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Identify and Evaluate the Dimensions of Organizational Structure at Agile University; Case Study: Azad University Units of Mazandaran

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Abstract

The objective of present study was to identify and evaluate the organizational structure of agile universities. The research method was mixed (qualitative-quantitative). Statistical populations in the qualitative section consisted of 18 researchers in the field of organizational agility and were selected by purposive sampling method. Statistical society in quantitative section consisted of 150 members of the faculty of management at the University units of Mazandaran province. These subjects have been teaching in the universities at least for 10 years. Stratified random sampling was done considering the size of the faculty members in each college. The sample size was 90 people calculated based on Cochran Formula. Data collection tools in qualitative section were semi-structured interviews and questionnaire respondents agreed determining factor in the quantitative part questionnaire had 25 questions drawn from the results of the interviews. This question has two dimensions and evaluated the existing and desired agile organizational structure. In the qualitative data analysis methods, using the technique of open coding, axial, and selective and Kendall test showed agreement among experts; In the quantitative data analyses using descriptive and inferential statistics were used. The qualitative findings stage of the existence of qualitative show there are 7 factors and 25 indexes. Kendall's coefficient of agreement for the issue of the right size were (0.72), improving the organizational level (0.66) decreased organizational formalities, (0.67), effective communication, (0.69) now and integration (0.61) the center of decision-making (0.67) and the improvement of human resources. So these concepts were introduced as aspects of organizational structure. The findings of this assessment indicate that between the status quo and the ideal situation is marked on all sides there is a significant difference. Most of this difference in the dimensions of formalization and the lowest levels in the structure; According to the strategy managers and planners Islamic Azad University about creating agile university research findings can provide special approaches.

Key Words: *Organizational Structure, Organizational Agility, Agile University*

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Introduction

One of the main features of each organization is structure; in which different activities are separate and harmony is created between tasks. Also, although the structure, the authority responsible for the control, regulation and standards enforcement activities and scope of work is determined. For this reason, information and knowledge about it is one of the prerequisites for any effective organization. (Kim, Kang, Lee, Choi 1, 2007; Avritzer, Paulish, Cai, Sethi 2, 2010; Benson & Decker 3, 2010)

On the other hand, with the transition of mass production and moving towards customer orientation, meet the needs of customers is the most important concern for organizations. In the business world today estimate the diverse needs of customers in their expected time is the most important competitive advantage. Organizations are capable to offer a variety of services according to customers' requirements, in the shortest time and lowest cost, improve quality, innovation and overall organization more flexibility in response to environmental needs.

Take advantage of the changes as opportunities inherent in turbulent environments, traditional management are tools for organizations to pass through the tissue, and using it to improve their competitive position. For this reason, many organizations keep pace with the identification of deficiencies in the traditional paradigm, the growth characteristics of organizational agility. (Aerts, Szirbik 4, Gasnertz, 2002, p. 17) According to Agostinho 5 (2015, p. 407), the agility is a way to deal effectively with the continuous and unpredictable changes in the environment, agility makes empower the organization, (Chen, Chou and Wang 6.2007 Page 35) to enable them to respond to changing environments in addition to the measures to be predictive of response. (Ganguly, Nilchiani, Farr 7, 2009, p. 420)

Satisfies the needs of customers and employees, (Sherehiy and Karwowski, 2014, p. 468) and benefit opportunities within turbulent and uncertain environment. (Qin and Nembhard, 2015, p. 468) Is evident in the higher education system is not responsive to traditional methods and paradigms. That is why the higher education system needs in the form of agility. Agility for higher education is the message that the era of the hierarchical management by objectives, or through the logic of predetermined and precise control over.

All universities are world class as universities accountable (Gitagawa, 2003), responsible (Übius and Alas, 2009) Entrepreneur University (Etzkowitz 8, 2000) to deviate from managing traditional system and execute missions of modern higher education establishment and functioning. Academic versions of new universities and higher education institutions with the mission; innovation in mission requires university, universities accountable to community needs, for responsible and sustainable development of graduates with high capability to fulfill the needs of business organizations in a globalized environment, education and the so-called agile.

