FUNCTIONING OF THE LOCAL PRODUCTION SYSTEMS IN BULGARIA, POLAND AND RUSSIA

THEORETICAL AND ECONOMIC POLICY ISSUES

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BENCHMARKING OF CLUSTER-TYPE LOCAL PRODUCTION SYSTEMS IN THE WORLD ECONOMY AND UKRAINE

1. Introduction

Having entered the 21st century, humanity determined its main global development targets in the UNO's Millennium Declaration. Thence began the movement towards achievement of the eight Millennium Goals, one of which being the development of "global cooperation for development". The experience of developed countries proves that allying businesses and organizations in clusters is an effective form of modern global cooperation.

The proliferation of cluster forms in the world economy has occurred only recently, over the period no longer than the last twenty years. During this time, they have revealed great opportunities for overall economic growth, especially in terms of employment and innovation. At the same

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time, it has become clear that cluster forms could play a larger role in business processes only if they were supported by global cooperation aimed at their improvement. The matter in question is the creation of strong competitive clusters, that entail the amalgamation of enterprises located within a certain territory, with the aim of increasing their competitiveness and promoting the social and economic development of the region.

2. Local production systems of cluster type and their classification

Recent decades have been characterized by qualitative changes in business activity, among which an important place belongs to tendencies of forming long-term direct relations among enterprises, science and research, research and development and educational organizations, state authorities, etc. The unification of entities within a business environment is based on using the location factor and local resources, leading to creation of various local production systems. They are also oriented at generating the synergy effect of partnering.

The creation of local production systems allows small and medium enterprises to increase their competitiveness on the national and world markets by using advantages of small-scale forms of business activity. That is, local production systems unite agents of market relations on the basis of network approach, which includes the similarity of their target objectives, the use of state support measures, attraction of investments, activation of innovation capacity, and development of partnering ideology.

The term ‘local production systems’ is widely used in the economic practice of France, where it originated. LPSs are associations of enterprises and organizations of cluster type. Subversions of such an approach can be found in other countries as well. Thus, in the Russian Federation, networked business associations are being created. Among their various types, one can identify business networks identified as groups of companies that were “united in order to increase the effectiveness of using the resources and specific advantages for realization of business projects.

By using mostly horizontal ties and mechanisms of specialization and inter-complementarity, they generate additional opportunities for achievement of better results".[1]

In Ukraine, the processes of business structures combination have traditionally been carried out based on the concept of the territorial-production complexes. These were a "combination of interrelated and mutually conditioned production components of a certain territory, which provided for the formation of a certain economic effect".[2]

The economic effectiveness of such an association was ensured by forming stable production, infrastructural, technical and technological, purchasing and distributional ties among separate enterprises, and by developing cooperation, combination and specialization of production. In view of the heterogeneity of natural, labor, and infrastructural resources, the functioning of territorial-production complexes was developed on principles of multi-branch diversification. The strengthening of functional interdependence among complex participants was provided based on concentration and agglomeration of various kinds of production and complex use of raw materials and waste.

Although the concept of territorial-production complexes contributed to economic development in the conditions of planned economy, it also had some drawbacks having negative impact on final outcomes in the conditions of emerging market economy. It did not fully considered the operation of market mechanisms of income generation, as well as the effects of a number of important social and infrastructural factors, limiting the processes of increasing production effectiveness. During Soviet times, generally inefficient production, technical and technological inter-firm relations were formed within the territorial-production complexes (TPCs) of the local level. The problem was that they were directorial in nature, which often contradicted the profitability requirements and economic feasibility of production. Such formation of productive ties

[1] A. Asaul, *Methodological aspects of forming and developing entrepreneurial networks*, Gumanistika, Saint Petersberg 2004 (in Russian), http://www.aup.ru/books/m497/4_1.htm/.

[2] I. Ishchuk, *Geography of industrial complexes* (in Ukrainian), http://pidruchniki.ws/1921022638450/rps/osnovni_naukovi_pidhodi_vivchennya_promislovih_kompleksiv/.

among enterprises led to economically unjustified limitation of the circle of affiliated companies and subcontractors of the main company, as well as to purposefully loss-making supply of low-quality, technologically inadequate and low-innovative products, which can be explained by the fact that such inter-firm ties were driven not by economic effectiveness and technological necessity, but by other factors of mostly planned and structural nature. A significant drawback of local territorial-production complexes in the Ukrainian economy of the Soviet period was that they were not aimed at priority formation of high-technology innovative types of production.

The transition of the modern Ukraine's economy to radical transformation renews the need for implementing new organizational and economic technologies of managing territorial and regional development based on creation of territorial associations of inter-connected enterprises and organizations also known as clusters. This form has been acquired over the recent decades by local production systems (networks) in all of the countries. These processes develop in Ukraine as well, although delays with economic reforms restrain them. According to expert evaluations, major obstacles on the way to broad clusterization of the Ukrainian economy consist in "absence of consistency in macro- and micro-economic policy; irrational use of resources; double taxation in production and sales of cluster produce; absence of willingness (and partly incapability) to restructure large state enterprises; unstable legal system which to a large extent does not reflect the conditions of globalisation; unsatisfactory use of public-private partnering; almost total absence of infrastructure necessary for clustering".[3] Another urgent questions in Ukraine are the choice of the concept that can be used for establishment of clusters in a certain location, the ways of optimising their structure, the need for creation of additional structures, the outcomes that must be reached in the process of their functioning, and the role of the state in cluster operation.

[3] S. Sokolenko, *Dynamics and perspectives for the development of innovation activity based on clusters in the countries of Black Sea Region in the 21st century*, 2010 (in Russian), http://ucluster.org/sokolenko/2010/05/dinamika-i-perspektivy-razvitiya-innovacionnoj-deyatelnosti-na-klasternoj-osnove-v-stranax-prichernomorya-v-xxi-st/.

