



## Mutual Relationship between Intellectual Capital and organizational Behaviors in Public organizations in Sari

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**Abstract.** Nowadays, the intellectual capital is growing more and more to become one of the effective tools in increasing the competition between companies, and this issue has highlighted the significance of intellectual capital as the economical and research project. Intellectual capital consists of body of nonphysical values and cases like staff's capacities, existing sources inside the organization and operational accessibility, all affecting the competitiveness of organization. Based on organization sources, intellectual capital is one of the most important sources of organization. Nowadays, it can be claimed confidently that using the intellectual capital remedies can increase the power of competitiveness of an organization and distinguishes it from others. This solution enables organization to use the existing information of competitiveness advantage. On the other hand, intellectual capital is one of the cheapest tools for economic expansion with the best result and the most efficiency, and the necessary culture is very crucial in this respect, therefore, the necessary prerequisite is preparing the culture for that organization. This research has chosen 178 staff of public organization of Sari using random sampling and has assessed the intellectual capital by means Bontis model and organizational culture by means of Denison model. In this research two questionnaires with Cronbach %828 and %834 has been used.

**Keywords:** intellectual capital, Culture, the efficacy of structural capital, public organization

### 1. INTRODUCTION

Experts in the field of intellectual capital have agreed unanimously that intellectual capital can be divided to human capital, structural capital and relational capital. Intellectual capital can play a major role in creating the advantage of competitiveness and can improve the organization. But creating such a advantage needs suitable cultural background in organization that can support these capitals. This is an issue that can be turned a blind eye to it. Organizational culture is the prerequisite that can inform all the organization actions and can bring about success or failure. (Dension, 2000)

Therefore, organizational culture paly a decisive role in type of organization organizational culture is the leverage to improve the organizational behaviors (Monvariyan and Bakhtae, 1385). Lack of symmetry between cultural background and management of intellectual capital is the dire problem that poses a great challenge to organization at the age of information and knowledge.

The modern world is the age of wisdom and nowadays other fortunes and tangible and natural properties is not the key of success of organizations and communities. On the contrary, intellectual capital and true management that is the key ingredient to success in the challenging age we live in.

#### 1.1. Significance of the study

Nowadays, intellectual capital such as knowledge, experience, personal experience, good relationships and the technological ability is key advantage and it is the factor of making profits.

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Two factors increasing the quality of organization operation during the last two decades are globalization and changes in technology. In this environment, intellectual capital and the intangible asset are the key ingredients. In modern economical competition, knowledge-based assets provide essential competitive advantage. (Gregory R, Prifling m, beck r 2009)

The ever-increasing success and efficiency of a company or of an organization is dependent on knowledge and intellectual capital. It is possible to program and to control and to have constant supervision on companies and organizations by means of knowing essence, model, measurement methods, valuing intellectual capital (Godarzi and Gominiyan, 1381) the importance of supporting organizational behavior as the decisive factor is so much that many huge, successful organization like Nisan can gain remarkable success and prosperity by means of creating a sort of organization in order to manage and use this intellectual capital. (Kaufmann,. and Schneider ,2004)

### 1.2. Research Goals

1-2-1 main goal: stating the relationship between organizational culture and intellectual apital in the public organization in Rasht

2-2-1 the subsidiary goals

1. The determining the organizational culture factor and the way the affect intellectual capital in the public organizations in Sari.
2. Prioritizing the effect of organizational culture factors on intellectual capital in the public organization in Sari

## 2. LITERATURE REVIEW

### 2.1. Basics

### 2.2. Organizational Culture

So far many definitions have been offered in culture issue that adds up to 167 in he most famous encyclopedias. As a result, it is not possible to offer a thorough and complete definition that includes all the attitudes. But we can highlight the common elements in all of these definitions.

All in all, culture is the complicated body of emotional, physical and spiritual characteristics that is the factor of s society or social caste. This includes not only arts and literary works but also different forms of life, basic laws of human beings, beliefs and ethical systems. In other words, culture is a sort of issue that has significance among people in society and in their interactions and signifies the method of making relationship and interactions among people; the organizational culture is the result of mutual relationship that is made among prejudices and principles of founders and what has been taught at the beginning of their employment. (Gholeich, 1388) Basically, organizational culture has been originated from three springs:

First: beliefs, values, and founders' hypotheses

Second: experiences learnt by group members as the parts of organization through time

Third: beliefs, values and new hypotheses made new members and leaders.

