

Education System and Agility Culture

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Abstract

The aim of the present paper is to present a model for agility culture in university and achieving as much as possible agility in Islamic Azad University in today's changing world by addressing following questions:

- 1. Which cultural dimensions and components contribute to the organizational agility?*
- 2. How is the cultural dimensions and components of the Islamic Azad University?*
- 3. Are agility components of Islamic Azad University in satisfactory conditions?*
- 4. What is the appropriate cultural model for explanation of these factors?*

The type of the research is applied and the method of research is survey and data are collected using combined method. Statistical population of the research includes employees and faculties of the zone 8 of Tehran Islamic Azad Universities during 2015-16 and covers 12,971 persons who serve in 34 academic units. Determination of the statistical sample of research is performed using quantitative method with single-stage, clustering random sampling and is studied in two levels; faculties and employees.

With respect to method, this research is survey and of correlation type with respect to data collection, combined method. Research tool is the questionnaire designed by researcher and for determination of the validity of the questionnaire, exploratory factor analysis is used.

Results revealed that among cultural components, personal factors including "psychological capital", "spirituality, trust, commitment and emotional intelligence" and "collectivism and team-working" and organizational factors including "change-orientation, futurism and competitive intelligence", "empowerment", "quality and performance-orientation" and "fairness in using facilities" are effective. Results of the factor analysis and model fitness which have appropriate indices yield a model which best describe the cultural components and dimensions leading to improvement of the agility.

Furthermore, investigation of the relationship between factors illustrated that there is a significant relationship between cultural components and personal and organizational dimensions and agility. Finally, recommendations are provided.

Keywords: Organizational Agility, Agility Culture, University.

Introduction

To evaluate the trend of components contributing to the higher education, we need to understand the realities of the society and the world which contribute to the organizations. Today, global economy changed obviously and mass production is replaced by technology-based and customer-oriented economy in US, northern Europe and some parts of the Asia and facts imply that a considerable change in production model is occurring and its main focus is on workforce. It is due to the competitive environment leading to fundamental changes in production. Human force is considered as a factor contributing to the rapid and continuous changes which attains modern technology and results in improvement of the efficiency and reduction of costs.

Goldman and Negal (1961) suggest various reasons for intensified global competition:

- Technology leads to customization of products and economic production.
- Technology and changes in international environment results in freedom of competition.
- Higher education standard on many countries including developing countries improved considerably.
- Production costs reduced significantly and benefits of using computer-aided design services is available all around the world and is very economic.
- Information networks of the world lead to access to global information and communication and speed and continuity results in improvement and technology and access in turn bring about change environment.

The way for presence in such a competitive environment is agility. Agility strategy for business is through responding to necessities of technological changes for having a position in appearing competitive market.

Information and communication technology affects people life and profit and non-profit organizations in an obvious manner. Access to information results in accelerated transfer and through educational plans, higher education can achieve agility. Universities attempt to gain more opportunities in extended geographical space by joint investment of different institutions.

With regard to access, technology and communicative actions, Friedman classifies the world into related, accessible and connected communities. Owing to the competition and for the sake of profitability and awarding degree, higher education is of novel subjectivity. Main concentration is on economic higher education through manipulation of educational organizations. Wohler states that market forces are threats which become the main focus of the academic organizations in economically profitable conditions and cause the dual role of the university employees as academic and entrepreneur resulting in contradiction between interests and commitment. The main focus of the agility in university is on distance learning and it seems that universities intend to take agile methods without agile paradigm (Charnitski, 2002). Today, a new concept appeared in universities some instances of which are noted below.

Top university and its characteristics

Despite of frequent usage of term “top university” in higher education, there is no agreement on this term. According to Altbach, lack of a clear definition prompted everyone to achieve top university. However, no one knows that what is this phenomenon and how it can be

achieved. Altbach defines the top universities as follows: “top universities are those which have the highest level of faculties, best researches, excellent quality of education based on international standards, public and private resources, potent students, scientific freedom, independent management structures and modern facilities for education, research, management and student life”.

Many theorists tried to provide such definition by means of scoring tables for universities such as one published by Times institution and Shanghai University. Despite of different methods used in evaluation of the international ranking of universities, in all indices, academic quality, internationalization, research products and effectiveness are generally emphasized. Liu (2009) presented an applied definition for global top universities. He believes that top university is one whose education and research is based on international standards in a wide range of majors and makes a lot of efforts for serving in either national or international levels.