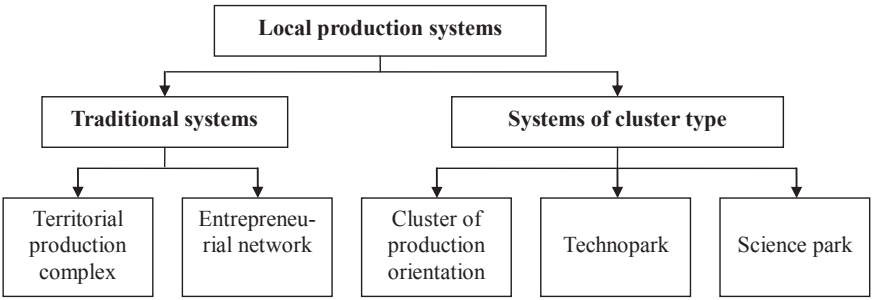

Figure 1. Classification of local production systems

Source: own composition

In considering local production systems, it is feasible to single out traditional LPSs that were formed and functioned under various socio-economic conditions in industrial societies, and LPSs that emerge in the post-industrial economy. The traditional types of local production systems include territorial-production complexes and business networks. Under the conditions of Ukraine and former USSR countries, these systems are characterized by a rather moderately fixed to certain territorial parameters. It was rather often that a territorial and production complex consisted of several local production systems. For example, the cotton growing enterprises could be located in Uzbekistan, whereas cotton and paper mills – in Ukraine and Russia. Moreover, territorial and production complexes and business networks, as a rule, combined not multiple but large enterprises and excluded small and medium-sized businesses.

In general, local production systems of cluster type can be divided into three most popular groups: industrial clusters; science parks; and techno-parks. Industrial clusters are local territorial association of business entities of the classical type, which fully corresponds with the definition given by M. Porter. In 1993, he wrote that "clusters are geographically concentrated groups of affiliated companies, specialised suppliers and service suppliers, companies in respective branches, as well as related organisations (for example, universities, standardization agencies, trade unions) in certain industries that compete, but at the same time perform joint

work".[4] In analysing the modern world experience of clustering, Ukrainian researchers have identified clusters as "local-hierarchical unions of technologically and geographically connected companies, financial and other business structures, which created an optimal organisational form of consolidating their subdivisions within separate regions, with the aim of minimising their costs, and thus, increasing their competitiveness on the national and world markets".[5]

The networked form of interaction between the innovation and technological centers and the industry aimed at joint fulfilment of science and technology innovation projects is the feature that makes technoparks be recognised as local production systems of the cluster type. They function within a specifically assigned arranged territories and include organisations and companies that cover the whole innovation cycle.

It is also feasible to consider science parks as local production systems of the cluster type as well, since they coordinate the flows of knowledge and technologies among universities, science and research institutions, companies, and markets. Finally, science parks give rise or contribute to growth of innovation-based networks of companies.

3. "New Regionalism" and the development of theoretical aspects of clustering

The modern processes of clustering and prediction of their future forms can be initiated and managed mainly in view of the phenomenon of "new regionalism". First of all, we should take into account that – as emphasized by M. Keating, the ideologist of the concept – "new regionalism" is characterized by two interrelated features: it is not confined to borders of the national economy and forces interconnected regions to compete, but does not give them a new role in the international division of labor.[6]

[4] M. Porter, *On Competition*, Williams, Moscow 2000 (in Russian).

[5] O. Burmych, *Technological modernisation in the European economy*, O. S. Burmych, O. D. Lukyanenko, Y. H. Panchenko, V. I. Chuzhykov (eds.), KNEU, Kyiv 2013 (in Ukrainian).

[6] M. Keating, *New regionalism in Western Europe*, "Logos" 2003, No. 6 (40), p. 81 (in Russian).

In view of this, the most prominent global trend is the empowerment of regions, which leads to transfer of functions from the national level to domestic structures.

However, the phenomenon of "new regionalism" affects administrative division and interregional competition. The most important is the fact that the formation of regions is not limited by national boundaries, but can include a part of the territory of another country. These processes were most common in Europe, manifesting themselves in the creation of Euroregions. Along with that, in the conditions of new regionalism intensifies the competition between regions of different levels for the development of resource potential and higher living standards.

In view of the internal processes taking place in global space, we can anticipate the initiation and proliferation of the new trends that will manifest themselves in self-formation of new regions and elimination of the existing intra-regional local formations of the industrial, network and administrative type. Clusters can be the driving force behind this Schumpeterian "creative destruction": in bringing together local actors, they at the same time are facing the administrative obstacles brought in by the conflict of interests of the managers of regional and local authorities. As noted by T. Bal-Woznyak, "in a market economy, the state is playing a supporting role, regardless of the prevailing type of coordination structure. The problem of coordination functions of the state not only leads to its limited participation in economic processes, but also testifies to the unreliability of coordinating actions of state institutions and alternative cost of this process expressed by the category of transaction costs".[7] This statement in its general interpretation can possibly be addressed to authorities of territorial levels.

When analyzing the role of clusters in the framework of "new regionalism", two directions of their creation must be considered. On the one hand, they are initiated by the state, municipal and local authorities. In this case, the network is usually subordinated to principles of program and target management mainly adhering to planned-economy philosophy, and it is limited by the boundaries of local government's competence. Another approach is connected with the initiatives of business structures

[7] T. Bal-Woznyak, *Economic networks as effective mechanisms of coordination of innovation activity*, Mizhnarodna ekonomichna polityka, KNEU, Kyiv 2011 (in Ukrainian).

which do not only need to coordinate and form a chain of interaction in order to achieve the goal of association, but also to convince the regional authorities and other territorial structures in the expediency of clustering or certain social and economic actions. Along with that the bureaucratic factor comes into force, which can inhibit the processes of cluster creation and affect its outcomes. The exit from this "vicious circle" could be found in creation of a new type of administrative structures within the cluster area. At that, two approaches are probable, when mainly socio-economic functions are secured to the new administrative unit, whereas public services related to information and legal providing remain with the "old district" (registry office, police, real estate, etc.). Analogous to such an approach is creation of election districts, the limits of which do not always coincide with the recognised territorial and administrative division.

