Research Paper

Investigating the Effect of Intellectual Capital on Performance of Islamic Azad University of Ghaemshahr Branch, Mazandaran, Iran

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Abstract
The world is moving forward from an industrial economy to a knowledge oriented economy fast enough. The present research project tries to investigate the effect of application of intellectual capital on performance of faculty of humanities of Islamic Azad University of Ghaemshahr Branch, Iran. By the arrival of information technology in the world economy and considering the importance of knowledge in society, the focus of economic researches have moved towards intangible assets such as relationships and organizational knowledge. In the past, tangible assets of an organization meaning those which were presented in the balance sheet of the company were considered as valuable assets of the organization but in information age, or knowledge age, intellectual power is more valuable than muscular, mechanical or even technical power. In this age, what leads to a more competitive advantage is nothing but intellectual capital and so its development is so vital for benefit making; it is the foundation stone of a knowledge oriented economy. The present research project tries to investigate the effect of intellectual capital on performance of faculty of humanities of Islamic Azad University of Ghaemshahr Branch, Iran.

Keywords: Organizational Performance; Intellectual Capital; Human Capital; Islamic Azad University; Ghaemshahr Branch

1. Introduction

Today's movement of economy towards knowledge-based industrial economy has led to paradigm change so that we can see emergence of information and knowledge based economy. The basis and foundation of such an economy are intangible assets and intellectual capital [1]. The organizational intangible and new assets are knowledge, competencies and skills of human resources, innovation, relationships with customers and suppliers, organizational culture, systems, organizational structure and software, patents and brands [2]. Intellectual capital allows managers to create, develop and maintain a source of competitive advantage that it does not easily get by competitors [3,4]. There are many organizations who have few fix assets but have intellectual capital and are so successful such as Google and Microsoft [2]. One of the places which is heavily depended on knowledge and shows great interest to intellectual capital is university. Universities are very innovative and are highly depended on research and intellectual capital as a source of renewal. Overally, Selection of universities for analysis the element of intellectual capital in this research that is Islamic Azad University, Ghaemshahr branch seems to be a good choice.

2. Literature review
Overall, organizational assets can be divided into two major categories:

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1) Tangible assets: physical and financial assets that are reflected in the balance sheet.

2) Intangible assets that are divided into two general categories:

- Intangible assets that are protected by law and It is referred to as intellectual property and are usually reflected in the balance sheet, such as patents, copyright,...

- Other intangible assets that named intellectual capital and are not reflected in the balance sheet [3,4], but consist 80 percent of the market value [5].

Much of the literature related to the intellectual capital stems from financial and accounting point of view [6]. Since it is difficult to identify and determine the value of intellectual capital, are not reported in many organizations, this has led to remain invisible to the outside world of the organization. Because intellectual capital does not reflect in the balance sheets easily, any organizations refuse to report it [7]. For this reason, many writers expressed the need to revise the system of traditional indicators that give more attention to financial indicators [1].

Intellectual capital often deemed to be synonymous with terms such as knowledge capital, knowledge economy and intangible assets [8]. Intellectual capital of an organization is intangible and subjective assets that organization can change it to new processes and create value. First attempt related to the intellectual capital due to the efforts of Fritz Machlap in 1962 but historically coined the term "intellectual capital" to know the name of John Kenneth Galbrayt in 1969 [1], but the new application of this phrase appears in 1990s [3,4]. Until yet there is not a definition of intellectual capital that is accepted by everyone. Much uncertainty in relation to understanding of intellectual capital stems from the fact that unlike in traditional accounting regime, it is not possible to add and subtract the value of intellectual capital and transfer value from one level of the corporation to another [1]. Thomas Stewart's definition of intellectual capital is:" a package of useful knowledge for the organization." Stewart in interpretation of the definition believes that components of this knowledge based package are organizational processes, technologies, exclusive privileges, staff skills and institutional customers and suppliers and stakeholders [2]. Russ and others believe that intellectual capital includes all processes that are not reflected in the balance sheet and also all intangible assets that considered in modern accounting [9]. Ulrich proposed a creative formula based on human resource management for intellectual capital and that is: commitment* merit [10].

By considering studies of Edvinson and Malon (1997), Sievi (1997), Roze and others (1997), Bontis (1999), Edonel and others (2004), intellectual capital includes cited in Diez (2010) [1]:

1) Human capital: human capital has significant share of total intellectual capital [11]. Human capital represents the stock of individual's knowledge in an organization such as professional skills, experiences and individual's innovation power [12]. This form of capital exits from the organization when people leave the organization [7].

2) Structural capital: Structural capital includes all non human- related stock of knowledge in organization and there is no threat in loosing this form of capital by leaving the organization such as vision, management philosophy, organizational culture, operational process, strategy, information system and everything that's worth is more than its material value [2]. According to Edvinson and Malon, structure capital could be considered as an infrastructure that will support and shape the human capital. Structure capital not only makes human capital stronger but also reveals organizational talent and competency for transfer and save capital components [1].

3) Customer/relational capital: this capital includes all assets that manage the relationships between organization and its environment and includes relationships with customers, suppliers, shareholders, competitors, community, government and regulatory agencies [12]. Despite of its importance, relational capital is not managed properly in the organization. Stewart believes that organizations even do not recognize their customers [13]. such relations are divided into two groups according to their goals:

a) The first group is those relationships that became formal through contracts and obligations with customers and suppliers or main partner's of the organization.

b) The second group consists of informal relationships [7].