The notion of “Farhnag” culture has been made of two parts of far and hangs in which far means up and front and hang means to intend. In terms of sociology in Iran, farhang is the Latin

equivalent of sowing and harvesting. It seems that in this definition, the notion of growth and edification can be mentioned as the goal of this ordered and united system. Therefore, culture is a sort of system which is made up of spiritual values such as values, rules, signs, beliefs, customs, knowledge and rife knowledge and material values including goods, tools, technology and cultural heritage that is common between members of a group or community or society that can be transferred from one generation to another (Panahi, 1375) and causes growth and edification in humans. On the other hand, from the perspective of lifestyle, we cannot separate it from job and the way it can be earned. Work and culture has mutual effect on each other. The widespread methods of earning affect the way people behave and interact with each other.

“Culture is the quality or suitable methods for those activities of materialistic and spiritual life that is stipulated by the way edified emotions and wisdom in their perspicacious part of life” (Jafari, 1379)

Daniel Denison (2000) has conducted a series of researches in the field of organizational culture and efficacy and in his own model has defined the characteristics of culture in this way: involvement, compatibility, and mission (Toosi, 1379).

Because Desnion model has been used as the pattern of organizational behavior in this research, some elements of this model will be analyzed as follows:



Diagram 1. Desnion model of cultural organization.

**Involvement in job:** Efficient organization makes their staff competent and efficient and develop the capacities of human resources at all levels. Members of organization are committed to their work and involve themselves as a part of the organization. Intense involvement in job signifies total mental preoccupation and as executive manager in a Korean firm has said that basically that the committed staff work body and soul in their job and do their best. This dimension can be measured by means of three factors:

Empowerment, team work, developing capacities

**Compatibility:** Researches have shown that efficient organizations are stable and united and staff’s conducts has originated from their fundamental values. Leaders and deciples has

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developed skills in their way to agreement even when they have opposite attitudes and organizational behaviors are coordinated well. Organizations with these features have strong culture and are different and general they can dominate their staff's behaviors. This dimension also has three factors:

Real values, agreement- coordination and solidarity

**Adaptability:** United organizations hardly change. Therefore, internal solidarity and external adaptability can be counted as a sort of advantage. Compatible organizations are not guided by customers, they take risks, they learn experience from their mistakes and they have the capacity and experience to change if necessary. These are improving their abilities to appreciate their customers. This dimension can be measured by three factors:

Creating change- customer orientation- growth and organizational learning

**Mission:** The most important feature of organizational culture is their mission. Successful organizations can grasp their goals thoroughly so that the organizational goals and strategic goals are defined clearly and open up the vista of that organization. The most troublesome ones have to change their missions. When an organization has to change its mission, changes in strategy, structure, culture and conducts are necessary. In this situation, leader defines and sets the vista and creates a new culture supporting the same vista. This dimension has three factors to be measured:

Strategy taking- aims and intentions- organizational vista

Besides, it must be said that learning the intercultural behavior creates deep awareness of our own culture. Understanding others' culture and the self in intercultural environments creates basis for computability and adaptability. (Gregory R, Prifling m, beck r 2009)

### 2.3. Intellectual capital

Traditional thought in a sort of economy based on measurement of sources and tangible assets that nowadays has been replaced with value making owing to intangible assets. Intellectual capital can include all the assets that are now shown in the balance sheet and this comprises of trademarks, inventions, privileges and human, structural superiority and environmental communications that are not reflected in financial bills. (Abasi, Goldi Sedghi, 1389) Expression of intellectual capital has been used by Fritze Machlab in 1962 and after that, John Count Gabliart has put forward in 1969. Before that Peter Draker has used the expression of knowledgeable workers. The first written work in this field has been published in Japan by Itami in the eighties (Namamyam and et al, 1390)

### 2.4. Notion of intellectual capital

It is necessary to understand the concept of intellectual capital before identifying, managing and measuring. From the perspective of management, capital is the body of human and structural capital such as knowledge, applied experience, organizational technology, relationship and expertise that can revive the organization in the market by creating competitive advantage.