Clusters as territorial entities can develop within the paradigm of "new regionalism" from the standpoint of somewhat unconventional perspectives for modern economic geography. This does not mean that geo-space as a physical attribute (geographic distance) loses its value. For the economy, it only remains as an indefinite "container" of the Brownian movement of business processes. Within its environment emerges an homogeneous geo-space of local environments (fillers) of social and economic, political, legal, and environmental institutions in the form of relationships, norms and bodies of administrative, economic and social status. Depending on the state of development of these spaces, clusters can be formed, the shape of which will be determined by local peculiarities. Clusters can create the critical mass necessary for competitive success of respective regions.

Theoretically, it is feasible to predict other processes in the development of the idea of "new regionalism" as well. Currently, there is some subordination of regions to challenges of globalization that will be increasing with time. Economic, administrative, political and other organisational forms of regions' functioning should provide for their competitiveness. In case when their functioning turns out to be incapable of responding to global challenges, this will testify to moral obsolescence of the existing regional order, which consequently will require the search for new functional approaches until more sophisticated and modern forms are found. Obviously, the destruction of long-term, age-old permanence of regional

divisions and formations cannot be excluded. Under conditions of globalisation, regions must acquire new qualities that will enable them to achieve the status of strategic players on the world market in order to transform into active autonomous subjects of the international system of competitive interaction. However, to reach this goal in the coming decades, the developments in new forms of regionalism will have to go through a network of changes and transformations. The most revealing in this respect is the experience of Finland, where re-transformation of regional structures from the bottom up occurred upon the condition that new structures would represent the interests of at least 20 thousands of inhabitants. Today, similar processes are taking place in Estonia, where local communities will have to find solutions for creation of new local territorial formations by 2017. Should their efforts turn out unsuccessful, the decision will be made by central authorities.[8]

As a type of obsolescence of the systems of territorial-administrative division of regions and new structures that were established on their basis, one can consider the problem of bankruptcy of the bodies of territorial administration. In this aspect, there will be a need to determine the causes of bankruptcy – whether it occurred in result of the incapability of elective bodies and their executive bodies to manage the region or in result of the obsolescence of the existing system. Depending on that, there can be two solutions: re-elections or formation of a new regional entity. If political parties are unable to present the program of overcoming the regional development divide and provide for its realisation, there appears a need to include the competition mechanism, including its elements of reorganization and change in the organisation and management of the region. For this type of bankruptcy, some form of protectorate by other regions and elements used internationally in the case of the default of the state would be appropriate.

Finally, in the aspects of interplay between regions and clusters there is another line of competition. These structures, on one hand, are destined to interact, because the success of cluster organization is the basis

[8] Report of Dr. Matti Raudjärv at the International Conference "Clusters in the development of the world and Ukrainian economy", Kallithea (Greece), September 18−25, 2013.

for resolution of socio-economic problems in the region. On the other hand, the bureaucratic mechanism of regional governance can "restrain" or simply hinder the development of cluster economy. For such situations, a dispute resolution system should be developed.

As a mechanism of solving the problems of cluster production systems development and regional development, one can consider the mechanism of combining large regions within the province. This aspect has already attracted the attention of Ukrainian researchers, but did not gain enough popularity. As noted by I. Brykova, "further thorough complex analysis is required for the mechanism of the impact of global processes of social development on positioning of the regions in the hierarchy of international competitive relations, and accordingly, determination of the factors of increasing the regional competitiveness in the conditions of global competition. In addition, of great importance become issues of the development of theoretical foundations of the strategy of increasing international competitive status of national lands in the long run".[9] The area-oriented approach can become the basis for transformation of national territorial units into strategic players in the global markets by means of using cluster forms in their internal economic structure. This is a promising direction supported by the fact that since 2003, the Management Development Institute which studies the competitiveness of countries, initiated the inclusion of certain regions in the rankings of the *Global Competitiveness Yearbook*. As a separate position, the Yearbook lists such territories as Bavaria, Catalonia, Île-de-France, Lombardy, Maharashtra, Scotland, Sao Paulo, and Chae Young. This emphasizes a special role of areas in the development of not only national, but also world economy, their competitiveness, leadership and influence as independent players. Here, it is appropriate to refer to expert opinion of the European Commission, which believes that "despite the existence of competitive and non-competitive firms in each region, there is always a common boundary environment that affects the formation of the competitive status of all local firms".[10] It is more

[9] I. Brykova, *Determinants of international competitiveness of national regions in global economic space*, 2007 (in Ukrainian), http://iepjournal.com/journals/7/2007_1_brykova.pdf/.

[10] Sixth Periodic Report on the Social and Economic Situation and Development of Regions in the European Union, Brussels 1999, p. 5.

efficient in the developing countries in the direction of expanding regional autonomy on questions of the development and implementation of regional competitive advantages.

Therefore, globalization assigns the status of strategic world market players to national regions, transforming them into active autonomous subjects of the international system of competitive interaction. In this context, the issue of providing for the competitiveness of national regions defined as their ability to meet the challenges of the global environment by identifying, creating and developing local competitive advantages acquires extreme significance.

4. Clusters as a moving force of prosperity in a global economy

Globalization leads to changes in the forms of local organization of production. In the world economy, new forms of fragmentation are developing, with integration processes enhancing within them. Initially, they mainly covered groups of national economies and manifested themselves most clearly in the creation of the European Union, where foreign economic relations of member countries focused primarily on their cooperation partners. However, the boundaries of such entities are also quite large and need to be supplemented by integrated local formations, because in economics, one cannot keep company with the entire world at the same time unless there are matching interests in production and sales of products and services.

Taking advantage of national economic openness sets certain preconditions for companies, which are forced to choose those locations for their business activity that offer better business environment for their needs. The larger the global markets, the higher the probability that resources will be allocated in more attractive areas, stimulating the formation of local specialization and creation of clusters. In their turn, by gaining higher competitiveness clusters promote creation of new clusters by means of forming the needs for additional services or appearance of new niches for creation of local production systems.

