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A. Taubayev, Doctor of Sciences (Economics), Professor
Karaganda Economic University of Kazpotrebsoyuz, Kazakhstan

INTEGRATION AND NETWORKING MECHANISMS OF PROMOTING SCIENTIFIC AND INNOVATION ACTIVITY IN THE HIGHER EDUCATION SYSTEM OF KAZAKHSTAN

The article considers the theoretical and practical issues of development networking integration forms of the universities in the innovation sphere on modern stage. It is established that participation of the Karaganda Economical University of Kazpotrebsoyuz in networking educational and scientific consortia allows expanding a circle of partners and a range of opportunities for intensification of scientific-innovative activity in the future.

Keywords: scientific and innovation potential of the University, integration of science and higher education, networking university.

Statement of the problem. The priority attitude of the state to the development of science has had a strong and deep cumulative effect for several decades: the strengthening of the state positions in science and technology sphere it was changing the traditional mechanisms of the cooperation in different sectors of the national innovation systems (NIS), the role of science in the socio-economic development [1].

A new trend in the same direction is the strengthening scientists' activity commercial character and structures that was created by them, which was shown up last twenty years. If earlier the equal significance of the information, advisory, educational services that provided by professors mostly on a contractual basis, but now more often, scientists themselves participate in the creation of companies, in direct investments in business. Professor, who made his own business and uses students and post- graduate students in science-intensive company work, is a very widespread phenomenon.

Appreciable "antreprenisation" of the research activities in universities became possible due to the removal of most of the bans on patenting of scientists from the universities the results of research studies carried out as a result of budget financing; long-term positive development of the stock market in the second half of the 90s and especially favourable dynamics of the market value in high-tech companies; a large number of examples of real commercial success of small science-intensive companies.

But this is a world tendency, and in science structure of the Republic of Kazakhstan remains extremely low share of universities which are executed in researches and development (about 5% of expenditure on science, compared with 21% in the EU and 14 – 15% – in Japan and the USA). It should be noted that new private universities almost don't conduct researches, and state universities are occupied in competition with private system of education in attracting students in Kazakhstan. At the end of last century there was the integration of some of the state universities and research organizations, which led to the degradation of such organizations. Also in big state universities in recent opening so-called "innovation centers and centers of the commercialization", who are not only engaged of the development of innovative activity of universities, but do not understand their mission. Continuation of such trend may lead to irreversible consequences for both to the science and to the quality of training.

Kazakhstan science has poor innovation orientation [2]. Market failures in innovation sphere is explained not only and not so much by the crisis in the national economic system, but discrepancy of the themes of the researches, institutional structures and mechanisms of functioning of science to the needs of the economy. Even in the conditions of the investment growth since the beginning of 2000 till present day, a significant inflow of investments to the enterprises in scientific sphere is not observed, but at the same time, according to our estimates, more than half of solvent demand for the technology is covered by import.

Analysis of last researches and publications. Theoretical and practical aspects of innovation activity in the higher education system in the world, including in Kazakhstan were discussed in the publications of Russian and foreign scientists Hodzhson J [3], Castells M [4], Strelec I.A. [5], Rozanov N., E. Savitskaya [6], M. Yudkevich [7], S. Mamontov [8]. and others, however, questions of the development of cooperation and networking of universities are not considered now.

Determine of earlier parts of common problems. Because the national innovation system in Kazakhstan unbalanced today; its main elements – scientific and technical sphere, universities, enterprises, innovation infrastructure – exist in isolation. The strategy of the industrial sector in uncertain economic situation in country is not focused on innovation development today, using the results of domestic researches. The level of innovation activity in industry, even of the investment lifting 2007-2011 do not exceed 4.5% [9] compared to 51% on average in the EU countries.

However, the autarchy of the system of higher education and industry can not last long, because the available scientific and technical base wears out quickly. University science in its present form is not able to effectively interact with industry and respond adequately to the needs of the economy. Involvement of scientific developments in the economic turnover hampered by unresolved problems of the distribution of intellectual property rights, the underdevelopment of the market for technologies and information services.