Brooking believes that the intellectual capital is the expression to combine the intangible assets, intellectual assets, human assets and infrastructure assets empowering organizations for doing tasks and duties.

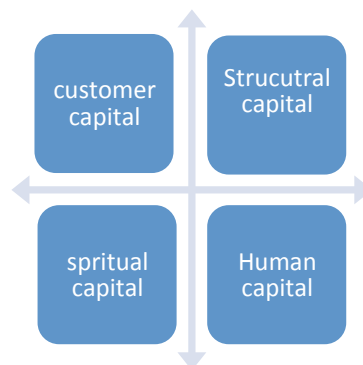
Intellectual capital is strategic sources enabling companies to operate better financially and to create competitive advantage, so regarding the role and importance of intellectual capital, it is vital to analyze its relationship with financial operation.

Because investing companies use fewer tangible assets than other firms in regard to the kind of activity and mission and rely more on intellectual capital. Therefore, this highlights the importance of study in the effect of intellectual capital on financial operations. Intellectual capital: are intangible assets that are made up of technology, customers' information, credit and organizational culture that is very crucial in respect to competitive power. Intellectual capitals are exogenous variables and organization performance is endogenous.

## 2.5. Types of intellectual capital

Human capital, knowledge and skill, work experience, abilities, job entitlement, work spirits, staff's loyalty, staff's satisfaction learning, innovation of relational capital, formal relationships, informal relationships, social network, partners, alliance and solidarity, trademark, trust, company fame, customers' loyalty, customers' obligation, customers' conditions, divisions of contracts, formal contracts, structural capital, organizational capital, values of a company, social values, management philosophy, process, habits, formal processes, informal processes, managing processes, intellectual assets, trade name, data and information, coded knowledge, inventions and copy right, trading secrets (Mehrmanesh and Amini, 1391)

The most widespread classification of intellectual capital divides it into three categories:



**Diagram 2.** The most widespread classification of intellectual capital

Human capital: it shows the existing knowledge of each of staff. Human capital is the origin of innovation and wisdom and perceptiveness. Human capital is the basis for intellectual capital and is the storage of knowledge that can be shown by staff. The possession of this kind of capital does not belong to companies and if some staff quit the organization, it is a sign of threat due to losing a part of its memory.

Staff can create intellectual capital by their intelligence and attitudes and this includes skills, education and the attitude that covers some parts of staff's behaviors.

Structural capital: this includes all the nonhuman resources of knowledge that consists of data basis and organization charts and instructions and strategies or everything else adding more value to the organization. Structural capital has been defined as something that at the time when staff returns home remains in the organization and has arisen from process and procedures in the organization. People may have high level of knowledge but if organizations have weak systems

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and procedures and people follow performance by this, the total potential power of intellectual capital will not release. Organizations with strong intellectual capital have supportive culture enabling people to experience new things, to learn, to lose.

**Structural capital** is a sort of knowledge that remains in the organization after staff leave. Staff can create structural capital, but at the same time these companies own these capitals. Besides, structural capital includes all the knowledge storage that are not made by the staff like organizational procedures, strategies, process guides and database.

**Customer capital or relational capital:** The main issue of Customer capital is the existing knowledge in market lines and its relationships with customers. Customer capital is indicative of the fact that potential capacity if an organization is dependent on clear external factors. In other words, Customer capital includes all the knowledge that exists in all relationships that organization can make with customers, competitors, trading counsels or governments. In fact, Customer capital consists of all the intangible sources within an organization related to the beneficiaries like the prestige, loyalty and satisfaction of customer or relationship with providers and the capacity of the negotiation. All in all, Customer capital is a bridge in intellectual capital process and the decisive factor in changing intellectual capital to market value, and as a result, to trading operation of the organization.

