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Evaluation of academic entrepreneurship based on the standards of the Accreditation Institute of Higher Education ACEEU[1] (Case: Islamic Azad University, Mashhad branch)

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Abstract
The paradigm of Academic Entrepreneurship has affected economic, social, and technological development, resulting in the prominence of the mission of universities in the last decade. However, meeting the objectives of Academic Entrepreneurship is accompanied by uncertainties. Therefore, Academic Entrepreneurship must be evaluated to monitor and follow up the mission of universities and increase their performance and accountability. This descriptive-analytical study aimed to evaluate the level of Academic Entrepreneurship at the Islamic Azad University of Mashhad branch. Moreover, this survey used a questionnaire to collect quantitative data. According to Cochran's formula, 148 faculty members of the Islamic Azad University of Mashhad were selected by random sampling. In addition, a researcher-made questionnaire based on the Academic Entrepreneurship indicators and standards of the International Accreditation Council for Entrepreneurial and Engaged Universities (ACEEU) was used to collect the data. Construct validity (0.83) and Cronbach's alpha (α=0.89) were used to evaluate the validity and reliability of the questionnaire, respectively. Then, partial least squares algorithm, bootstrapping, and SmartPLS and SPSS for mean comparison were employed to analyze the data. According to the evaluation results of each of the components, the Islamic Azad University of Mashhad was shown to be very excellent and privileged in terms of strategic orientation, entrepreneurial capacities, and third mission activities, respectively. However, the results did not confirm the stimulators and enablers component and the innovation and impact component. In general, the level of Academic Entrepreneurship in the Islamic Azad University of Mashhad was found to be satisfactory. Finally, suggestions were made for policy-makers and academicians to stimulate and strengthen Academic Entrepreneurship processes.

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1. Introduction

Currently, universities have entered the third phase of their mission. The rapid expansion of universities and their growing tendency to change towards a new mission has further highlighted the perspective and role of universities in meeting the needs of society according to global requirements (18).

Universities have always been the pioneer of development and have played a significant role in economic development and social change. Furthermore, meeting social demands and needs, financing research, transferring knowledge, and increasing entrepreneurial capital (24) have been the strong stimulators for the orientation towards the academic entrepreneurship paradigm and development of the academic entrepreneurship ecosystem (43).

It is widely accepted that each new program and mission is followed by new needs and expectations. The mission of academic entrepreneurship has directed the universities to use new monitoring tools, and newer and more effective methods for monitoring and evaluation of the third mission of universities (26), which measures our understanding of the social and institutional dynamics of the university, job creation, commercialization, and effect on the development of universities.

Despite the significant efforts of universities for entrepreneurship, job creation, and presentation of different plans and programs, studies in the field demonstrated the inappropriateness of academic entrepreneurship in universities (15), reflecting the necessity of monitoring academic entrepreneurship (52) for strengthening the supervision of the academic entrepreneurship indicators (36).

As the most important puzzle in the ecosystem of academic entrepreneurship, universities are the engine and source of development in knowledge and technology. Expectations from the university to have more effective participation in the growth of the knowledge-based economy (49), social and industrial transformation, wealth creation and value creation (22 & 28), and stimulation of global competition for commercialization (30) reveal the higher sensitivity of performance evaluation and monitoring. Hence, academic entrepreneurship strategies should be constantly evaluated, validated, and leveled, and the position and ranking of the universities should be evaluated and validated based on global standards (36). However, very few studies have been conducted on the evaluation of academic entrepreneurship and no comprehensive study addressed the evaluation of its indicators (2).

On the one hand, universities must develop capabilities of academic entrepreneurship for meeting the ever-increasing social demands to be more effective in the competition for knowledge commercialization and increasing their role in the development and response to social expectations. On the other hand, they must monitor and evaluate academic entrepreneurship activities and capabilities to determine the quantity and quality of the entrepreneurial activities in the current situation and compare the position of their university with other universities clearly and precisely.

Uncertainties about the effect of higher education on social and economic development (20) and the objections to the performance evaluation method of universities based on traditional criteria (37) reflect the necessity of the evaluation of the universities' mission according to reliable and up-to-date criteria. Therefore, this study used the standard criteria of academic entrepreneurship provided by the Accreditation Council for Entrepreneurial and Engaged Universities (ACEEU) to evaluate academic entrepreneurship. The results of the study indicated the strengths and weaknesses of the university in

different dimensions of academic entrepreneurship, which can provide a ground for decision-making by academicians to improve the status of academic entrepreneurship and be a basis for comparison of universities. This evaluation would also provide a perspective to the university administrators for planning new missions, adopting strategic strategies, and making the mission objectives more accessible.

