

Assessing the Relationship Between Organizational Culture and Organizational Intelligence in Payam e Noor University (A Case Study: Payam e Noor University-Mashhad Center)

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Abstract: In the present study to examine the relationship between organizational culture and intelligence Sazmany in PNU (the center of Mashhad will be discussed. The present study is an applied descriptive survey which used a structural equations correlation approach to collect needed data. Correlational studies aim to conceptualize complex behavioural patterns by examining the correlative relation between these patterns and their assumed variables. Correlational studies fall into three groups: two-variable correlational studies, regression analysis and correlation matrix analysis or covariance analysis. Factorial analysis and structural equations correlation approaches employ correlation matrix or covariance analysis. All countries, including Iran, need processes in the universities and institutes of higher education which help them to be more flexible, transparent and competitive and foster their organizational intelligence according to the Holistic Scientific Map. Findings of this study indicate that there is a positive significant relationship between organizational culture and intelligence, thus in order to enhance organizational intelligence, components of organizational culture must be improved.

Key words: Tertiary institutions organizational culture, organizational intelligence, education, result

INTRODUCTION

Modern economic growth results from the knowledge distribution and systematic and institutionalized application of knowledge and is primarily derived from the attempts of higher education institutions in all countries which has brought about a new concept as organizational intelligence. Economic growth requires planning, organizing, leading and monitoring and managing the process of knowledge access in an efficient and effective way. On the other hand, organizations have found that they cannot survive unless they manage and evaluate their organizational intelligence. Furthermore, they have to recognize their organizational intelligence's weaknesses and strengths through different methods of planning and decision-making. They should also prevent from unnecessary concentration on the issues which are not effective in their future success (Akgun *et al.*, 2007). Besides intelligent human capital, there are other elements which affect organizations' performances. Distinguishing and employing intelligent people is not enough for an organization, since it is not as efficient as organizational intelligence.

As intelligent human beings can get more success in human world and during their turbulent lives, intelligent organizations can also be more prosperous, since new sciences, skills, needs, challenges have brought about

more complicated organizations whose management is considerably difficult. This concept can be understood when we accept that besides intelligent human beings, intelligent machineries play a significant role in the organizational processes. Thus, organizational intelligence is a combination of both human intelligent and artificial machineries intelligence in the modern complicated organizations. Therefore, managers are undoubtedly forced to take advantage of both aforementioned factors to enhance the organization's efficiency and dynamism.

Many definitions have been proposed for organizational intelligence so far. Some define it as an organization's capacity to integrate all accessible capabilities and employ them to achieve its objectives. This capacity can be an integration of technical and human capabilities which are named organizational and machine intelligence. Technical intelligence refers to the organization's ability to process computerized data and knowledge which is greatly effective in the present organization's transactions while human intelligence is more significant than technical intelligence, since proper application of technical information is heavily dependent upon human intelligence. Matsuda defined organizational intelligence as a complicated, homogenous, accumulated and harmonized collection of human and machine intelligence. Simic (2005) defined organizational

intelligence as intellectual ability of an organization which in fact, integrates its humane and technical (informational and communicational) potentials that are used in solving concrete organizational problems. Halal defined organizational intelligence as the capacity of an organization to create knowledge and use it strategically for adapting to environment and business place. Yolles believed that the concept of organizational intelligence has other paradigms such as organizational learning and knowledge management (Danaeefard *et al.*, 2012).

Albrecht (2002) in his book "The power of minds at work" introduced organizational intelligence in action and drawing on 25 year of experience as an organizational consultant and commander of a Navy unit, he coined Albrecht's law in the field of management. He expressed this problem that intelligent people when assembled into an organization will tend toward collective stupidity. Using a wide variety of personal experiences, success and failure stories and real cases, he lays out a manifesto for escaping from collective stupidity and achieving collective intelligence-in short, Organizational Intelligence or "OI." He also believed that managers cannot solely improve an organization toward being intelligent, they need all employees in the organization for this purpose (Zahraei and Pour, 2011). Albrecht proposed seven following components for organizational intelligence.

Strategic vision: The capability of creation, inference and statement of the purpose of a corporation.

