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Institutional and financial support for regional innovation development based on cluster approach

Abstract

Introduction. In Ukraine, the most urgent task today is to increase country and regional competitiveness in the open European market. Many foreign and domestic scholars see the key to success in the innovative capacity development.

Purpose of the article is to prove the importance of innovation stimulating through the clustering of economics in order to implement the concept of «smart specialization» and to identify the main trends and potential sources of clusters funding in Ukraine.

Results. In our opinion, one of the key issues of cluster policy in our country is financial support. After identifying gaps and bottlenecks, we conclude that the problems of institutional and financial support of regional cluster-based innovative development should be resolved both at the state and local levels.

Conclusion. Ukraine should work out a cluster-based economic development strategy and elaborate support measures for its implementation. One of them should be favourable conditions creating for the financial resources consolidation by the non-profit organizations – cluster coordinating institutions.

Keywords: Regional Innovative Development; Smart Specialization; Entrepreneurial Discovery; Clusters; Clusters Financial Support Mechanisms

JEL Classification: G 38, O 31, H 72

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Інституційно-фінансова підтримка інноваційного розвитку регіону на базі кластерного підходу

Анотація. У статті обґрунтовано необхідність закладення інноваційного підходу у розвитку вітчизняної економіки на основі концепції «розумної спеціалізації» регіонів. Розглянуто й узагальнено зарубіжний і вітчизняний досвід інституційно-фінансової підтримки інноваційного розвитку регіонів на основі кластерного підходу. Запропоновано механізми фінансування кластерів як ключових структур у реалізації регіональної політики інвестиційного розвитку.

Ключові слова: інноваційний розвиток регіонів; концепція «розумної спеціалізації»; підприємницькі відкриття; кластери; механізми фінансової підтримки кластерів.

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Институционально-финансовая поддержка инновационного развития региона на базе кластерного подхода

Аннотация. В статье обоснована необходимость внедрения инновационного подхода в развитие отечественной экономики на основе концепции «умной специализации» регионов. Рассмотрен и обобщен зарубежный и отечественный опыт институционально-финансовой поддержки инновационного развития регионов на основе кластерного подхода. Предложены механизмы финансирования кластеров как ключевых структур в реализации региональной политики инвестиционного развития.

Ключевые слова: инновационное развитие регионов; концепция «умной специализации»; предпринимательские открытия; кластеры; механизмы финансовой поддержки кластеров.

Introduction. On June 27, 2014, Ukraine signed the economic part of the Association Agreement with the European Union. Legislative approval of the course for the membership in the European Union requires a new approach to regulation of economic development. The most urgent task today is to increase the competitiveness of the state and regional economics in the consolidated European market. Most foreign and domestic scholars see the key to success in the development of innovative capacity, which provides institutional and systemic financial state support. That is why one of the main priorities of

the Europe–2020 Strategy is «smart growth» – developing an economy based on knowledge and innovation. The EU has set a goal for members to spend 3% of GDP on R&D by 2020 [1].

In The Strategy for Sustainable Development «Ukraine–2020», which was approved on January 12, 2015 by the Decree of the President of Ukraine, innovative development is not mentioned as a priority of state development [2]. In The State Regional Development Strategy up to 2020, increase in innovation and investment capacity of the regions is mentioned as one of the ten operational objectives to improve the compe-

titiveness of regions [3]. It is obvious that in these strategic documents outlining directions of economic development due attention to the innovation development is not given. In the conditions of budget shortage without recognizing the direction of innovation as a priority, its financing is insufficient.

Brief Literature Review. The key role of innovation in economic development of the country and its regions is widely considered in the works of OECD and the European Union experts [6; 9]. The idea of the innovation development strategy based on the concept of smart specialization implementing through clustering of the economy is grounded in the works of such foreign scientists as P. Kryjom (2014) [8], T. Berndt (2009) [10], I. Kirzner (1997) [5], S. Sandu (2012) [4], and others. Among domestic researchers, the problem of clusters development and its financial support was investigated by M. O. Kyzym and V. Ye. Khaustova (2012) [15], I. G. Tkachuk (2009, 2011, 2014) [16–20], S. O. Kropelnytska (2008, 2009, 2011, 2014) [7; 16–20], S. V. Onyshko and B. S. Onyshko (2010) [21], L. I. Fedulova (2011) [22], and others.

