



Original Article (Mixed)

Designing an entrepreneurial ecosystem model in a university with a knowledge-based approach

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Abstract

The aim of the current research is to Designing an entrepreneurial ecosystem model in the university with a knowledge-oriented approach. According to its purpose, the research method is applicable; and mixed (qualitative-quantitative) in terms of its implementation. The statistical population in the qualitative section includes 20 academic experts who are knowledgeable about the entrepreneurship ecosystem, using a targeted sampling method; and in the quantitative section, it includes 384 people from all managers of Islamic Azad Universities across the country. Data collection in the qualitative part was done through semi-structured interviews with the members of the statistical community, and in the quantitative part was done through a questionnaire. Data analysis was done using ATLAS TI software in the qualitative part, and partial least squares method in the SPSS and PLS software in the quantitative part, and factor analysis method was also used in data analysis. The results in the qualitative part showed that 67 primary codes, 11 basic themes, and 5 constructive themes are identified in most infrastructure and support clusters (2 themes), integration of technology and knowledge (2 themes), education and culture (3 themes), policy and planning. (2 themes), and integrated management (2 themes); and relationships between them were drawn and presented in the form of a paradigmatic model. The results of the quantitative part showed that 5 indicators and 11 components with factor load, average extracted variance, and convergent validity are higher than (0.4), Cronbach's alpha coefficient and composite reliability are higher than (0.7), significant t coefficients is higher than (1.96); all were confirmed, and the model has a strong fit.

Keywords:

entrepreneurial ecosystem,
entrepreneurial university,
knowledge
commercialization,
knowledge-based business

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Extended abstract

Introduction

The role that universities play in ensuring the success of knowledge and entrepreneurship is beyond the transfer of knowledge and is ultimately the creation of a knowledge-based entrepreneurship ecosystem (Baharestan et al, 2023). Following the economic downturn caused by the 2008 financial crisis, governments in high-income countries are increasingly seeking a role for universities to stimulate regional economic development. Consequently, there is an increasing role for today's universities to be drivers of innovation and entrepreneurship to accelerate increased regional competitiveness and economic growth (Audretsch et al, 2022). The demand for the commercialization of academic knowledge has increased; universities are more involved in knowledge maintenance and transfer activities (Ali et al, 2019). Through their initiative to improve institutional budgets and with government actions to support wealth production and competition, universities create the context of a knowledge-based entrepreneurial ecosystem (Radko et al, 2022).

Governments around the world (especially in high-income countries) are looking for technological innovation and knowledge application as drivers of national economic growth, and universities act as generators of this national capacity (Weerasekara et al, 2022). From this point of view, universities, which operate at the critical intersection of education, research and knowledge transfer, are considered as key agents of change in the commercialization of knowledge and the creation of an entrepreneurial ecosystem (Theodoraki et al, 2022). The term "academic entrepreneurship ecosystem" is often used in this context to describe universities that are used entrepreneurially to contribute to economic development (Badzińska, 2021). Academic entrepreneurship ecosystems show an interconnected set of different components that support each other in the birth of new entrepreneurs (Dutta et al, 2021). New businesses also emerge because they are located in an environment or "ecosystem" that allows them easy and supportive entrepreneurship (Hsieh et al, 2020). An efficient academic entrepreneurship ecosystem is needed to breed entrepreneurs. The government encourages the creation of entrepreneurs among academics (Kamel, 2022).

Based on the said material, the researcher is trying to answer the question: what is the model of the entrepreneurship ecosystem in the university with a knowledge-oriented approach?

Theoretical Framework

Entrepreneurship in university

Today, university entrepreneurship is an advanced and attractive ideal for higher education (Coral et al, 2022). In the future competitive world, universities have no way to survive but to move towards university entrepreneurship (Novela et al, 2021). To achieve this goal, changes should be made in educational and research processes, structure, culture, and the way and content of interactions between universities and companies and the government. The emergence of universities with the aim of acquiring knowledge and attaining the facts of existence has been the source of many changes in human societies (Boh et al, 2016). With the expansion of universities, not only the human resources needed by the society have been trained (Lenzer et al, 2021), but also the intellectual and cultural infrastructure of the society has been provided to enjoy new methods and technologies (Giuri et al, 2019; Prokop, 2022). One of these developments is the development of entrepreneurship. The university plays a decisive role in the development of entrepreneurship. Creating and developing entrepreneurs in the educational system and turning it into an institutionalized culture requires the identification and determination of policies and principles that show the relevant solutions (Lahikainen, 2020).