Shared fate: When all people in the corporation know what the mission of the corporation is and attempt for achieving this mission.

Appetite for change: Tendency to encounter with unexpected challenges for obtaining new strategic vision.

Heart: Vital energy in order to be successful.

Alignment and congruence: Determined systems and rules to be implemented.

Knowledge deployment: Effective application of knowledge, information and data.

Performance pressure: Managers should have their own specific executive attitude (Yaghoubi and Haghi, 2010).

On the other hand, powerful culture in organization can be a significant and effective factor in organizational intelligence which helps organizations to achieve their goals. Organizational culture is comprised of all values,

beliefs, norms, perception and attitudes that organization's people have in common. An efficient organizational culture plays a significant role in generating an appropriate environment for transacting and supporting knowledge activities in the organization (Allameh and Zari, 2011).

Quinn stated that knowing the culture is necessary for knowing an organization and its staffs' performance and behaviour, since it is helpful to accelerate new changes and stabilize new directions in the organization. Thus, organizational culture is influential in organizational intelligence, organization's success and its long-term objectives. Unfortunately, some organizations do not pay much attention to organizational culture's fostering, although organizational culture affects all organization's aspects. Denison classified traits of organizational culture in the following manner:

Involvement: Empowering the employees, building the organization around teams and developing human capabilities at all levels.

Consistency: Rooted in a set of core values, employees are skilled in reaching agreement even when there are diverse points of view.

Adaptability: Driven by the organization's customers, continuously changing the system and having tendency for organizational learning.

Mission: Having a clear sense of purpose and direction, defining organizational goals and strategic objectives.

Universities must pay much attention to organizational intelligence and culture due to their duty in the fields of professional education, research, services, publications and development and considering their function in the society as moral and intellectual bases. They should study some issues such as multiple shareholders, professional bureaucracy and learning paradox. In fact, organizational intelligence and knowledge-oriented culture give much help to the organizations especially universities and institutes of higher education to be able to recognize, select, organize and distribute the vital information and skills which have been considered as organizational memory and have not been organized yet. It effectively and efficiently improves the organizations to solve their problems, program and make decisions.

Anyway, organizational intelligence should be considered as an outcome of social symbols, organizational culture and interaction between the employees. In addition, the existence of various

organizational culture's dimensions and their association with the organizational performance elucidates organizational culture's effect on organizational intelligence. According to what has been mentioned about organizational intelligence, apparent overlaps of this variable and organizational culture are expected. This study aims to determine these overlaps.

More studies are needed to assess the effect of organizational culture on organizational intelligence in institutes of higher education. However, many theoretical studies have been conducted to investigate effective factors in organizational intelligence so far. Khodadadi (2008) did a research with a sample of 116 people and examined the relationship between components of organizational intelligence and organizational culture in physical education offices of Azarbaijan Sharghi. Target population of his research was consisting of all managers and staffs of physical education offices in Azarbaijan Sharghi. Findings of his study showed that based on Pearson's correlation coefficient, there is a significant positive relationship between organizational culture and five components of shared fate, appetite for change, alignment, coordination and knowledge application. By and large, there is a significant positive relationship between organizational intelligence and organizational culture. Erfani Khanghahi and Jafari assessed the direct and indirect effects of transformational leadership, learning culture and organizational learning on organizational intelligence in Islamic Azad University (8th district) with a sample of 311 people. Target population of their study included all faculty members of Islamic Azad University of 8th district. Findings of this study indicated that latent variables of transformational leadership, organizational learning and learning culture affect organizational intelligence both directly and indirectly. In another study, Izari and Satari Ghahfarokhi (2007) investigated the relationship between components of organizational intelligence and culture in Esfahan Mobarakeh Steel Company. Findings of their study indicated that components of organizational intelligence such as strategic vision, shared fate, heart, alignment and congruence and performance pressure can be applied to significantly predict the organizational culture. Ehsanbakhsh and Dizghah (2012) in a descriptive survey examined the relationship between organizational culture and organizational intelligence among 49 executive managers in Gilan Province. Their findings showed that powerful organizational culture enhances organizational intelligence. Yaghoubi and Haghi (2010) did a research in social security organization and found that there is a positive relationship between organizational culture and intelligence. Samani and Nouri conducted a research in Isfahan University and found that there is a positive relationship between emotional intelligence and

