

УДК 378.1:001(574)

## PERSPECTIVES ON DEVELOPMENT OF INNOVATION ACTIVITIES AT HIGHER EDUCATIONAL INSTITUTIONS

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The article presents the main directions of development of innovation activities at universities, problems and perspectives of innovative clusters, the Kazakh experience of developing the knowledge-based economy.

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Keywords: innovative development, innovation activities, university, technology, commercialization, transfer

The key role in modern economy belongs to innovations. A strategic goal for innovation activities and economic development in our country, is to make the national production and territories worldwide competitive in the nearest future. The main resource to achieve this goal is higher education, which is aimed at «... entering the ratings of the leading world universities», – as stated in the presidential Address «New decade – new economic growth – new possibilities for Kazakhstan». In this respect, better professional training, international relations of the Kazakh universities, as well as their effective integration into the world educational space are of a very important. Obviously, it depends on the potential of teaching and scientific personnel.

Today, education is regarded as one of the basic values, which deficiency make any further social development impossible. Nowadays, the growing role of educational system embraces not only its function of moral education, but also its ability to improve the quality and enrich the human capital as a part of production relations. University activities regardless of the branch of science, are aimed to improve the knowledge and professional skills. University educational policy is focused on training high-qualified specialists, who

are able to compete in the labor market, in popular branches of science, technology and techniques, basing on development and implementation of innovative educational programs amid integration into the world education system. Universities contribute to the innovative infrastructure of a region by educating staff and providing scientific support, and determine its future development [1, 2].

Interaction between research organizations and industry is one of the main problems, which should be solved through establishing a system of technology transfer. In other words, it is necessary to create conditions where scientific and educational organizations can share knowledge-intensive innovative products with consumers (companies). These conditions lay foundation for establishment of innovation belts around universities. Lack of a developed technology transfer system at universities leads to the absence of demand for the results of scientific and technical activities of university staff and students. In general, the process of creation and transformation of knowledge into commercial product should be supported by the state, including the use of new measures. For example, in France, the scientists are treated as state officials in order to stimulate and raise the status of this profession.

In Kazakhstan, like in some other dynamically developing countries, the role of universities changes as they must help develop a «clever economy», which not only follows the international progress, but could also allow to outrun in certain priority spheres. The state creates a competitive environment using the advantages of all property forms, and thus emphasizes the infrastructural development of the higher education. In Kazakhstan, 5 national laboratories and 15 university engineering laboratories were established and equipped, according to the instructions of Kazakh President N. Nazarbaev. This step, aimed at breakthrough discoveries in the national science and innovations, contributed to the revitalization of scientific researches in Kazakhstan [3, 4].

Analyses of condition and work of the laboratories showed that there is enough scientific potential in Kazakhstan to conduct fundamental and applied studies and train appropriate scientists and professionals, which will provide scientific support and human resources for country's innovative and accelerated industrial development. Since the laboratory equipment has been acquired, there are more innovation projects aimed at encouraging investments into scientific research, including the private ones. Moreover, the majority of laboratories widened the range of services they offer, as well as gained more customers, which proves that laboratory facilities are available for common use.

An effective management of innovative technology development in Kazakhstan, integrating business, science and engineering potential, requires a system of commercialization and introduction of technologies, developed by Kazakh specialists, on the basis of existing scientific and research centers and holdings. This will allow to increase Kazakhstan's share in the world production consider-

ably. Successful commercialization of scientific achievements and technologies transfer are only possible if scientific and educational organizations interact with companies via a innovation infrastructure. The latter should provide the choice and evaluation of projects with commercial potential; conduct patent research; protect intellectual property; estimate intellectual contribution to newly established joint ventures; search for and raise investments for financing the results of research and development.

It is important to take into account the experience of other centers, for example, the technological cluster at the East Kazakhstan State Technical University in Ust-Kamenogorsk and JSC «Fitochemistry» in Karaganda, which are integrated with the research institutes, universities and production through a syndicate agreement. In 2009, at our university, a National scientific laboratory on nuclear technologies and renewable energy technologies was opened. Along with solving fundamental and applied tasks, it is aimed at developing innovative technologies and training engineering staff. This process corresponds with modern world trends in organization of integrated system «science-education-production», which has recently gained a strong presence in the USA and Western Europe.

In Russia, there were also created numerous science-oriented universities. The best example is an integration of universities and research institutes of the Siberian department of the Russian Academy of sciences in Novosibirsk. The National research university is being established at the Novosibirsk state university. A large technological cluster is also in the works. It will focus on the development and implementation of technologies, similar to the cooperation cluster of universities, research institutes and industrial companies in Tomsk. Such integration of

science, education and production proved to be effective, according the solid results already achieved.

Innovations today have become a prevailing factor of development for the higher education. Innovative development of a modern university is objectively determined, goal-oriented, temporal transformation of university from one condition into a qualitatively new one. The process involves directed introduction of essentially new elements, properties and characteristics to the university activities. Innovation strategy of university development is one of the most important success factors. Earlier, universities could function successfully focusing their attention mainly on the rational use of its internal potential. Nowadays, on the contrary, there is a long overdue necessity to switch from function to development modus. Development strategy of the university is an essential factor of successful work under modern conditions, answering the questions «what to change» and «how to change». The answers let project the mechanism of innovative development of university as a system. Innovative model of university development urges to integrate science, education and innovation activities, as well as to develop and apply mechanisms that make the university more competitive, thanks to an effective and qualitative development of all its activities. The international experience shows that innovations development requires highly qualified scientific and technical potential, good facilities, demand for the results of scientific innovative activities, protection system for intellectual property. On order to train professionals for innovative economy, one need to create an innovative environment at the university, and possess an appropriate teaching qualification.

The focus on a sustainable development of innovative activity has become

the main objective necessity for development and survival of modern higher educational institutions. Setting innovations as a prevailing factor of higher education development is one of the important signs of the contemporary world. This is determined by the fact that ability to accept innovations and the choice of innovative development let the higher education system survive and develop under conditions of rapid social changes and growing competition. Innovative type of university development determines its unique character. This reflects in its rating in the educational market, the quality of its scientific and educational activities, the level of intellectual potential and innovation culture, the development strategy. Innovation-based competition is a relatively new and a rather important factor of university's survival, and is a decisive factor of an advanced development and implementation of new scientific products.

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