



## THE ROLE OF UNIVERSITIES IN BUILDING A REGIONAL INNOVATION SYSTEM

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### ABSTRACT

*The article examines the role of universities in building a regional innovation system.*

The innovativeness of the economy means the transition to an intensive type of expanded reproduction, which is based on scientific and technological progress and innovative activity (ID) as factors providing competitive advantages of socio-economic systems. The need to develop the innovative component of the economy has been repeatedly confirmed both in the works of both foreign and domestic economists. However, according to experts, about 1.2% of GDP is spent on research and activation of innovation activities, for example in Russia, and about 50% of this amount falls on budget investments, whereas in the United States this figure is 2.6-2.7% of GDP per year, in the European Union, Japan, the share of R&D spending ranges from 2.7% to 3.1% of GDP.

The level of innovation of the economic environment depends on many factors, the main of which are the accumulated intellectual potential, the relevant regulatory and legislative framework and institutional framework, the availability of investment resources of a risky nature (venture type). The need for technical re-equipment of the leading sectors of the economy (mechanical engineering, petrochemistry, transport), a significant reduction in quantitative and qualitative terms of scientific and technical branch institutes and centers have led to the formation of a layer of small innovative and engineering firms, on the one hand, and on the other hand, divisions associated with the development and implementation of innovations that increase business efficiency are formed at large enterprises and holdings. However, the mechanism of



systematic use of scientific developments to manage competitive advantages in industrial production has not yet developed.

The domestic manufacturing industry, apparently, cannot be a source of innovation breakthrough in the coming years due to the lack of financial resources, personnel, management structure and support of innovation activities, orientation to an extensive development strategy and price competition. Thus, in the near future, the system of university and academic science may be the centers of systemic integration of innovation activity.

The role of universities in building a regional innovation system is associated with the development of the following areas of activity:

- reproduction of scientific and technical (intellectual) potential necessary for the development and commercialization of innovations;
- production of innovative products and services in-house;
- incubation and generation of small knowledge-intensive businesses associated with the university;
- formation of an innovative infrastructure to support the ID, serving the needs of the regional innovation system;
- training of personnel for ID;
- formation of an innovative culture in the business environment.

The activity of universities in the development of all the above activities will allow the formation of centers of innovation

activity in the region and the institutional basis of the regional innovation system.

One of the forms of organizing and conducting innovative activities is currently the model of educational, scientific and innovative complexes (UNICS). In market conditions, universities for various reasons do not have the opportunity to integrate with science and production on partner terms, there is a process of integration in all types of activities by joining themselves or absorbing other enterprises and organizations. This trend in changing the university's approaches to the external environment leads to the creation of a new structural form — the university complex.

The University Complex (CC) is an association of educational institutions operating in the system of higher and postgraduate professional education, implementing programs of various levels, scientific and other non-profit organizations; implementing educational programs of various levels in accordance with the established procedure, as well as other activities in order to improve the efficiency and quality of the educational process, the use of material, intellectual and information resources for training specialists and conducting scientific research in priority areas of education, science and the social sphere. In this case, the association may imply either a legal entity or interaction on the basis of contracts. Educational institutions may be established in one of the organizational and legal forms of non-profit organizations provided for by law.

The mechanism of functioning of university complexes provides for the formation of three types of associations of



educational institutions and non-profit organizations on the basis of the university, i.e. according to the model:

- university educational district;
- associations of legal entities (union);
- the complex as a single legal entity.

Each university chooses a model depending on the existing infrastructure, established external relations with enterprises and local authorities, and also depending on strategic plans for further development.

The University educational District does not have the status of a legal entity. This is the educational environment of a university in a city or

a region that covers educational institutions that implement educational programs at various levels. Educational institutions of various forms of ownership are united with the aim of: improving the quality of education; forming continuity of educational standards and training programs; providing targeted training for the industrial and social spheres of the region.

The Association of Educational, Scientific and Other Non-Profit Organizations is a non-profit organization created with the aim of improving the quality of education and making fuller use of intellectual, material and production resources.

The CC as a legal entity can be formed of two types: type 1 - A university complex as a reorganization of the university in the form of joining other legal entities to it; type 2 - a University complex formed by self-development of the university. It can be

noted that to a greater extent the creation of the Criminal Code has been developed on the basis of classical, technical and technological universities, universities of pedagogical profile, to a lesser extent the forms of complexes of universities of agro-industrial and economic profiles have been worked out.

The results of a study of the experience of creating university complexes, for example, in Russia showed that of them: 15% were created or are being created as state educational institutions, 40% were created or are being created as an association (union), 45% were created or are being created as an educational district.

The creation of university complexes in the form of educational districts, including educational institutions regardless of ownership and implementing educational programs at various levels, is due to the fact that first of all a system of multi-level and multi-stage continuing education is being built: "school -college (lyceum) - university".

The creation of conditions for affordable education (primarily higher education) is realized through the opening of branches and the development of distance education. As a rule, this approach is typical for regions where the higher education system is represented by one leading university in the region or several universities of the same profile (for example, pedagogical universities and institutes), the economy of the region has a pronounced specialization (for example, the agro-industrial complex). In the university educational district of single-profile educational institutions, the profile university serves as an organizational and methodological center.



The creation of a university complex in the form of an association (union) makes it possible to unite educational, scientific and other institutions and organizations.

This form has a number of advantages: firstly, the subjects of the association can unite, while maintaining their independence, the number of subjects is unlimited; secondly, a comprehensive approach is being implemented to solve the problems of development of all parts of the education system in the region; thirdly, the unity of the regional educational space is ensured; fourth, there is a consolidation of budgetary and extra-budgetary sources of funding for the implementation of specific projects of the association and the preservation of financial independence of its subjects. All these transformations are innovative in nature and are dictated by the need to search for opportunities to achieve new results, and not by the logic of development and self-preservation of the educational system.

An example of the organization of university complexes in can be: Bauman Moscow State Technical University (MSTU), which together with the Khrunichev State Space Research and Production Center created a consortium to organize targeted training of specialists in the areas of design, creation and operation of rocket and space technology; St. Petersburg State Electrotechnical University, where the UNIC was created and successfully operates, etc.

University complexes (UOO and UNIK) have been created and are successfully functioning in developed industrial countries (USA, Germany).

The successful experience and purposeful work of a number of classical and technical universities testifies to the unconditional effectiveness of investments in the formation of leading universities as centers of sectoral and regional innovation activity. The formation of the basic elements of the regional innovation infrastructure is determined by the level of the region's economy and the resources it has.

The existing university base plays a decisive role in choosing the model of the university complex, the development of infrastructure and its elements. This is, first of all: the scale of the university, the volume of research and development;

innovative potential; the degree of integration of the university with educational, scientific institutions, industrial enterprises and organizations of the region and the role that the university plays in the socio-economic, technological, educational and cultural development of the region.

Universities that create university complexes should become centers of innovation activity of regional economies. These complexes form an innovative environment and infrastructure for the commercialization of innovations in educational and scientific and technical activities. The special role of the university complex is that it should encourage teachers, students, scientists to innovative entrepreneurship.



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