An archetypal example of the region where strong clusters in many high-tech fields are generated is the Silicon Valley of the United States. Huge results were achieved by strong European clusters that were created on the basis of American experience. They specialize in financial services (London), flower growing (Holland), biological pharmaceuticals (Denmark and Sweden), and other products and services. At that, it should be noted that in many countries, cluster policy began to emerge at the regional level earlier than at the national level. For example, back in the 80s, such lands as Baden-Württemberg, Bavaria, North Rhine-Westphalia in Germany initiated the programs aimed at fostering networks that unite science and business. Instead, federal government initiated the first program in the mid 90s.[11] This testifies to the fact that, given the strong regions in economic and administrative aspects such as German lands, regions and not the center can become a "trigger" for the development of important directions.

Inclusion of the state in the cluster policy is largely connected with the need to finance specific joint projects. Usually, it was limited to promotion of self-organization and formation of clusters in the economy of regions. This can be illustrated by the example of programs aimed at support of clusters in France, which focused on the development of local production systems (fr. «Systèmes productifs locaux»). It provided the possibility to receive subsidies of 37.5 thousand Euros per cluster on average. The conditions of financial support were relatively soft: formation of a cluster organization that united its founders.[12] They could spend money on a wide range of costs, including branding, export support, self-organization of companies, universities and local authorities; gaining experience for future large-scale implementation of programs. In 2006−2008, thanks to successful development of programs on local production systems, they were followed by the program «Competitiveness

[11] *Cluster policy in Europe. A brief summary of cluster policies in 31 European countries*, 2008, http://www.clusterobservatory.eu/system/modules/com.gridnine.opencms.modules.eco/providers/getpdf.jsp?uid=100146/.

[12] P. Martin, T. Mayer, F. Mayneris (eds.), *Public support to clusters: A firm level study of French "Local productive systems"*, University of Paris I, 2010, p. 4, http://perso.uclouvain.be/florian.mayneris/rsue.pdf/ (accessed 08.01.2014).

clusters», with financing of 1.5 bln euros, that expanded the range of supported cluster initiatives. It offered financing for specific cluster programs, which were formed and proved their effectiveness.

Strong clusters located regionally proliferated their activities in the global economic space in the aspects of staffing, technology and investments. They are typically servicing global markets and cooperating with other regional clusters that provide additional contributions to global value chains. Finally, specialization is deepening in local spaces. In the case of slow inclusion in this process, the risks of regions lagging behind in economic and social development and appearing depression increases.

When assessing the development of cluster systems in developed countries, it should be noted that on one hand they promoted economic development in view of the global conditions of the last decades, but on the other hand they needed to adapt to the challenges faced in the 20s of the XXI century. However, international statistical studies of T. Bal-Woznyak did not confirm significant advances in the context of innovativeness, especially in the new EU member countries.[13] There is a hypothesis about the larger impact of innovativeness on bridging the development gap by means of reducing the level of benefits from intensification the transition processes from the resource-based economy to network economy based on knowledge.

The aim of the "Europe 2020" strategy was to enhance economic power of the European Union and the level of well-being of its citizens. As stated in the conclusion of the European Council: "Our efforts should be more focused on the development of EU competitiveness, productivity, growth potential and economic convergence. The new strategy concentrates on the key areas: knowledge and innovation, more sustainable economy, higher employment level and social inclusion".[14]

In order to maintain high living standards and their further improvement, Europe launched a search for new organizational forms for clusters that would ensure progress in the field of innovation. This entails requirements

[13] T. Bal-Woznyak, *Economic networks as effective mechanisms of coordination of innovation activity*, Mizhnarodna ekonomichna polityka, KNEU, Kyiv 2011 (in Ukrainian).

[14] *European Council approved Strategy Europe-2020*, "Eurobulletin" 2010, No. 4, April, p. 16.

that Europe should become more productive in generating new ideas to reduce the gap with the U.S. and Asia in terms of innovative development. Thus, European clusters develop towards transformation into powerful catalysts of this process, functioning as inter-connected territorial centers.

Current views on the role of clusters are defined in the "European Cluster Memorandum" as "regional centers of concentration and specialized companies associated with one other by multiple canals that create favorable environment for innovations. They make "open innovations" possible: namely the creation and improvement of new ideas in the network consisting of companies and organizations that cooperate with each other. These groups of companies and organizations contribute to elimination of the obstacles to transformation of new ideas into new products and generating maximum benefits from globalization".[15]

5. Regional development and clusters in Ukraine

The strategic development of Ukraine is mostly realized according to programs of governmental parties, because there is no long-term program approved at the parliamentary and governmental level. In the foreign economic space, the country operates according to the laws that govern the world and European integration. The implementation of development programs declared during the election campaigns of President of Ukraine and Verkhovna Rada is realized by periodic passage of laws that lay the basis for certain changes or (in the terminology of the majority party) "reforms". However, gradual development in spite of periodic aggravations and failures in the economy as a whole or in separate areas, is still taking place.

In the economic development of the Ukraine, regions gradually turn into main actors in implementation of socio-economic programs in the field of economy, infrastructure, healthcare, education, culture,

[15] *The European Cluster Memorandum. Promoting European Innovation through Clusters: An Agenda for Policy Action*, The High Level Advisory Group on Clusters, YEAR, http://www.vinnova.se/upload/dokument/VINNOVA_gemensam/Kalender/2008/Klusterkonferens_jan08/European%20Cluster%20Memorandum%20Final.pdf/ (accessed 08.01.2014).

and so on. However, these changes have not become systematic and balanced in nature, thus, intra-regional problems, such as excessive imbalances, structural anachronisms, increased depressive developments, and low interregional cooperation, remain generally unresolved. Among the government documents aimed at improving the legal regulation of development, one can pay attention to the "Concept of state regional policy", approved by the Decree of President of Ukraine on May 25, 2001; the Law of Ukraine No. 2850-IV of September 8, 2005 "On promotion of regional development"; "State strategy of regional development until 2015", approved by the Cabinet of Ministers of Ukraine on July 21, 2006, No. 1001; Resolution of the Cabinet of Ministers of Ukraine as of June 24, 2006, No. 860 "On approval of development indicators monitoring of the regions, districts, cities of the republican importance in the Autonomous Republic of Crimea and of regional significance for recognition of depressed areas". At the same time, still remain uncertain the basic principles, approaches and instruments of state regional policy; directions and sources of institutional and legal providing of territorial development; and foundations of reforming the administrative and territorial structure.