According to the above definition, Salmy introduces a set of characteristics of global top universities including emphasis on talent of faculties and students, abundance of resources for rich education and providing research environment and autonomous administration of the university for encouraging and persuading creativity and having strategic vision.

In definition of the top university, many theorists expressed some of its characteristics and thereby some of the distinctions of these universities although many believe that general characteristics such as benefiting from global reputation, extensive financial resources and having excellent faculties are considered as the first characteristics of such universities. It must be pointed out that until factors contributing to the university with a theoretical and subjective framework, there is always deficiency in expression of the characteristics. As such, it appears that design of a theoretical model in accordance with realities of the top universities leads to more comprehensive and practical understanding about these characteristics. As Salmy noted, these characteristics are taken from the complementary sets playing role in top universities including:

- Concentration on talent (including students and faculties)
- Benefiting from abundant resources for providing an environment suitable for learning and advanced research
- Suitable management leading to encouragement of seeking strategic vision, creativity and flexibility

Third-generation University and its characteristics

As changes continued and intensification of global competition as well as appearance of the knowledge-based economy and as knowledge became competitive advantage, at the end of 20th century, universities entered the economic and social field upon completion of their mission. This university was the evolved version of first-generation universities (educational-oriented) and second-generation (research-oriented) and are referred to as third-generation or entrepreneur universities. At present, MIT and Stanford universities are extensively known as the drivers of the development.

In accordance with the importance of achieving novel academic concepts, vital factors of the education in higher education centers are as follows (Arman Mehr et.al, 2012):

- Student empowerment
- Reputation of the university

- Fund received from the university
- Compatibility of the education with demands of the society
- Attraction and maintenance of the excellent professor
- Academic capacity and being update
- Appropriate and accessible laboratories and workshops
- Number of academic majors
- 10-year goal

Hence, to achieve the level of top universities in accordance with the vital factors of success, we have to pay attention to the concepts accelerating changes such as organizational agility.

Agile methods for agile universities

Universities are odd organizations and have contradicting, multiple and of course complex duties. These duties include teaching, research and serving local, national and international communities, economic reforms as well as rehabilitation of urban life. It is expected that universities are memory institutions for keeping and maintenance of historical facts to tell people who we are and where did we come from. However, and at the same time, it is expected that universities are the place and field of discoveries, inventions and creativities. The concept of scientific research means “discovery and doing novel works”. However, it means social sciences such as art and humanities as well. It is a challenging innovation in front of old methods.

From long time ago, universities progressed with attempt for making balance between balance keepers and divisive innovators. However, we must frequently think about the issues affecting our processes and how this effect must be. Today, there are a great deal of challenges corresponding to technological advances, supply of fund and international competitions which are threats for university traditions which necessitate the better, faster and cheaper performance (Twidale, 2013). One of the methods of enhancement and acceleration of the work is agility.

The term agility means rapid, active and easy movement along with the ability of rapid thinking and in an intelligent manner. A lot of definitions are presented for agility. However, none of them contradicts the other. These definitions generally represent the idea of speed and change in workspace. Owing to the novelty of the agility, there is no comprehensive definition upon which an agreement is made. According to Sharifi and Zhang (1999), agility means the ability of each organization for sensing, perceiving and predicting changes in business. Such organizations must detect environmental changes and consider them as factors of growth and development (Jafar Nejad and Shahabi, 2007: 32). Muscle (2001) defined agility as the ability for prosperity in an ever-changing and unpredictable environment. Agility is a set of capabilities and qualifications leading to survival and growth of the organization in face of environments full of uncertainty.

Model and framework of organizational agility

Sharifi and Zhang presented a reference conceptual model which is being used in most of the researches about agility.

In their model, four main aspects are recognized:

1. Agility drivers
2. Strategic abilities

3. Strategic providers
4. Agility capabilities

This conceptual model explains the relationship between these four elements. Agility drivers provide the characteristics of the business external environment in relation to the uncertainty and unpredictability of the changes.

Strategic capacities including qualification, reaction and responsiveness, speed and flexibility are taken into account as the main characteristics of the agile organizations which are probably successful in face of changes.

Agility capacities are achieved through methods of agility providers. Providers in turn can be achieved from four fields: organization, technology, people and innovation.