Despite the multiple studies conducted on different categories of academic entrepreneurship, including entrepreneurship education, development, and commercialization, a major topic that has been not significantly attracted by the researchers, is the evaluation of the components of academic entrepreneurship based on an international standard model that can represent the real position of the university. A long time has passed since the beginning of the third mission of the universities, and now we should know how successful the universities have been in this mission. Moreover, a simple question should be dealt with: If the quality of education is ensured by accreditation and the results of the studies in the field are ranked, why is the university's third mission not evaluated and ranked by the global standard criteria (21)?

As mentioned earlier, this study aimed to evaluate the components of academic entrepreneurship in the Islamic Azad University of Mashhad branch by answering the above question, reviewing the related literature, and surveying university administrators and professors according to the ACEEU model. This council is a specialized institution, which has provided and introduced an accreditation standard framework for the evaluation and ranking of academic entrepreneurship by redefining quality standards in higher education, with an emphasis on the third mission of universities to enable university beneficiaries to become active agents of change and acceleration of innovation and participation, with an innovative and transformative approach (21).

This study covered various variables that have not been investigated in previous studies on the evaluation of academic entrepreneurship in terms of objectives and subject, and thus it is the first in the evaluation of academic entrepreneurship in the Islamic Azad University according to a standard model and internationally valid measures.

2. A review of the literature on academic entrepreneurship evaluation

As a novel key mechanism for new innovative achievements and regional and economic developments, academic entrepreneurship has become increasingly important in recent decades (53). By definition, academic entrepreneurship is to provide the results of academic research to the market by academicians (31), involve the universities in economic development and competitiveness of the regional economy, and increase the country's social capital through innovation (55).

Academic entrepreneurship is a dynamic and multi-layered ecosystem with the actors at individual, organizational, and institutional levels (38, 40, 48), which involves commercialization as a tool beyond pure commercial aspects (e.g., consulting services, development activities, etc.) and commodification (e.g., patents, franchises, newly-founded companies belonging to faculty members or students, etc.) (23).

A study in the field showed that academic entrepreneurship is a medium in developed countries, through which innovation is introduced to the market by transferring technology of research discoveries; however, it is a strategy for survival and an instrument for universities to diversify their sources of income in developing countries that is an obstacle for

the development of academic entrepreneurship (28).

Another study concluded that changes in the mission, objectives, and processes of universities have led them to look for new management and reporting tools with a mixture of technology (26). Academicians are interested in the evaluation of the results of activities and the effects of academic entrepreneurship on the university and society. This situation can support the formation and growth of new investment in a region by stimulating the tacit knowledge sharing among networks of innovative firms and lead to the attraction of more talent and participation in maintaining an advantageous cycle (38). Thus, new evaluation tools and criteria must be developed to estimate the value produced and the economic and social value of the activities of universities at the national and regional levels (53).

In this regard, Sikando and Elia (2014) showed that the indicators of the third mission could be used to meet the information needs of the beneficiaries so that their evaluation provides the ground for supervising each of the stages of technology and entrepreneurship and its results in terms of social and economic effects on development, monitoring, and management. Moreover, it helps to redesign strategies and strengthen entrepreneurial investment. Having an appropriate criterion to compare themselves with other institutions, the universities achieve valuable insight into their actions, and beneficiaries simultaneously can receive objective data to evaluate and decide on the cooperation with the institution to continue investment in resources.

Keykha and Pourkrimi (2021) addressed the indicators of the academic entrepreneurship ecosystem and identified 33 categories as 12 indicators, including entrepreneurship pedagogy (entrepreneurship training programs, entrepreneurship curricula), academic research entrepreneurship (management of academic research, targeting of academic research, development of academic research), academic entrepreneurship (institutionalization of entrepreneurship, development of entrepreneurial interactions, development of entrepreneurial events, continuous interaction of the university with industry, entrepreneurial strategies, management of entrepreneurial activities), good governance (political policymaking, economic policymaking, crowdsourcing in governance), governance in higher education (higher education leadership, modern management of universities), entrepreneurial manpower (development of human capital of faculty members, students, and employers, management of human resources), support and encouragement (support mechanisms, motivational mechanisms), entrepreneurial finance (financing of financial resources, allocation of financial resources, financial management and planning), legal-regulatory (legal mechanisms, regulatory mechanisms), hard capacity-building (hard capacity-building inside the university, hard capacity-building outside the university), soft capacity-building (intra-university culture, extra-university culture), and competitive setting (intra-university competitiveness, extra-university competitiveness).