Although there is some legal providing of regional development, its state regulation and stimulation remains largely beyond the scope of permanent systemic influence. In general, one can observe divergence of priorities in accordance with electoral preferences of voters, which prevents and obstructs the development and realization of effective regional policy. Under these conditions, the vast majority of regions has found it promising to use cluster forms of development supplemented with creative inclusion of the experience of developed (especially European) countries. Today, we can observe the tendencies to creation of production clusters of regional significance that are subordinated to priority goals of regions' development and increase in their competitiveness. At the same time, local clusters are being established in the cities, districts and villages, structuring the economic space and solving the problems of local significance. It is high time to form clusters of the world and European kind that are capable of having essential influence on the overall national development and aimed at assuring the leadership of Ukraine in certain areas.

Worth acknowledging is that in Ukraine, the creation of clusters is slowed down by insufficient normative and legal support. Currently, the matter in question is the feasibility of broad use of clusters in economic development, rather than real steps towards providing of the institutional basis of their systemic formation. Definitions of terms and documents supporting the need for a cluster-based, innovation-oriented industry model were given in the 2003−2011 State program for industrial development adopted in July, 2003.[16] However, this task was not performed in practice. Later, in 2008, the Cabinet of Ministers of Ukraine approved the Concept of draft Program for Development of Industry in Ukraine by 2017, which indicated the need to "develop the normative and legal basis for the creation and implementation of the model of cluster organization of industry".[17] However, these decrees did not create any systemic legal framework for clustering.

The weakness of legal support for clustering did not stop these processes in general. Taking into account international experience and scientific achievements of foreign and Ukrainian scientists, the practice of cluster approach to economic development in Ukraine is constantly evolving. European and American firms were involved to explore the possibility of clustering in Ukraine. For example, *Monitor Group,* the consulting company created by M. Porter, the founder of cluster theory, studied the economy of Donetsk region and revealed more than 40 clusters in its economic base. Among the most competitive of them, the research identified metallurgy, engineering, construction and agriculture. However, the priority should be given to two main branches of the region – metallurgy and agriculture with processing, while the others can be considered later.[18] Meanwhile, the example of Donetsk region shows that Ukraine possesses large reserves for implementation of cluster forms

[16] Decree of the Cabinet of Ministers of Ukraine No. 1174 as of July 28, 2003 "On approval of State program of industry development for the years 2003 to 2011", http://zakon1.rada.gov.ua/cgi-bin/laws/main.cgi?page=1&nreg=1174-2003-%EF (in Ukrainian).

[17] Decree of the Cabinet of Ministers of Ukraine No. 947-p as of July 9, 2008 "On approval of the Conception of the project of All-state target economic program of industry development for the period before 2017", http://zakon.rada.gov.ua/cgi-bin/laws/ main.cgi?nreg=947-2008-%F0&p=1222860236039635 (in Ukrainian).

[18] O. Lyakh, *Forming of the ecologically-oriented construction cluster in an old industrial district*, O. V. Lyakh, O. I. Oseredchuk (eds.), "Visnyk of Donetskoho Universytety. Seria B. Ekonomika, Pravo" 2011, Special issue V. 2, p. 50 (in Ukrainian).

for local production systems development. This is especially true for metallurgy, coal, machine building, chemical industry and energy due to high coefficient of production localization by branch of industry and specialization (Table 1 and Table 2). Similar situation is observed in other regions of Ukraine: in the conditions of planned economy, enterprises of certain branches were assigned by central authorities to separate regions, and this inherited dependency has not yet been removed. Meanwhile, it is necessary to take into account modern tendencies in structural shifts as well.

Table 1. Coefficients of production localization by branch of industry in Donetsk region

Branch	2007	2008	2009	2010	2011
Food Industry	0.38	0.35	0.40	0.38	0.40
Chemical Industry	0.74	0.72	0.64	0.56	0.60
Metallurgical Industry	2.11	2.02	2.29	2.16	2.22
Extractive Industry	1.49	1.42	1.74	1.30	1.29
Mechanical Engineering	0.76	0.78	0.92	0.97	0.88
Power engineering	0.60	0.61	0.71	0.64	0.61

Source: N. B. Balabanova, *The use of cluster structures in increasing the competitiveness of the region*, "Visnyk of Mariupolskoho derzhavnoho universytetu. Seria: Ekonomika" 2011, Issue 4, p. 29 (in Ukrainian).

Table 2. Coefficients of industry specialization in Donetsk region

Branch	2007	2008	2009	2010	2011
Food Industry	0.56	0.56	0.62	0.61	0.61
Chemical Industry	1.11	1.16	0.98	0.90	0.93
Metallurgical Industry	3.15	3.25	3.52	3.47	3.43
Extractive Industry	2.23	2.28	2.67	2.08	1.99
Mechanical Engineering	1.13	1.25	1.42	1.56	1.36
Power engineering	0.90	0.98	1.09	1.03	0.94

Source: N. B. Balabanova, *The use of cluster structures in increasing the competitiveness of the region*, "Visnyk of Mariupolskoho derzhavnoho universytetu. Seria: Ekonomika" 2011, Issue 4, p. 29 (in Ukrainian).

The analysis of publications suggests that in the context of territorial entities and separate industries, clustering is expanding unevenly. It has gained most proliferation in construction, tourism, food, and clothing industry. Ivano-Frankivsk has successfully launched such clusters in tourism and souvenir production as "Suzirya" and "Wool-made blankets and other arts and crafts in the Carpathian region" specializing in manufacturing articles of sheep wool. Rokytne district (Rivne region) established a wood processing cluster; Kherson region – transport and logistics cluster "The Southern gate of Ukraine"; Poltava – the cluster for ecologically clean baby foods "Poltava"; Odessa – the cluster for organic agriculture and green tourism in the Danube region; Kharkiv – the cluster of pig breeding and meat products; and Sevastopol has registered 7 cluster groups, including recreational "Chersonese" and "Baidary tour".[19] Worth adding is that in Sevastopol a new approach to creation of local production systems was formed. It manifested itself in the establishment of one mega-cluster "Sevastopol" based on seven cluster associations, and which is expected to generate huge synergy effects.