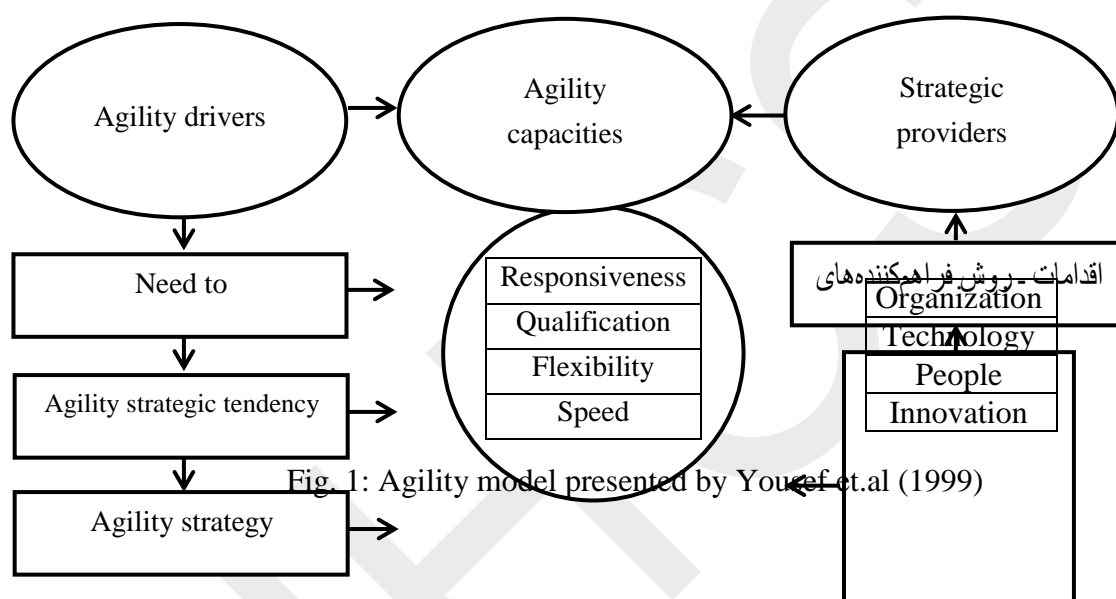


Fig. 1: Agility model presented by Yousef et.al (1999)

