

## ПРЕДПРИНИМАТЕЛЬСКАЯ СПЕЦИФИКА СОВРЕМЕННОГО УНИВЕРСИТЕТА В ИННОВАЦИОННОЙ ЭКОНОМИКЕ: ФУНКЦИИ, ПРИНЦИПЫ\*

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**Ключевые слова:** предпринимательский университет, коммерциализация знаний, трансфер знаний, генерирование научных идей, предпринимательство, инвестирование, инновационная активность.

Рассматриваются предпринимательские особенности развития современного университета. Выявляются и характеризуются предпринимательские функции университета, выделяются их принципы.

In modern conditions of the world economy development educational environment is undergoing significant changes. Significance of innovation, market mechanism and the world crisis provoke the need for closer integration of the education system with government, business and science, through the creation of innovative forms and organizational structures. This leads to the creation of such associations as: technological platforms, clusters, educational clusters, public-private partnerships, "knowledge triangle", "triple helix" and other the purpose of which is the improvement of innovation activities efficiency of its members and the country as a whole. The leading role in all integration structures belongs to the university as it is the leading link in the system of generation and commercialization of the newest knowledge. By creating innovative structures, such as business incubators, technology parks, business centers, technology transfer centers, etc. and by carrying out paid educational services (educational entrepreneurship) to commercialize knowledge and increase the budget revenues universities are beginning to fulfill the role of business and thus displace the classical paradigm of education. They transform into entrepreneurial universities (universities of entrepreneurial type). It is well known that entrepreneurial activity is defined as an independent activity of citizens individually or in the form of associations aimed at making profit, carried out based on their initiative at their own risk and financial responsibility.

Burton R. Clark first considered the problems of formation of entrepreneurial university in his book "Creating Entrepreneurial Universities: Or-

ganizational Pathways of Transformation"<sup>1</sup>. For ten years he analyzed the activity of European universities: University of Twente (the Netherlands), the University of Warwick (Britain), Chalmers University of Technology (Sweden), University of Strathclyde (Scotland), the University of Joensuu (Finland), which allowed Burton R. Clark to identify their transformation towards the active entrepreneurial activity. He defines the entrepreneurial university as a university, ready to take risks during the development of new practices, the results of which are unclear. From the standpoint of the researcher entrepreneurial university has a significant difference from the classical university. Such universities are willing to commercialize the results of generation and dissemination of knowledge. From the point of view of J. Ropke<sup>2</sup> entrepreneurial universities possess the following distinctive features: entrepreneurial behavior of the organization itself, entrepreneurial behavior of teachers, students and staff, structural interaction between entrepreneurial university and the region. That is why the entrepreneurial university should be open to organizational change and implementation of innovative ideas. Formation of such features requires active work aimed at adaptation of employees to the changes in the university, development of entrepreneurial thinking and inclusion of the majority of employees into the processes of innovative ideas generation and managerial decision making. Entrepreneurial values should be fundamental for both faculty and students involved in the project implementation. Clark believes that having designated the task to transform into an entrepreneurial university any university must take thoughtful steps for the sake of reorganization of

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its structure and reorientation of its activities philosophy towards business priorities. Another way of forming the entrepreneurial university is to create most favorable conditions for the development of the initiative among teachers and students, for the formation of innovative companies.

The leading role of universities is explained by the fact that they unite within their education system, all the main branches of science, and therefore have the greatest intellectual potential. Teaching, research and business activities are combined within entrepreneurial universities, which generates income due to commercialization of innovations. Ever since teachers and students are included into the business activities of the University within the framework of an innovative business structure, introduction of new applied knowledge in the learning process gets accelerated. Formation of new knowledge and its capitalization ensure accelerated development of intellectual resources and therefore increase in development of innovative activities. Thus entrepreneurial universities carry out not only classical university functions: training, research, intellectual, educational, cultural, economic and social functions, but also completely new features: a transfer of knowledge, generation of research ideas, entrepreneurial and investment activity<sup>3</sup>. According to A. Grudzinski and A. Bedniy knowledge transfer is a “system of measures aimed at the organization of multi-channel and multi-level interface between the university and its external environment and first of all with high-tech enterprises”. Knowledge transfer is possible under certain conditions: a high level of scientific research and the implementation of market-oriented educational programs. The researchers say that the most important feature of any entrepreneurial university is “innovation activity and, consequently, the presence of knowledge transfer systems supporting it”<sup>4</sup>. Generation of scientific ideas is the most important function of any entrepreneurial university. Scientific research and educational activities filled with creative ideas of young researchers are being actively conducted within universities. Grants obtaining, conduct of students’ own research, experimental work, participation in conferences and seminars comprise innovation activity of universities. It allows forming new creative ideas, which require careful analysis before they can

generate new vectors of innovative activities. Implementation of business function involves creation of separate structural units of small innovative enterprises within the university, where in the process of labor, through commercialization of ideas, students with the help of professors and entrepreneurs could receive practical experience in real business activities<sup>5</sup>.

Entrepreneurial University builds its activities in such key areas as: training of specialists active in the innovative sphere, production of high-tech ideas, technologies, innovations and their commercialization (capitalization of knowledge)<sup>6</sup>. Thus, entrepreneurial university, operates not only in the direction of education, scientific research, but also in the direction of making a profit from its own business activities, attracting investments into universities both from the state and business<sup>7</sup>. As a result of cooperation with other institutions (the state, business community) university makes its own contribution into the socio-cultural development of the region. N. Golovko, V. Degtiareva, S. Madykova in their research reveal direct relationship between capitalization of knowledge and inner university transformation factors. Differences in the purposes of tripartite association participants can be overcome within the framework of the entrepreneurial university, which “provides a “dialogue” and a real opportunity to integrate these different styles and systems of values”<sup>8</sup>.