Clusters were established and are successfully operating in all areas of construction industry in Ukraine. The first cluster "Podillya" was established in the city of Khmelnytsk in 1998. It united more than 30 construction-related companies located in Khmelnytsk region, almost all of which still continue cooperation and provide jobs for nearly five thousand people. The cluster fulfills original orders both in Ukraine and abroad within the framework of Polish-Ukrainian Program for Business Cooperation.[20] The creation of the construction cluster in Khmelnytsk became possible thanks to availability of mineral resources used in construction industry, as well as relevant scientific, production and human capital. And the least

[19] V. Zakharchenko, *Competitiveness of Ukrainian regions: cluster approach*, V. Zakharchenko, S. Zakharchenko (eds.), "Krayeznavstvo. Geohrafiya. Turyzm", 2012 (in Ukrainian), http://www.vmurol.com.ua/upload/publikatsii/nauka/pdf_2012/Concurentospromozhnist_regioniv_Ukrayini.pdf/.

[20] S. Sokolenko, *Dynamics and perspectives for the development of innovation activity based on clusters in the countries of Black Sea Region in the 21st century*, 2010 (in Russian), http://ucluster.org/sokolenko/2010/05/dinamika-i-perspektivy-razvitiya-innovacionnoj-deyatelnosti-na-klasternoj-osnove-v-stranax-prichernomorya-v-xxi-st/.

role was played by the fact that in a city of Khmelnytsk, there are large financial flows due to the fact that over the past decade, it developed large wholesale markets.

While the experience of "Podillya" cluster can be viewed as entry on the international market in the form of exports of construction services, Kharkiv region together with Belgorod region of the Russian Federation created a trans-border Euroregion construction cluster "Slobozhanschina". It consists of the representatives of local authorities, enterprises, and infrastructural institutions, public organizations, construction organizations specializing in design services, manufacturing of building materials, construction, maintenance, reconstruction and capital repairs of housing, civil and industrial facilities in Belgorod and Kharkov regions. Organizers of the cluster were Belgorod regional fund for small business support, Belgorod State Technological University named after V. G. Shakhov, JSC "Kharkiv Regional Entrepreneurship Support Foundation", and Kharkiv State Technical University of Construction and Architecture. The main tasks that are solved within the framework of cluster are to decrease the cost of operations and to improve the quality of construction products, development of new types of construction products, materials and technologies, the introduction of international standards of quality management system ISO 9001 in the construction industry, and the growth of commissioning objects (including residential) of higher quality.[21]

The example of Khmelnytsk region, demonstrating the combination of efforts within the cluster business organization for the purpose of increasing its competitiveness, is becoming increasingly popular in Ukraine. Regional administrations and entrepreneurs consider Khmelnytsk region as a training center to find the most suitable models of exploiting competitive advantages in their regions and industries. Thanks to this occurs gradual growth of clustering processes. The most persistent and dynamic of them during the last decades were able to achieve some success.

The successful initiatives that have been operating over the past ten years thanks to combination include Khmelnytsk Regional Association "Sewing cluster" registered in 2001. It includes the enterprises of light

[21] *The construction cluster of Euro-region "Slobozhanshchyna"*, http://www.mb31.ru/page/klaster_slob/ (in Ukrainian).

and textile industry and Khmelnytsk National University and the "Student house of models". The enterprises in the cluster moved away from mass production of uniforms and began to build their model line, rationally dividing markets among themselves.

Another cluster, "Kramatorsk jewelry" has been successfully operating since 2010, specializing in consumer goods. The cluster was founded by owners of the jewelry factories and the Chamber of Commerce in Donetsk region. In this model, the purpose is to diversify the local economy and to perform branding of the area as a national center of machine engineering, The union initiated a hard work on training and improving qualifications of personnel. In 2011, the cluster enterprises' directors, managers, representatives of advertising departments organized 14 seminars and training sessions. In March 2011, the working visit of representatives of the cluster to Germany took place. During the visit, they studied the experience of applying the German jewelers' cluster model, as well as the trends and directions of European jewelry design. The experience of innovative and evolutionary changes in the jewelry industry of Ukraine were presented in August 2011 at the thematic meeting of the "KAIDZEN-club on the problems of development of small and medium business in Ukraine". In September, the jewelry cluster was presented as a business association at the CIPE (Centre for International Private Entrepreneurship) project conference "Development of the potential of business associations in Ukraine", attended by representatives of the Chambers of Commerce and business associations of Ukraine, Russia and Belarus.[22]

There appears to be much interest in the local production systems of the seaside regions. The Ukraine, being a maritime state, has seaports in the Azov-Black Sea basin, which are the essential element necessary for creating a competitive national transport system. However, the industry has been lacking structural reforms for the last two decades, whereas state enterprises have higher-than-normal obsolescence of their fixed assets. These circumstances become favorable environment for non-transparent privatization and proliferation of the illegal network of private marine terminals. However, the freight traffic and the number of invest-

[22] Information about the status of work on small business support in Donetsk region in 2011.

ment projects aimed at development of ports are rapidly growing. However, due to the lack of interaction with other transport sectors, especially with the railway, there is no correspondence between the capacities of ports and port infrastructure.

