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Identifying the Dimensions of Innovative University to Presentation a Model (Case Study: Islamic Azad University)

Robab jafarzadeh Ghadimi[1], Taraneh Enayati[2*], Mohammad Salehi[3]

1. Department of Educational Management, Sari Branch, Islamic Azad University, Sari, Iran
2. Department of Educational Management, Sari Branch, Islamic Azad University, Sari, Iran
3. Department of Educational Management, Sari Branch, Islamic Azad University, Sari, Iran

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Abstract

Purpose: The aim of this study was to identify the dimensions of the innovative university in order to provide a model in Islamic Azad universities, East Azerbaijan. This research regarding its purpose was an applied one, which was carried out using an exploratory mixed methods approach. **Methodology**: In the qualitative section the Delphi method and in quantitative section descriptive method was used. The statistical populations of this study, in the qualitative section of the study were the exports who were aware of the subject and in the quantitative section were faculty members of Islamic Azad University of East Azerbaijan(n=900). In the qualitative section, the purposeful sampling method, considering the saturation law (n=12) was used and in the quantitative section, using random stratified sampling method, based on the scientific rank of faculty members and based on the Cochran formula, 270 subjects were selected as the statistical sample. The data collection tool was a researcher-made questionnaire of the dimensions of the innovative university. The reliability of the questionnaire was quantitatively determined using Cronbach's alpha method (0.891) and composite reliability (0/688). Exploratory factor analysis using SPSS software was used to analyze the data and validation used to Smart PLS. **Findings**: Also, the results showed that the endogenous variable (Innovative University) has the ability to explain the changes exogenous variable (the five structural, strategic, research structural, environmental and educational pedagogical dimensions).**Conclusion**: The overall value of the model was also confirmed using the GOF= (0/396) standard.

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* Corresponding Author: Email: tenayati@yahoo.com

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1. Introduction

The present century is a promising area of change, complexity, and competition. Any organization needs a continuous or fundamental improvement to achieve growth and competitive advantage. Therefore, leaders of today's organizations should innovate as a quality and productivity, as well as a strategic principle throughout an organization. The components of interaction, leadership, communication, knowledge, integration, organizational support, and motivation have a significant effect on innovation. Among these factors, knowledge has a greater impact on innovation (Saeeda Ardakani et al., 2013). Efforts to innovate in higher education institutions, as a means to excel, have become the main theme of debates and research over the past decade, as institutions, think tanks, and policymakers are working on issues of implementation, access and power Financial solution (Kirschner, 2012, Wildavsky et al., 2011).

2. literature Review

The addition of new features to the universities will make fundamental changes to their management system (Skribans et al. 2013). A business model is a business, service, economic, and structural organization based on schemas and specific programs based on functional development and development tools in the workplace (McInerney, 2011). One of the most important issues in this regard is having a specific pattern of planning for the course and progress in this course (Durham, 2004). The basic principles of planning, despite the foundations and fixed indicators that are in place, have different implementation and implementation indicators that are carried out according to specific goals over time, geographic location and use (Dominguez et al., 2009). This type of management and planning is used for flexibility in adaptation, the proper use of products and products, and the promotion and improvement of equipment and commodities that are suited to the needs of the content and taste of the day (Matejun, 2016). In more specific terms, in this planning style, the pattern used is based on the idea of and innovation in the context of specific change and its related (Lemosa et al., 2016). One of the most important indicators of success in this field is the use of innovations within its specific framework to remain in the competitive environment and provide feedback from it and available resources (Nor Azlina and Aliza, 2016). Organizational innovation as a key element of success is the production of products and the provision of new services to compete for business and to succeed in this competition (Gumusluoglu and Ilsev, 2009).

The enterprise-based application Specialized and flexible resources to achieve maximum facilities and capabilities (Shruti Sinha et al., 2016). In other words, in this branch, the basic axis based on the implementation of the principles of implementation with the maximum positive outcome and the least damage Is. One of the environments that seriously affects the organizational innovation in advancing its goals is the educational and academic environment (Simao, 2016). In this system, with the application of organizational innovation and its cultural, social and structural foundation, the educational system employs an independent process, the result of which is the reduction of side, waste and time issues, and with respect to those organizational relationships and educational culture Directly and with high returns, it covers the flow of education (Morrar, 2015). In other words, organizational innovation in the academic environment is the most important achievement in the correct use of education in its organizational structure (BENNER & TUSHMAN 2003, 13). In most organizations, especially in educational research organizations, structural

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variables are the most efficient sources of creativity. Organic structures have a positive impact on innovation, the work is not so formal and focused, and these organizations have a lot of flexibility. Management history also leads to innovation because of the legitimacy of doing things and achieving the desired goals, and innovation comes about when it comes to increasing resources (Robbins, 2008). Creating and sharing knowledge is a principle It is important and vital to improve the relationships between innovative and creative universities and businesses and societies. Interaction with the community is not just the exchange of knowledge, but the actual exchange with all the foreign partners that a university can do its part to generate knowledge (Paul, 2007).

Curriculum is developed with a variety of strategies. Exploiting Knowledge Trading, Technology-Based Economic Growth, Scientific Startup Activities Are Effective Strategies in an Innovative University. Kinds of curricula, courses, teaching methods can best serve the educational goals of the Third Generation University to be The third-generation college has a minority-based, business-centric focus and endorses the need to train business skills for those who want to set up technology companies. The goal is to train technology starters. Research findings can be considered as opportunities for commercializing and producing new business ideas that are recognized for the first time. The Innovation University offers technology-based technology-based research based on research (Kyro and Mattila, 2012).

In this system, educational seriousness, while flexible, brings together a combination of educational progress and the creation of a healthy environment for education among learners (Audrey & Jaraji, 2016). (Eddleston et al., 2008), in a detailed study of the situation, has proved that the basic principles of planning in its totality are flexible policies in relation to the purpose and pattern of use identified in that area. Therefore, different organizations have always set and set up specific long-term programs to achieve their main goals and upgrade their indicators. Most of these programs are based on increased quality and profitability indicators and organizational and service plans aimed at reducing factors. Losses are a loss of time and cost (Garrido & Martos, 2016). PRajalo and Vadi (2017) tested the research as "Innovative collaboration of the university and industry" with a conceptual approach in 12 cases experimentally. The interactive model in two dimensions of motivation and absorption capacity as vital aspects determines the probability of success or failure of such collaboration.