Despite the high scientific value of domestic and foreign research, changing market conditions that caused the active Ukraine's progress towards integration with the European Union and the international community, and, as a result, the need to improve the competitiveness of the national economy in global markets requires improvement of the innovation financial support mechanism.

Purpose of this paper is to prove the importance of innovation stimulating through the clustering of economy while implementing the concept of «smart specialization» at state and regional level in Ukraine and to identify the main tendencies and available sources of clusters funding in Ukraine.

Results. The experience of European and world highly developed countries shows that the main role in innovation stimulating is given to regions. The regional development strategies are focused on local potential mobilization and implementation of innovation as the basis for regional development. Enhancing the role of networks and associations of enterprises, especially clusters, for innovation development highlights the importance of regional innovation systems.

According to this approach, central and regional governments are responsible for stimulation investments which complement existing factors of production in the region to form the future inner potential and get interregional comparative advantages. This concept foreign scientists call «smart specialization». Therefore, each region should identify its best assets and R&D potential in order to concentrate its efforts and resources on a limited number of priorities where it can really develop excellence and compete in the global economy [4].

According to the concept of smart specialization, science, technology and economic specialization is the basis for the comparative advantages development and, more broadly, for the economic development promoting. The priority role in determining the ground for comparative advantages is given to the regions, private stakeholders and entities.

The strategy based on the concept of smart specialization can be seen as a combination of sectoral, innovative and regional development strategies. A choice of directions of R&D public investments is made in accordance with the directions, which are chosen and developed by the entities. It is so-called «entrepreneurial discovery» of smart specialization. The concept provides that entities and other stakeholders discover and produce information about what should be done in the area of R&D and innovation for a unique competitive advantage creating.

Leading economist of the Austrian School of Economics, Israel M. Kirzner (1997), was the first who broadly developed the theory of «entrepreneurial discovery» in his work «Entrepreneurial Discovery and the Competitive Market Process: An Austrian Approach» [5]. Discovery occurs in the process of cooperation and interaction between enterprises, their associations, research institutions, universities and other market actors operating in the region. Thus, in contrast to the strategies that form to the «top-down approach», smart specialization of the region will be determined in an upward path, based on the business entities' knowledge of the market.

In the most OECD countries cluster approach is used in stimulating innovation. Moreover, such countries as Australia, Austria, Belgium, Czech Republic, Estonia, Finland, Germany, Ireland, Israel, Poland, Russia, Spain, Turkey, and The United Kingdom are combining clusters policies and specialization strategies [6, 187].

Clusters are usually created by initiative of entities and make «entrepreneurial discovery» of economic specialization of the region.

Unlike traditional forms of production organization, clusters' functioning is specific. Discussion about clusters, their prototypes and analogues, as well as forms of their financial support has long held in the economic literature. But there has not been formed yet a unified view of the nature of this economic phenomenon and support of its development. Significant cash flows pass through clusters, however, to the problem of the clusters' financial base forming not enough attention is paid.

We should remind that cluster, in our opinion, is the system of economic relations that occur between entities associated on a voluntary basis, rounding on territorial, technological and/or institutional (social) connections and aimed at better total financial results achieving for the cluster and each of its subjects preserving a high level of competition [7, 51].

According to the European approach to the cluster concept consideration, and, in particular, the Polish Agency for Enterprise Development (PARP), cluster is defined as «a specific form of production, which is the concentration of elastic entities in near space that conduct complementary economic activities. These subjects compete and cooperate simultaneously and have relationships with other institutions that work in particular field. The ground for cluster development is cooperation linkages which occur between entities that generate processes of specific knowledge formation and increase adaptive capacity» [8].

The presence of clusters as associations of enterprises which have common interests (production, marketing, finance, access to scientific research, etc.) enables central and local authorities to provide financial and other support for innovative activity of specific target group according to the strategic directions of regional development.

In Ukraine, a significant obstacle to the successful operation of clusters is the lack of financial resources. In our opinion, one of the key areas of cluster policy in our country is financial security. The main reason in favor of state cluster financial support by R&D funding, infrastructure investment, employees training and the initial stages of cluster development financing, is to spread knowledge among members of the clusters. Therefore, it becomes possible to generate a collective system of knowledge and information, which leads to higher productivity, more innovation and competitiveness of enterprises participating in clusters. The main sources of cluster development financing are presented in Figure 1. In our mind, credit and grant sources of cluster support should be added to this list [7; 16–17].