The purpose of the research is integration and network mechanisms of activation of scientific-innovation activity in the higher education system of Kazakhstan consist in researching priorities of industrial-innovative development, mechanisms of enhance innovation capacity of universities as key participants in the national innovation system.

Main results of the study. At the same time, reforms in of innovative-industrial development sphere did not become a stimulus for activation of University science. The existing model of functioning of the economy differs by its internal mechanisms of self-development and inertia, unfavorable for scientific-technological and innovative development of the higher education system. If such trend saves university science and high-tech industries will have irreversible degradation which have an important mission to ensure accelerated industrial-innovative development of Kazakhstan.

Thus, necessary of researching to the adequate conditions, of the organizational-economic mechanism of development of University science in Kazakhstan, aimed on inclusion of the higher education system in the national innovation system has become a priority for the formation of the "new economy".

When science was reforming it was insufficiently such fact that it is one of the most inertial sectors of the economy. Forming and subsequent operation of scientific potential impact several generations and include training in secondary and high schools, training the scientific staff in postgraduate study, accumulation of knowledge, the systematic

updating of fixed funds of science, education, establishment of scientific schools.

Today in most faster developing countries education is the key of productive power in the society, clean production, and not expensive sphere. Education attracts inside itself very serious for the development of economy based on knowledge in Kazakhstan.

Kazakhstan for the development of a knowledge-based economy, it is necessary to develop science-intensive production and create a "knowledge-intensive jobs." Training of specialists for them can be implemented only as a result of integration of science and education – the leading factors in the progress of society.

What is the essence of integration of modern science and modern education? A new type of relationship here is a two – way process, involving the development of new forms of organization of science and educational institutions, primarily in high school, and then in the new strategy of the organization of the educational process. Notice that we are not talking about a University or school science, they don't exist. Correctly speak about the process of accumulation of scientific knowledge, which can be obtained in a variety of settings, schools and in higher education. But they can be referred to the scientific, when they will not depend on the process of obtaining those [10].

In other words, science can be done in schools and in the universities, a truly scientific result is independent from the institution where it received. Holding of the researches should not be the prerogative only of research institutes and centers. Universities with big opportunities (laboratories, specialists, post-graduates, government financing and other) universities should become a locomotive of scientific development, prepare scientific personnel, conducting research and producing results.

Integration of science and higher education is one of the main ways of movement towards knowledge economy. It is urgently needed, but not by mechanical merger of research institutes and universities. Each of these participants is a monopolistic owner of heterogeneous resources: academic sector has a large, research-centered intellectual potential and developed material base, while in university conducting is contingent of students and significant in terms of quantity and quality teaching staff.

Necessary to consider that each of these subjects is the process of integration of science and education in Kazakhstan is only on initial stage and it hasn't noticeable results. The reasons for this are many. First of all, unlike Western universities, in our universities research work is being conducted in very small scale. Its total volume is less than 5% of the amount of scientific works in the country by the expense of the Republican budget. The reason is not only in lack of funding, but in the absence of real conditions for research work in universities obsolete and have not updated the material-technical base; sharply increased teaching load in connection with the development of modern methods of teaching, including credit technology of training. Due to the low wages of the teachers have to work in 2-3 places.

Therefore, integration of science and higher education is a complex issue, which requires the careful, thorough, and most importantly, a creative approach. This should be more fully taken into account the specifics and peculiarities of activity, goals and objectives, role and place in society, educational establishments and scientific institutions.

New type of relationship is a two way creative process involving the development of new forms of organization of science in educational institutions, however, ensuring the active participation of research groups in the educational process, trained human resources.

High level of integration of higher education and science is the Association between the scientific institutes, universities with manufacturing companies, enterprises, scientific and technological parks. Such large associations can serve large economic organizations, corporations, holdings, transnational companies, providing them with a range of educational, research and other services. It is very popular abroad the creation of such large complexes, which are called multiuniversities. They are university production centers or intellectual cities, which play a crucial role in the development of specific regions.

