In other words, there are intangible items that are not logically part of the intellectual capital of an organization. Famous of an organization is example of it. Famous of an organization is may be a byproduct or result the rational application of intellectual capital of an organization, but cannot be considered part of it. From the past time, the distinction between intangible assets and intellectual capital has been unclear. Intangible assets called "goodwill" (A.P.B 1970; A. S.B. 1997) and intellectual capital have been considered as part of goodwill. More recently, a number of contemporary classifications, the distinctions, is adjusted particular, by dividing the spheres of intellectual capital to external capital (customers), internal capital (structural) and human capital among which can be refer Sveiby, 1997 and Ross et al, 1997. Word of intangible assets, had roots in accountants terminology, and word of intellectual capital, mostly related to management (Oliver, 2008). This term (intellectual capital) by Stewart (1991) as well as the word has been used as a synonym for intangibles. The reason for calling this term as a capital because of it has economic roots, because in 1969 by economist named Galrayt was introduced as a process of value creation and also as a set of assets (DeCastro et al, 2008). Too much emphasis and attention to the intellectual capital reflects fundamental differences between companies, which operate in new and old economy. In old economy market value was based on physical assets, while in new economy, value arise through the use of intellectual capital of company and knowledge. The emergence of the knowledge economy has led to the ending the era of the relative importance of tangible assets and followed of it, a new paradigm was formed that much attention to intellectual capital and knowledge could be seen in it (Zhou, 2003). In this age with the rapid development of global economy, intellectual capital, which be represents the company's core assets (such as structures, processes, systems, culture, brand, competencies and communication with customers) has become Into a vital stimulus to sustain a business in today's competitive environment and the role of physical resources is limited to support those assets. In the knowledge economy, knowledge is include, much of the value of the product and the value of company as well as the vast bulk of the major and important resource in a company Innovation processes and develop new products that is considered essential to the survival of an organization, and maintaining competition ability in the economy is obtained from result of intellectual capital. Therefore, in this study is looking for that identified elements of intellectual capital of food production companies (dairy industry), of Kermanshah province and examine their effects on company performance in order to improve the performance of new product development deliver important information that are about it to decision makers and strategists the company. In other words, the researchers in this study sought to answer this question, whether

is there a significant relationship between the intellectual capital and food production company performance (dairy industry) of Kermanshah with each other? Or not. Countless studies in relation to research subject done at country and abroad that the numbers of these studies are mentioned below: Zanjirdar et al (2012) examined the relationship between intellectual capital and capital market performance in Iran. Results showed there is a significant relationship between intellectual capital and market performance. Sinai Hasan Ali et al (2011) investigated the relationship between intellectual capital and company performance in Tehran Stock Exchange. Results based on data collected from 26 manufacturing companies with high tech, and 26 manufacturing companies with low tech showed that both variable of capital of innovation, and customer have a significant positive relationship with financial performance, However, another significant result was that intensity of the relationship between innovation capital wit performance in high technology companies are not more than low-tech companies. Abbasi and Goldie Sedghi (2010) paid to examined the effect of intellectual capital on the financial indicators of companies in the Tehran Stock Exchange. Results of the least square method showed the coefficient of performance of each of the elements of intellectual capital had a positive and significant effect on the rate of return on equity. The impact of physical and human capital efficiency coefficient on earnings per share is positive but impact of structural capital efficiency coefficient was negative and significant. The impact of human capital efficiency coefficient, on it was negative and significant. Also the results showed that companies that have higher intellectual capital have better financial performance. In addition, the mean coefficient of intellectual capital between the 7 industries was significantly different. Khaef Elahi and Shahaei (2010) paid to examined the effect of intellectual capital on performance in Tehran's Sepah Bank branches. The results showed that intellectual capital has effect on the performance of the Bank branches. Abdulai et al (2012) examined the intellectual capital and company performance in software companies in West Africa. The results showed a significant relationship between intellectual capital and company performance together. Clarke et al (2011) examined the relationship between intellectual capitals with company performance in Australia. Results showed a significant relationship between intellectual capital and company performance together. Kehelwalatenna and Gunaratne (2010) examined the relationship between the intellectual capitals with performance of company in the Colombo Stock Exchange. Results showed a significant relationship between intellectual capital and company performance together.