Few cluster organizations are able to maintain themselves only by membership dues; and almost all of them are always looking for financial sources to support cluster activity. International, state or regional support, and sometimes cost sharing, is critical to many of these structures. Helping to ensure long-term funding, the state can provide the necessary support for the cluster organizations in order to strengthen their positions in the cluster. Government support can be provided through appropriate funding mechanisms and a minimum of bureaucratic regulation and obstacles ensuring in access to these funds.

Clusters provide justification for the allocation of resources in order to maximize the impact on the economy. Significant investments in important element of the cluster, which is often research and development or large industrial parks, is a common way to enhance the reputation of the cluster and attract new firms. Some countries have tried to buy clusters due to large-scale investment, but with varying success. The way in which public authorities allocate resources among clusters should take into account the maturity of the cluster. Newly created and mature clusters have very different needs. The reorga-

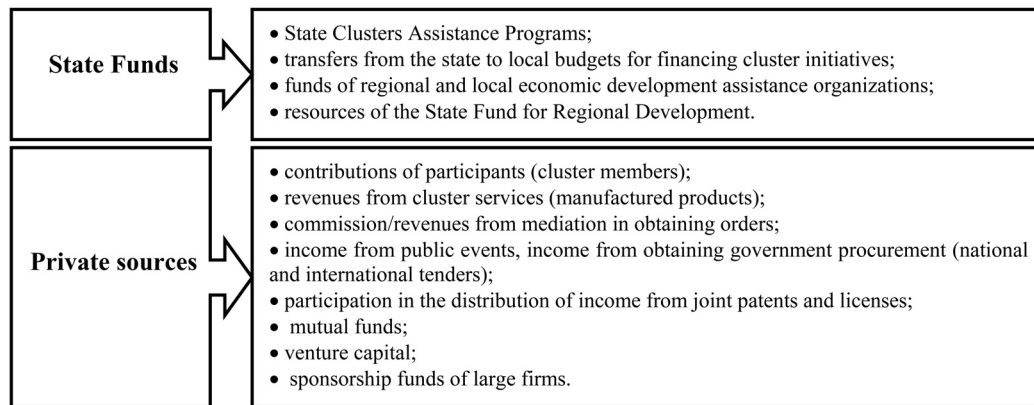


Fig. 1: Sources of cluster development financing
Source: Compiled by the author based on [10; 22, 33]

nization of agencies and institutions to focus on a particular cluster is justified only for mature clusters. Industrial parks and incubators, existing within the cluster will help to attract new members to the newly created potential cluster.

One of the easiest means to encourage firms to cooperate and achieve economies of scale is taking only collective applications from several companies at competitive financing division. Such funding may be available to support:

- Networks or associations of enterprises;
- Consortia of firms supplying technical and administrative services, which are necessary for the preparation of related companies;
- Consortia of small companies developing or workplaces improving [11].

Taking into account the world experience in financing the creation and operation of clusters, we can distinguish three main sources of support:

1. State budget (e.g., France, Sweden, Portugal, Norway);
2. Regional budgets (e.g., Germany, Great Britain, Lithuania, Poland);
3. EU Structural Funds (e.g., Germany, Great Britain, Lithuania, Poland) [5].

In every country where cluster policy is supported there are institutions (funds, programs), the aim of which is financing the clusters development. In Japan, clusters financial support is provided by the Ministry of Economy, Trade and Industry, in Italy – by The National Institute of Foreign Trade, in Lithuania – by The Public Institution Lithuanian Innovation Centre, in Norway – by The Research Council of Norway which provides grants to state target clusters [12].

In Ukraine, there is also considerable experience in the development of cluster initiatives, but not as significant in their financial support. However, there is no single state policy and institution that has claimed responsibility for the financial support of at least the first steps of the clusters operation, although, there is some experience on the local level. For example, in Ivano-Frankivsk city of western Ukraine by «bottom-up» approach a non-profit organization «Cluster of Folk Artistic Crafts «Suzirya» (NPO «Cluster of FAC «Suzirya»») was created as a coordinating agency of the local cluster [16; 17]. Initial operating costs of NPO «Cluster of FAC «Suzirya»» are partially funded from the local budgets under the first phase of the cluster development project of folk crafts in Prycarpatya.