Moreover, Gomez (2015) identified certain indicators of academic entrepreneurship to improve the performance systems and monitor the entrepreneurial activities of universities and introduced indicators of academic entrepreneurship. These key criteria include policies and strategies, the share of technology, resources, and initiatives, human capital, business activities, and internal and external effects.

In addition, Kabrita (2015) tried to use the outputs of academic entrepreneurship to evaluate it. He believes that the strategic

management of academic entrepreneurship plays a major role in the dynamics of creating intangible values, and currently, most researchers follow innovation development and commercialization strategies, including intellectual capital (IC) management, academic spin-offs, and technology exchange and transfer in their study of academic entrepreneurship. Recently, the "third mission" has been considered a direct aid to society and economic development and integration of the mission of education and traditional research with the needs. In this strategic role, knowledge assets and IC are the stimulators of the creation of the value core and adaptation to the respective needs. Evaluating the performance of academic entrepreneurship is not simple, but the concept of IC can be used as a valid strategic and competitive management framework. According to Kabrita, academic entrepreneurship can be analyzed and evaluated by measuring the IC of the university.

ACEEU has performed several types of research on academic entrepreneurship to identify practical actions for improving innovation and entrepreneurship in higher education and evaluating and accrediting academic entrepreneurship. In fact, it aims to describe and evaluate the activities of entrepreneurial universities (universities with a focus on economic activity) and the actions of participatory universities (universities with a focus on social effects).

ACEEU accreditation standards include five dimensions and each dimension accounts for three standards or indicators of academic entrepreneurship.

1. Strategic orientation: An entrepreneurial university adopts a strategic orientation and position to bring a wide range of social participation with a focus on economic effects. The university has a general and strategic commitment to creating entrepreneurship and its social effects. This orientation is manifested in strategic priorities, financial planning, and investments.

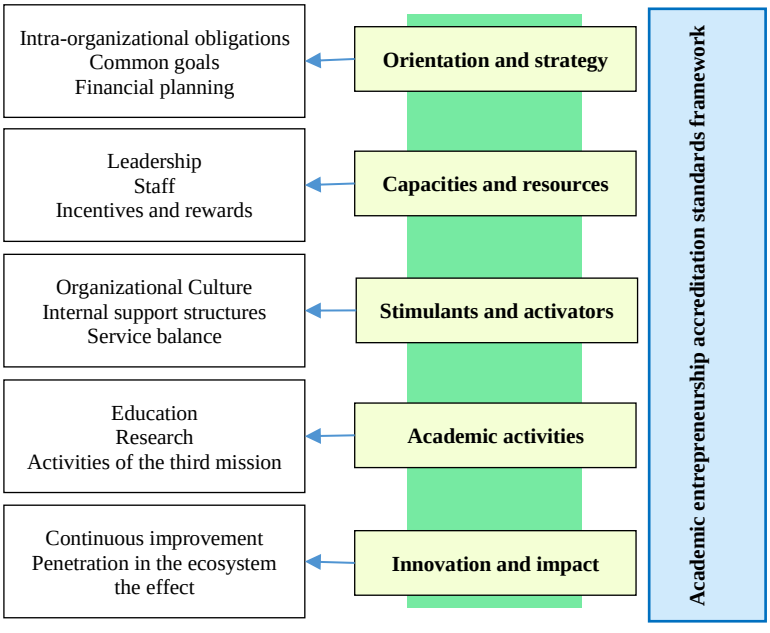

Figure 1. Academic entrepreneurship standards framework of ACEEU (21)

2. Intellectual capital and organizational capacity: Institutions that are committed to entrepreneurship, concentrate on the development of entrepreneurial minds and skills and cover a wide range of job opportunities such as internal activities,

employment, and entrepreneurship. Therefore, they develop their employees' IC and organizational capacity for risk-taking and organizational entrepreneurship, and thus these would be reflected in the institution of leadership, personality traits of employees, and motivations and rewards. In such organizations, university values and leadership approaches are mobilized to strengthen entrepreneurship, including risk-taking, team cohesion, and innovation. Furthermore, the employees' personality traits are managed to meet the current and future needs of society, and the university provides a coherent motive and reward system to motivate employees for performing and supporting academic entrepreneurship activities (21).