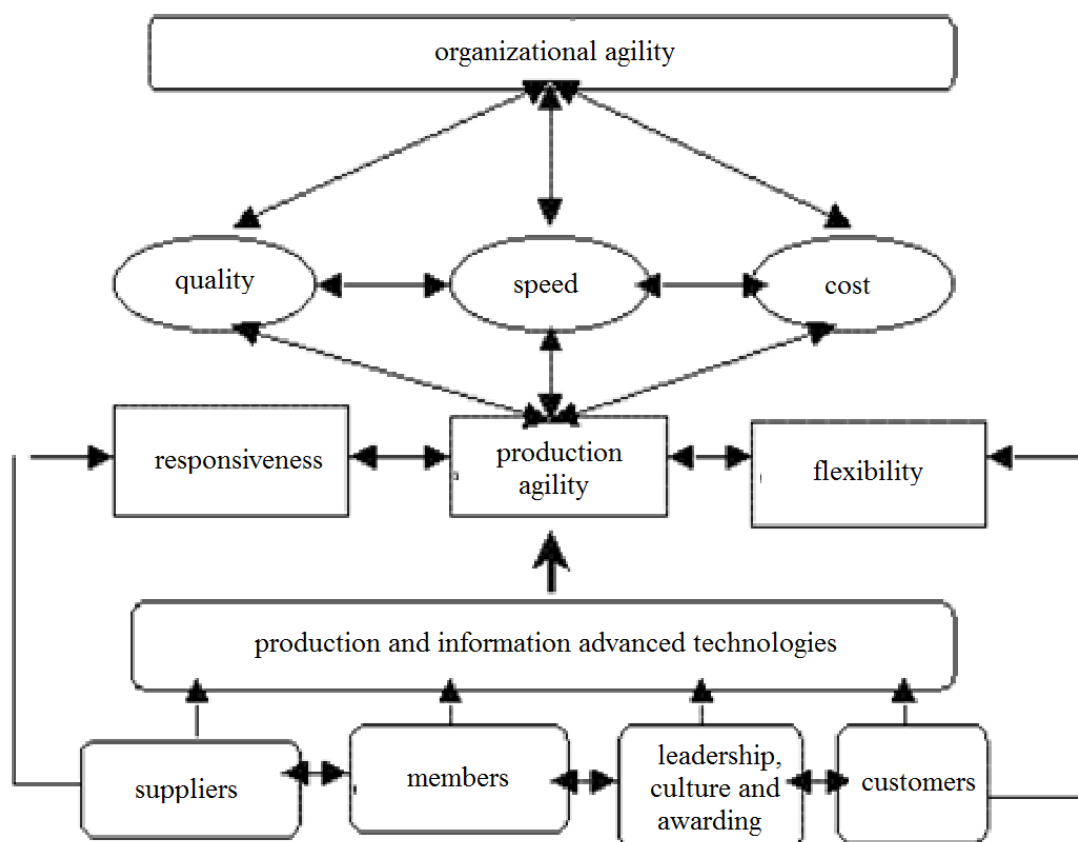


Fig. 2: organizational agility model (Yousef et.al, 1999)

One of the other models presented for organizational agility is that of two theorists of agility in 2010. According to their model, the first characteristic of an agile plan is a sustained strategy which is the ability to yield results under changing environmental conditions. Agile organizations have plans which can be rapidly adapted in response to the internal and external pressures for change and shift in strategic goal. The third characteristic of the design of an organization is the agility of leadership and common identity. This characteristic changes the organizational thinking from a personal characteristic into an organizational one. However, the last one is the ability of value making. This ability seeks the agility of the organization for what is the mission of the organization (Dadgar, 2013).

Research suggested that effective implementation of the plans of pervasive quality control and miniaturization depends upon the strategies embedded in change of the culture. These plans failed when they were without change in culture. However, they were successful when change in organizational culture was the aim of the change so that the plans can be implemented in the context of this change and improved the effectiveness of the organization. In fact, the main reason of success was the change in culture.

Dependence of the organizational progress upon culture change was due to the fact that when values, tendencies, definitions and goals remain unchanged, organizations return to their initial conditions despite of change in procedures and strategies. Unfortunately, unsuccessful attempts for making change bring about pessimism, frustration, mistrust and deterioration of morale of the members of organization. As research revealed, if the strategy of change is not implemented in the first stage, the conditions of the organization worsens.

Organizational culture

Various definitions are presented for organizational culture some of which are presented below:

- Organizational culture is a set of values, beliefs, guides, agreements and thinking methods common among the members of the organization and is followed by the new members as the method of right accomplishment of the works and thinking (Duncan, 1989).
- Organizational culture is a system of common inferences of the members from the organization and these characteristic results in distinction of two organizations. A system whose members have a common inference is composed of a set of main characteristics which are respected by the organization (Robins, 1995: 159).
- Edgar Shine believes that organizational culture is a set of traditions, regulation, ethics and values which are announced officially. Organizational culture is an accumulation of common courses in a common history and implies to the structural consolidation and evolution of organizations so that it can be addressed as the identity of the organization (Mahmoudi, 2005: 39).
- Menguzzato and Renau define organizational culture as a set of values, common beliefs, viewpoints, dreams, logics, talents among other common things among at least some of the members of the organization from top management to operational levels (Val et.al, 2003: 5).

Model of recognition of organizational culture of Cameron and Queen and Denison and Globe can be implied to in this regard.

Cameron and Queen model of recognition of organizational culture

In the process of evolution of (Ranaei, 2009) this model based on the studies performed by various researches, along with introduction of a different methodology for understanding the organizational culture, it is attempted to utilize the capabilities of this methodology for presenting a model for measuring the compatibility of the components and elements of an organization. Based on this model, if various characteristics are in a quarter of a unit of the coordinate axis of competitive values, it means that there is a type of compatibility among cultural dimensions and elements of the organization.

Denison model

Ability of using Denison model in all organizational levels is one of the characteristics of this model (Iran Zadeh, 2010). In addition, in recent years, this model is used extensively by management consultation institutions for evaluation of the organizational culture of the companies and organizations. One of the other benefits of the Denison model is its graphic diagram which illustrates the characteristics of the organizational culture in two dimensions; internal and external and the level of flexibility as well as 12 indices so that it can show the organizational culture conditions.