Lemosa and Ferraz Cario (2016) conducted a research on the interaction of the University and Industry in Santa Catarina, Brazil, by examining the phases of transformation, forms of interaction, benefits, and barriers. The results indicate that there is a need for nonlinear interactions for innovation. If in four universities studied, these interactions are with old channels and services. The severity of communication depends on the shortage of knowledge transfer time from universities to companies. The lack of a clear path for these interactions is a feature of universities in Brazil. (Ivascua and Margarita, 2016) conducted a study on the presentation of an initial business model for collaboration between universities and industrial partners (through projects) in an open innovation. The results show that the collaboration between these two institutions of the university and industry is very consistent with the framework for collaboration shown. Universities face limited and inattention to creativity and innovation. Structural constraints, lack of attention to opportunities and threats, lack of strategic look, archival research and inefficient training, which, by spending a lot of financial, human, and costly costs of lost time, needs to innovate a hundred times.

The issue of innovative universities and their dimensions has been less of a concern for researchers and has largely been considered. Scientific studies show that the factors affecting the institutionalization of

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innovation in universities, especially at the Azad University, have been influenced by several factors and, depending on the structure of universities, the environment, and educational and research programs, there is also a lack of a comprehensive model Which is suited to the culture of the academic community, has faced the university with many challenges. Therefore, this research seeks to identify the dimensions and indicators of innovation for the establishment of an innovative university in Islamic Azad University. Planning at third-generation universities places different dimensions in line with time and space, and universities have felt the need for innovation with all their being, and a different look at the dimensions of innovation, innovative planning for the organization Makes it necessary. Relative importance of innovation, along with other factors of organizational change and improvement as factors of performance for products and services at the university, is important. In universities, innovation should be considered in the cycle of educational and research planning alongside academic strategies and environments as well as organizational structure. Failure to pay attention to innovations will reduce demand and accessibility. Universities are graded according to the Thomson Reuters index and look at the indicators to keep pace with growth, and each year, with We will find new indicators that will require universities to innovate and change according to the time and place and the resources needed and available and the processes that need to be reviewed and reformed.

3. Methodology

In terms of applied purpose, in terms of data collection method, descriptive-survey, in terms of exploratory blend type, was considered in terms of time and in terms of field environment. A: Qualitative section: Experts and academic specialists with books, articles and dissertations related to innovation and entrepreneurship, and so-called well-known experts. A sample sampling method was used to determine the samples of this research and to determine the group of experts. In this study, 12 samples were considered as interviewees. B: Quantitative Section: The statistical population of the study consisted of 900 faculty members with professors, associate professors and associate professors of free universities in East Azarbaijan. 270 students were selected as sample size. Qualitative section: In the qualitative part of this research, semi-structured interviews were used. In an interview for a preliminary study, a general question was asked about the dimensions of the innovative university and eight questions were asked about the indicators of the innovative university. Subjects were discussed in order to understand the participants' experiences during the interview. The researcher analyzed the data in the process of sampling the participants so that incomplete cases can be completed by obtaining new information from the new participant. After doing twelve interviews, the indicators were repeated in previous interviews and the researcher reached saturation. During the interview, he collected the views on the appropriate indicators for determining the dimensions of effective innovation in the university and the components considered and finalized. B- Quantitative section: In the quantitative research stage, the questionnaires were designed based on the criteria extracted from the qualitative stage. In fact, the research questionnaire was based on the results of the qualitative section (interview, review of upstream documents such as the Statutes of the Free University and the centers of growth and technology, the country's comprehensive scientific map and the fifth development plan). The questionnaire consists of 66 closed-ended and 5 Likert scale options.

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In order to ensure the validity of the qualitative part of the research, and to ensure the accuracy of the findings from the researcher's point of view, the valuable comments of the professors and faculty members who were well-known in this field were used. At the same time, participants were encouraged to analyze and interpret data. The formal and content validity of the questionnaire was confirmed by experts in this field. In the convergent validity sense, the mean value of the extracted variance was used. The minimum criterion for the acceptance level is the average extraction variance of 0.5. All variables with extracted mean variance were higher than 0.5. Therefore, the convergent validity of these variables was confirmed. By comparing the crude mean of the extracted variance of each structure with the values of the coefficient of correlation between structures, a divergent validity study was performed. The mean values of the variance extracted in the rows and columns that were located were the highest, indicating a divergent validity among the variables of the research. Also, in order to determine the reliability of the data gathering tool, Cronbach's alpha and combined reliability were used by Smart PLS and SPSS software. The values of these coefficients for all variables were higher than 0.7, which indicates the reliability of the questionnaire. The mean values of the extracted variance, the combined reliability coefficient and the Cronbach's alpha coefficient are shown in Table (1).

Table 1. Descriptive statistics of research factors

factor	Standard deviation	mean	Mean of variance	Mixed reliability	Reliability alpha
Structural	0/61811	3/4667	0/674	0/869	0/865
Research	0/76111	4/0132	0/784	0/951	./948
Peripheral	0/70970	3/5412	0/631	0/839	0/826
Strategic	0/54331	3/5324	0/652	0/837	0/824
Educational and Educational	0/54349	3/6413	0/699	0/942	0/927

4. Findings

In the qualitative section, according to the research objectives and questions, after identifying relevant documents related to the topic of research and interviewing the experts, the indicators related to innovation were identified. In a small part, three questions were answered.

Question 1: What are the dimensions of the innovative university in the Islamic Azad University of East Azarbaijan The present research was to identify the underlying factors affecting the creation of an innovative university. For this, exploratory factor analysis was performed by analyzing the main components. To investigate and answer this question, a researcher-made questionnaire on the dimensions of the Innovative University was used as a tool for data collection. In this section, an exploratory factor analysis was first performed. In performing factor analysis, first of all, should it be ensured that data available for analysis can be used? Various methods, such as calculating the KMO value for the suitability of the factor analysis, and also to ensure that the data are appropriate, indicates that the matrix of correlations that are the basis of the analysis is not zero in the society and at 95% There is a significant relationship between the research fields and the possibility of discovering a new structure of data is possible, Bartlett's test is used. The results shown in Table (2) show that the correlations between the data are appropriate for factor analysis and sampling adequacy.

