Impact of University Education Globalization on Entrepreneurship on Mashhad Medical Science University

V. Fallah, S. Saffarian, M. Hassanzadeh

Abstract

Background: Nowadays, universities are not only the place for producing knowledge, but also they must take steps to adopt global standards in order to play their role in meeting social needs. This research was conducted with the aim of investigating the impact of university education globalization on entrepreneurship and Knowledge-Based companies and presenting the model.

Materials and Methods: The present study is a descriptive-analytical type with two qualitative and quantitative phases. In the qualitative phase of the research, six experts and professionals related to the research topic selected by snowball sampling method were interviewed and the data obtained from these interviews was analyzed by using Strauss and Corbin’s three-step coding method, and the related questionnaire was designed. In the quantitative phase, a researcher-made questionnaire was provided for 384 University professors of the universities of Medical Sciences of Ferdowsi, and Azad university of Mashhad, selected by stratified random sampling. Descriptive and inferential statistics and SPSS-19 and Smart PLS-3 software were used to analyze the data.

Results: According to the research findings, 293 participants were men and almost half of them had a bachelor’s degree. Also, the significance level for the relationship between the university educations globalization and entrepreneurship, the relationship between the university education globalization on the development of Knowledge-Based companies and, finally the relationship between entrepreneurship and the development of Knowledge-Based companies were reported less than 0.05, as a result of which it can be said that there is a significant relationship between these variables.

Conclusion: Regarding the role of Knowledge-Based companies in the economic and scientific development of countries and the impact of universities on supporting these companies, it is suggested that universities, by approximating themselves to the global criteria, play their role in advancing this route.

Keywords — University Education, Globalization, Entrepreneurship, Knowledge-Based Companies

I. INTRODUCTION

In recent times, rapid changes in various aspects of health care have substantiated profiting from sciences such as economic, management, psychology unavoidable. Based on this, the field of “entrepreneurship” and its common axis “Opportunity Recognition” embraces all of the aforementioned sciences as a common denominator and important focal point when applied to health care systems. In fact, entrepreneurship has a main role in meeting patients’ needs and improving quality in these systems. Based on the described situation, dietitians, as a part of health care system, also need the practical use of concepts of “Entrepreneurial Opportunity Recognition” in order to respond to the demand of their customers and also to access better paying jobs as we observe their activities globally. In other words, the increasing prevalence of chronic diseases such as diabetes, hypertension, heart diseases and also people’s tendency toward using care for these diseases, has led to increase entrepreneurial opportunities in the field of medical science counseling services in the world, tremendously [1]. Medical science University’s Higher education as a driving force for sustainable development and moving towards community plays a strategic role. In addition, the mentioned institution plays a determinant role in the competitive advantage of countries at the regional and international levels. In this regard, the universities are expected to, while paying attention to the mentioned aspects, consider their social responsibility more than before [1]. On the other hand, concurrent with the phenomenon of globalization, the need for the transformation of higher education institutions and more emphasis on the international cooperation of universities and higher education institutions has been done, [2] Internationalization of the university is the process of integrating the international and cultural dimensions with the goals, functions and services of the universities [3] The globalization of higher education system, in addition to the effects it has on the faculty members and students, creates widespread structural changes, as a result of which it deserves that the universities are evaluated by an international look in order that they reach the global standards gradually and play a role in proportionate with them [4] and [5]. On the other hand, Iran's higher education, despite the advances it has had in the last three decades, still has a long way to the desirable global standards which necessitates a proper understanding of the existing conditions and the principled planning to approximate educational standards to the international level: [6].