In the academic context, human capital is knowledge of scientists and researchers. Structure capital is managing processes and common procedures in university and relational capital consists of relations and networks of the whole university.

3. Methodology

Research method in this research is survey and descriptive. The survey instrument is based on Bontis intellectual capital questionnaire. In this questionnaire the elements of intellectual capital are human capital, structural capital and relational

capital and each of the elements were operationalized with 10 items. The depended variable in this research is university performance. All items are measured by Likert 5- point scale. But given that the number of questions in this questionnaire is 100, researchers reduced them and responding to the questions will be easier. The number of questions was reduced to 42. The number of questions related to intellectual capital was 36 and number of questions related to university performance was 6. To assess reliability, a sample set of 10 questionnaires were distributed among community members and Cranach's Alfa was measured by using SPSS software. Cranach's alpha coefficient for the questionnaire using SPSS software, were calculated almost 0/957 and according to this reliability, is high. The Statistical Society in this research is professors of Faculty of human science in the University of Ghaemshahr.

The statistical community is 103 members and a questionnaire was distributed among all and 87 questionnaires were returned. Overall 71 questionnaires were usable. Data collection was by using library and field studies in this research.

3.1 Data analysis

In this study, for analyzing data, linear regression was used. Also Cranach's alpha was used to determine reliability. Results show that there is a significant relationship between human capital and performance and relational capital and performance.

4. Results

To test hypotheses version 17 of SPSS software was used. The results of this analysis are as follows:

Hypothesis (1): human capital has a positive and significant effect on performance.

Table1. Effect of human capital on performance.

Hypothesis	Depended variable	Depended variable	R	R Square	β standard	T test	Sig
(1)	Human capital	University performance	0.395	0.156	0.395	3.572	0.001

Based on these tests we can say that in the 0.05 significant level, human capital have a positive and significant effect on performance of the University of Ghaemshahr. Therefore, the first hypotheses in the 0.95 level is accepted.

Hypothesis (2): structural capital has a positive and significant effect on performance.

Table 2. Effect of structural capital on performance.

Hypothesis	Depended variable	Depended variable	R	R Square	β standard	T test	Sig
(2)	Structural capital	University performance	0.161	0.26	0.161	1.342	0.184

Based on these tests we can say that in the 0.05 significant level, Structural capital does not have a positive and significant effect on performance of the University of Ghaemshahr. Therefore, the second hypotheses in the 0.95 level is denied.

Hypothesis (3): relational capital has a positive and significant effect on performance.

Table 3. Effect of relational capital on performance.

Hypothesis	Depended variable	Depended variable	R	R Square	β standard	T test	Sig
(3)	Relational capital	University performance	0.383	0.147	0.383	3.422	0.001

Based on these tests we can say that in the 0/05 significant level relational capital have a positive and significant effect on performance of the University of Ghaemshahr. Therefore, the third hypotheses in the 0.95 level is accepted. Ranking elements of intellectual

capital and performance of the university Based on Friedman test, the priority component of intellectual capital is as follows:

Table 4. Ranking of elements of intellectual capital.

No	variable	Rank average	priority	Friedman	Sig	df
1	Human	1.83	3			
2	Structural	2.3	2	3.729	0.000	2
3	Relational	2.14	1			

Table 5. Ranking of elements of performance.

No	Variable	Rank average	priority	Friedman	df	sig
1	Future outlook	3.51	5			
2	Response to competition	3.61	2			
3	Successful performance	3.53	4	9.901	5	0.07
4	Employee productivity	2.99	6			
5	Induce in the number of students	3.76	1			
6	University leadership	3.59	3			

5. Discussion and Conclusion

The results of the priority of elements of intellectual capital are as follow: 1) relational capital, 2) structural capital and 3) human capital. These results show that faculty of human science of Ghaemshahr Islamic Azad University have intentioned more on issues such as communication with students, getting feedback and trying to meet the needs of their students those are belong to relational capita and later focused on issues such as intellectual property management, work processes and procedures, management of information systems those are belong to structural capita and finally focused on human capital that includes knowledge of scientists and university researchers, students and skills and competencies of staff . Therefore, we can propos suggestions based on priorities:

1. Relational capital development:

➢ Design and implement a program to improve relations with suppliers and university students,

➢ Measure satisfaction of students from provided services,

➢ Give Information to employees and professors of students needs,

➢ Getting feedback from students and publish these feedbacks in all units of the university in order to find information about the needs.

2. structural capital development:

➢ Efforts to develop appropriate reward systems suitable to performance to motivate staff and faculty professors,

➢ Design and implement plans for succession especially for high levels of the organization diarchy,

➢ Using the latest scientific achievements and give value to the research and researchers,

➢ Use from adequate procedures and strategies for the management of intellectual capital.

3. Human capital development:

➢ Design a framework for the competencies of staff and faculty professors that includes their knowledge, skills and abilities and design annuals plans to develop these competencies.

➢ Design plans and programs to encourage employees to express their opinions freely in group discussions and also develop the power of innovation and creativity of the staff.

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