In other words, today's world demands a different kind of graduates, and educational institutions cannot teach students under industrial mass production. Thus factors affecting organizational agility and improve agility to the researchers and the university. Since the researchers believe one of the main causes agility Universities is the structure that is less considered, in this study first, researchers in this study to identify and assess the dimensions of agile organizational structure approach using data dealt Foundation and then to assess the dimension's units of Mazandaran university.

Research literature

Agility among researchers and industry experts in recent years has been concerned more and several studies in this regard provided, to understand better the concept of agility and factors affecting the agility. Huang (1999, p. 52); agility includes new ways of doing things

and that it is a new trend to build, buy or sell, diverse and numerous communications and new standards of performance evaluation considers both individuals and companies. For an organization agility is the ability to operate profitably in a competitive environment with unpredictable opportunities and are constant changes in the relationship with the customer.

Vernadet (1999), defined agility in line with the changing needs of business and competitive advantage. Petro and Hillo (2004, quoted by Jafarnejad and Shahaei, 2007), believe that agility is an organization's ability to operate profitably in a competitive environment in opportunities for continuous, unpredictable and variable.

Researchers believe that considering three important advantages for organizations to create organizational agility, the first is that agility is the ability of an organization to take advantage of the opportunities and positive use of the risks to be taken, all of which result from unforeseen changes large and frequent, especially market-based uncertainty. Second agility is generated using methods and techniques for valuation. Third one of the objectives of agility, balance long-term strategic economic success in the competitive matrix is very important. (Sharp, 2012)

Arteta and Giachetti, (2004) defined agility as the ability of an organization to adapt and take advantage of the opportunities that are presented to follow their developments. Some of the concepts embodied in agility in Table 1. In definitions provided essentially, the issue of speed and change in organizations is considerable. In addition, to assess and improve organizational agility by researchers and scholars pattern and various approaches have been proposed. However, universities often have emerged to solve the problems of communities has always been subject to change.

Changing the locus of economic discourse from a focus on traditional factors of production to knowledge-based economy, causing major changes in the structure and nature of its relations with its surrounding environment, (Clark 2004) During the last two decades numerous research reports in literature about the nature of human society expected changes in the higher education sector, from the perspective of the changing role within the university and surrounding community to interact with published its findings. (Aidis, 2005)

Forming a proper structure in any organization can lead to advantages such as universities agility of response, flexibility, speed and accuracy and change management, and the ability of the organization (university) and effective, and successful entrepreneur (Raschke 2010, p. 229, Qumer, 2008, p. 279) in that case, the connection between the organizational structure and elements of the organization. In other words, organizations are conscious and units as part of the original system created by the system and among these some system specific pattern governing their interaction.

This differentiation within and between sectors and organizational structure called communication patterns between them. (Katz, 200) Appropriate organizational structure of the enterprise, the removal of unnecessary things, streamline the flow of information within the organization, shared vision, to develop human resources capable still is. (Ramazan, 2011) From the perspective of Chen and Hang (2007) quotes Rahmanseresht, Radmard Galvani (1390), formalization as the basic organizational structure impact both positive and negative effects on the function of knowledge.

In the meantime, most theorists to define the structure of visible variable that is acceptable to apply, administrative components, the number of supervisors, line managers and staff personnel of the total number of employees, independence, especially to the extent that senior management decisions must be left in its highest level, focus, i.e. the proportion of jobs that operators in decision-making and participation and the number of areas in