In addition, in today’s highly evolving world, knowledge
and innovation are considered as the most fundamental factors of advancing in the industrial and economic arenas. A country's economy is flourished when the necessary context for innovation and presence in global competitive markets is provided. Moving toward innovation and creating change in the combination of products and services lies within the scope of the activities of Knowledge-Based business. Hence, Knowledge-Based businesses play an important role in the effectiveness of production, the solidification of knowledge in products, the promotion of economy and welfare level, the generation of wealth and value added in a community. In Knowledge-Based businesses, economic growth and job creation are realized in line with innovation capacity. This means that research and development achievements are continuously transformed into new product, process, or systems through investment, and the access to investment capacities for entrepreneurs and researchers is increased, and this is an important factor in creating innovation and the exploitation of the power of technology in the national economy. Based on the rapid adaptation to the environmental changes, in this view, the university is known as the clear distinction with traditional universities in how to manage it, performing new activities based on the development of entrepreneurial culture, participation in economic development by investment, creating job, and hence increasing the level of welfare, and also reducing social corruptions [7]. Also, the Entrepreneur University due to its economic outputs such as patent, advantage contracts, generative companies, employment creation, and also the mechanisms of transferring science and technology to the industry is of particular importance in the knowledge basis economy [7-8] Entrepreneurship has a direct impact on the economic and social development of the people. Entrepreneurship that causes entrepreneurial tendencies and activities at organizational level has been recognized as an important element in economic development, wealth creation and performance improvement (Entrepreneurship Article). Entrepreneurship can be important for the revival and promotion of companies’ performance, and can also affect the economy through increasing productivity, improving performances, creating new industries and increasing international competition [9].

An entrepreneurial organization has features like encouraging innovation and risk aversion, learning from mistakes and flexibility. On the other hand, there are obstacles and limitations such as the promotion of people due to the relationship with high authorities and not competency, and the incompatibility of relationships with the organizational structure and the lack of risk aversion of senior managers, on the route of moving towards entrepreneurship in companies [9-10].Therefore, with regard to the mentioned points and the necessity to address issues raised in the international dimension, the importance of moving towards the third millennium universities, many advantages of entrepreneurship especially in the field of health and the lack of research that coherently identifies the factors affecting the medical sciences universities to become entrepreneur, this study was conducted aiming to determine the impact of university education globalization on entrepreneurship and Knowledge-Based companies and presenting the model.

II. RESEARCH QUESTION
A. How does the globalization of higher education affect the performance of Mashhad Medical Science University?
B. What is the status of university entrepreneurship at Mashhad MedicL Science University?

III. RESEARCH HYPOTHESES
1. There is a significant relationship between the globalization of higher education and academic career at Medical Science University of Mashhad.
2. There is a significant relationship between entrepreneurship and academic entrepreneurship at Medical Science University of Mashhad.
3. There is a significant relationship between the factors of university infrastructure and entrepreneurship at Medical Science University of Mashhad.
4. There is a significant relationship between structural factors and academic entrepreneurship at Medical Science University of Mashhad.
5. There is a significant relationship between academic performance factors at Medical Science University of Mashhad.

IV. MATERIAL AND METHODS
The present study is descriptive-analytical type and has two qualitative and quantitative phases. In other words, since in this research the researcher firstly intends to identify the desirable approach of the globalization of education by using interview with academic and organizational experts (qualitative stage) and then by using the obtained results, design a tool and implement it on the statistical sample to validate the obtained model (quantitative stage), it can be said that the research method used is the combined research method in terms of data type.

V. RESEARCH QUALITATIVE PHASE
The statistical population of this research in the qualitative stage includes six people divided into three groups: the experts in the field of management (especially in the field of human resource management, organizational behavior and strategic management), university professors and students, and the managers of Knowledge-Based companies. The data collection tool has been interview, and the sample size has been according to the saturation level. That is, the researcher continues to interview as long as more interviews lead to newer data. Otherwise, the interview will be stopped. Therefore, while the sampling is purposeful, snowball sampling method was also used and the interviewees were asked to introduce individuals who can provide appropriate qualitative data for us in this regard. Before beginning the interview, a summary of the research plan, the results of reviewing the research history, along with the goals and questions, were emailed to the interviewees for initial preparation, and at the beginning of the interview session brief descriptions were also provided. Then, the interview process was conducted. In order to record qualitative data and for more concentration of interviewers on the interview process, and with the permission of the interviewees, almost all interviews were recorded, and the notes of key points of each interview were taken.