According to the above research hypotheses are as follows (We reminder, that assumption of this study, with each side has been measured separately):

1. There is a positive and significant relationship between human capital and Company performance (financial, non-financial, product, market and customer).
2. There is a positive and significant relationship between structure capital and Company performance (financial, non-financial, product, market and customer).
3. There is a positive and significant relationship between Relational capital and Company performance (financial, non-financial, product, market and customer).

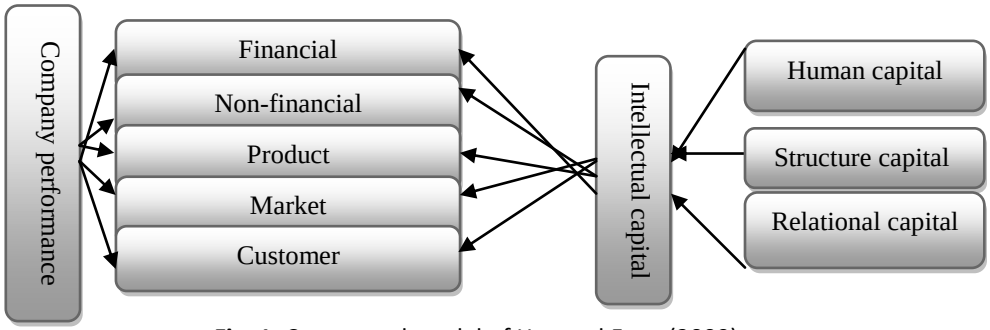


Fig. 1. Conceptual model of Hsu and Fang (2009).

2. Materials and methods

The study was descriptive - survey of correlation, including applied research. For Literature section was used _ library method and to test the hypotheses, a questionnaire of 34 questions Hsu and Fang (2009) (Intellectual Capital (15 questions), company performance (19questions)) that has been designed with a Likert. 3 opinions of teachers and specialists was used to determine validity of the questionnaire and to determine the reliability of the

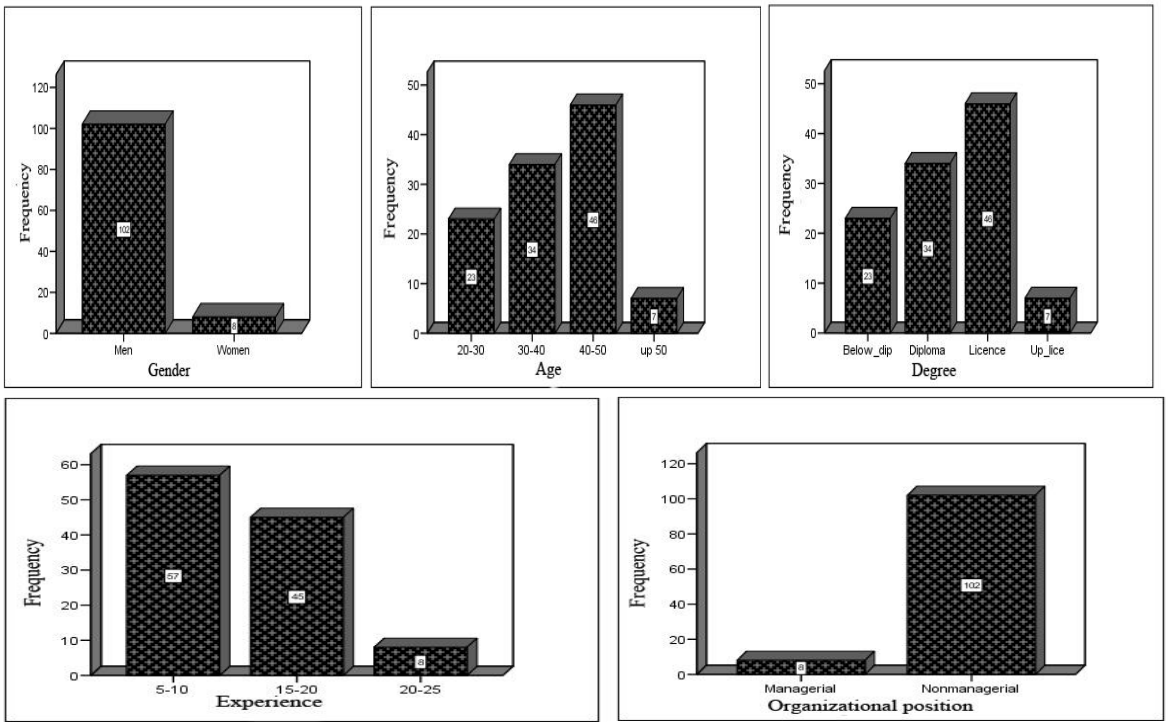
questionnaire, Cronbach's alpha test 0.83 and 0.81 respectively, obtained for intellectual capital and company performance. Kalantari, (2012) SPSS software was using for statistical data analysis in order to investigate the relationship between the hypotheses using Pearson correlation. The statistical population is consisted of 180 managers and employees of dairy industry of Kermanshah province, which uses Morgan table, were selected 120 subjects as the sample.