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Table 2: Results of the KMO index and the Bartlett test before eliminating the questions

Results	test		Content
0/866	KMO		new finding
16084/295	Chi-square	Bartlett's Curry Test	
2145	Degree freedom		
0/000	significance		

According to the KMO number (greater than 0.7) and the significant number of Bartlett test (0.05sig <), it can be said that the data is suitable for performing factor analysis and has the required conditions. In order to understand the share of the factors in the explanation of the variance of each item, the primary components and extractive shares are used. The larger the extraction subscription value (ie, greater than 0.5), the better the factors described. Questions whose numbers are less than 0.5 are deleted.

Table (3). Basic Shares after Delete Questions

questions	primary	Extracted	questions	primary	Extracted
1q	1/000	0/772	34q	1/000	0/513
2q	1/000	0/687	35q	1/000	0/869
3q	1/000	0/819	36q	1/000	0/661
4q	1/000	0/613	37q	1/000	0/771
5q	1/000	0/770	38q	1/000	0/773
6q	1/000	0/743	39q	1/000	0/093
7q	1/000	0/523	40q	1/000	0/114
8q	1/000	0/784	41q	1/000	0/837
9q	1/000	0/848	42q	1/000	0/509
10q	1/000	0/722	43q	1/000	0/775
11q	1/000	0/102	44q	1/000	0/149
12q	1/000	0/795	45q	1/000	0/799
13q	1/000	0/811	46q	1/000	0/573
14q	1/000	0/824	47q	1/000	0/743
15q	1/000	0/055	48q	1/000	0/034
16q	1/000	0/656	49q	1/000	0/032
17q	1/000	0/792	50q	1/000	0/677
18q	1/000	0/597	51q	1/000	0/667
19q	1/000	0/014	52q	1/000	0/664
20q	1/000	0/647	53q	1/000	0/859
21q	1/000	0/615	54q	1/000	0/693
22q	1/000	0/218	55q	1/000	0/661
23q	1/000	0/571	56q	1/000	0/541
24q	1/000	0/685	57q	1/000	0/050
25q	1/000	0/688	58q	1/000	0/685
26q	1/000	0/538	59q	1/000	0/688
27q	1/000	0/140	60q	1/000	0/764
28q	1/000	0/673	61q	1/000	0/704
29q	1/000	0/543	62q	1/000	0/861

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30q	1/000	0/075	63q	1/000	0/645
31q	1/000	0/715	64q	1/000	0/070
32q	1/000	0/670	65q	1/000	0/876
33q	1/000	0/667	66q	1/000	0/579

There are 13 questions of common variance less than 0.5 and deleted. The KMO and Bartlett tests in Table (4) show the elimination of questions that indicate that all questions are appropriate in the process of factor analysis.

Table 4. Results of KMO index and Bartlett test after eliminating questions

Results	test		Content
0/888	KMO		new finding
14938/496	Chi-square	Bartlett's Curry Test	
1378	Degree freedom		
0/000	significance		

To illustrate which factor has a greater role in the total variation (variance) of the variables in question, according to the total variance statement table (5), these factors explain about 70.420% of the variance of the variables, which in fact indicates that Suitable validity is a question. The first factor always explains the maximum variance of the variables and has the largest value. According to the Keser criterion, agents with a specific value of less than one are not considered to be agents of choice. The results show that 53 items can be reduced to 5 dimensions, and we can combine these 53 items, construct a new structure based on dimensions with a new composition, and then analyze the data. The first factor with a specific value of 11.597 and the fifth factor with a specific value of 4.620 have the highest and lowest shares in the variance of the total variables, respectively. Also, in the sketch diagram of Figure 1, a special value is plotted for each agent. At the point where the shape of the curve for the special values is horizontally, it is called the scratch point and the factors on the left are the real ones and those on the right are the error factors. There may be more than one scary. Therefore, in addition to the Searched test, other tests, such as the Kaiser test, must be performed.

Table 5. The total variance explained

Factors	special amount			Total squared load factor (before rotation)			Total squared load factor (after rotation)		
	sum	Ratio of variance (Percent)	cumulative percentage	sum	Ratio of variance (Percent)	cumulative percentage	sum	Ratio of variance (Percent)	cumulative percentage
1	11/597	21/881	21/881	11/597	21/881	21/881	11/044	20/837	20/838
2	9/945	18/764	40/646	9/945	18/764	40/646	10/196	19/238	40/075
3	6/600	11/333	51/979	6/006	11/333	51/979	5/733	10/818	50/893
4	5/154	9/725	61/703	5/154	9/725	61/703	5/330	10/056	60/949
5	4/620	8/717	70/420	4/620	8/717	70/420	5/020	9/471	70/420
6	1/360	1/954	72/374						
7	./908	1/713	74/087						
8	./864	1/631	75/718						
9	./806	1/520	77/238						
10	./719	1/356	78/594						
11	./693	1/308	79.902						

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12	./638	1/204	81/106						
13	./604	1/140	82/246						
14	./556	1/049	83/295						
15	./542	1/022	84/317						
16	./519	./979	85/295						
17	/.495	./935	86/230						
18	./467	./881	87/111						
19	./446	./841	87/952						
20	./424	./424	88/752						
21	./396	./396	89/499						
22	./368	./368	90/194						
23	./360	./360	90/873						
24	./336	./336	91/506						
25	./317	./317	92/104						
26	./306	./306	92/681						
27	./286	./286	93/221						
28	./259	./259	93/709						
29	./249	./249	94/179						
30	./240	./240	94/631						
31	./222	./222	95/049						
32	./209	./209	95/443						
33	./204	./204	95/828						
34	./190	./190	96/186						
35	./180	./180	96/526						
36	./172	./172	96/850						
37	./154	./154	97/142						
38	./147	./147	97/419						
39	./141	./141	97/685						
40	./139	./139	97/947						
41	./123	./123	98/179						
42	./114	./114	98/395						
43	./112	./112	98/606						
44	./108	./108	98/809						
45	./098	./098	98/994						
46	./093	./093	99/169						
47	./086	./086	99/332						
48	./.75	./075	99/474						
49	./.73	./073	99/613						
50	./064	./064	99/732						
51	./053	./053	99/833						
52	./050	./050	99/927						
53	./039	./039	100/000						