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In order to ensure the validity of research in the subject selection stage, the researcher investigated theoretical foundations and study background in the field of designing the model of university education globalization and its impact on entrepreneurship and Knowledge-Based companies and designed the research questions based on the extracted model from the history. Also various books and articles on the methods of designing and conducting interviews were studied, and the current research planning was conducted based on the practical guidelines of these texts and consulting with experts in this field. In addition, in order to increase the research validity, the researcher, after ending the interviewees' explanations during the interview, expressed his perception of the interviewee's statements in order to ensure the accuracy of the statements expressed with the interviewee's confirmation. Also, during the interview process, in order to remove ambiguity and for more clarification, the follow-up questions such as "What do you mean by ...?" or "Please explain more in this regard?" were used. Also, to calculate the reliability of performed encodings, the retest reliability method and the agreement reliability method between the two coders (inter-subject agreement) were used. Based on the results, the reliability of retest was (93) and the reliability of agreement between the two coders was calculated as (87). Therefore, the analysis reliability ratio of performed interviews is appropriate.

To analyze the data obtained from the interview, Strauss and Corbin [9] three-stage coding method was used as open, axial and selective coding. In the analysis of qualitative data, the following steps were followed: 1) reviewing data 2) organizing data, 3) coding data, 4) classifying data, 5) creating minor categories, 6) creating main categories or major axes, and 7) compiling a report. In the open coding step, the texts were first reread carefully. The researcher reviewed the data line by line and specified and coded the main concepts in each line or sentence. In the open coding stage, the extracted codes are entitled according to the conceptual approximation and the expression of a common concept is entitled under a specific category. After this stage, it was also tried to classify the categories into larger conceptual categories. In fact, entailing the categories was performed by the inspiration of theoretical foundations and research empirical history, the characteristics of university education globalization, as well as the semantic relation of codes. Finally, the researcher, with regard to the obtained results of the interviews, designed the model of university globalization.

VI. RESEARCH QUANTITATIVE PHASE

In this stage, after conducting the qualitative research and developing the questionnaire, the quantitative method was used to test the proposed model for university education globalization and its impact on entrepreneurship and Knowledge-Based companies.

The statistical population of this research includes 5000 Member ship of Mashhad university at the end of June 2018, of which 384 people by using the Cochran sample size determination formula and based on almost 95% confidence, maximum variance and 5% permissible error were calculated and by stratified random sampling method were selected (according to insurance, treatment, medical documents sections, hospital and clinics). In the next stage, by using the assignment sampling formula proportionate with the categories, the sample size of each department of the organization from the total sample size was specified.

A researcher-developed questionnaire was used to collect data. The basis of making the questionnaire of present research is the components identified in the research qualitative stage presented in the conceptual model. In fact, the main structure of the questionnaire is the same components and sub-components of the research conceptual model. In this regard, it has been attempted to extract most of the items directly from the text of interviews. Also, the relevant specialized texts and research literature were used to complete the questionnaire. The present research questionnaire consisted of 50 questions and was designed and implemented according to the 5-point Likert’s spectrum. In order to ensure the validity of questionnaire, content validity and experts’ opinion were used. Cronbach's alpha coefficient was used to investigate the reliability of questionnaire. For this purpose, the final form of the questionnaire was performed on 30 people of statistical population and then the Cronbach's alpha coefficient was calculated equal to 0.867, which confirms the reliability of research tool. Descriptive and inferential statistics were used to analyze the data. In the descriptive statistics section, the mean and standard deviation were used and in the inferential statistics section, the confirmatory factor analysis with the aid of Smart PLS-3 software as well as single-variable t test with the aid of SPSS-19 software were used.

VII. FINDINGS

According to the findings of the study, 293 (76.3%) of respondents were men, and 91 (23.7%) of them were women, most of whom (65.6%) were under 40 years old. Respondents' educational status has also been presented in Table 1.

<p>| TABLE I: FREQUENCY DISTRIBUTION OF RESPONDENTS IN TERMS OF THEIR EDUCATIONAL STATUS |</p>
<table>
<thead>
<tr>
<th>Education</th>
<th>Frequency</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Associate</td>
<td>45</td>
<td>11.7</td>
</tr>
<tr>
<td>Bachelor</td>
<td>175</td>
<td>45.6</td>
</tr>
<tr>
<td>Master</td>
<td>108</td>
<td>28.1</td>
</tr>
<tr>
<td>Ph.D.</td>
<td>56</td>
<td>14.6</td>
</tr>
<tr>
<td>Total</td>
<td>384</td>
<td>100.0</td>
</tr>
</tbody>
</table>