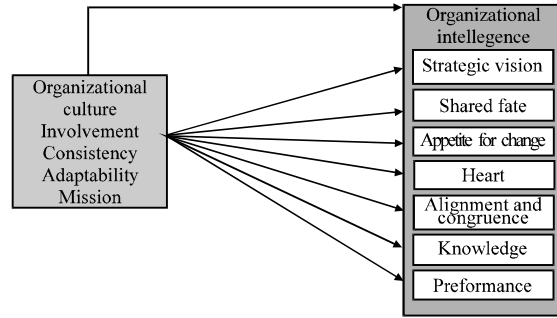


Fig. 1: Research conceptual model

organizational culture. Danaei and coauthors assessed the relationship between emotional intelligence, organizational culture and organizational learning in service organizations in Kermanshah Province. their findings demonstrated that there is a significant relationship between emotional intelligence and organizational culture.

Research conceptual framework: Conceptual framework is needed to assess research hypotheses, variables and their operative and conceptual definitions. Research conceptual model and questions were designed on the basis of organizational culture's components (involvement, consistency, adaptability and mission) proposed by Denison and organizational intelligence's components (strategic vision, shared fate, appetite for change, heart, alignment and congruence, knowledge deployment and performance pressure) suggested by Albrecht shown in Fig.1.

Major question: Is there a relationship between components of organizational culture and organizational intelligence in 9th district's units of Islamic Azad University?

Minor questions:

- Is there a relationship between organizational culture and strategic vision in 9th district's units of Islamic Azad University?
- Is there a relationship between organizational culture and shared fate in 9th district's units of Islamic Azad University?
- Is there a relationship between organizational culture and appetite for change in 9th district's units of Islamic Azad University?
- Is there a relationship between organizational culture and heart in 9th district's units of Islamic Azad University?
- Is there a relationship between organizational culture and alignment and congruence in 9th district's units of Islamic Azad University?

- Is there a relationship between organizational culture and knowledge deployment in 9th district's units of Islamic Azad University?
- Is there a relationship between organizational culture and performance pressure in 9th district's units of Islamic Azad University?

MATERIALS AND METHODS

The present study is an applied descriptive survey which used a structural equations correlation approach to collect needed data. Correlational studies aim to conceptualize complex behavioural patterns by examining the correlative relation between these patterns and their assumed variables. Correlational studies fall into three groups: two-variable correlational studies, regression analysis and correlation matrix analysis or covariance analysis. Factoral analysis and structural equations correlation approaches employ correlation matrix or covariance analysis.

Target population and sampling: Target population of the current study is consisting of all employees in 25 units and academic centers of 9th district of Islamic Azad University (N = 2660). Stratified random sampling has been applied for selecting the research sample. James Stivens's suggestion has been regarded when analyzing research variables based on multiple regression analysis. Due to the fact that the applied approach in this study has been structural equations modeling which is associated with multiple regression from many aspects, considering 15 components for each variable in SEM is not illogical. (Houman, 2005). 335 questionnaires were distributed, among which 231 people answered the questionnaires.

Measurement tools and statistical techniques: Two questionnaires were used in this study for data collection. Denison questionnaire was utilized to assess organizational culture which was consisting of 30, 5-level Likert questions. Albrecht questionnaire was used to examine organizational intelligence, consisting of 49, 5-level Likert questions. Descriptive and inferential methods (Pearson's correlation coefficient and path analysis) and Lisrel software deployed for data analysis.

Validity and reliability: Since, research measurement tools (Denison and Albrecht questionnaires, respectively used for organizational culture and organizational intelligence) have been standard and utilized in many studies inside and outside Iran, their content validity is confirmed. To evaluate research reliability, different methods such as internal consistency in which

Table 1: Cronbach's alpha of research variables

Variables	Cronbach's alpha	Questions	Samples
Involvement	0/77	9	231
Consistency	0/71	7	231
Adaptability	0/83	8	231
Mission	0/78	6	231
Strategic vision	0/81	7	231
Shared fate	0/93	7	231
Appetite for change	0/85	7	231
Heart	0/74	7	231
Alignment and congruence	0/70	7	231
Knowledge deployment	0/71	7	231
Performance pressure	82/0	7	231