**Spiritual capital:** The notion of the spiritual capital remained ambiguous and there is only vast explanation about this. Spiritual capital is a new part of intellectual capital. Majority of essays in the first 150 years has concentrated on ethical entity as the basis of success such as honesty, modesty, loyalty, valor, justice and patience. The feature of ethical principles has shown that there are basics of effective life and people can touch the real success and learn to tolerate the events that happens are the learning tools and they have to live alongside of these principles. The basics such as justice, trustworthiness, honesty, trust and human esteem are the principles for guiding human behaviors and they are proved to the everlasting values rather than methods and values.

Recently, the issues of religion and beliefs have been highlighted in relation to grasping the spiritual capital and its dimension has been analyzed. For example, tangible qualities for social capital are power, emphasis, knowledge and production that are a series of religious formalities.

Spiritual capital can be defined in this way:

“Treasure that can help keeping mankind’s future and it is food that can preserve our body.”

Spiritual capital is a sort of particular capital and follows the religious capital. Spiritual capital

Can keep mankind and humanity and in fact edify human soul. Soul health deeply rooted in people can be used for lucrative business.

Spiritual capital is vital both for people and for organization and can affect the management method. Spiritual capital can make sure that the trading operations go according to compatibility with laws and standards improving organization performance.

Successful companies like Coca Cola, Starbox, Hewlett Packard are the examples of companies that has made a huge fortunes by putting into perspective the spiritual value.

## 2.6. Intellectual capital measurement

It is urgent that we calculate the intellectual capital because intellectual capital is becoming more and more important and due to being aware of intellectual capital of companies. Although measurement is difficult to be done owing to intangible asset, but this measurement will help to measure it and compare it with good and useful scope and to reach the ideal point, we should do the necessary action. Consequently, identifying intangible asset is necessary. Researchers in recent years have put forward various models to measure the intellectual capital that some of them measure it financially and some of them in a nonfinancial way. There are four various ways to measure from William's perspective (2002)

**Direct methods:** Is the estimation of money value of intangible assets or intellectual capital by means of identifying various elements that comprise this system. According to these methods, once the value of these elements will be calculated one by one and then the total value of various classifications is indicative of the asset value.

1. Methods of investment marketing (methods of creating investing market) (MCM): difference between market value (based on price of stocks) and salaries of stockholders that is reduced from the tax or replacement price can be perceived as the value of intellectual capital or intangible asset.
2. Methods of return on asset (ROA): calculation the average of net profits and its division by the average of tangible assets is the result of rate of return on asset that will be compared to industry average later. The subtraction of these two values will be multiplied by tangible assets to get the average of annual incomes of intangible assets. Afterwards, this average will be divided by rate of interest to get the estimation of intangible assets or intellectual capital.
3. The methods of scorecards (SC): these methods are achieved based on identifying the various elements of intangible assets or intellectual capital and factors and comparisons on the basis of scorecards and their reports in shape of diagrams. The difference between the four methods lies in their capacity to measure the intellectual capital financially or in nonfinancial way at macro level or micro level.

## 2.7. Reporting the intellectual capital

Disclosing information related to intangible asset and intellectual capital has been played up in recent years. The main goal of this reporting is providing useful information for the users of this information including stockholders and investors, financial investors, staff and other people. Reporting and revealing information of intellectual capital has great effects on beneficiaries' decisions inside and outside organization. In fact, revealing this information has bilateral effect. Information affects the users' understanding of market value and on the other hand, it affects the users' understanding of managers' decisions. Regarding the significance of intellectual capital on many companies, revealing and reporting the financial and non-financial information has been paid attention a lot.

In traditional accounting system, there are some limitation on reporting and revealing intellectual capital because most parts of intellectual capital cannot be reflected in the balance sheet and instead, the expense spent on intellectual capital must be considered as current expenditure in profit and loss bills. Knowing these expenditures can reduce the current expenditure and displaying the financial statue of organization. Nowadays, completing accountancy for intellectual capital or intangible asset is perceived as a necessity in such a way that there must be particular conceptual framework with accounting approach to development in order to tackle the problems of intangible assets. Besides, in setting accounting standards,

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measurements and reporting the dimensions of intellectual capital must be taken into consideration.