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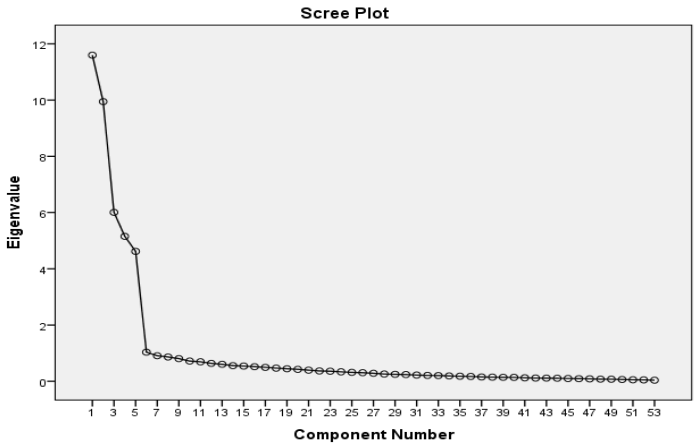

Figure 1. Nutritional factors of the disease

To determine the correlation matrix between items and factors and to classify each item in each factor, the correlation matrix between the terms and factors after the rotation is used. In this matrix, if factor loads (factor scores) of each of the variables are greater than 0.5, then under the operator umbrella it is considered that the higher the coefficient, the more the factor plays a greater role in the total variation (variance) of the variable in question. Table (6) shows what questions and factors related to these dimensions are related. These dimensions were named structural, research, strategic, environmental and educational-educational according to experts.

Table 6. rotating factor matrix

	factors						factors				
	1	2	3	4	5		1	2	3	4	5
q1		0/878				q34				0/698	
q2	0/831					q35					0/930
q3	0/905					q36		0/812			
q4			0/761			q37					0/868
q5	0/872					q38		0/881			
q6	0/859					q41					0/912
q7	0/725					q42		0/688			
q8	0/882					q43				0/884	
q9	0/917					q45	0/891				
q10				0/855		q46			0/751		
q12	0/886					q47		0/865			
q13	0/896					q50				0/810	
q14	0/905					q51			0/798		
q16		0/806				q52			0/812		
q17		0/891				q53	0/920				
q18			0/761			q54					0/825
q20			0/788			q55					0/807
q21				0/798		q56				0/737	

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q23		0/750				q58				0/824	
q24		0/825				q59		0/818			
q25		0/826				q60		0/878			
q26					0/722	q61		0/836			
q28			0/819			q62	0/923				
q29		0/711				q63		0/794			
q31				0/836		q65	0/935				
q32			0/813			q66					0/754
q33			0/815								

Table 7. Indicators of Innovation at Islamic Azad University

1. The existence of intellectual property laws and regulations, in the production of articles and scientific books and patents
2. The absorption of research capital and research funding by financial institutions, including the Fund for the Support of Technology and Innovation and Entrepreneurship
3. Support the establishment of joint research institutes between industry and universities and knowledge-based companies
4. Adaptation between scientific developments and community needs and educational and research programs
5. Presence of faculty, staff and students in internal and external scientific and research centers
6. Conducting workshops, conferences, seminars, competitions and related specialized Olympiads
7. Print research results in authoritative scientific-research journals and ISI
8. Documenting and authorizing research findings
9. Future and futures studies
10. Balanced Development of Science, Technology and Innovation
11. Prioritization of applied and targeted research
12. Production of publications and software applications
13. percent of articles shared with industry
14. Number of patents
15. The existence of technological, scientific, research, executive and cultural infrastructure
16. Teamwork and group problem solving
17. Transparent information sharing across faculty, staff and students across the university
18. Confidence Between University and Society
19. The Impact of the Director's Personality on Innovation and Entrepreneurship
20. The existence and the status of the university
21. Accelerating the process of producing ideas and turning into sustainable businesses
22. Determine the exact duration of projects by management
23. Ensuring information security and risk
24. Attention to the decentralized structure
25. Innovative Offers
26. Realistic goals in fostering all aspects of the student's personality
27. Identification, Recovery, Utilization and Maintenance of Inventors, Innovators and Entrepreneurs
28. The existence of educational and research spaces for researchers, faculty, creative, innovative and entrepreneurial students.
29. The existence of a learning system
30. formalization of affairs
31. Knowledge of individuals about the place of innovation in the organization's strategy
32. Tolerance of failures and mistakes by the community
33. Capacity of absorption (structural, cultural, basic knowledge, strong
34. manpower, trust between the holder and the receiver of technology, ability to carry out research and development) Innovative technology
35. Localization of experiences

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36. Pay attention to the quality of people and processes
37. The existence of an innovative science atmosphere
38. There is an appropriate upgrade system for individuals
39. Selection and exact selection of people based on real criteria
40. Granting privileges and facilities for innovative projects
41. University Identity
42. Short-term and medium-term informal training of faculty members and students
43. Coordination of different fields, individuals, equipment and physical space
44. Adaptation between professional competencies of faculty members at the national and global levels
45. Commercialization of research based on the needs of the country
46. Fundamental, Applied and Development Theorization
47. Creating the necessary substrates to maintain and improve the health of the community
48. The expansion of the policy of decentralization in the development of health and medical networks
49. Changing curriculum approaches
50. The institutionalization of the culture of change and innovation
51. Application of Inventions
52. Coordination of educational and training programs for media (visual, audio, writing) with country development programs
53. The Impact of Outbound Social Capital on University Development Processes
54. Development of libraries and databases and sports and welfare facilities
55. Upgrading and updating equipment, technologies and training programs
56. The proportion of content presented with technological developments and global and multicultural requirements
57. Objectives and Perspectives Revision and Re-engineering of Policies and Procedures for the Implementation of Processes
58. Impact of assessment, in the ranking of innovative projects and resource allocation
59. Paying attention to the authority and scientific acceptance at the national, regional and international levels
60. Justice-centered and accountable education
61. Suitable motivational practices
62. Correction of the Faculty Pyramid
63. Predicting the admission of graduate students
64. Institutionalizing critical thinking, methodological critique, professional commitment, spiritual and cultural values
65. Control the financial cycle for the implementation of construction projects and maintenance of buildings, facilities
66. Use of educational and research standards

The second question: the dimensions of innovation in Islamic Azad University of East Azarbaijan What is to identify the factors involved in innovation, along with the time factor and the value of each variable with the heuristic solution (Figure 2 and 3) Based on standardized coefficients between latent variable exogenous The value of t-value is outside (96/1 and 96/1). At the level of confidence, 95% of the correlation of the variable of the innovative university with 5 dimensions (structural, research, strategic, environmental and educational) Yeti) is significant. There is a positive and significant relationship between the variables. Also, with respect to the value of R2 (19/0, 33/0 and 67/0 for weak, average and strong values) For the variable, the forecast is close to moderate and weakened. The model of structural equations implies that: the internal variables (structural, research, strategic, environmental and educational-educational dimensions) with the exogenous variable (innovative university) Has a direct and significant correlation.