An important stage of the innovative development of the system of higher education in Kazakhstan and ensuring its competitiveness is the introduction of online universities cooperation. It is connecting with the fact that in modern conditions the traditional division of the economy into sectors or the industry loses its operationality and come first clusters – system network linkages of firms and organizations, the significance of which as a whole exceeds the simple sum of its parts. Network or cluster model of innovation development in national system of high education is well implemented, it can cardinally change the content of the educational and scientific-innovative policy of the country, through the removal of constraints on growth of efficiency and technological innovation.

Understanding the network of philosophy in the world community is growing rapidly, and networks become the key component of national and regional economic development plans.

In connecting with the active position in competitive market of higher education, actualizes the importance of the ability to consolidate efforts with other dynamic educational institutions, to be ready to operate in network structures, in which each member of the network complements each other and increases the efficiency of the whole network. Last decade due to globalisation and the excessive development of information and communication technologies competitive pressure on the market of educational services grew so strong that any higher educational institution may not be enough confident in long-term prospects of its development.

In such conditions the most optimal variant for securing and improving the competitiveness of universities is network structures of interaction. It is the network structure plays a leading role in formation of policy formation and growth of the economy knowledge in countries of all continents, of course, most of all to the greatest extent in industrialized countries. Network structures give an opportunities to provide knowledge transfer and innovation in universities and institutes in the countries with economies in transition.

As the main motives of creating the network structures in higher education spheres can be mentioned:

- development and active implementation of high technologies;
- increase of innovation and economic activity on the territory of the network operation;
- possibility of cooperation and reducing transaction costs of the network participants;
- to maintain and increase the competitiveness of the network participants;
- preparation of highly skilled and demanded specialists.

Summarizing world experience of development of networks and clusters structures almost in all spheres of the economy, that can told that they gave a significant impetus to innovative development of the national economic system. In network structures instead of rigid specialization in the form of single-industry organizations-participants is developing the so-called flexible specialization, the ability to innovate. In these quality network structures are based on the hidden redistribution of knowledge and interdiscipli-

nary exchange of information characteristic of the innovative-educational networks.

What about to innovation motive formation of network structures of universities, summarizing the international experience of development of innovation activity in the countries of Western Europe, USA and Japan, we can notice the trend of such institutional and management structures for the development and implementation of innovations, which are characterized by the concentration of basic research, mainly in higher education sphere. However, in Kazakhstan the main resource potential for the creation of innovations for production have traditionally shaped and active fixed for applied research institutes and academic institutions.

Development of scientific and innovation potential of the universities of Kazakhstan universities should not break this tendency, but to bring universities from the level of simple educational organizations to the level of research and innovation, through the creation of network interactions with the research institute, with universities, with state and regional development institutions and corporate structures.

As a good example of the formation of the network interaction on the basis of international and national relations of a higher educational institution we can notice our Karaganda Economical University of Kazpotrebsoyuz, which is a member of several international and regional organizations, particular: International Association of Universities, International Association of Universities), the Association of educational institutions Educational Network (EdNet), the Council of cooperative Universities of the CIS countries, the Association of Justice Universities of the Russian Federation.

Development of networking multiplicative signed in 2006, in Bologna (Italy) Great Charter of European Universities and the official acceptance with of the principles of the Bologna process allowed to start active development of cooperation with international organizations, funds and their representatives in Kazakhstan, in particular, with the German academic exchange service DAAD, French Alliance, Informational-educational Center "Bilim – Central Asia", "Education First Academic programs", "Kazakhstan Council for Education Trave", "CCUSA Kazakhstan", AIESEC successfully realizes the programs of the European Union Erasmus Mundus and Tempus, that also involve the combined universities in the original network, consortia for the implementation of specific projects. Particularly, the program Tempus (TRANS-European mobility scheme for higher education) is a European Union program aimed at supporting the modernization of higher education on the basis of cooperation between universities independently from external influence, in the framework of country-driven consortia.