Table 2: Statistical data based on demographic characteristics

Characteristics	Values (%)
Gender	
Male	92
Female	8
Age	
Between 20 and 30	18
Between 31 and 40	49
Between 41 and 50	29
Between 51 and 60	4
Degree	
Diploma	4
Associate degree	31
BS	61
MS	4
Work experience	
Between 1 and 5	29
Between 6 and 10	34
Between 11 and 15	15
Between 16 and 20	9
>20	13

Table 3: Correlation matrix of variables of organizational intelligence and culture

Statistic variables	1	2	3	4	5	6	7	8	9
Strategic vision	1								
Shared fate	0/69*	1							
Appetite for change	0/59*	0/69*	1						
Heart	0/63*	0/66*	0/71*	1					
Alignment and congruence	0/65*	0/72*	0/64*	0/73*	1				
Knowledge deployment	0/61*	0/67*	0/60*	0/66*	0/72*	1			
Performance pressure	0/48*	0/55*	0/58*	0/65*	0/58*	0/58*	1		
Organizational intelligence	0/80*	0/86*	0/82*	0/86*	0/87*	0/84*	0/75*	1	
Organizational intelligence	0/39*	0/34*	0/20*	0/28*	0/27*	0/16*	0/19*	0/31*	1

Cronbach's alpha is calculated can be employed. This method is mostly used Cronbach's alpha is 0.7. Questionnaires' reliability was calculated for each variable and is shown in Table 1.

Descriptive statistics: In this section, first, descriptive statistics of demographic variables such as gender, age, degree and work experience have been demonstrated in Table 2 and then, correlation matrix of research variables have been shown in Table 3.

Table 3 shows correlation coefficients between research variables. Results of this table indicate that there

is a significant direct relationship between seven components of organizational intelligence and organizational culture ($p < 0.01$). Correlation matrix demonstrates that there is a significant relationship between two variables of organizational culture and organizational intelligence ($p = 0.31$) at the level of 0.01.

RESULTS AND DISCUSSION

Inferential statistics: Path analysis approach was used to test major and minor research questions and the relationship between variables and components. It also evaluates fitness of the research conceptual model. Before implementing path analysis approach, variables' multicollinearity, tolerance and variance were assessed. Then, results of path analysis were investigated.

Considering the application of structural equations, the relationship between latent variables and Gamma, Beta coefficients was assessed. In this way, all multiple regression coefficients were calculated. The t-test was used to examine significance of Beta coefficients and structural equations between variables. Before final

analysis and structural equations modeling were conducted, model's fitness was evaluated through the application of Lisrel software.

Model's fitness was confirmed through the comparison of covariance matrix of target population with covariance matrix of research sample. The most important indexes for the fitness of linear structural relationships which explain variance are as follows: Goodness of Fit Index (GFI), Adjusted Goodness of Fit Index (AGFI) whose freedom degree is adjusted and Root Mean Square Error of Approximation (RMSEA). Range of variations of goodness of fit indexes is between zero and one. Nearer it is to one, the model's goodness of fit is more accepted. Furthermore, little amounts of RMSEA demonstrate the model's goodness of fit in a way that it is about 0.05 or less than this amount for good models (between 0.1 and 0.05 can be also considered as fairly good models).

In order to recognize causal relationships between organizational culture and intelligence, path analysis was conducted through the application of structural equations approach. Figure 2 and Table 4 and 5 indicate results of path analysis in the associated structural model.

Considering Table 4, general indexes of structural equations model show model's and pattern's goodness of fit ($\chi^2 = 2273.44$, $df = 39$, $RSMEA = 0.574$, $GFI = 0.71$, $AGFI = 0.70$, $NFI = 0.73$, $CFI = 0.74$, $NNFI = 0.72$). As it has been mentioned, model's fitness needs standard indexes and $RSMEA$ is < 0.1 and nearer to zero and GFI , $AGFI$, NFI , CFI , $NNFI$ are nearer to one. Thus, the model's goodness of fit has been confirmed and mentioned indexes in Table 4 have required standards.