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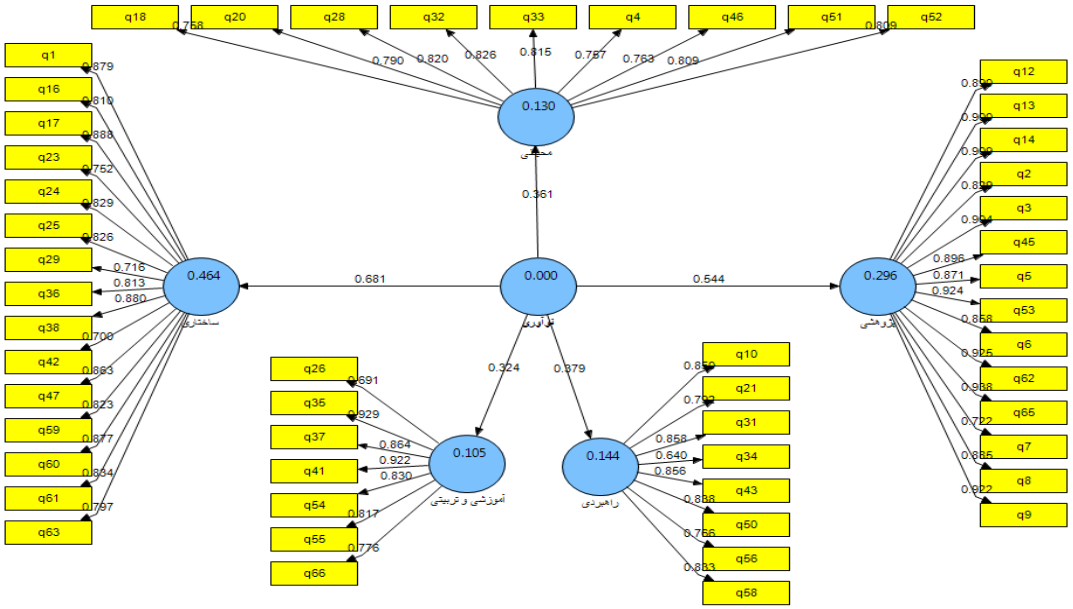

Figure 2. The model of innovation dimension in standard mode

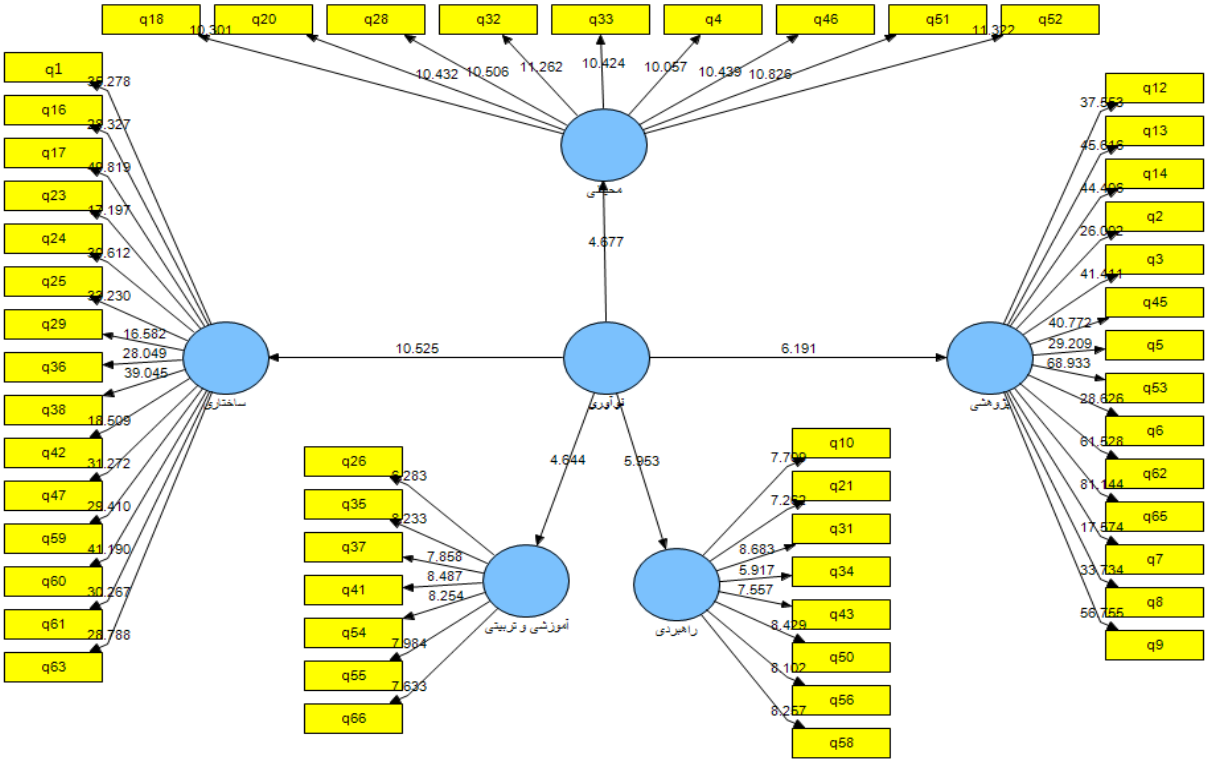

Fig. 3. Dimensional model of innovation in a meaningful state

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Question 3: Is the model of the university's dimension suitable? It is based on the exploratory model that the innovative university consists of five dimensions that could explain the changes of the innovative university. Confirmatory factor analysis and structural equation model with reliability, convergent validity, divergence, t-value and R2 confirm the validity of the model and based on this, the exploratory factor analysis structure was confirmed. Fit fit for the time model is realized where the explained variance is acceptable and the internal consistency is higher than 0.5 for each of the structures. Table (8) shows the factor load values of observable variables. High values of 0.4 are acceptable for explaining changes by measurements.