3. Stimulators and enablers: There is a culture for thinking and entrepreneurship in the academic entrepreneurship context. The internal support services and facilities of the university enable people to progress in their entrepreneurial stages. In other words, internal support structures in the university are improved by access to external services and consequently, a comprehensive support system is provided for entrepreneurship.
4. Education and research and activities of the third mission: In academic entrepreneurship, research is planned and implemented for income and intellectual participation with a high potential for commercialization. An entrepreneurial university is committed to the education, research, and development of the entrepreneurial minds and skills of its employees, promotes various career opportunities, and provides different opportunities for students to increase their entrepreneurial knowledge, skills, and actions. For this reason, a large volume of higher-study programs in the university includes entrepreneurship, employment, and value creation.
5. Innovation and effects: Academic entrepreneurship focuses on local, regional, social, and economic effects. These effects lead to continuous improvement and production of more economic effects in the region and an increase in the effectiveness of the universities in the beneficiaries. Accountability for the development of businesses, the importance of the performance of the university in educational, research, and commercial activities, and support and encouragement of the creative, experimental, and innovative ideas of the university result in the emergence of new businesses or development of previous businesses, followed by new achievements (21).

Innovation is the key component of academic entrepreneurship, and the university should always seek to discover new opportunities through innovation to be succeed in its third mission and achieve sustainable competitive advantages (15). Academic entrepreneurship refers to the participation of universities in economic development and the increase of social capital through innovation (16).

Since the ACEEU evaluation and accreditation model of academic entrepreneurship has been designed for the global higher-education context by considering different kinds of educational systems and approaches to entrepreneurship and participation, it has been largely accepted and used by researchers due to the characteristics such as being up-to-date, comprehensiveness, practicality, and consistency with the third generation universities, and thus was used as a basic theoretical model in this study.

This innovative study was conducted for the first time in terms of objectives, topic, content, evaluation method, and use of a

standard model and standard indicators of accreditation of a European institution of academic entrepreneurship. Therefore, it could be said that it is an important applied research both in terms of title, objectives, and content and in terms of the scope of the variables.

3. Methodology

This is descriptive applied research in terms of the nature and objectives of the study, respectively. It is also a quantitative survey due to the use of a questionnaire to collect data. The main variable of the study is "academic entrepreneurship" based on the standards of the ACEEU, which includes the sub-variables of strategic orientation, organizational capacities, stimulators, academic activities, innovation, and effects. The statistical population of the study included all professors and faculty members (n = 240) of the Islamic Azad University of Mashhad in 2021. Thus, Cochran's formula was used for random sampling of the participants and 148 respondents were selected. Then, a researcher-made questionnaire, which was designed according to the ACEEU model and adapted to the context of Azad University, was distributed among the participants. An introduction letter and demographic questions were included in the preliminary part of the questionnaire and 62 questions as 15 components and five main dimensions of academic entrepreneurship were included in the second part of the questionnaire. It should be noted that a 5-point Likert scale was used to evaluate the responses to the questionnaire. The average scores of each component were calculated according to ACEEU and used for accreditation and ranking of the university according to the following spectrum.

Table 1. Levels of Academic Entrepreneurship based on ACEEU standards.

Levels of A.E	Undesirable	satisfactory	excellent	very good
Average	0-1.499	1.50-2.499	2.50-3.499	3.50-5

As seen in the above table, if the score of a component is <1.49 according to the data collected from the questionnaire, the performance of the university in that component would be less than the expected level and is reported to be unfavorable. Moreover, if the average of the component ranges between 1.50 and 2.49, the performance of the university in that component is reported as expected and satisfactory, while the score between 2.50 and 3.49 is above the expected standards and is reported as excellent. In addition, a score of 3.50 to 5 indicates higher performance than the expected level and is reported as excellent.