GLOBE project (2002)

The most recent researches about the culture is carried out by House and Savadan (2002). This study which is known as GLOBE project is a multistage plan in which researchers assessed the relationship between social culture, organizational culture and organizational

leadership. About 150 researcher and theorist of management and social sciences took part in this project from 61 countries. The main purpose of this project was to make an experimental theory based on a research for explanation of the effect of cultural variables on leadership and organizational processes and effectiveness of the processes. Assumptions of the GLOBE project are as follows:

- Avoiding uncertainty
- Power distance
- Intergroup collectivism
- Intragroup collectivism
- Sexual equality
- Decisiveness
- Futurism
- Performance-orientation
- Humanism

Table 1: four models of Denison organizational culture

| Engagement | Conformity | Compatibility | Mission | Culture |
|---|--|--|---|-------------|
| Internal | External | Internal | Internal | Focus |
| Empowerment Development of capabilities Team-making | Organizational learning Customer-orientation Making change | Coordination and cohesion Agreement Fundamental values | Scope Goals Strategic orientation | Index |
| Flexible | Flexible | Fixed | Fixed | Flexibility |

Table 2: assumptions of Cameron and Queen

| Hierarchical | Market | Adhocracy | Tribal | Culture |
|--|--|---|--|-------------------------|
| Attention to internal environment and mechanical processes | Attention to external environment and mechanical processes | Attention to factors outside the organization and organic process | Attention to factors inside the organization and organic process | Focus |
| Order of rule governance, regulation of harmony and efficiency | Competition, achieving goals, interaction with environment | Creativity, entrepreneurship, conformity and dynamism | Unity and collective consolidation, team working and sense of being family | Dominant characteristic |

| | | | | |
|--|--|--|---|------------------------------|
| Coordinator, organizer, administrator | Decisive, attention to production | Entrepreneur, innovator, risk taking | Training, facilitation, paternal practices | Leadership style |
| Rules, policies and procedures of clear expectations | Goal-orientation, production, competition | Entrepreneurship, flexibility, risk taking | Loyalty, attention to traditions and interpersonal bonds | Members connecting mechanism |
| Emphasis on stability, predictability on the suitable turning of works | Maintaining competitive advantage and excellence in market | Emphasis on innovation, growth and attraction of new resources | Emphasis on development of human resources, commitment, morale and ethics | Strategic emphases |
| Based on job security, obeying, predictability, stability of relations | Based on intense competition, expectation from people, achieving goals | Based on risk taking, innovation, freedom and uniqueness in all contexts | Based on team-working and collaboration | Management of employees |
| Effectiveness and saving, on time delivery | Increase in market share, market leadership | Production of products, leadership in market and innovation | Development and optimization of human resources, organizational commitment and attention to personnel | Success criteria |

Table 3: models at a glance

| GLOBE | Queen | Denison | Model |
|-------------------------|-----------|---------------|---------------------|
| Avoiding uncertainty | Adhocracy | Missionary | Cultural components |
| Power distance | Market | Compatible | |
| Intergroup collectivism | Hierarchy | Continuity | |
| Intragroup collectivism | Tribal | Collaborative | |
| sexual equality | | | |

| | | | |
|-------------------------|--|--|--|
| Decisiveness | | | |
| Futurism | | | |
| Performance-orientation | | | |
| Humanism | | | |

Research model

In initial stages of research, three models are considered for preparation of the appropriate model. Studying the scientific resources and researches led to conclusion that cultural components contributing to the agility of the university are not necessarily derived from a certain organizational culture. For instance, adhocracy and market culture of Cameron and Queen had characteristics which resulted in agility and in GLOBE researches, collectivism, ambiguity tolerance, futurism and sexual factors contributing were recognized. However, improvement of most of the Denison model components could result in improvement of agile culture. On the other hand, it was shown in researches that factors such as organizational intelligence, psychological capital and spirituality can improve the agility. Therefore, it was tried to go beyond the models to evaluate components leading to agility improvement.