Table 8. Indicator for fitting the model of measurement

Factor load	index	factor
0/879	1q	**Structural**
0/810	2q	
0/888	3q	
0/752	4q	
0/829	5q	
0/826	6q	
0/716	7q	
0/813	8q	
0/880	9q	
0/700	10q	
0/863	11q	
0/823	12q	
0/877	13q	
0/834	14q	
0/797	15q	
0/829	16 q	**Research**
0/904	17q	
0/871	18q	
0/868	19q	
0/722	20q	
0/885	21q	
0/922	22q	
0/890	23Q	
0/900	24Q	
0/909	25Q	
0/896	45q	
0/924	26q	
0/925	27q	
0/938	65q	
0/757	28 q	**Environmental**
0/768	29 q	
0/790	30 q	
0/820	31 q	
0/826	32 q	
0/815	33 q	
0/763	34 q	
0/809	35 q	
0/809	36 q	
0/850	10 q	**strategical**
0/792	39 q	
0/858	40 q	
0/640	41 q	

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0/856 0/888 0/766 0/833	42 q 43 q 44 q 58 q	
0/691 0/929 0/854 0/922 0/830 0/817 0/776	47q 48q 49q 50q 51q 52q 53q	**Instructional-educational**

Also, according to Table (9), to calculate the general fitness of the communality values model, which represents the average of the variance of the variables of the hidden research, and R2, which necessitates the effect of an exogenous variable on an endogenous variable.

Table 9. Communality rate and R2 variables of research

Latent variable	$\overline{R2}$	$\overline{\text{communality}}$
Structural	0/464	0/674
Research	0/296	0/784
Strategic	0/144	0/652
Peripheral	0/130	0/631
Educational-Educational	0/105	0/699

In addition, the GOF index is an indicator for examining the fit of the model to predict the endogenous variables. The values of 0.01, 0.25, and 0.36 are presented as weak, moderate and strong values for GOF, respectively. In table (10), the total structure values and the average determination coefficient and GOF are given.

Table 10. The results of fitting the general research model

GOF	$\overline{R2}$	$\overline{\text{communality}}$
0/396	0/228	0/688

5. Discussion

Innovation is one of the most important missions of universities in the present era. The necessity of the growth and development of innovation in different universities of the country can be considered and examined. The main purpose of this study is to identify the dimensions of the innovative university to provide a model for Islamic Azad University.

In response to the dimensions of the innovative university in Islamic Azad universities in East Azarbaijan, the results of exploratory factor analysis showed that: The innovative university has five research, structural, strategic, environmental and educational-educational dimensions. In the research dimension based on the results of the qualitative section, after the removal of indices that cannot explain the changes in the variables, 14 indicators remain. In the structural dimension, based on the results of the qualitative section, 15 indicators

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remained after the factor analysis. In the strategic dimension, based on the results of the qualitative section, 8 indicators remained. In the environmental dimension, 7 indicators remained based on the results of the qualitative section. In the educational-pedagogical section, 7 indicators were identified based on the results of the qualitative section. This finding According to the results of the researches of Dehghan, Talebi and Arabian (2012), the structural dimension of the components (structure and performance appraisal) and in the environmental dimension to the component (out-of-group capital) have been pointed out, and the peasant, so-called and Fathi (1391) On the other hand, there is a structure consistent with the components (appropriate educational system, organizational structure, human resource management, and organizational culture). Skirbanz et al. (2013), which have expressed the research, educational, strategic, and environmental dimensions in their third-generation university models. It has pointed to the dimensions of strategy, structure, and market and stakeholders that, in the structural dimension, Teamwork and problem solving group and in the strategy dimension have pointed to components (people's awareness of the position of innovation and promotion and innovation development) that are consistent with the current research. Pheisgar et al. (2013) has an environmental dimension with components (technology infrastructure And the complexity of technology). Powell (2007) has pointed to the next dimension as a creative community in the innovative university model. Shah Ali et al. (1393), in his innovative university model, dimensions of education and research with components (training needs assessment, establishment of research and research centers, holding conferences and scientific meetings at the national and international levels), and the structure with components (flexibility Attraction in infrastructure, communication networks and centralized structure), and in the strategy dimension, they have pointed to the components (goals and perspectives, strategic decisions) that are consistent with the current study. Mattila and Crowe (2012) onwards Strategy and education, all the researches referred to in this study are consistent. In explaining this finding it can be said that: Universities Innovative companies have been able to create in all aspects of change and innovation, and this does not necessarily mean changes in the dimensions of the organization of innovation. In order for innovative organizations to innovate, they will have a purely innovative planning in all aspects appropriate to organizational contexts.

In response to the question of the appropriate model of the innovative university in Islamic Azad University of East Azarbaijan, according to the structural equations, the final results of the model were obtained. According to Figures (2) and (3), the standardized correlation coefficient between the two variables Innovative University (structural dimension 0/16, research dimension 544/0, strategic dimension 379/0, peripheral dimension 361/0 and post-graduate education-324/0) indicate that these relationships are significant. Therefore, it can be concluded that there is a significant relationship between innovation and five dimensions at the 95% confidence level. According to the results of the research findings, there is a significant relationship between the innovative university as an independent variable and structural, research, environmental, strategic and educational-educational dimensions as a dependent variable at 95% confidence level. The results of this study are consistent with Sect et al. (2011), which in their model have pointed to the explanation of organizational innovation using organizational structure and external focus. Dehghan, Talebi, and Arabiun (2012) have pointed to the correlation between the environment and the structure with administrative innovation in medical science universities, as well as with peasant, al-Husayar and Fathi (2012), which illustrate structure, strategy, and education with creativity and innovation. It is consistent with the current research. Sakribanz et al. (2013) referred to the changes in innovation with strategy,

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research, environment and education with the model of the third-generation university model presented. Mattila and Crow (2012) have pointed to the correlation between organizational strategy, education and innovation that is in line with the current research. In explaining this finding, we can say that: Innovative Innovation requires its structure, research, environment and strategy to be innovative. Education and training that can meet the needs of university innovation. For meaningful changes in the university, each dimension needs to change and improve innovation.

