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CURRENT ISSUES OF THE FORMATION OF CLUSTER STRUCTURES ON THE BASIS OF SMART SPECIALIZATION

The European strategy "Smart Specialization" is aimed at prioritizing the innovative development of regions, improving its management, and involving a wider range of stakeholders. The advantage of this strategy is that it "smartly" and selectively approaches the expenditure of limited resources – it prevents duplication of research and innovation activities by different regions, which is extremely important in the context of global competition. The concept of smart specialization [1] aims at efficient, effective and synergistic use of public and private investments, and supports countries and regions in strengthening their innovative capacity while focusing limited human and financial resources on a few globally competitive areas of activity. According to the smart specialization strategy, only those regions will be able to apply for support from EU resources that have already defined their smart specialization. It should be noted that smart specialization involves identifying strengths and developing the competitive advantages of regions based on the existing structure of the regional economy.

The smart specialization strategy is based on four principles of economic transformation ("4 K"):

1) Critical mass and strict selection (limited number of priorities based on the region's own capabilities and international specialization; concentration of financial resources and more efficient budget management).

2) Competitive advantage (adaptation of innovative potential to business needs through the so-called "entrepreneurial discoveries").

3) Formation of cluster structures (development of world-class clusters and creation of platforms for inter-industry relations in the region and beyond, which contributes to specialized technological diversification).

4) Collaborative leadership (effective innovation systems [2] as a collective effort based on the interaction of states, the private sector, science and innovation consumers).

The main feature of the smart specialization strategy is the emergence in its structure of the so-called entrepreneurial discovery process, which means the involvement of entrepreneurial structures in determining the priority areas for the development of the region as the most promising from the point of view of the business. This process shows in which area of R&D and innovation a country, region or city is strongest because entrepreneurs know best what they can produce in the most efficient way. The synthesis of knowledge in the field of innovation and business, previously fragmented, helps to create a vision of opportunities in existing or new sectors. It is this type of complex knowledge that needs to be activated and maintained as the main ingredient in the process of smart specialization. Entrepreneurial knowledge extends far beyond science and technology – it combines and correlates scientific and technological knowledge with market demands (growth potential), potential competition, resources and services needed to start a new business activity.

The smart specialization strategy expands the concept of "actor-entrepreneurs", meaning not only enterprises but also universities, state research institutes, and independent researchers (innovators), who are important to identify and attract to organize joint projects with the business sector. Only through the interaction of science and business can one obtain reliable information about the future value of specific types of regional specialization [3]. Instead of targeting entire industries/sectors, this approach encourages investment in specific activities aimed at strengthening comparative advantage in existing or new areas. In the concept of smart specialization, public authorities perform the following functions: 1) creating conditions for approvals and choosing smart specialization as the leading strategy for innovative and regional development; 2) identification of the needs arising in connection with the chosen specialization (for example, in the field of education) and the introduction of appropriate incentives and support measures; 3) assistance in the formation of cluster structures and monitoring of cluster development in accordance with the specialization chosen by the regions [4–8].

Clusters are the main horizontal tool of the smart specialization strategy. In this regard, clusters can make the greatest contribution to sustainable development by supporting research, development and innovation within identified areas and areas of specialization. The smart specialization strategy introduces the necessary structural changes that stimulate innovative development [9]:

– a radical transformation, in which R&D and innovation can suddenly make certain areas of business activity with previously slow growth attractive. For example, the use of digital technologies and information systems [10] in the management and conservation of the archaeological and historical heritage in Italy (Florence) – is an example of the simultaneous emergence of an innovation sphere and a market niche;

– transition from the existing (traditional) sector to a new one, based on interaction and cooperation in the field of R&D, engineering and production, which form the knowledge base for the development of new business activities. For example, in Austria, entrepreneurs found a way to move from precision engineering to medical technology, which led to a series of inventions in medical technology that emerged from existing developments in precision engineering;

– modernization – technological re-equipment of the existing industry, including developments with the special use of the so-called "key enabling technologies", to improve the efficiency and quality of the existing, possibly traditional, production sphere. Such technologies are, for example, semiconductors, new ("advanced") materials, photonics, nanotechnologies;

– diversification that promotes potential synergies that may arise between existing and new (related) areas of business activity and that makes the transition to a new area attractive and profitable. For example, as a result of the smart specialization strategy, the Toulouse region began to specialize in aeronautics (Airbus Valley), which led to the expansion of entrepreneurial activities, infrastructure and specialization of higher education and research institutes in the direction of satellite and navigation technologies.

Prospects for further research are in the theoretical generalization of scientific approaches to the definition of the term "regional cluster infrastructure", taking into account the specifics of the functioning of the economic regions of Ukraine.

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