Cooperation and mobility program of European and national Universities Erasmus Mundus is built on the basis of cooperation among European universities in according to the interests of the students of all countries of the world.

In recent years participating in the network of educational and scientific consortia, work on projects and programs enabled to the University in recent years to expand the circle of partners, and to expand the range of opportunities for learning and personal growth of teachers and staff. Presently, on the basis of long term contracts KEUK develops cooperation with 40 universities from 12 countries: Austria, Germany, South Korea, Poland, the Czech Republic, Hungary, China, Turkey, Russia, Ukraine, Belarus, Uzbekistan. There are strategic partners of the foreign universities:

1) Anadolu University (Turkey)

2) University of Applied Sciences. Janos Kodolany (Hungary)

3) Graduate school of entrepreneurship (Germany)

4) University of Applied Sciences Carinthia (Austria)

5) International business school Solbridge (South Korea)

6) Euro school Bitterfeld-Wolfen (Germany)

7) Kiev national University named after Taras Shevchenko (Ukraine)

8) Moscow State University named after Mikhail Lomonosov (Russia)

9) Saint-Petersburg State University of information technologies, mechanics and optics

10) National research University – Higher school of Economics (Russia)

11) Moscow state University of Economics, statistics and Informatics (Russia)

12)Belarusian state University (Belarus)

13) Financial Academy under the Government of the Russian Federation (Russia)

14) Russian State tax Academy (Russia)

15) St. Petersburg State University (Russia)

16) St. Petersburg State University of Economics and Finance (Russia) and others

Real and perceptible educational results bring participation of the University in the Network University of the Shanghai cooperation organization, in which the KEUK is includes one of the basic universities from Kazakhstan in the field of "IT-technologies". Partners of KEUK network are the leading Universities of the countries of the Shanghai six – Russia, China, Kyrgyzstan, Kazakhstan, Tajikistan and Uzbekistan.

Presently in the framework of the University of the Shanghai cooperation organization is implementing the program of dual master's degree in information technology sphere, which is being attended by 20 students. While the program is being implemented with Russian Universities – St. Petersburg State University of information technologies, mechanics and optics, Astrakhan State University, Novosibirsk State University, but in the future, as the project is supposed to implement programs diploma education with other countries of the SCO.

Conclusions from this research and prospects of further development in this direction. In General, from the point of view of activization of innovative activity creation of a network of universities interaction also has a lot of advantages. It allows to:

- attract foreign scientists to the research projects on the territory of Kazakhstan;
- expand the number of participants of grant funding research projects through the network;
- reduce the duration of the innovation cycle due to the phasing of the research project among network participants;
- to create conditions for the exchange and transfer of knowledge in the innovation system.

As prospects of further expansion of interaction between universities can offer development on their basis of educational innovation complexes and zones, representing a network of cooperation, consisting of not only universities, but also research institutes, scientific centers, consulting and training companies, oriented at training of skilled labour and the generation of new ideas and developments.

Such educational and innovative developments should be focused on the deployment of innovative infrastructure in the regions, where the policy development and attraction of qualified human resources (including foreign ones), as well as technology transfer.

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А. Таубаєв, д-р екон. наук, проф.
Карагандинський економічний університет Казпотребсоюза, Казахстан

ІНТЕГРАЦІЙНІ І МЕРЕЖЕВІ МЕХАНІЗМИ АКТИВІЗАЦІЇ НАУКОВО-ІННОВАЦІЙНОЇ ДІЯЛЬНОСТІ В СИСТЕМІ ВИЩОЇ ОСВІТИ КАЗАХСТАНУ

У статті розглянуто теоретичні та практичні питання розвитку на сучасному етапі інтеграційних форм мережевої взаємодії університетів в інноваційній сфері. Встановлено, що участь Карагандинського економічного університету Казпотребсоюза в мережевих освітніх та наукових консорціумах дозволяє значно розширити коло партнерів і спектр можливостей для активізації науково-інноваційної діяльності в перспективі.