### 2.8. Reasons of paying attention to measuring the intellectual capital

There are some reasons put forward by Mar and et al to measure the intellectual capital:

Helping organization to create some strategies

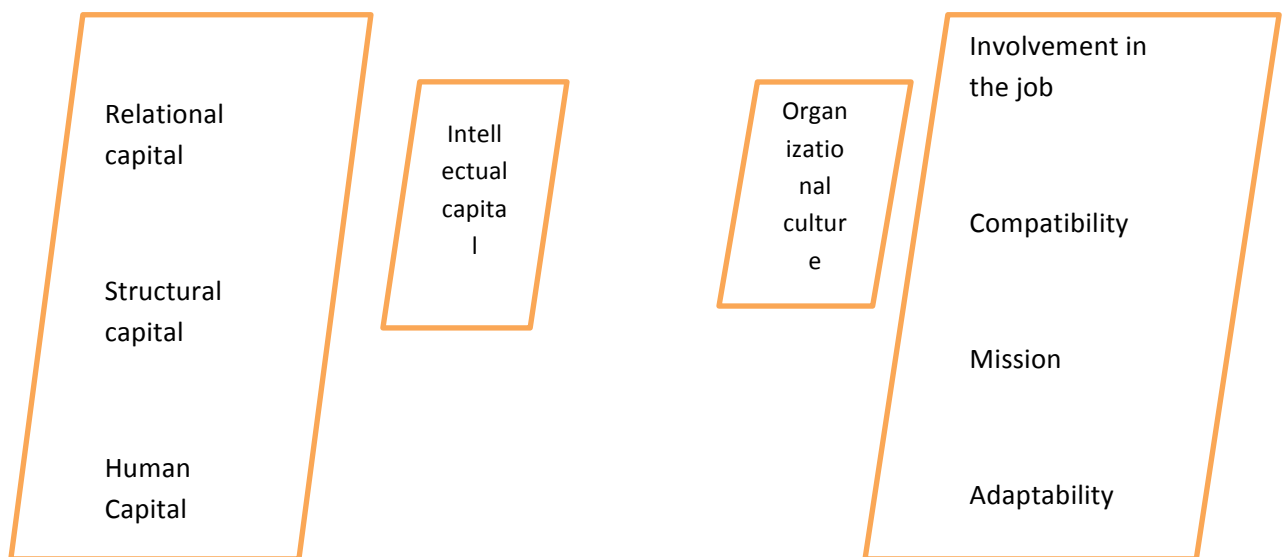
Evaluating the execution of these strategies

Helping to develop and diversify the organization activities

Use of results of measurements as a basis to compensate the services

### 2.9. Analytical model of the research

In this research, Denison model of organizational culture and Bontis model of intellectual capital has been used.



**Diagram 3.** Organizational culture (Denison, 2000) and intellectual capital (Bontis, 2004)

## 3. RESEARCH METHODOLOGY

The current research is practical and the researcher has used the field method. It can be counted as survey-descriptive research. In this research, the current conditions will be analyzed and we offer some solution to tackle the problems.



### 3.1. Statistical population and sampling method:

Statistical sampling of the research is a part of larger statistical population that can be set by determining the sampling volume (Delavar, 1374) and 178 persons has been put into consideration as a sampling by using random method.

### 3.2. Tools of gathering data, validity and reliability

Tools of gathering data are two standard questionnaires. In this research, to determine the tools of gathering information, the researcher has used the ..... For the reliability test of questionnaire, Cronbach has been used. This questionnaire has been distributed among 30 persons and then data has been gathered for the test and with calculating Alpha Cronbach, reliability has been confirmed. Cronbach for two culture and intellectual capital is %828 and %834

**Table1.** Calculation of alpha Cronbach

Variable	parts	Number of questions	Value of alpha Cronbach
Adaptability	Change	5	0.81
	Customer-orientation	5	0.83
	Organizational learning	5	0.98
Involvement in the job	Team work	5	0.97
	Development of capacities	5	0.89
	empowerment	5	0.88
Compatibility	Coordination and correlation	5	0.80
	agreement	5	0.81
	Fundamental values	5	0.82
Mission	Strategy taking	5	0.93
	Vista and prospect	5	0.85
	Aims and goals	5	0.91
Intellectual capital		36	%83

## 4. ANALYSIS OF DATA

In order to analyze the data got from the questionnaires, the researcher has used the statistical-inferential and statistical- deductive methods by means of software. Regarding the results of Smirnov test, the normalization of data has been proves (table2). Afterwards, at deductive level, the researcher has used Pearson and regression test.