3. Results and discussion

In this study for analysis the research hypotheses were used SPSS software and descriptive statistics test the results are shown in Table No.1 and Figure No. 2.

Table 1
Descriptive Statistics of research community sample.

Specificity	**Group (percent)**			
Gender	Women (0.7)		Man (0.93)	
Age	20-30 years (0.21)	30-40 years (0.31)	40-50 years (0.42)	More than 50 (0.6)
Degree	Below diploma (0.21)	diploma (0.31)	Bachelor (0.42)	Bachelor or higher (0.6)
Experience	5-10 (0.52)	15-20 (0.41)	20-25 (0.7)	
Organizational position	employees (0.93)		Manager (0.7)	



H_0: There isn't a positive and significant relationship between human capital and Company performance

H_1: There is a positive and significant relationship between human capital and Company performance

H_0: $\beta = 0$

H_1: $\beta \neq 0$

Human capital and financial performance of company, according to the indicators relating to the test shows

t= -0.26, P<0.05, β= -0.70, according to the index of in 0.95 confidence level H0 assumption is not rejected (t <± 1.96).

Human capital and non-financial performance of the company, according to the indicators, relating to test shows the value of t= 2.05, P<0.01, β= 0.7, according to the indicators in 0.99 confidence level, H0 assumption be rejected.

Human capital and product performance of company, according to the indicators relating to the test shows t= -0.41, P<0.05, β= -0.01, according to the index of in 0.95 confidence level H0 assumption is not rejected (t <± 1.96).

Human capital and market performance of the company, according to the indicators, relating to test shows the value of t= 3.18, P<0.01, β= 0.31, according to the indicators in 0.99 confidence level, H0 assumption be rejected.

Human capital and customer performance of company, according to the indicators relating to the test shows t=0.65, P<0.05, β=0.02, according to the index of in 0.95 confidence level H0 assumption is not rejected (t <± 1.96).

The findings obtain of the Second hypothesis of investigation indicate that:

$$\begin{cases} \mathbf{H_0}\text{: There isn't a positive and significant relationship between Structural capital and Company performance} \\ \mathbf{H_1}\text{: There is a positive and significant relationship between Structural capital and Company performance} \end{cases} \quad \begin{cases} H_0: \beta = 0 \\ H_1: \beta \neq 0 \end{cases}$$

Structural capital and financial performance of company, according to the indicators relating to the test shows t= -0.26, P<0.05, β= -0.1, according to the index of in 0.95 confidence level H0 assumption is not rejected (t <± 1.96).

Structural capital and non-financial performance of the company, according to the indicators, relating to test shows the value of t= -3.79, P<0.01, β= 0.36, according to the indicators in 0.99 confidence level, H0 assumption be rejected.

Structural capital and product performance of company, according to the indicators relating to the test shows t= -0.37, P<0.05, β= 0.02, according to the index of in 0.95 confidence level H0 assumption is not rejected (t <± 1.96).

Structural capital and market performance of the company, according to the indicators, relating to test shows the value of t= 4.24, P<0.01, β= 0.50, according to the indicators in 0.99 confidence level, H0 assumption be rejected.

Structural capital and customer performance of company, according to the indicators relating to the test shows t= -1.65, P<0.05, β=0.07, according to the index of in 0.95 confidence level H0 assumption is not rejected (t <± 1.96).