Concept	Theorist
agility is comprehensive strategic response to fundamental changes in non-negligible and competitive system reigns. (Dominant)	Goldman and Najel (1995)
Agility means the dynamic changes, a position that involves bold-oriented and market share and achieve success in the field of mass customers.	Goldman and Najel (1995)
Search through the integration of resources that can reshape in competitive foundations	Yusef, Sharhadi, Gunasekaran (1993)
Rapid response to corporate needs, according to create and deploy virtual organization	Subba. Nahm
The ability to successfully manufacture and sell a wide range of products with low cost, high quality	Subba. Nahm (2001)
Ability to prosper in a constantly changing and unpredictable environment.	Maskell (2000)
The ability to touch the long-term changes in the organization applies the power of innovation.	Jackson, Johansson (2003)
The paradigm of the 21st century and winning strategy	Lin, Ching, Chiu, Tsen (2006)
Being able to quick thinking organization with a clever method	Pan & Nagi (2009)
The speed, compatibility informed with the ability to adapt quickly in response to changes and unexpected events with the applicable processes and structures in a dynamic environment	Kidd (2009)
Agility is a concept of organizational maturity and the ability of any organization to sensors, understanding and predicting changes in the work environment	Zhang (2011)
Competitive factors affecting successful implementation of speed, flexibility, quality and innovation rearranging the organizational resources and best practices to meet the needs and demands of customers	Trong (2013) Lin Chiu ,Tseng
Organizational conscious process to process, behaviors and structures of the organization to adapt to the external environment be provided.	Monauni (2014)
Philosophical attitude in order to understand and predict changes in the external environment	Agostinho (2015)
Collection the company's capability to respond to unexpected threats to the environment and earn maximum advantage and profit from growth opportunities and development changes	Sorenson (2015)

Table 1. The concepts embodied in the organizational agility. Source: researchers

which its employees participate in complexity, the degree of separation that exists in the organization and formality, the degree or extent to which organizational jobs, are standard. (Morton and Hu 2008; Isern Sánchez and Moreno 2, 2011)

On the other hand, literature suggests that the areas organizational structure of traditional structures with features such as focus, extreme division of labor, flexibility to changing environment, close control and shape its mechanical mobility of staff and human resources and in assisting the organization to develop and effectively confront challenges and new demand is weak.

In contrast, organizations with dynamic structure with features such as customer orientation, decentralizing the division of power, flexibility and tendency to self-control, low formal, minimal hierarchy, teamwork, confidence, creativity offered to employees. However, the research evidence has shown that academic departments at universities in decision-making is independent and stratified, organizational bureaucracy to a minimum and to increase organizational flexibility. Innovative activities and academic entrepreneurship goes up. (Daividson, 2001, p. 466)

However, studies that person's knowledge (1386), carried out showed that the organizational structure of universities have a moderate level of bureaucracy. In another study Zarrabi (1390) showed that there is too much bureaucracy in education system reigns supreme, in this study, it was found among the components of bureaucracy, hierarchy and division of labor and specialization lowest rates have the highest. Hashem Beig and others (1391) showed that the application of cybernetic model components (systems, self-control) is low at the university. But the tendency of faculty to the above pattern.

Mohammadi (1393) also showed a significant difference between the existing structure of academic and Entrepreneur University structure there. It seems that the dynamic organizational structure leads to increased agility universities. This type of structure can better respond in today's dynamic environment for solving problems and taking advantage of environmental opportunities the university. In this case, the design of a dynamic organizational structure within the university can improve academic agility. Agile University of discovering, identifying and overcoming current problems and the future of higher education.

In field studies into two categories, structure and organizational agility deals can be found. Booth (1996) to the positive role of information technology in agile structure. Sharifi and Zhang (2000) with a minimum concentration of organic organizational structure for industrial systems Jackson and Johansson, open communication in Intelligent Systems, Goldman et al (2005) to increase the influence of in internal and external corporate contributions, Sherehiy and Karwowski (2007) delegate to agile organizational structure, Duderstadt (2010) to open the flow of information in agile structures, Morshedi (2010) to the flexibility of in organizations with agile structure Mirccea and Andreescu (2011) small business space Work. Sheffield and Lemetayer (2012).

Given the importance of agile university structure as a factor to discover, recognize and overcome the current problems and the future of higher education, raises the following questions:

1. What are the dimensions of agile organizational structure of universities?
2. How is the current and desired status of agile organizational structure of universities, in universities studied?
3. Is a significant difference between current and desired status of agile organizational structure, studied at university?