To determine the validity of the instrument of the study and consistency of the questions with the topic, as well as the usability, efficiency, and appropriateness of the questions, the content of the questionnaire was approved by three knowledgeable professors and it was found that the questions of the questionnaire could explain and evaluate the topic. The convergent and discriminant validity of questions and components were investigated after collecting the data. Then, the average variance index extracted (AVE) was used to determine the convergent validity in the partial least square (PLS) regression method. The minimum value for convergent validity was 0.5 for each variable. The higher the convergence of a variable, the higher its predictive power.

Table 2. Discriminant validity of variables.

Variable	AVE
Orientations And Strategies	0.421
Capacities And Resources	0.600
Drivers And Enablers	0.555
Academic Activities	0.731
The Innovation And The Impact	0.683
Academic Entrepreneurship	0.718

Fresnel and Locker's test was run to examine the discriminant validity of the constructs. In this test, the root mean square of the variance extracted for each construct must be greater than the correlation coefficient of that construct with other constructs (Abbasi 2013, 171).

Table 3. Correlation matrix and average root of variance extracted (AVE).

Components	Orientations And Strategies	Capacities And Resources	Drivers And Enablers	Academic Activities	Innovation And The Impact	Academic Entrepreneurship
Orientations	0.827					
Capacities and resources	0.662	0.855				
Stimulants and activators	0.533	0.565	0.775			
Academic activities	0.700	0.742	0.741	0.745		
Innovation and impact	0.681	0.620	0.756	0.737	0.731	
Academic entrepreneurship	0.800	0.840	0.844	0.938	0.829	0.847

As seen in Table 3, the root mean value of the extracted variance of the variables in the cells in the main diameter of the matrix is greater than the correlation value between them that are below and to the right of the main diameter, which reflects the appropriate discriminant validity of the constructs.

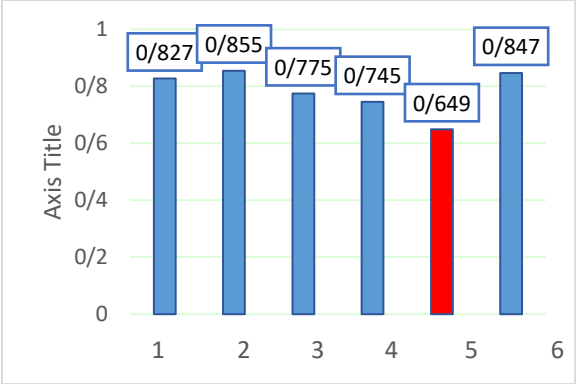

Chart 1. Average Variance Extracted (AVE)

To examine the reliability of the questionnaire, the partial least squares algorithm test (SmartPLS) was used to determine the path coefficients and examine the compositional reliability of the constructs and measuring instrument, the goodness of fit, and validation of the measurement model, and finally, the Cronbach's alpha coefficient of the variables was calculated according to the data. Cronbach's alpha values confirmed the reliability of the questionnaire. Reliability indicates the ability of the instrument to measure the desired variable. After confirming the validity and reliability of the instrument, the final questionnaire was distributed among the participants of the study.

Table 4. Cronbach's alpha values of the variables.

variable and subvariables	questions	Number of questions	Cronbach's alpha coefficients
Academic entrepreneurship	62	1-62	0.901
Orientations and strategies	12	1-12	0.683
Organizational capacities and resources	12	13-24	0.832
Stimulants and activators	12	25-36	0.932
Academic activities	13	37-49	0.816
Innovation and impact	13	50-62	0.883

Moreover, the changes in the skewness of the data were examined to determine the normality of data distribution. Analysis showed changes in the skewness of the data

ranges between 2 and -2; therefore, data distribution seems to be normal. Furthermore, Kolmogorov-Smirnov statistics and the Shapiro-Wilk test were used for more certainty. The obtained results (Sig.>0.05) revealed the significance of the hypothesis of data normality and normal distribution of the data curve. Hence, parametric equations were employed to test the hypotheses.

Table 5. Data normality test.

Academic entrepreneurship variable	N.	Df	Sig.
Kolmograph-Smirnov test	148	147	0.102
Shapiro-Wilk test	148	147	0.09

In the next step, the one-sample t-test was used to test the hypotheses of the study, examine the academic entrepreneurship variable at the Islamic Azad University, and evaluate each of the respective components.

Table 6. T-test to determine the level of academic entrepreneurship and its components.