In response to the question of whether the model of an innovative university in Islamic Azad University of East Azarbaijan is fitted, the results show that given the fact that the Cronbach's alpha and the combined reliability of the model is more than 0.7, the suitability of the research reliability status approved. The average value of the extracted variance for the variables is greater than 0.5 and confirms the appropriateness of the convergent validity of the research. The study of structural model by determining the significance coefficients of T-Values for all relationships in the research model, which is more than 1.96, shows that 95% confidence level of all relationships is confirmed. In this study, the coefficients of R2 and the fit of the general model and the GOF criterion confirm the model's suitability of 396/0. Based on the results of research findings, has the proposed model been successful in predicting intradermal variables? Or not? The fitting values of the model, the structural, and the general fit, indicate that the fit model is suitable. In explaining this finding it can be said that: identifying the dimensions of the innovative university and designing a suitable model based on the theoretical support and determining the rational goals has led to model validation and fit.

Given that the relationship between the innovative university and the structural dimension seems logical, creativity and innovation in flexible and organic structures can be present and present, not in traditional structures. Paying attention to organizations with a lack of focus in decision making, less rules and regulations, informal communications to improve the state of innovation at the university. Creating a creative atmosphere in the appropriate structure and policies of communication, rewarding and encouraging systems, focusing on the workgroup, creating team teams and working groups as an agent for the presentation and application of new ideas in the organization. Promote learner's goals and policies, so that learning is not the sole philosophy of the university at any time. In organizations that provide transparent information sharing across the boundaries of the university. The relationship between the innovative university and the environmental dimension ends with the extension of an outsourcing approach to customers and the market. Focusing on opportunities and environmental threats and the need to pay attention to the provision of new services Quality is to create satisfaction among the stakeholders of the university. Innovative technology absorption capacity in the structural, cultural, basic knowledge, empowered manpower, trust between the holder and the receiver of technology and the ability to carry out research and development, attention to research is necessary as an important mission of universities. Of course, in new policies The Open University of Financial Planning should be focused on the goal of focusing, because planning for a budget based on the facts, qualitative growth rather than quantitative growth, the equalization of the rights of faculty members and central monitoring for the cost of the Kurds to the principle of saving. But in other cases of decentralization, the policy is appropriate with time and requirement.

The relationship between the innovative university and the research dimension by organizing more and better conferences, with academic and academic exchanges with domestic and foreign universities, studying opportunities and academic trips, introduces students to innovative technologies, and transfer knowledge as

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an important priority. Universities are raised. The introduction of scientific products in the form of publications and software applications along with the documentation of research findings, with the need for attention to futures and futures research in innovative universities. The percentage of articles shared between the university and the industry, with the number of citations submitted to the articles and the number of patents patented by the indices of innovative and entrepreneurial universities. The relationship between the innovative campus and the strategic dimension, the use of long-term planning, the adoption of decisions Strategic that considers innovation and development in all aspects of the university a priority. The continuous education and development of individuals at the university, which is developing human system in the form of serving the quality and satisfaction of customers to improve the scientific and scientific atmosphere at all levels. The relationship between innovative university and educational-pedagogical aspect is based on educational and training standards, justice-centered and accountable education, and institutionalization of creative and critical thinking. An overview of the content that is relevant to the developments in technology and global and multicultural requirements. Comprehensive entrepreneurship and skills training programs are tailored to create employment, with the support of entrepreneurs and entrepreneurship, and are geared to innovation and change through motivational practices. Developing upgrading programs for individuals, equipment, technologies, and training programs to use the capacities of creative and innovative faculty members and students, with the exception of the goals and plans of innovative universities.

According to the results of this research, it can be concluded that the universities of the country to change, develop and improve the quality, stay and survival in relation to other universities in the country and abroad, and obtain innovation indicators in the evaluation by the Thomson Reuters Institute Indicators Being placed in the top ranking and ultimately considering the prospect 1404, the first rank of science and technology in the region should address the major dimensions of academic development with regard to innovative open planning and the use of contingency management and the acquisition of high-quality outputs for compatibility With changing global conditions and appropriate responses by redefining and redefining goals and eye sizes Do yourself with a scientific approach and social participation. Organizing theoretical and practical knowledge and applied research and innovative planning at universities using a flexible structure and new strategies that improve universities in their programs, and the quality of education that needs a higher education system. Innovative. Economic and social, political and cultural forces incite innovation in interaction with universities. So, the passage from the generations of the university to third-generation universities is not only possible in practice with the sharing of knowledge and technology, as it is necessary to redefine and redefine innovation in all aspects of science and technology. The missions of the university are obtained. At the end, it is suggested that different scenarios be integrated into the organization's core strategies in the long-term perspective and objectives. Get advice and guidance from academic and innovative specialists in formulating strategies. Use the innovative strategies of other domestic and international universities and other organizations.Innovative processes in earning sustainable earnings. Encouraging the presentation and testing of ideas for innovative ideas. There is a clear sharing of information. Become a learner organization. Intellectual property laws are developed and implemented. Universities will have more scientific and international interactions with more and better conferences with other universities. Possibility of quantitative and qualitative growth of study opportunities and scientific trips to and from abroad. Concluding a contract with other research and industrial centers and joint university studies with the industry that will provide a platform for familiarizing themselves with innovative processes. Conduct

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meetings, seminars and exhibitions, to share innovative experiences and create business and generate revenue for the university. Supporting innovative and creative people and providing the necessary facilities. Innovative patent support and ideas. Attraction of external resources and the support of top managers of universities from the fields of technology transfer, growth centers and science and technology parks and knowledge based companies. Courses will be aimed at developing a culture of innovation and entrepreneurship. Training will be conducted in accordance with the standards of other indigenous and foreign universities. The possibilities for using external innovations will be provided. Creating enriched and reinforcing environments can provide university success. The percentage of articles shared with industry will increase. Future and futures studies will be prioritized in university research. To attract students and quality faculty. Give a theorizing in various domains of material and spiritual value. The cartoons and group problem solving should be used. There is a scientific and innovative atmosphere. Suitable motivational practices. Trust between university and community exists. Social capital is important for the group. People are aware of the place of innovation. There is a scientific authority and authority for the university. Develop real goals for students. Adequate content exists with technological developments and global and multicultural requirements. Comprehensive entrepreneurship and skills programs will exist, such as other universities.