Research methodology

In this study, the purpose and nature of the research that dimensions of structural factors agile, combining quantitative and qualitative methods are used, using research-based

strategies using quantitative and qualitative methods in study showed a mixed method is used. In mixed research methods, both time and intensity (surface, shallow and deep) are gathering important information. Given the above, and since in this study aims to identify the components of agility University of Azad Universities of Mazandaran province, in order to study the issue in-depth and understanding of integrated exploration method is used. Table 3 shows the stages of research.

Statistical society in the qualitative stage, experts in the academic community includes 18 faculty members, graduates of PhD in the field of industry, are managed. These people, in the context of structural transformation of the university or in the field of organizational agility literature and correspondence were the primary stated his willingness to interviews. Data collection tools in qualitative research consisted of in-depth individual interviews and explore. The qualitative data collected using three-step encoding process based on systematic design strategy grounded theory of Strauss and Corbin (1967), was coded.

After performing encoded choice questionnaire was developed and agreed to ensure that the experts were distributed to experts participating in the interview process. Once received, to determine the consensus among the members participating in the interview, the correlation coefficient (Solidarity) were used Kendall. Kendal correlation coefficient indicates that people who have arranged several

Topic	Supporters	Topic	Supporters
Organizational participation	Koufteros Nahm. Cheng (2007)	Controlling and evaluation	Benson, decker (2001)
Organizational chart and level	Katsikea, Theodosiou, Perdikis, Kehagias (2011)	Organizational architecture	Artes et al
Supervision area	Vickery, Droge, Germain (1999)	Organizational established strategy	Damanpour, Gopalakrishnan (1998)
Rules and regulation	Benson and Decker (2010)	Size of organization	Pulkkinen (2006)
Activity area	Chen et al (2007)	Organizational complexity	Chen et al (2007)
Organizational power	Kim et al (2011)	Organizational network	Benson and Decker (2010)
Decision making focus	Silva,Franca (2012)	Organizational focus	Conboy, Morgan,Beyond (2010) Rabins quoted by Erabin and Parsaeisan (2014)

Table 2. Lists some of the concepts embodied in the organizational structure Source: researchers

categories based on their importance, basically the same criteria to judge the importance of each of these categories are used to agree with each other. When complete coordination or approval of this scale to one and in time to decide whether to stop or continue the complete absence of periods is zero.

Statistical society was 150 at the few members of the faculty of management at Azad University units of Mazandaran province. These people at least 10 years has been teaching in the university of. The list of members of the Secretariat universities have been getting. Statistical sample size was calculated based on a sample of 90 people. Stratified random sampling based on the number of faculty in each college. Randomly sampling method was simple. Data collection tools at this stage is a self-made questionnaire of 24 questions.

The provisions of this questionnaire was taken from the qualitative stage, while the theoretical foundations that support these components. This questionnaire under the current situation and the desired situation and based on the Likert 5 options (very low to very high) was designed. Face and content validity for Theta respectively; confirmed by 0.79 was determined that was accepted. To analyze the data, descriptive and inferential statistics Kolmogorov- Smirnov test and t test was used two dependent groups.

Research findings

The findings of qualitative data

Of the analysis of qualitative data in coding stage 75 1 the basic concept code was obtained. This concept of higher level of abstraction and are an important step to generate categories structure of agility. After performing open coding, axial coding stage and concepts were classified. After reviewing and match these codes and delete duplicate code, after several research of the data, the concepts of code (and categories and compared with theories and models of organizational structure and organizational agility, categories and in the form of 7 were classified.

Then this issue and to investigate the correlation between experts' consensus was for a questionnaire (Statistical society) were distributed. Expert's enforcement of the questionnaire showed that 50 percent of experts voted factors specified. Kendall's coefficient of agreement for the issue of the appropriate size, improve organizational level, (0.66) decreased organizational formalities, (0.67), effective communication, (0.69) now and integration (0.61), the center of decision-making (0.67) and the improvement of human resources; (0.69) that the agreement is relatively modest people; Therefore, output stage 7 components and 25 indicators of quality there was little that formed the basis of the questionnaire.