Sarayani et al, (2024) investigated the presentation of the model of recruitment and selection of public sector human resources with the entrepreneurial government approach. According to data analysis, 545 final codes were extracted through open coding and then, using axial coding, categorized in the form of 121 concepts and 16 categories of contextual factors (environmental), structural factors (organizational), behavioral factors (content), recruitment of human resources, selection human resources, recognizing entrepreneurial opportunities in the public sector, exploiting entrepreneurial opportunities in the public sector, executive and managerial obstacles, political and legal obstacles, economic obstacles, cultural and social obstacles, mixed selection with internal resource acquisition in experience-oriented jobs, combined selection with external resource acquisition in knowledge-based jobs, individual consequences, organizational consequences, social consequences; and finally, in the selective coding stage, a processed and multidimensional model has been presented for the first time at the level of government organizations of Sistan and Baluchistan province.

Awad & Salaimh (2023) presented a research entitled Towards an Entrepreneurial University Model: Evidence from Palestine Polytechnic University. The main findings showed that other financial support sources can accelerate academic entrepreneurship.

Research methodology

According to its purpose, the research method is applicable, and in terms of its implementation, it is mixed (qualitative-quantitative). The statistical population in the qualitative section includes 20 academic experts who are knowledgeable about the entrepreneurship ecosystem using a targeted sampling method; and in the quantitative section, it includes 384 people from all managers of Islamic Azad Universities across the country. Data collection in the qualitative part was done through semi-structured interviews with the members of the statistical community, and in the quantitative part was done through a questionnaire.

Research findings

Data analysis was done using ATLAS TI software in the qualitative part, and partial least squares method in the SPSS and PLS software in the quantitative part, and factor analysis method was also used in data analysis. The results in the qualitative part showed that 67 primary codes, 11 basic themes, and 5 constructive themes are identified in most infrastructure and support clusters (2 themes), integration of technology and knowledge (2 themes), education and culture (3 themes), policy and planning. (2 themes), and integrated management (2 themes); and relationships between them were drawn and presented in the form of a paradigmatic model. The results of the quantitative part showed that 5 indicators and 11 components with factor load, average extracted variance, and convergent validity are higher than (0.4), Cronbach's alpha coefficient and composite reliability are higher than (0.7), significant t coefficients is higher than (1.96); all were confirmed, and the model has a strong fit.

Conclusion

The purpose of this research was to design an entrepreneurship ecosystem model in a university. The results of this research are in agreement with the researches of Ezzati et al, (2022), Panahi et al, (2022), Enetzari (2018), Mohammadpour et al, (2019), Mousavi et al, (2018), Nanni (2019), Mohgar et al, (2019), Elia et al, (2020), Guerrero et al, (2020), Prokop (2022), Meyer et al, (2020), Davari et al, (2016), Kulczakowicz (2021), Sun et al, (2020), Noormohammadi Najafabadi et al, (2022), Jame Bozorgi et al, (2023), Radko et al, (2022),



Awad & Salaimh (2023), Alkaabi et al, (2023), Keykha & Purkarimi (2021), Aliabadi et al, (2020), and Aghajani & Tai (2019).

Noormohammadi Najafabadi et al, (2022) showed that the main factors and components identified are cultural factors including the promotion of entrepreneurial culture, entrepreneurship education, skill training; and contextual factors including human capital, knowledge production, knowledge transfer, knowledge commercialization; and structural factors include networking of growth centers and technology transfer offices as well as breeding companies, which are considered effective variables in creating a regional entrepreneurship ecosystem. People's views on the influence of factors in creating a regional entrepreneurship ecosystem were measured by using a sample t-tech test. In total, effective academic factors had a significant impact in creating the regional entrepreneurship ecosystem. Based on the obtained results, the following suggestions are presented:

- Attention and promotion of technological goods.
- Pushing the university towards technological universities and commercialization of knowledge
- Expanding technology-based knowledge in university courses.
- Transferring technological entrepreneurship and its commercialization in universities
- Have the necessary planning to teach new skills and knowledge in universities.
- To provide the necessary fields to establish a connection between educational programs and the needs of the labor market and society.