Research methodology and statistical population, sampling method and volume

Present paper is an applied one with respect to the purpose since its results can be used for improvement of the agility. This research is a cross-sectional work since collection of its data is performed in a certain time period through sampling from the population. With respect to the method, it is a survey and correlative and from data collection point of view, a quantitative method is used. The time period of research is 2014-15. Studied statistical population includes 12,971 persons of zone 8 of the Islamic Azad University in 34 academic units. Determination of the research statistical population is done by clustering one-stage random sampling. To ensure the reliability of questions and items used in this research, initial questionnaire was tested on 30 people to remove probable deficiencies. After collection of questionnaires, reliability of the research was performed using Cronbach's Alpha by SPSS software and table below summarizes the results for each variable, separately.

Table 4: level of Alpha for each of the variables

| Cronbach's Alpha | | |
|------------------|----------------|---|
| Ideal status | Current status | Variable |
| 0.916 | 0.934 | Culture from personal point of view |
| 0.882 | 0.981 | Culture from organizational point of view |
| 0.942 | 0.985 | Culture |
| 0.971 | 0.939 | Agility |

Results

Results are presented for each question, separately.

Q1: which cultural dimensions and components contribute to the organizational agility?

To answer this question, cultural dimensions and components were obtained by studying the literature and theoretical background and was given in the form of a questionnaire containing 40 items. After collection of data for validation of questionnaire as well as determination of the components, exploratory factor analysis (method of principal component analysis) was used so that derived dimensions and components can be compared with 2 dimensions and 8 components obtained using literature and the opinion of experts, cultural components and dimensions and contributing to the organizational agility can be determined and validity of the questionnaire can be confirmed.

Results of quantitative studies yielded the KMO as much as 0.829 and Bartlett’s sphericity were significant in 0.05 level. It means that exploratory factor analysis was appropriate. Then, based on derived factors, it was revealed that only two factors including personal and organizational factors of cultural dimensions contribute to organizational agility.

Exploratory factor analysis for determination of personal dimensions showed that KOM and Bartlett’s test of sphericity are significant in 0.05 level and three factors including “psychological capital”, “spirituality, trust, commitment and emotional intelligence”, “empowerment”, “quality and performance-orientation” and “justice in using facilities” constitute constituting the organizational components which contribute to the organizational agility.

Q2: how is the cultural components and dimensions of the Islamic Azad University?

Table 3: results of t-test for cultural components and dimensions

| Significance level | DOF | t-value | Average difference | Average of ideal status | Average of current status | Components | Dimensions |
|--------------------|-----|---------|--------------------|-------------------------|---------------------------|--------------------------|------------|
| | | | | | | Personal dimension | |
| 0/000 | 372 | -18/82 | -1/85 | 8/70 | 6/85 | ul | ul |
| 0/000 | 372 | -17/30 | -1/81 | 8/41 | 6/60 | l, | t, |
| | | | | | | it | ul |
| | | | | | | e | |
| 0/000 | 372 | -17/12 | -1/97 | 8/27 | 6/30 | n | |
| | | | | | | g | |
| | | | | | | Organizational dimension | |
| 0/000 | 372 | -17/35 | -1/76 | 8/18 | 6/42 | :- | |
| | | | | | | l, | l |

| | | | | | | |
|-------|-----|--------|-------|------|------|--------------|
| 0/000 | 372 | -14/83 | -1/87 | 8/21 | 6/34 | it |
| 0/000 | 372 | -16/99 | -1/69 | 8/24 | 6/56 | d :- n |
| 0/000 | 372 | -15/42 | -2/08 | 8/18 | 6/10 | n s |

For all components, there is a significant difference between current and ideal status. Moreover, since the average observed for current status is less than that of the ideal status, in respondents' opinion, the status of components is not suitable.

| DOF | t-value | Average difference | Average of ideal status | Average of current status | Components | Variables |
|-----|---------|--------------------|-------------------------|---------------------------|------------|------------------------|
| | | | | | | Responsiveness |
| | | | | | | Qualification |
| | | | | | | Flexibility |
| | | | | | | Speed |
| | | | | | | Organizational agility |

For agility components, there is a significant difference between current and ideal status. Further, since the average observed for current status is less than that of ideal status, in respondents' opinion, status of none of the agility components is suitable.

Q3: what is the appropriate cultural model for explanation of the factors?

Fig. 2 represents the path model for t-value. This model in fact tests all structural equations using t-test. According to this model, if the absolute value of t-statistic of the path is higher than 1.96, path coefficient and factor load are significant in 95% confidence level.