TABLE II: PEARSON CORRELATION TEST RESULTS TO INVESTIGATE THE RELATIONSHIP BETWEEN UNIVERSITY EDUCATION GLOBALIZATION AND ENTREPRENEURSHIP
Regarding the results of Table 2, Pearson correlation coefficient for the two variables of the university education globalization and entrepreneurship is 0.976. The value of observed significance (sig) number is smaller than 0.01 and it is actually zero, which is less than the standard significance level (0.05). Therefore, there is a significant relationship between these two variables at the 99% confidence level. Considering that the correlation coefficient between these two variables has a positive sign, so it can be said that the changes of these two variables are positive type and have the same direction with each other. It can be said that the changes of these two variables are positive type and have the same direction with each other. Considering that the correlation coefficient between these two variables has a positive sign, so it can be said that the changes of these two variables are positive type and have the same direction with each other.

<table>
<thead>
<tr>
<th>Entrepreneurs</th>
<th>Globalization</th>
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<tr>
<td>.976**</td>
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<td>384</td>
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TABLE III: PEARSON CORRELATION TEST RESULTS TO INVESTIGATE THE RELATIONSHIP BETWEEN THE UNIVERSITY EDUCATION GLOBALIZATION ON THE DEVELOPMENT OF KNOWLEDGE-BASED COMPANIES

Regarding the results of Table 3, Pearson correlation coefficient for the university education globalization and development of Knowledge-Based companies is equal to 0.982. The value of observed significance (sig) number is smaller than 0.01 and it is actually zero, which is less than the standard significance level (0.05). Therefore, there is a significant relationship between these two variables at the 99% confidence level. Considering that the correlation coefficient between these two variables has a positive sign, so it can be said that the changes of these two variables are positive type and have the same direction with each other.

<table>
<thead>
<tr>
<th>Entrepreneurs</th>
<th>Development of Knowledge-Based Companies</th>
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<tr>
<td>.963**</td>
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<td>.000</td>
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<td>384</td>
<td>384</td>
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</table>

TABLE IV: PEARSON CORRELATION TEST RESULTS TO INVESTIGATE THE RELATIONSHIP BETWEEN ENTREPRENEURSHIP AND THE DEVELOPMENT OF KNOWLEDGE-BASED COMPANIES

Regarding the results of Table 4, Pearson correlation coefficient for the two variables of entrepreneurship and the development of Knowledge-Based companies is equal to 0.963. The value of observed significance (sig) number is smaller than 0.01 and it is actually zero, which is less than the standard significance level (0.05). Therefore, there is a significant relationship between these two variables at the 99% confidence level. Considering that the correlation coefficient between these two variables has a positive sign, so it can be said that the changes of these two variables are positive type and have the same direction with each other.

After analyzing the checklist, the results of the studies are presented in Table 5.

TABLE V: INVESTIGATION STATUS OF ENTREPRENEURSHIP IN MASHHAD UNIVERSITY OF MEDICAL SCIENCE

VIII. EVALUATION CHECKLIST FOR MASHHAD MEDICAL SCIENCE UNIVERSITY IN TERMS OF ACADEMIC ENTREPRENEURSHIP

The standards in this checklist are divided into four categories: structural, functional, process and infrastructure. They are evaluated using descriptive statistics. Based on the standards of this research, studying of the universities indicates that in Mashhad Medical Science University, out of total 680 grades, it was obtained 520 grades, which is generally in a good state of entrepreneurship. Based on the

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results of the research, Mashhad Azad Islamic University structural dimension obtained only 120 scores from a total of 170 scores, in the functional dimension, 200 scores from 250 scores, in process dimension, 110 scores from 150 scores and in infrastructure dimension, it was obtained 90 scores from 110 scores.