All this created such an economic situation, that should be solved with the help of maritime clusters. At the current stage, the research aimed at creation of such a cluster model that will be capable of ensuring the increased role of maritime transport in the country's economy is being realized. One of the models known as "national maritime cluster" was presented by the State Administration of Maritime and River Fleet. It consists of a system of maritime clusters: the Danube (the ports of Reni, Izmail, Ust-Danube); Odessa (the ports of Odessa, Ilyichevsk, Yuzhny, Belgorod-Dnestrovsky), Mykolaiv (ports: Nikolayev, Oktyabrsk, Kherson, Skadovsk); Crimean ports: Evpatoria, Sevastopol, Yalta, Kerch); the Azov sea (ports of Mariupol and Berdiansk). The organizational potential of such a project is determined by such elements as technological maturity in strategic. project and program management, clarity of future vision, and the first step of the project. It is believed that this structure of national maritime cluster provides flexibility in management, planning and coordination of individual clusters and significant improvement of the competitiveness, and more even load of ports.[23]

Another concept of marine clusters creation is based on the regional approach and bottom-up initiative. It involves the functioning of two groups of clusters: emerging clusters and pre-clusters or agglomerations. Emerging clusters belong to second stage of cyclical cluster development, which consists in the fact in the region there are a few companies that are combined to specialization in the 'key' field and expand the overall prospects for cooperation.[24] Seaside clusters specialize in fishing industry, maritime

[23] B. Kozyr, *Cluster systems in the projects of seaside trade ports development in Ukraine*, Management of complex systems development. Collection of papers, No. 6, Kyiv National University for Construction and Architecture, Kyiv 2011, p. 99−102 (in Russian).

[24] I. Kolesnik, *The prospects of development of regional marine clusters in the Ukraine*, "Visnyk Donetskogo Natsionalnoho Universytetu. Seriya B: Ekonomika i pravo" 2011, Vol. 1, p. 131−136 (in Russian).

transport and logistics. This corresponds to the experience of the Canadian program of support to sea clusters and Norwegian program on creation of conditions for the development of "maritime industry" cluster. The use of the pre-clusters in the system of marine management focuses on informal association of small and medium-sized businesses of the shipbuilding and ship-maintenance sphere. In the conditions of the crisis, their mission is to form a competitive network of companies that provide for the successful development of the region based on location- and industry-specific competitive advantages.

In the economic space of trans-border regions increases the importance of cross-border cooperation based on forming a unified innovation infrastructure, ensuring the effective use of local scientific and technical capacity, creating conditions for modernization of industry and its rapid development.[25] This is typical of the Danube territories after entry of Romania into the European Union and the resulting appearance of new opportunities generated by the united Europe. The above-mentioned clustering projects in the Danube area are being developed for the Ukrainian side only, which somewhat limits their effectiveness in view of the uniqueness of the region, which possesses one of the major transport arteries of Europe. For the development of clustering strategy, it is necessary to take into account the location of the Danube region on the crossroads of important international routes from Europe to Asia, including three commercial sea ports (Reni, Izmail, Ust-Danube), 2 ship-repair plants, State shipping company JSC "Ukrainian Danube shipping company", 4 railway stations, a locomotive depot, a number of road transport enterprises and airport "Izmail". According to expert reports, it is necessary to establish a training and information-analytical cluster in the region in order to acquire the skills and experience in analyzing the implementation of local production systems and to carry out further formation of various clusters on the territo-

[25] In fact, in border regions, this can be especially true for the seaside territories, where good chances exist for the appearance of "growth poles" (according to F. Pareto), which emerge close to dominating industries acting as engines of growth. The domination effect leads to the outcome that industries that are engines of growth stimulate the catching up of affiliated industries, generating production growth and innovations.

ries of the Euro-region "Lower Danube" (Ukraine, Romania, Moldova).[26] The attracting of foreign investments to the Danube region should contribute to resolution of such problems as restoration of the technological base of regional enterprises, modernization and reorientation of the existing industries that are idle. At that, the priority should be given to those directions of development that include the improvement and expansion of transport networks and ports, as well as expansion and diversification of export-oriented business.

6. Scientific parks of Ukraine in the system of local production systems and their development prospects

The creation and functioning of Ukrainian scientific parks is carried out in accordance with the Law of Ukraine No.1563-VI "On Scientific Parks" of June 25, 2009. Scientific parks are defined as legal entities created based on the initiative of higher education institutions and/or scientific institutions by means of combining the contributions of the founders with the aim of organizing, coordinating, and controlling the process of development and implementation of the projects of scientific parks. Its partners may be business entities that have to sign the corresponding agreement. The priority directions of a scientific park should economically and socially construct scientific, technical and innovative activities that are consistent with the purposes of its creation, take into account the needs of the region and be consistent with the laws "On priority directions of development of science and technology" and "On priority directions of innovative activity in Ukraine".

Research of the problems of scientific parks development is carried out by many Ukrainian and foreign scientists. Among them, we would like to mention B. Andriyan (theoretical foundations of scientific parks);[27]

[26] S. Kovalenko, *Trans-boundary cooperation of Ukrainian Danube area within the cluster model*, "Visnyk socialno-ekonomichnyh doslidzhen. Collection of articles" 2009, No. 38, p. 96–97 (in Ukrainian).

[27] V. Andriyanov, *Science parks. South-Eastern version*, "Vneshnyaya torgovlya" 1990, No. 9, p. 33–35 (in Russian).

M. M. Ivanov, S. R. Kolupaev (methods of science and innovation management in the U.S.);[28] A. G. Karataev (operation of science parks in the developed capitalist countries);[29] V. K. Vasenko (world experience of the strategy and development of free economic zones in Ukraine);[30] V. I. Ljashenko, A. I. Zemlyankin, I. J. Pidorycheva, T. F. Berezhna (infrastructure of science parks);[31] O. A. Mazur (Ukrainian and international experience of technology parks);[32] V. Seminozhenko (parks and experience of innovation economics);[33] D. V. Tabachnik (Ukrainian and international experience of technology parks),[34] and others. However, the practice of creating technoparks has not become widespread enough, although some experience was already accumulated, which provides grounds for future development of their network.

The first scientific park "Kyivska Politechnika" was established at the National Technical University "Kyiv Polytechnic Institute" by the Law of Ukraine No. 523-V of 22.12.06 on Science Park "Kyiv Politechnika" with the aim of organizing massive innovation activity directed at intensifying the processeses of development, production and implementation of high-technology products on the domestic and foreign markets, increasing revenues to state and local budgets, accelerating innovation development of the Ukrainian economy. This law was of pilot importance for the formation of regulatory rules and basic principles governing the activities of scientific parks.