Main components	N.	Ave.	t	df	Sig.
Orientation and strategy	148	3.55	4.09	147	0.00
Organizational facilities and resources	148	2.94	-0.65	147	0.01
Stimulants and activators	148	3.18	2.06	147	0.053
Academic activities	148	2.77	-2.09	147	0.049
Innovation and impact	148	2.93	-0.72	147	0.48
Academic entrepreneurship	148	2.36	1.35	147	0.031

4. Discussion, conclusion, and suggestions

Since "evaluation" is a tool for continuous improvement and promotion of accountability culture, the main and ideal objective of this study was to address the third mission. Efforts to continuously improve and make the university administrators accountable for the current state of the results and achievements of the university and its consequences on society to evaluate the level of academic entrepreneurship in the Islamic Azad University indicated to what extent this university was successful in its new mission; that is, academic entrepreneurship, at what level the performance of the university was in each of the dimensions and fields, in which entrepreneurship components it was successful, and in which dimensions it could not achieve a suitable position. Therefore, the strengths and weaknesses of entrepreneurship were highlighted and alarms and warnings were activated.

The evaluation of the first component showed that the average of the variable of orientation and strategies of academic entrepreneurship is 3.55, which was above average and at the excellent level, reflecting that this university has a general and strategic commitment to creating entrepreneurship and its social effects. Entrepreneurial orientation is a key component in the emergence of academic entrepreneurship, with three characteristics of institutional commitment, common objectives, and financial planning. Finally, the Islamic Azad University of Mashhad seems to have firmly taken the first step in the realization of academic entrepreneurship by establishing a favorable vision of entrepreneurship, creating commitments, and setting clear and common objectives in line with this mission.

In their studies, Migun Puri (2019) and Samadi (2016) considered institutional commitments as an effective infrastructure in the creation and development of the academic entrepreneurship ecosystem, and Audretsch (2016) called it innovation and entrepreneurship signaling. According to Gomez (2015), the development and strengthening of institutional policies and strategies in response to internal and external pressures and expectations and social and economic needs would be effective and thus he emphasized monitoring them as indicators of academic entrepreneurship. Given the importance of entrepreneurial orientations and strategies, Islamic Azad University is suggested to

make its strategic commitments more prominent and move towards excellence and value creation. Accordingly, university administrators should be committed to increasing the constructive role of the university in society and responsibility for social challenges, solving social problems and local challenges, and encouraging faculty members and students to conduct applied research by performing suitable research activities, attending research outputs, and developing motivational systems.

The evaluation of the second component showed that the average capacities and resources of academic entrepreneurship at the Islamic Azad University were 2.94, which was above average and at an excellent level. Hence, it could be said that the Islamic Azad University of Mashhad as an entrepreneurial university is committed to the education and development of IC and organizational capacity that focuses on the development of entrepreneurial minds and skills and covers various job opportunities, including internal activities, employment, and entrepreneurship. According to the faculty members, this university tries to develop its employees' IC and organizational capacity for risk-taking and entrepreneurship; an issue that is reflected in the administrative departments of the university, personal traits of employees, and motives and rewards.

Improvement of management values and approaches to strengthen entrepreneurship, including risk-taking, team cohesion, and innovation is also mobilized in this university and employees' personality traits are managed to meet the current and future needs of society. In fact, the university organizes a coherent motivational and reward system to motivate employees for performing and supporting academic entrepreneurship activities. This procedure at Azad University is consistent with the results of the study. Consequently, findings indicated that education and development of IC and empowerment of human capital through the development of entrepreneurial minds and increase of entrepreneurial skills enhance organizational capacity and academic entrepreneurship capital and lead to the creation of job opportunities, employment, and entrepreneurship inside and outside the university (Garcia, 2013; Cabrita, 2015; CIFTC, 2015; Yozuma & Ekuyo, 2015; Gomez, 2015).

Accordingly, the development of entrepreneurial skills and improvement of organizational capacity, personality traits, risk-taking, creativity, and innovation in the academicians are suggested by training, empowering, and developing intellectual capital and entrepreneurial attitudes of administrators. The motivation for investment and participation in innovative activities and the creation of innovation should also be encouraged by providing incentives and allocating appropriate rewards.

