

Academic entrepreneurship as a mechanism of technology transfer

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The article examines academic entrepreneurship as one of the mechanisms for the transfer of innovative ideas and technologies from the academic environment to production. The characteristics of such objects of the innovative infrastructure of the university as technology transfer offices and business incubators are given. The advantages of start-ups and small innovative enterprises as the main forms of academic entrepreneurship are considered.

Key words: academic entrepreneurship, innovation, small innovative enterprises.

In the context of globalization, innovation is becoming the most important source of development for countries and regions. At the new stage, innovations are based on scientific developments, the process of commercialization of which in science is usually called academic entrepreneurship.

Academic entrepreneurship is appeared in the United States in the late 1970s as a way to improve the competitiveness of American companies on the international market for transport and technical equipment.

The official consolidation of academic entrepreneurship as a new research area is associated with the adoption in 1980 of the Bay-Dole Law, which marked the beginning of the proliferation of knowledge-based companies created by academic scientists and graduates of technological universities, as well as securing the right of employees of higher educational institutions and research institutes to commercialize their own inventions.

The development of social networks, the expansion of publishing opportunities and sources of funding, the development of legislation in the field of intellectual property protection contributed to the fact that academic entrepreneurship has become widespread in Europe and the most developed countries of Asia.

Traditionally “Academic entrepreneurship” means “university spin-off” or institutional transfer of R&D (technology) to organize innovation or venture. University spin-offs are dependent upon licensing or assignment of an institution’s IP for starting their activity [1].

In well-known research universities, such as MIT, Stanford, and others, spin-offs are supported through special structural units, the so-called technology transfer offices (TTOs). The responsibilities of this unit include the creation of favorable conditions for scientists wishing to engage in research activities, namely:

- provision of the necessary infrastructure (laboratory, equipment);
- selection of personnel for the implementation of the project;
- search and attraction of investors to research projects;
- advising scientists on licensing and patenting issues;
- ensuring the protection of intellectual property;
- advising and helping scientists in creating spin-offs [2].

Funding for academic spin-off firms is also carried out from university funds, which can be replenished through the university's commercial activities or through charitable donations [3].

Another structure that can help scientists in the implementation of their own business is a business incubator. Its task is to advise and assist in its creation (rent of placement at discounted rates, assistance in organizing the promotion of spin-off products, etc.).

An equally important form of academic entrepreneurship is the formation and development of start-ups, that is, enterprises formed by graduates or university employees who have developed and received licenses for technology transfer in their free time from study or work. In the innovation process of the development of such companies, universities are indirectly involved, providing mainly educational and information services, thereby contributing to the creation of a favorable scientific, technical and entrepreneurial atmosphere. Start-ups, as a rule, have high innovation and commercial potential, therefore they are very popular with investors.

It can be noted that the largest number of science-intensive companies are represented in Finland, Canada, Great Britain, Japan and the USA. This is due to a large amount of funds allocated for scientific research and the formation of R&D in these countries.

The relevance of the study of academic entrepreneurship is due to the fact that academic entrepreneurs:

- support economic development, both at the regional and national levels;
- produce a significant amount of economic value;
- provide jobs;
- stimulate investment in university technology;
- increase the commercialization of university technologies;
- are an effective means for the commercialization of technologies in the early stages of development;
- are an effective means of attracting inventors;
- support the mission of the higher education institution;
- support additional research by university teachers;
- help to attract and retain new teachers;
- contribute to the learning of students;
- are distinguished by high performance [4].

The role of small innovative enterprises emerging at universities and academic institutions is determined by the following circumstances.

Small innovative enterprises contribute to the involvement of a university or an academic institution in the economic circulation of intellectual property, which, in turn, creates opportunities for increasing the income of both the organization itself and the authors of inventions. Thus, half of the income of large universities and research centers from the commercialization of intellectual property objects comes from the sale of licenses.

Small innovative enterprises create a positive image of the parent organization, which attracts talented youth, as well as generates the interest of potential sponsors and investors.

Small innovative enterprises provide jobs for students, university graduates and graduate students, and contribute to their professionalism.

Small innovative enterprises attract real customers for research and development work, form their market orientation, and make it possible to predict future directions of scientific research [5].

In general, the transfer of technology from a university can occur through:

- carrying out research under contracts;
- conferences, exhibitions and special media;
- joint publications;
- work of exchange researchers;
- informal contacts within professional communities;
- the flow of graduates into business;
- sale of licenses for the intellectual property of the university;

- establishment of subsidiaries by the university;
- creation of joint laboratories by the university and business.

Academic entrepreneurship, at whatever level of development it may be, contributes to an increase in the country's innovativeness and the formation of its competitive advantages.

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Анализ современного состояния системы государственного аудита и финансового контроля в Карагандинской области Республики Казахстан

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Аннотация. В данной статье рассмотрено состояние системы государственного аудита и финансового контроля в Карагандинской области Республики Казахстан, которая является важным элементом в управлении бюджетными ресурсами, активами области и субъектов квазигосударственного сектора.

Ключевые слова: государственный аудит, финансовый контроль, государственный бюджет, финансовые поступления, финансовые нарушения, аудиторские мероприятия.

Финансовый контроль, проводимый различными государственными органами в зависимости от уровня управления, является одним из основных видов финансового контроля.

В соответствии со статьей 1 Закона Республики Казахстан «О государственном аудите и финансовом контроле» от 12 ноября 2015 года № 392-V, «...финансовый контроль – это деятельность, направленная на устранение выявленных в ходе государственного аудита нарушений...» [1].

Финансовый контроль проводится субъектами государственного аудита и финансового контроля в рамках компетенции, утвержденной настоящим Законом и другими законами Республики Казахстан, а также актами Президента Казахстана и Правительства РК, через