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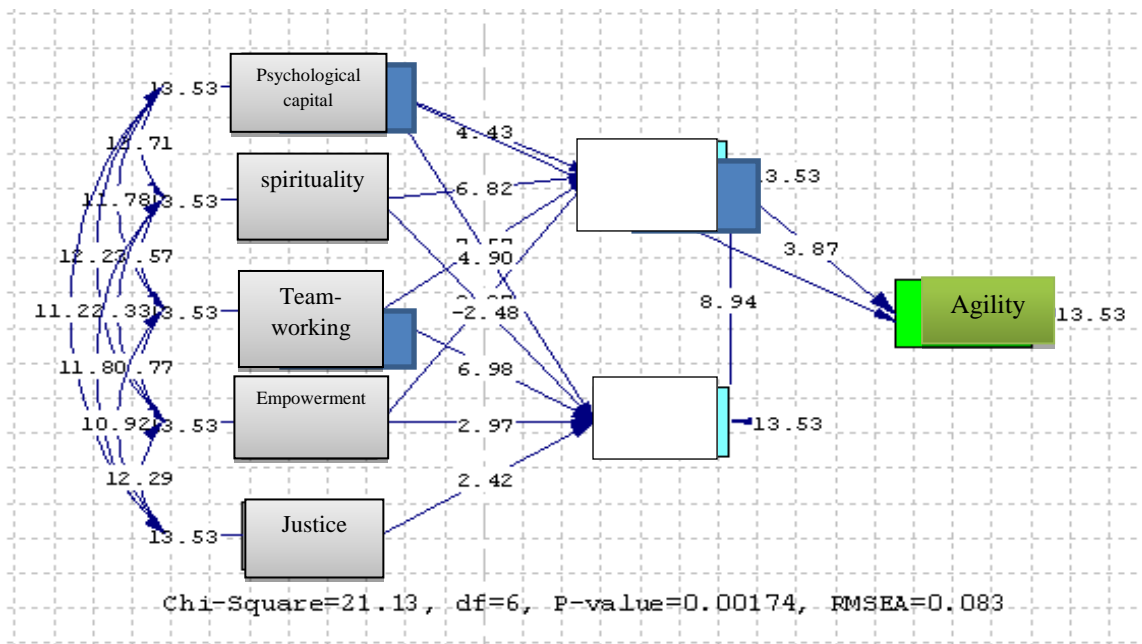


Fig. 2: modified model of research in case of significant coefficients

Research model in significant state shows that calculated absolute t-value for each of the path coefficients is higher than 1.96. Therefore, all path coefficients are significant in 95% confidence level. Hence, the effect of independent variables on dependent one is confirmed based on the available paths.

Table 5: fitness indices for modified model

| Allowable limit | Estimates | Index |
|-----------------|-------------------------------|---------------------|
| >0.05P | 21.13 χ^2 0.0017P 6df | Chi-square χ^2 |
| | | Chi-square/ DOF |
| | | RMSEA |
| | | GFI |
| | | AGFI |
| | | NFI |
| | | NNFI |
| | | RMR |

Results of factor analysis and model fitness illustrated that the following model is the best one for explanation of factors contributing to the improvement of agility in universities.