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References

Audrey, P. N., Jaraji, K (2016). The Impact of Innovation on Performance of Small and Medium Enterprises (SMEs) in Tanzania: A Review of Empirical Evidence. Journal of Business and Management Sciences. 4(1): 1-6. http://pubs.sciepub.com/jbms/4/1/1

BENNER, M. J., TUSHMAN, M. L. (2003), Exploitation, exploration, and process management: The productivity dilemma revisited, The Academy of Management Review, 28(2):238-256.

Dehghan, Nabi Allah, Fathi, Samad and Hooshiar, Akbar.(2012). Presentation of Creativity and Innovation Model at Army Officer Universities of the Islamic Republic of Iran Based on Imam Khomeini's Prophets, Journal of Scientific Research on Military Management, No. 48, Year 12: 158-113.

Dehghan, Reza, Talibi, Kambiz and Arabiun, Abolghasem.(2012). A Study on the Factors Affecting Innovation and Organizational Entrepreneurship in Iranian Medical Universities, Piavar Health Journal, Tehran University of Medical Sciences, No. 1, Volume 6, pp. 33-22.

Dombrowski, C., Kim, J. Y., Desouza, K. C., Branagza, A., Papagari, S., Baloh, P., & Jha, S. 2007. Elements of innovative cultures. Knowledge and Process Management, 14(3), 190–202.

Dominguez D., Worch H., Markard J., Truffer B., Gujer W. (2009). Closing the capability gap: Strategic planning for the infrastructure sector. California Management Review, 51(2): 30-50

Durham, Mary. (2004). Three Critical Roles for Knowledge Management Workspaces. In M.E.D. Koenig & T. K. Srikantaiah (Eds.), Knowledge Management: Lessons Learned: What Works and What Doesn't. (pp. 23-36). Medford NJ: Information Today, for The American Society for Information Science and Technology.

Eddleston K. A., Kellermanns F. W., Sarathy R. (2008). Resource configuration in family firms: Linking resources, strategic planning and technological opportunities to performance. Journal of Management Studies, 45: 26-50

Garrido ,A., Martos, M. (2016). Influence of Customer Quality Perception on the Effectiveness of Commercial Stimuli for Electronic Products, Frontiers in Psychology, 7, 336. http://doi.org/10.3389/fpsyg.2016.00336.

Gumusluoglu, L., Ilsev, A. (2009), Transformational leadership, creativity and organizational innovation; Journal of Business Research 62: 461-473.

Ivascua, L., Cirjaliua, B., & Draghicia, A. (2016). Business model for the university industry collaboration in open innovation. 3rd Global Conference on Business, Economics, Management and Tourism 26-28, Rome, Italy. Science Direct.

Kirschner, A. (2012) . Innovations in higher education? Hah! The Chronicle of Higher Education, 58(32), B 6–9.

Lemosa, Dannyela da Cunha, Ferraz Cario, Silvio Antonio (2016). University–industry interaction in Santa Catarina: evolutionary phases, forms of interaction, benefits, and barriersUniversidade do Estado de Santa Catarina, FlorianÓpolis, SC, Brazil http://www.revistas.usp.br/rai

Matejun, M. (2016). Role of technology entrepreneurship in the development of innovativeness of small and medium-sized enterprises. Management, 20(1):

Mattila, J., & Kyro, P. 2012. Towards future university by integrating Entrepreneurial and the 3rd Generation University concepts, Lappeenranta University of Technology School of Business.

McInerney, C. M., Koenig, E. D., (2011), Knowledge Management (KM) processes in Organizations: Theoretical Foundations and Practice, Morgan and Claypool.

Morrar, R. (2015). Technological Public–Private Innovation Networks: A Conceptual Framework Describing Their Structure and Mechanism of Interaction. Technology Innovation Management Review, 5(8): 25-33. http://timreview.ca/article/92.

Nor Azlina, A.b, Aliza ,R(2016). Entrepreneurial Orientation, Strategic Management Accounting Practices, Innovation, and Firm Performance: Craft Industry Perspective.

PRajalo, Sigrid, Vad i,Maaja(2017). University-industry innovation collaboration: Reconceptualization, University of Tartu, Faculty of Economics and Business Administration, Narva mnt 4, 51009 Tartu, Estoniaroceedings of the ASEAN Entrepreneurship Conference 5: 179-191.

Robbins, Steven.(1999). Principles of Organizational Behavior, Translation by Ali Parsayian and Seyyed Mohammad Arabi, Tehran: Office of Cultural Research.

[DOR: 20.1001.1.26453460.2018.1.8.9.3]

Saeeda Ardakani, Saeed, Konjkav Monfared, Amir Reza, Hakaki, Sayed Masoud and Rezaei Dolatabadi, Hossein.(2013).Identifying the Factors Affecting the Development of Individual Innovation, Quarterly Journal of Technology Development Management, No. 1.

Shah Ali, Ahmad, Alem Tabriz, Akbar, Rezvani Far, Mohammad. (2014). An Innovative Model for Assessing Innovation of Universities Using Fuzzy Exploratory Factor Analysis, Fuzzy AHP, 12th International Management Conference.

Shruti Sinha, Pushpendra Priyadarshi, Pankaj Kumar, (2016) "Organizational culture, innovative behaviour and work related attitude: Role of psychological empowerment", Journal of Workplace Learning, Vol. 28 Issue: 8, pp.519-535, https://doi.org/10.1108/JWL-06-2016-0055

Simao, L. B., Et all (2016). External relationships in the organizational innovation. RAI Revista de Administração e Inovação, 13(3): 156-165.

Skribans,V., Arnis, L., and Merkuryev, Y (2013) . Third Generation University Strategic Planning Model Development, Faculty of Engineering Economics and Management, Riga Technical University.

Wildavsky, B., Kelly, A. P., & Carey, K. (Eds.). (2011) . Reinventing Higher Education: The Promise of Innovation. Cambridge, MA: Harvard Education Press.

[DOR: 20.1001.1.26453460.2018.1.8.9.3]