**Table 2.** Results of Smirnov test to evaluate the normalization of data

Value	z	Level of significance	Results of normalization of data
Involvement in the job	1.70	0.400	Acceptance of the null hypothesis based on normalization of data
adaptability	1.66	0.087	Acceptance of the null hypothesis based on normalization of data
mission	1.57	0.093	Acceptance of the null hypothesis based on normalization of data
Compatibility	1.78	0.100	Acceptance of the null hypothesis based on normalization of data
Intellectual capital	1.53	0.300	Acceptance of the null hypothesis based on normalization of data

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1.4. Regarding the fact that data is normal in this research, Pearson correlational coefficient and regression multicollinearity variable. (Table 3)

**Table 3.** Results of correlational test.

Hypothesis	Correlational coefficient	Decision factor	Result
There is statistical significance between involvement in the job and intellectual capital	0.712	0.001	
There is statistical significance between intellectual capital and compatibility	0.643	0.002	
There is statistical significance between intellectual capital and mission	0.675	0.013	
There is statistical significance between intellectual capital and adaptability	0.685	0.017	

Results are indicative of the fact that there is positive and significant relationship between variables. After confirming the research hypotheses and making sure that there is linear and significant relationship, the fundamental question is: what is equation of this linear relationship? The following equation is in respect to table 4:

Y is intellectual capital.

$$Y = 0.563 + 0.242x_1 + 0.247x_2 + 0.129x_3 + 0.223x_4$$

Regarding table 5, those groups of variables whose sig id less than 0.05 are written in the equation. This equation shows that among four constituents of organizational culture (mission, involvement, adaptability, compatibility), the most effective is adaptability because of the written coefficients, the most coefficient is adaptability.

**Table 4.** (ANOVA)

Significance level	Fisher statistic	Mean square	Freedom degree	Root-mean square
000	168.567	1.487	4	5.948
a. Independent variable of compatibility, involvement, mission				
b. dependent variable of intellectual capital				

**Table 5.** Regression.

Regression test	Nonstandard coefficients		Standard coefficients	t	sig
	b	Standard error	beta		
Stable coefficient	0/563	0/116		4/841	0/000
Involvement x1	0/242	0/030	0/337	8/013	0/004
Adaptability x2	0/247	0/031	0/332	7/887	0/002
Compatibility x3	0/129	0/035	0/162	3/707	0/005
Mission x4	0/223	0/027	0/332	8/208	0/007

## 5. SUGGESTION

It might be suggested that each organization based on their mission and goals choose a method and pattern to measure the intellectual capital in the organization and report to the beneficiaries after grasping both the notions of intellectual capital and all the cases that can be perceived as a sort of intellectual capital including, knowledge, work experience, abilities, job entitlement, work spirits, flexibility, staff's loyalty, satisfaction, learning, formal relationships, informal relationships, partners, trust, trading signs, company fame, customer's loyalty, organizational

culture, philosophy of management and so forth. And in this way, the intellectual capital can be managed and preserved truly.

Furthermore, based on the findings of this research, the following might be suggested:

1. Determining the attitude and goal and missions of organization and enforcing definite and clear political lines can help the stability and improvement of intellectual capital. Therefore, it might be suggested that the organization policies must be declared clearly and definitely and managers should be committed to this.
2. Spreading the collaboration culture and team work must be created in the organization using the suitable tools in order to improve the intellectual capital. These tools can be put into practice in form of courses with attention to measuring the educational needs.
3. Creating the adaptability spirits and loyalty to common values by staff to improve the intellectual capital
4. Organizing some groups in firm of cultural advisors between affiliated organizations with goal of creating one unique culture in the organization to reinforce the intellectual capital.
5. Putting forward the organizational culture model in public organization in Sari states with the attitude toward future events.
6. Evaluating the existing challenges in creating the organizational culture in the public organizations.

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