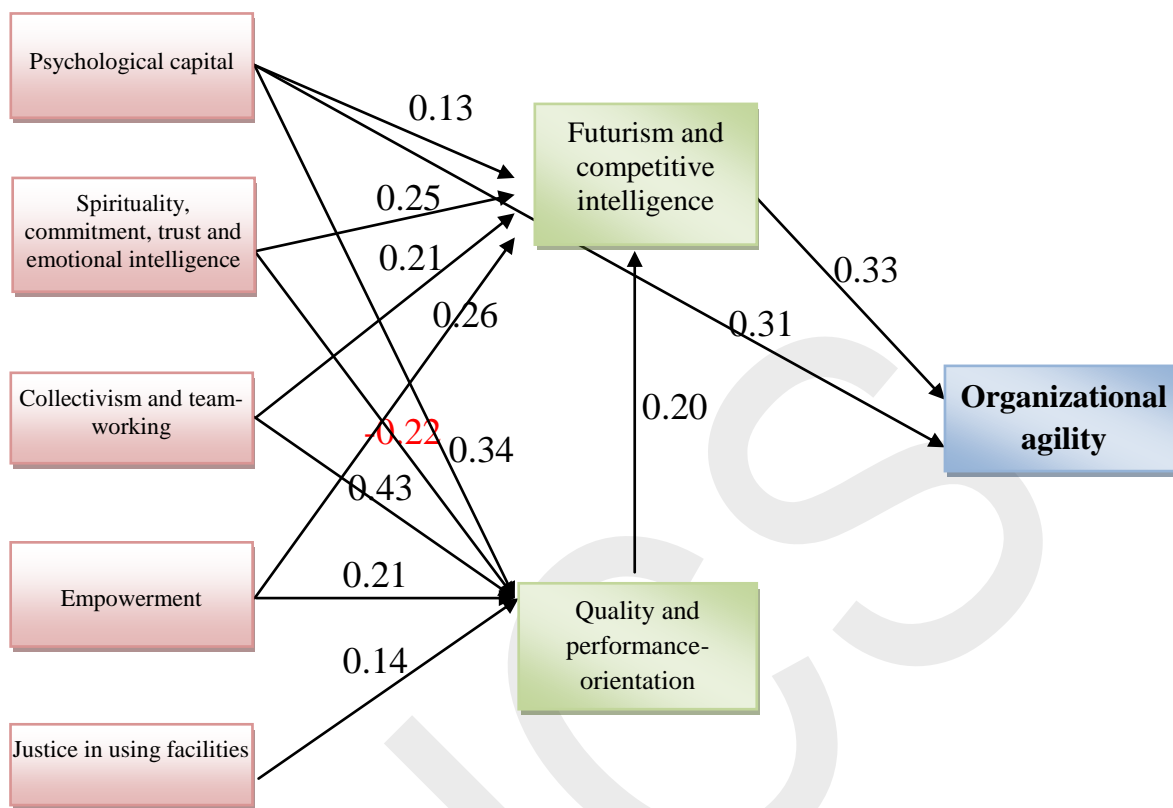


Fig. 3: model of cultural factors contributing to the improvement of organizational agility

Model of research is of suitable and appropriate fitness in accordance with indices. According to the model shown in Fig. 3, variable “change-orientation, futurism and competitive intelligence” is a key and intermediate variable by means of which all other variables affect the organizational agility. Variable “quality and performance-orientation” is the second intermediate variable which is affected by other variables and contributes to the change-orientation, futurism and competitive intelligence and eventually, the organizational agility. In addition, the variable psychological capital has direct as well as indirect and intermediate effect on organizational agility.

Conclusion

Research suggested that effective implementation of the plans of pervasive quality control and miniaturization depends upon the strategies embedded in change of the culture. These plans failed when they were without change in culture. However, they were successful when change in organizational culture was the aim of the change so that the plans can be implemented in the context of this change and improved the effectiveness of the organization. In fact, the main reason of success was the change in culture.

Dependence of the organizational progress upon culture change was due to the fact that when values, tendencies, definitions and goals remain unchanged, organizations return to their initial conditions despite of change in procedures and strategies. Unfortunately, unsuccessful attempts for making change bring about pessimism, frustration, mistrust and deterioration of

morale of the members of organization. As research revealed, if the strategy of change is not implemented in the first stage, the conditions of the organization worsens (Queen, 2014).

Abbas Pour (2012) showed that abilities whose utilization is necessary in universities for confronting drivers of agility direction change include intelligence, control over change in speed and flexibility, innovation, futurism, recommending solution to the customer by the learning organization.

Results illustrated that psychological capital and change-orientation, futurism and competitive intelligence have most and least contribution to the organizational agility. These two variables explain totally 44% of the variance of organizational agility.

Among variables which have direct contribution to the change-orientation, futurism and competitive intelligence, empowerment has highest contribution and spirituality, trust, commitment and emotional intelligence, collectivism and team working and psychological capital rank after it. These variables totally explain 93% of the variance of “change-orientation, futurism and competitive intelligence”.

Among variables which have direct contribution to the quality and performance-orientation, collectivism and team working has highest contribution and spirituality, trust, commitment and emotional intelligence, psychological capital and justice in using facilities rank after it. These variables totally explain 68% of the variance of “quality and performance-orientation”. Consequently, concentrating on the cultural components along with improvement of agility through strengthening behaviors in personal and organizational levels will be useful.

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