The overriding factor is the scientific one. The researchers point out the following: “Before speculating on the capitalization of knowledge we should take into account the micro-structure of motivations, norms, potential and resources of a particular scientist participating in “development of innovations”. Henry Etzkowitz emphasizes the importance of human resources as follows: “Model development is impossible without individual contribution of a scientist”<sup>9</sup>. Moreover, as a result of human resources movement within the model and also being an element of two or three institutional spheres (combining of a teaching profession and working in a company or successful entrepreneurship) the forms, methods and instruments of the teaching profession get updated which provides significant knowledge increment.

When analyzing the role of culture in the establishment of entrepreneurial universities G. Mkrtchyan notes that “a new concept of a university mission is being generated in the entrepreneurial

university, where entrepreneurial attitude towards academic work is dominant"<sup>10</sup>. According to L. Kobzeva the mission of a modern university of entrepreneurial type resides in entrepreneurial activity, in other words "in being an active player in the socio-economic development of the region"<sup>11</sup>. N. Korzhenevskaya proposes the principle of "search of effective balance within the controversial value-oriented system" as the key principle of entrepreneurial university activity<sup>12</sup>.

Thus, the shifting and extension of priorities according to which the subjects of innovation activity operate determine the need for their integration. One of the examples is the innovative integrated structure (technological platforms) which includes: higher education institutions, scientific research institutions and enterprises; the triple helix model includes: university, enterprise, state. Here universities play the key role.

Classical universities undergo significant changes and gradually transform into entrepreneurial (innovation, research) which determines the establishment of new structures of innovation activity organization. Competitive scientific groups form within the framework of entrepreneurial universities. Such groups carry out patent and licensing activity, commercialization of scientific research and development and transfer of knowledge through modern innovative structures of entrepreneurial type.

With scientific-applied researches of domestic and foreign scientists in mind we can separate out the following principles of entrepreneurial universities activity: entrepreneurial way of thinking of professors, students and employees, their ability to adapt to changes, entrepreneurial proactiveness, openness to organizational changes and implementation of innovative ideas, high level of scientific research, consistency of organizational and economic relations of all parties of the association, development through knowledge increment and increase in its potential, integration of various styles and value systems and balancing the interests.

Entrepreneurial universities not only fulfil their classical functions such as: teaching, scientific-research, intellectual, higher and further education, cultural, economic and social functions. Principally new functions are carried out by such universities as well: training of innovation-active professionals, knowledge transfer,

generation of scientific ideas, production of high-tech ideas, technology, innovation, commercialization (capitalization of knowledge) development, attraction of investment.

<sup>1</sup> *Burton R. Clark* Creating Entrepreneurial Universities: organizational Pathways of Transformation. London : IAU Press, 1998.

<sup>2</sup> *Ropke J.* The Entrepreneurial University: Innovation, academic knowledge creation and regional development in a globalized economy // Working Paper, Department of Economics, Philipps-Universität Marburg, Germany, 1998.

<sup>3</sup> *Резник Г.А., Пономаренко Ю.С., Курдова М.А.* Функции вуза: новые возможности развития // Мир науки. 2014. № 4. URL: <http://mir-nauki.com/PDF/30PMN414.pdf>.

<sup>4</sup> *Грудзинский А.О., Бедный А.Б.* Трансфер знаний - функция инновационного университета // Высшее образование в России. 2009. № 9. С. 66-71.

<sup>5</sup> *Леоненко О.В., Шаховская Л.С., Головчанская Е.Э.* Предпринимательский университет как необходимое условие развития конкурентоспособных научных групп в современной инновационной среде мировой экономики // Материалы, оборудование и ресурсосберегающие технологии : материалы Междунар. науч.-техн. конф., 14-15 апр. 2016 г. Могилев : БРУ, 2016. С. 3-12.

<sup>6</sup> *Андрюшкевич О.А., Денисова И.М.* Формирование предпринимательских университетов в инновационной экономике // Экономическая наука современной России. 2014. № 3 (66). С. 87-104.

<sup>7</sup> *Налетова И.В.* Метафундаментальный анализ предпринимательских университетов // Аналитика культурологии. URL: <http://www.analiculturolog.ru>.

<sup>8</sup> *Golovko N.V., Degtyareva V.V., Madyukova S.A.* Entrepreneurial university and the triple helix theory // Высшее образование в России. 2014. № 8-9. С. 46-53.

<sup>9</sup> *Etzkowitz H.* The Triple Helix: University-Industry-Government Innovation in Action. Working paper 2002-11. URL: [http://www.sister.nu/pdf/wp\\_11.pdf](http://www.sister.nu/pdf/wp_11.pdf).

<sup>10</sup> *Mkrtychyan G.A.* The entrepreneurial university: concept and diagnosis of culture // Вестник Мининского университета. Нижний Новгород, 2014. № 4.

<sup>11</sup> *Кобзева Л.В., Пономаренко В.В.* На пути к предпринимательскому университету: что находится в центре изменений? // Инновации. 2011. № 4 (150). С. 85-93.

<sup>12</sup> *Корженевская О.Н.* Специфика развития вузовского предпринимательства в условиях формирования экономики знаний : автореф. дис. ... канд. экон. наук. Волгоград, 2014.

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