The findings of the quantitative data

The research results showed that the most frequent time faculty members participating in the Research Assistant Professor, GPA faculty members 13.5 years work experience and familiarity of the topics of organizational structure and organizational agility faculty members has been good.

Table 4 shows the mean scores of the respondents in the categories of organizational structure shows both current and desired status as is clear from Table 4. Average in all aspects of the situation are higher than average. (Contract number 3, as the average index is intended.) Greatest amount of academic average in the status quo of corporate communications and the lowest of the university is recognized.

This means that the faculty, the University of network-based Communications Units, official communications flexibility, informal communication staff, students communicate effectively in social programs and infrastructure, appropriate technologies are better than others. Research findings indicated in the table suggest that the optimal situation in terms of human resources has a higher average, this means that the expectations of faculty members to have technical skills, social and psy-

Explanation	Intensify	Kind of activity
Familiar with agility and organizational structure concepts	Deep	Reviews the literature on organizational agility and organizational structure
Attention to mixed research kind	Narrow	Initial interviews with some teachers about the kind of research
Output of qualitative data	Deep and narrow	Interviews with academic experts Design and implementation of the initial questionnaire to determine the consensus of experts on research findings
Analytical analysis	Deep	Design and implementation of a special questionnaire academics The final analysis and identification of structural components agile University

Table 3. Stages of doing research

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chological human resources staff from other higher dimensions.

Table 5 shows the distribution of scores in both current and ideal state is the norm for all aspects of agile organizational structure; because the probability of error is sig viewed from the 0.05, therefore with 95 percent probability distribution of statistical data are normal; therefore, parametric test t-affiliated groups is provided. Table 6 indicate a significant difference between the existing and desired gap between current and desired status is determined.

As is clear from Table 6 between current and ideal state of specified dimensions' agile university structure there is a significant difference; because a significant level in all aspects from 0.05 less. This means that the utility university the indicators are agile structure dimensions. In the meantime, the greatest difference between the current situation and the ideal situation for later recognized as one of the factors identified in the structure of the university agile and the lowest organizational level in the structure of the university agility.

Discussion and conclusion

No doubt each of tensions and conflicts poor structure of the organization and also prevents innovation and creativity, agility is one university the most basic features. It was found in the organizational structure of a university that is so agile in change and uncertainty flourishes. Agile university from flexible organizational structure that uses stakeholders with diverse needs and opportunities for changing tune. Non-hierarchical structure of organic, flat, adaptable and permeable borders feature is an agile organization.

At the University of Agile Organizational Structure to easily and quickly created and when that change is needed in terms of organization, it can be easily restructuring. University should as far as possible in the decision-making power is delegated to departments and educational groups and the work done by the team and for the team and the team,

Index	Topic
Change the size according to the needs University Use appropriate staff	Suitable size of university
Moderate levels of supervision at the University of Adjusted levels of management at the University of The adjustment in staff offices As appropriate scientific groups	Improve organizational situation
Program at the University of legislation Set at the University of flexible standards Adjusted leadership Full tests and academic groups Academic freedom of professors Academic freedom of faculty members	Reduce organizational unity
Network-based communication units Official Communications flexible Informal communication staff Effective communication students in the field of social Appropriate infrastructure technology	Effective communication
Connections with the University's commitment Interaction between faculty and students in science External cooperation with other educational institutions, industries, Company faculty members in the decision-making process Delegate in groups and academic departments	Integrity and participation
Improving technical skills Improvement of social skills	Human resource improvement

Table 4. Categories influential in promoting organizational agility at the University organizational structure

to quickly and easily create and, if needed to change the terms are easily restructuring. Universities should be permeable structure.

Each employee in the university affairs and tasks in certain ways and not having the same standard is very low and to exploit the creativity of employees are somewhat allowed to deviate from the rules. One of the prominent characteristics university the agile structure, with commitment, communication among academic staff and interaction between faculty and students in science and external cooperation with other educational institutions and industries. This would be entrepreneurial and create wealth in the universities.