Table 5 shows the obtained coefficients and parameters of general measurement model. Coefficients whose significance is > 1.96 and < -1.96 are significant. Significance of these parameters proves the model's significance and in other words, it shows the significance of each component in the model.

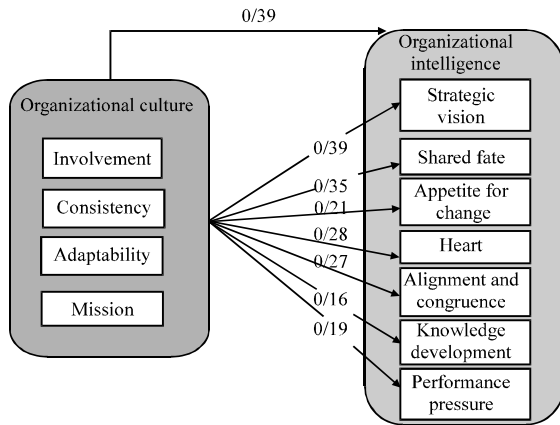


Fig. 2: Results of coefficients and standard estimation of the general research model

Table 4: Goodness of fit indexes for the general structural pattern

χ^2	df	χ^2/df	RMSEA	GFI	ADFI	NFI	CFI	NNFI
44/2273	39	58	0/574	0/71	0/70	0/73	0/74	0/72

CONCLUSION

Developed countries pay much attention to intangible or intellectual assets. They shifted this

Table 5: The t-test coefficients in the general research model

Questions	Paths	Path coefficient	t-statistic	Result
Major question	Organizational culture---organizational intelligence	0/32	4/86	Confirmed
First minor question	Culture ---- Strategic vision	0/39	6/25	Confirmed
Second minor question	Culture --- Shared fate	0/35	5/45	Confirmed
Third minor question	Culture --- Appetite for change	0/21	3/09	Confirmed
Fourth minor question	Culture --- Heart	0/28	4/36	Confirmed
Fifth minor question	Culture --- Alignment and congruence	0/27	4/21	Confirmed
Sixth minor question	Culture --- Knowledge deployment	0/16	2/38	Confirmed
Seventh minor question	Culture --- Performance pressure	0/19	2/93	Confirmed

attention from private organizations to public ones such as universities and research centers. Owing to the fact that universities play a significant role in national innovation systems. All countries, including Iran, need processes in the universities and institutes of higher education which help them to be more flexible, transparent and competitive and foster their organizational intelligence according to the Holistic Scientific Map. Findings of this study indicate that there is a positive significant relationship between organizational culture and intelligence, thus in order to enhance organizational intelligence, components of organizational culture must be improved. Findings of the researches conducted by Khodadadi (2008), Ehsanbakhsh and Dizghah (2012) and Yaghoubi and Haghi (2010) are consistent with the findings of the current study.

LIMITATIONS

Some limitations existed during the process of accomplishing this research which can be listed as follows: few numbers of similar researches in institutes of higher education, imperfect structural modeling which may show goodness of fit for more than one model. Therefore, this conclusion can be drawn that although the structural model's goodness of fit is confirmed, it cannot be expected to be the only valid model. In spite of these limitations for evaluated structural model, important conclusions could be drawn in the field of intelligence conceptualization and its improvement in academic areas.

SUGGESTIONS

The following suggestions have been made due to the reviewed literature. Since, organizations' managers and leaders are greatly effective in forming a cultural pattern and considering this fact that there is a positive relationship between patterns of organizational culture and intelligence, it is suggested that universities' managers make special arrangements to enhance both organizational intelligence and culture.

All countries, including Iran, need to pay more attention to the role of knowledge, organizational intelligence and culture in achieving sustainable development.

According to Matsuda and Albrecht's definition of organizational intelligence, higher education system is a combination of intelligent human beings, machines, educational instruments and aids which help the process of decision making in the modern era. For this purpose, two actions are needed: to pay more attention when attracting and employing human resources as organizational intelligence, retain and update their knowledge, improve their memory and organizational intelligence through continuing education; to utilize intelligent educational tools. The application of both human and machine intelligence which bring about organizational intelligence, helps higher education system to achieve its objectives.

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