As it is obvious, the standards in this checklist are divided into four categories: structural, functional, process and infrastructure, then they were analyzed using descriptive statistics. According to the obtained standards in this study, the results showed that Mashhad Medical Science University achieved 520 points out of a total of 680 grades, which is in general in a good situation. According to this Mashhad Medical Science university, in structural dimension obtained 65 scores out of 170 scores, in functional dimension, 180 scores out of 250 scores, in process dimension, 110 scores out of 150 scores and in infrastructure dimension, it was 90 scores from 110 scores. In the field of organic structure, it was obtained 10 scores from 20 and in the field of formality was 25 scores from 40, and in the field of decentralization was 5 scores from 10, and in the field of units and committees of third generation obtained 45 scores from 100. In the functional dimension, it was obtained 20 scores from 40, in the field of training courses was 50 scores from 60, in the field of graduates was 20 scores from 30, in the field of extracurricular activities was 20 scores from 30, in the field of communication with industry and society was 15 scores from 30 scores, in the field of management support was 30 scores from 60, in the field of priority of entrepreneurship for university was 30 scores from 30, in the field of promotion and planning academic courses was 60 scores from 60, in the field of university environment was 20 scores from 30 scores, in infrastructure dimension in organization's technology was 30 from 30, and in the field of facilities and financial resources was 60 possible scores from 80 scores.

IX. DISCUSSION

Due to the fact that the content of the checklist is in the form of a review of the articles, the findings of this research, which are designed as a checklist, are in consistent with the findings of other studies and it is necessary to pay attention to its content as a standard [3, 5, 7-9 and 14-20]. Findings indicate that Mashhad Azad University has considered the organization technology, entrepreneurship in university strategic plans, promotion and awareness of entrepreneurship, the possibility of access to books, articles, libraries and laboratories. However, there should be more attempts in the field of organic structure, formality, decentralization, development of training courses, financial resources, graduates, extracurricular activities, an encouragement environment for entrepreneurship, communication with industry and society, supporting entrepreneurship activities, and the existence of necessary units and committees. It can be said that organizational technology is the most important point of university strength and in the discussion of administrative bureaucracy can be considered as the most important point of attempting. According to research, it seems that in compared to the past universities are developed in some cases but they have not made any significant progress in moving toward the third-generation university [11-12]. According to this research, there are signs of determination of management to start the entrepreneurship process in Mashhad Medical Science University.

About the relationship with industry, according to research in advanced countries, attention to the relationship between university and industry has always been considered as an important issue [12-13]. It can also be pointed out that generally in Iran, universities do not show a good attraction in the field of working with the industry part, and in contrast, the industry does not consider working with universities as appropriate issue, while the proper relationship between both industries and universities can lead to the development of both of these sectors in such a way that university and industry will achieve their own benefits. Therefore, according to research in the area of improving the cooperation between university and industry, entrepreneurship can be useful in this part[14-15]. In other words, entrepreneurship can turn the theoretical research findings into action. In the context of an encouragement environment of entrepreneurship, the entrepreneurial university has an attractive content, and suggests that facilities, customs, and atmosphere create fruitfulness for motivating and stimulating entrepreneurship [16-17]. This issue makes an improvement for the university that aligns its self with the changes around itself. In relation to the graduates, the goal is to allow people to have a skill and ability to work in the business market and also provide a new job. The entrepreneurial university naturally should know the current quality of the society and accordingly make a plan to get the optimal quality. Therefore, the entrepreneurial university must understand the needs of markets and then try to meet those needs. In this regard, coordinating the university curriculum with the market need can be effective. Furthermore, the entrepreneurial university should also consider motivation and economic growth. Essentially, the university atmosphere should be supportive for entrepreneurs in any way and provoke people to guide their efforts in a desired size or even more [18-19-20]

X. CONCLUSION

The findings indicate that Mashhad payamnoor University, considering the content of the designed checklist, has focused on entrepreneurship and started moving to the third-generation university. Although these measures are not enough, they are indicative of the beginning of this process. In order to achieve this goal, it seems that universities should also establish units and committees. For example, in order to support graduates and students for material and spiritual assistance, setting up associations and groups is essential. In addition, management levels and management pyramid should be properly mapped. In many organizations, including universities, the pyramid has a high height that should be reduced. Now, there is no good relationship between university and industry. It seems that there is a sufficient capacity at universities and the context is provided for research. In addition, lack of the relationship with industry is a big problem, which should be more considered. Today, it seems that industry needs to prioritize the need and relationship with university to compensate their backwardness. According to this research and obtained information in the field of administrative bureaucracy, status of graduates, the level of individual’s ability, the status of
education and research in academic fields, and also relationship with the industry and knowledge-based companies measures should be taken.

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REFERENCES