In this study, it was found appropriate scale 7 factor University, the improvement of the academic enterprise, reduce academic recognition, effective communication of the University through student portals, enterprise integration and comprehensive centers of decision-making and improvement of human resources involved in the structure of universities agile. These findings are consistent with findings of Booth (1996), the role of ports in information technology systems, Sharifi and Zhang (2000) with a minimum concentration of organic organizational structure for industrial systems, Jackson and Johansson (2004) Referring to open communica-

Average	Dimension	Average
3.77	Size of university	4.28
3.77	Organizational level of university	4.13
3.42	Organizational position of university	4.24
3.80	Organizational communication of university	4.45
3.76	Integrity and participation	4.24
3.77	Decision making focus	4.24
3.71	Human resource	4.62
3.19	Structure of agile university	4.18

Table 4. Mean scores of respondents in categories organizational structure of university agile

Current status		Dimension	Desired status	
Sig	k.s statistic		k.s statistic	Sig
0.063	2.27	Size of university	3.27	0.053
0.059	2.62	Organizational level of university	3.25	0.057
0.063	2.36	Organizational position of university	2.63	0.063
0.057	2.62	Organizational communication of university	3.45	0.630
0.065	2.61	Integrity and participation	3.35	0.058
0.065	2.55	Decision making focus	3.52	0.063
0.046	2.78	Human resource	3.56	0.059
0.059	2.96	Structure of agile university	3.45	0.061

Table 5. Evaluation of data categories agile organizational structure of university Using k.s statistic

tion in Intelligent Systems, Goldman (2005) increased the influential role of in internal and external organizational contributions, Sherehiy and Karwowski (2007) Delegate to agile organizational structure, Duderstadt 2010 to open the flow of information in agile structures, Morshedi (2010) to the flexibility of in organizations with agile structure Mirccea and Andreescu (2011) small business space and Lemetayer have Sheffield, (2012) is aligned and consistent.

It was found in the existing structural conditions and favorable conditions of agile university dimensions are identified, there are significant differences vacuum at the center of decision-making is the biggest difference.

Sig	T value of dependent group	Difference between current and desired status	Dimension
0.000	11.9	0.51	Size of university
0.000	7.4	0.36	Organizational level of university
0.000	15.6	0.82	Organizational position of university
0.000	13.2	0.65	Organizational communication of university
0.000	9.9	0.48	Integrity and participation
0.000	10.8	0.97	Decision making focus
0.000	11.8	0.78	Human resource
0.000	12.83	0.99	Structure of agile university

Table 6. Significant differences between current and desired status using t-test.

However, the current situation the university is not designed for an agile system. The findings of this study Zarrabi (2011) had high academic bureaucracy, Hashem Beig and others (2012) showed that the application of cybernetic model components (systems, self-control) at the university's bottom line.

Due to the fact that there are significant differences between the organizational structure of universities studied conditions and favorable conditions of agile universities, it is recommended that authorities rethink their organizational structure and designed it to be that in response to changing needs flexible environment, from the rules and regulations for employees is troublesome to be reduced. The participation of employees in decision-making and to make the situation as transparent and two-way communication from top to bottom and from bottom to top is created.

At the same time the organization's activities and tasks not designed to be very specialized, because it causes lethargy and boredom specialization in organization among employees and the basic spirit of creativity and innovation that eliminates the agility among employees. On the other hand, originality and dynamism of university activities with agile structure is in need of a free and democratic atmosphere and supporting principles faculty members is considered. A fundamental policy to increase the autonomy of universities' responsibility, accountability and dynamism.

Therefore, recommended to provide mechanisms for scientific freedom, independence and sense of responsibility to increase academic university. This study, like other research scholar limitations under control and out of control. Restrictions can be limited under the control of the structure of the branches of Azad University of Mazandaran that researchers hope other universities and other research into the structure and the results are compared agile and out of control can be achieved the limitations of the limited number of published research report, the university's agile structure.

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