Since 2003, the need in clustering of Ukrainian economy has systematically been considered in the Cabinet of Ministers of Ukraine. The Resolution of the Cabinet of Ministers of Ukraine from May 14, 2008 «On Approval of the State Target Economic Program» Creation of Innovation Infrastructure in Ukraine 2009-2013» envisaged creation of innovation and technology clusters as a part of scientific and research organizations, SMEs, technology transfer centres etc. with the participation of local executive authorities. The Order of the Cabinet of Ministers of Ukraine «On Approval of the Project Concept of the State Industrial Development Program until 2017» No 947 dated

July 09, 2008 envisaged formation of technology clusters in knowledge-intensive and high-tech areas and productions that can radically change the economic and scientific-technical potential of industry .

Other resolutions and orders of the Cabinet of Ministers of Ukraine and the decisions of the local authority are oriented at the establishment of industrial area-territorial production systems (clusters), eco-innovation clusters, cluster of folk crafts and other [11, 13-15].

As we can see from the above, the state cluster policy in Ukraine is in the process of formation, but it mostly relates to organizational and institutional component of the economy clustering, and virtually any document mention the financial support of such processes.

In view of the aforementioned, we think that at this stage of structural changes in Ukraine's economy and in the crisis period of its development, much attention should be paid to grant mechanisms of clusters support.

Grant mechanisms include:

1) International technical assistance that is a resource provided by donors (governments of foreign countries, their authorized organizations and international organizations) according to international treaties on free and irrevocable basis to solving priority tasks of social transformation and economic development.

2) Grants of international donors provided in the form of non-repayable financial assistance, charitable contributions and donations, with dedicated purpose to solve certain socially significant problems.

3) Corporate Social Responsibility Projects that is voluntary initiative of private enterprise in proceedings nonprofit activities aimed at socio-economic development of localities and territories of their business presence [16; 17]. Clusters also are established on a voluntary basis. Cluster Coordinating Center usually acts as a non-profit organization that combines the efforts of its participants (actors).

4) Endowments which are trust funds intended to noncommercial use, usually to fund organizations and initiatives in education, health or culture that is filled by donations.

As an example, let us consider a cluster of infant nutrition, which is launching in Ivano-Frankivsk region. Development of this cluster project started in accordance with the Decision of the Regional Council dated 19.09.2008, No 650-25/2008 «On the Development of Innovative Investment Project of the Production of Baby Food from Ecologically Clean Cow Milk» and The Order the Head of Ivano-Frankivsk Regional Administration dated 15.09.2010, No 501 «On Implementing the First Stage of Investment and Innovation Project «The production of baby food from ecologically clean cow milk in Rohatyn district»».

Although the project is a part of The Regional Research and Technical and Innovation Activity Development Program until 2015 and is consistent with other programs of agriculture and rural development in Ivano-Frankivsk region, and, most importantly, it is included in the State Program «Health 2020:

Ukrainian dimension» (Resolution of CMU dated October 31, 2011, No 1164-r.) [18], the investment phase of the project has not started yet. In our opinion, since the sphere of maternal and child health has never been highly profitable, such trust funds as endowment, along with budget support can contribute to its launch initially.

Conclusion. The study proved the key role of innovation and the need for government support for increasing competitiveness and long-term economic growth of the state and its regions. Innovative development strategies of foreign countries are focused on the concept of «smart specialization» as a way to bring their economies out of the crisis through economic development based at innovation. The most optimal form of production organization is to concentrate state intellectual investments in specific economic activities in order to enhance comparative advantage in existing or new areas, is cluster.

After identifying gaps and bottlenecks, we conclude that the problems of institutional and financial support of regional cluster-based innovative development should be resolved both at the state and local levels. Administrative reform taking place in Ukraine, empowerment of local authorities in the field of development and use of local budget revenues stipulate and allow developing the strategy of cluster financial support. One of such measures should be favorable conditions creating for the formation of financial resources of non-profit organizations cluster coordinating institutions.

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