Ключові слова: науково-інноваційний потенціал університету, інтеграція науки і вищої освіти, мережевий університет.

А. Таубаев, д-р экон. наук, проф.
Карагандинский экономический университет Казпотребсоюза, Казахстан

ИНТЕГРАЦИОННЫЕ И СЕТЕВЫЕ МЕХАНИЗМЫ АКТИВИЗАЦИИ НАУЧНО-ИННОВАЦИОННОЙ ДЕЯТЕЛЬНОСТИ В СИСТЕМЕ ВЫСШЕГО ОБРАЗОВАНИЯ КАЗАХСТАНА

В статье рассмотрены теоретические и практические вопросы развития на современном этапе интеграционных форм сетевого взаимодействия университетов в инновационной сфере. Установлено, что участие Карагандинского экономического университета Казпотребсоюза в сетевых образовательных и научных консорциумах позволяет значительно расширить круг партнеров и спектр возможностей для активизации научно-инновационной деятельности в перспективе.

Ключевые слова: научно-инновационный потенциал университета, интеграция науки и высшего образования, сетевой университет.

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V. Virchenko, PhD in Economics, Associate Professor
Taras Shevchenko National University of Kyiv, Kyiv

NATURE OF INTELLECTUAL PROPERTY RELATIONS AND ITS ROLE IN A PUBLIC REPRODUCTION

Article is devoted to theoretical analysis of nature and structure of intellectual property relations. Types of intellectual property relations and its role in public reproduction are investigated. Peculiarities of intellectual property relations are considered. Two groups of approaches to classification of intellectual property objects are analysed: classification of objects depending on its characteristics which is based on the analysis of their most essential features, specificity of their protection, features of realisation of the property and non-property rights; classification on the basis of various minor criterions which do not reveal nature and character of objects but at the same time allow to divide them into groups according to concrete tasks of research. Necessity of defining of incorporeal objects of intellectual property which cannot be labelled as objects of copyright, industrial property or branding tools is proved. Criteria of classification of party's to intellectual property relations are investigated. The subject structure of intellectual property relations according to the legislation of Ukraine is defined. New approaches to classification of party's to intellectual property relations depending on their role in relations of intellectual property and their economic functions are offered, which allow to embrace as much as possible all participants of intellectual property relations, consider their role in the process of commercialisation, and draw attention to subjects which carry out regulating and mediatorial functions on the intellectual property market.

Keywords: intellectual property relations, classification, objects and subjects of intellectual property, copyright, industrial property.

Introduction. Property relations form basis of any economic system, providing possibility of realisation of economic interests of the owner in social production, and also forming the mechanism of distribution of its results. While the essence of the property was investigated by Aristotle in IV c. BC, intellectual property relations has turned to object of scientific researches only in XVIII c. Nowadays scientific discussions arise among researchers concerning structure of intellectual property objects, rating different results of intellectual activity as intellectual property objects, and also concerning division of party to intellectual property relations into groups by different criteria.

At the present stage of development of productive forces and formation of a postindustrial society, intellectual property relations turn from sphere of realisation of human potential to a basic source of social and economic development of the nation. In particular, according to the World organisation of intellectual property in 2011 the contribution of intellectual property branches to GDP of the USA was over 1 billion. That in 7 times exceeds a current CDP of Ukraine.

Objects of intellectual property are used in different spheres of economic activities, provide manufacture of innovative products, promote development of sphere of services and increase profitability of enterprise activity. Genesis, development, complication and a variety of intellectual activity occurred together with evolution of a human civilisation. Lately under formation of a postindustrial society an intellectual property relation turned to an important component of social and economic basis of a society, and objects of intellectual property turned into defining factor of a social reproduction.

During the Middle Ages intellectual activity was considered only as realisation of creative and a mental potential of the person, means of creation of a variety of leisure of the person and cultural life of a society. Besides, the sphere of services where the basic role belonged to intellectual activity, was considered unproductive in economic sense. In XX c. when the sphere of non-material production gradually starts to prevail over production of goods under the contribution to gross national product, and the share of