The findings obtain of the Third hypothesis of investigation indicate that:

$$\begin{cases} \mathbf{H_0}\text{: There isn't a positive and significant relationship between Relational capital and Company performance} \\ \mathbf{H_1}\text{: There is a positive and significant relationship between Relational capital and Company performance} \end{cases} \quad \begin{cases} H_0: \beta = 0 \\ H_1: \beta \neq 0 \end{cases}$$

Relational capitaland financial performance of company, according to the indicators relating to the test shows t= -0.26, P<0.05, β= 0.70, according to the index of in 0.95 confidence level H0 assumption is not rejected (t <± 1.96).

Relational capitaland non-financial performance of the company, according to the indicators, relating to test shows the value of t= 1.97, P<0.01, β= 0.23, according to the indicators in 0.99 confidence level, H0 assumption be rejected.

Relational capitaland product performance of company, according to the indicators relating to the test shows t= -0.41, P<0.05, β= 0.01, according to the index of in 0.95 confidence level H0 assumption is not rejected (t <± 1.96).

Relational capitaland market performance of the company, according to the indicators, relating to test shows the value of t= 0.23, P<0.01, β= 0.01, according to the indicators in 0.99 confidence level, H0 assumption be rejected.

Relational capital and customer performance of company, according to the indicators relating to the test shows t= 0.65, P<0.05, β=0.02, according to the index of in 0.95 confidence level H0 assumption is not rejected (t <± 1.96).

4. Conclusion

Specific economic conditions governing on active companies have caused to the competitive advantage of companies not the longer based on tangible assets. Something that nowadays is competitive these companies in the current economic scene are invisible assets and In other words their intellectual capital. Such companies with appropriate communication with customers, and gain the necessary experience in this way and relying on knowledge, organizational technique and their professional skills have been able make it happen. Because today, sustainable profits are achieved when the firstly organizations learn ways to acquire knowledge and secondly, managing these knowledge with the help of existing process in knowledge management has convert intellectual capital. When the industrial economy is moving towards knowledge economy, companies will be face with great challenges such as dynamism uncertainty and complexity. In such a business environment will increase need to learn more about intellectual capital and control them. The high Importance of this issue has led to the companies was greater efforts to identify its intangible assets and in one hand appropriate manage of them. Generally should be said that the new developments in the economy, globalization and its consequences led to considered companies performance more than ago. And because the intellectual capital is a new issue which is theoretically in the last few years has been proposed in global level. So that it is considered valuable resource for countries, organizations and companies, because rate of growth and develop it, is rapidly becoming an indicator to brown field development of countries. On the other hand, this intangible resource have been proposed as one increases the value of the company's resources, and key investment in entrepreneurial growth, perhaps that is why the need to develop and manage intellectual capital has become as a serious obligation on the national level and in the business arena With moving towards knowledge-based economy has led to change the dominant paradigm of industrial economy. So that can be witnessing the emergence of information and knowledge economy that basis of it is based on centered of intellectual capital.

In a simple sense, perhaps can Considered intellectual capital as a knowledge package consists of a set of intangible and hidden resources , principles, culture, behavior patterns, capabilities, competencies, structures, communication, processes and processing leading to / resulting from knowledge. Because, today, we are seeing the growth importance of intellectual capital as an effective tool is essential for enhancing the competitiveness of companies. In other words, intellectual capital measurement to compare different companies is determine their real value and even improve controls of them and totally, is essential companies' performance, according to the above, the researchers were also looking for the answer to the question whether the significant relationship between intellectual capital and company performance. The results showed that intellectual capital (human, structural and relational) only with performance of Company (nonfinancial and market) has a significant relationship. And intellectual capital (human, structural and relational) on company performance (financial, product and customer) has no significant relationship. This research is consistent with studies that have performed by Zanjirdar et al (2012); Abdulai et al (2012); Sinai Hasan Ali et al (2011); Clarke et al (2011); Abbasi and Goldie Sedghi (2010); Khaef Elahi and Shahaei (2010); and Kehelwalatenna and Gunaratne (2010).

Acknowledgment

This research was financially supported by the Eslamabad-e-Gharb Branch, Islamic Azad University and we would like to thank them for sharing their insights and supports. Special thanks to Dear Management, Eslamabad - e-Gharb Branch, Islamic Azad University.

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