The evaluation of the third variable showed that the average stimulators and enablers of academic entrepreneurship are not valid according to the significance coefficient of the test. The enablers of academic entrepreneurship include three components: supporting culture, supporting structures, and suitable services and facilities. According to the AECCU model, there is a dynamic culture for thinking and entrepreneurship in an academic entrepreneurial context, and services, facilities, equipment, and internal support enable people to grow and develop themselves and progress in entrepreneurship. Hence, the internal support structures in such a university are improved with possible accessibility to external services and a comprehensive support system is provided for entrepreneurship. According to the faculty members, this university failed to meet the beneficiaries' expectations regarding the enablers. Enablers of academic entrepreneurship are established in a

dynamic culture with supporting thoughts and attitudes. Therefore, more support is suggested to increase business motivation and create an entrepreneurial spirit among academicians. Moreover, graduates should be encouraged to invest and create new businesses and self-employment and respective authorities should consider appropriate motives. They also should strengthen laws and policies supporting entrepreneurs and encouraging their participation in practical projects and provide services, facilities, and equipment to support individual growth and entrepreneurship development, resulting in a comprehensive support system for improving internal support structures of entrepreneurship.

The results of the evaluation of the fourth variable; that is, the activities of the third mission, was determined to be on average 2.77 according to the faculty members of this university, indicating their commitment to education and research, and the activities of the third mission of academic entrepreneurship were evaluated to be excellent, which reflects various opportunities in this university to improve students' entrepreneurial knowledge, skills, and actions. Considering these results, continuous monitoring and evaluation of the education process and regular analysis of the results with the realities of the external environment and the business world are suggested to improve the effectiveness of educational achievements and increase its social consequences.

One of the problems in the evaluation of educational activities is its inconsistency with the beneficiaries' needs and outdated indicators; therefore, it is suggested to identify the beneficiaries' real needs and update the evaluation criteria.

The development of curricula according to social demand is a component of the improvement of third-mission activities, which should be in cooperation with industry to strengthen basic skills and practical competencies.

Furthermore, the research of academicians should be taken advantage of with an approach to solving society's challenges, aligning the research projects with the expectations of the industry, emphasizing the commercialization of the projects, and considering the priorities of policymakers. Finally, respective practitioners and authorities should support investment in research and practical ideas.

The evaluation of the fifth variable; that is, innovation and its effects on the university, was not confirmed. According to the results, innovation and local, regional, social, and economic effects is one of the key components and the most important achievement of the mission of academic entrepreneurship, which continuously improves production, economic development of the region, and effectiveness of university in the beneficiaries and their interests. Since the evaluation results were not confirmed on the component of innovation and local, regional, social, and economic effects, and the data deviation was associated with a high level of error, a reliable opinion could not be provided about the results and consequences of academic entrepreneurship. However, the following suggestions can lead the academicians to better performance.

Innovation is the final component of academic entrepreneurship and the key to a sustainable competitive advantage (15). The current state of knowledge and technology is not suitable to create increasing innovation, and thus it is recommended to create new interdisciplinary and multidisciplinary disciplines and expand the boundaries of knowledge and advanced technologies.

Academic research is suggested to be directed to the use of the research results and outputs for changing and improving industrial production and developing the

quality and efficiency of industries and factories.

The university can influence the employment of young people, income, social welfare, and health of families, in particular, women, solve environmental problems, and finally improve social life by coherent planning in entrepreneurial activities, creating an entrepreneurial culture, participating in national projects, and helping to modernize and optimize industries.

The evaluation of the main variable of the study indicated that academic entrepreneurship in Islamic Azad University is acceptable with an average of 2.36, reflecting the positive trend of Azad University towards the universities of the third millennium; however, it could achieve better results by considering the key components and performing more effective activities in line with innovation, entrepreneurial consequences, and more accountable performance against environmental and regional issues. Since the economic and social consequences resulting from the commercialization of knowledge and technology and academic entrepreneurship activities are not limited and short-term, which affect the entire ecosystem and beneficiaries, it is suggested to invest more in parks, growth centers, entrepreneurship offices, development of spin-offs, development of knowledge transfer, and increase of innovation to influence the economic and social development and improve the quality of life and well-being of society.

The evaluation of academic entrepreneurship and its components in Azad University determined the level of university performance in policies, objectives, commitments, capacities, activities, results, and achievements and highlighted the strengths and weaknesses of the university. Finally, these results can be used to have more accountable administrators, obtain more favorable results, and evaluate the expected outcomes of society.

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