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[28] M. Ivanov, *The USA: Management of Science and Innovations*, M. Ivanov, S. R. Kolupayev (eds.), Izdatelstvo "Nauka", Moscow 1990 (in Russian).

[29] A. Karataev, *Science parks in developed capitalist countries*, "Vneshnyaya torgovlya" 1990, No. 9, p. 13−15 (in Russian).

[30] V. Vasenko, *Free economic areas: the development strategy*, monograph, Vydavnytstvo "Dovkillya", Sumy 2004 (in Ukrainian).

[31] V. Lyashenko, *Prospects of development of science parks as elements of infrastructure for small innovative business in Ukraine*, V. I. Lyashenko, A. I. Zemlyankin, I. Yu. Pidorycheva, T. F. Berezhna (eds.), "Visnyk Ekonomichnoyi Nauky Ukrayiny" 2012, p. 89−109 (in Ukrainian).

[32] O. Mazur, *Technological parks. World and European Experience*, O. A. Mazur, V. S. Shovkalyuk, "Prok-Biznes", Kyiv 2009 (in Ukrainian).

[33] V. Semynozhenko, *Technological parks in Ukraine: the first experience of innovation economy formation*, "Ekonomika Ukrainy" 2004, No. 1, p. 6 (in Ukrainian).

[34] D. Tabachnyk (ed.), *Technological parks. World and Ukrainian experience*, Vydavnytstvo Tp IEZ, Kyiv 2004 (in Ukrainian).

The creation of the scientific park "Kyivska Politechnika" attracted 55 foreign and local technology companies, almost 100 research groups and laboratories of Kyiv Polytechnical Institute producing competitive know-how, more than 20 engineering faculties offering high-quality personnel for companies, several venture and investment funds, which if necessary invest in start-up projects. The science park attracts ever more students that not only work for its companies, but also create their own small enterprises for commercialization of their own inventions and projects within the framework of the scientific park's business incubator.

During 2005−2010, the participants of the technopark "Kyivska Politechnika" commercialised more than 150 new products and technologies. Among the achievements of the park one can mention the following: a complex of computer technology instruments that protect the user from indirect electromagnetic radiation; strategic planning and systemic management of sustainable development of megacities of Ukraine; energy-efficient Eco-house with complex use of renewable and alternative energy sources; technology of production of new dietary foods of sanative and preventive action; micro-satellite; technologies of low-cost titanium production, etc.[35]

Organization and activity of the park is realized in accordance with three main elements of the "triple helix" model, which was developed in 1996 by Henry Etzkowitz, professor of Stanford and Edinburgh universities and includes such elements as universities, business and the state.[36] In the case of the scientific park "Kyivska Politechnika", only two elements are actively involved – the university and the manufacturing sector (American companies Netkracker, USPolytech, EPAMSystems; "European Institute of Innovation Technologies" (London), German Research Center "Eurocentrum"; Ukrainian companies – Group DF, "Datagroup", "Technologies of nature", "UAVIA", Kherson enterprise "Sudmash", concern "Ukrpozhservis", Kyiv enterprise "Meridian" and others). In its

[35] *Research universities as centers for innovation development of the country*, "Dzerkalo tyzhnya" 2011, No. 2, http ://www. dt. ua/articles/73711#article/ (in Ukrainian).

[36] I. G. Dezhyna, V. V. Kiseleva (eds.), *The state, the science and business in the innovation sphere of Russia*, Institut ekonomiki perekhodnogo perioda, Moscow 2007, 184 p. (in Russian).

turn, the state did not show any interest in the work of the country's first scientific park. Although it could place orders for creation of high technologies in such critical areas, as resource and energy saving; biotechnology for food and agricultural sectors; information systems for effective management of different parts of society, etc. Such a policy could have contributed to reduction of high-technology imports into Ukraine in these directions.

The network of Ukrainian scientific parks expanded, however, their impact on formation of the innovation economy is still impossible to realize. To monitor the processes of functioning of scientific parks, it is expedient to determine their network. In scientific literature, the following science parks are described:[37]

– "Aerospace innovative technologies", created in 2010 within the framework of the EU project "Support to knowledge-based and innovative enterprises and technology transfer in Ukraine" at the National Aviation University, Kyiv);

– Kyiv T. Shevchenko University, created at the end of 2010 by the research institutions of the National Academy of Sciences of Ukraine (Institute of Archeology; Institute of Bioorganic Chemistry and Petrochemistry; O. Palladin Biochemistry Institute; Institute of Geochemistry and Mineralogy named after M. P. Semenkov; E. O. Paton Electric Welding Institute; Institute of History of Ukraine; Institute of Metal Physics named after G. Kurdyumov; Institute of Microbiology and Virology named after D. K. Zabolotny; Institute of Organic Chemistry, Institute of Applied Physics; Institute of Materials Science named I. M. Frantsevich; Institute of Information Registration; Institute of Theoretical Physics named after M. M. Bogolyubov) and higher educational establishments of the IVth level of accreditation (Kyiv National T. Shevchenko University and National University of Food Technologies);

– "AGROECO" created on the basis of the Institute of Agroecology and Environmental Economics of the National Academy of Agrarian Sciences of Ukraine (IAEE NAAS of Ukraine) with the participation

[37] V. Lyashenko, *Prospects of development of science parks as elements of infrastructure for small innovative business in Ukraine*, V. I. Lyashenko, A. I. Zemlyankin, I. Yu. Pidorycheva, T. F. Berezhna, "Visnyk Ekonomichnoyi Nauky Ukrayiny" 2012, p. 89−109 (in Ukrainian).

of the Institute of Agroecology and Environmental Economics NAAS of Ukraine; Institute of Sugar Beet and Energy Crops NAAS of Ukraine; Institute of Hydraulic Engineering and Land Reclamation NAAS of Ukraine; National Scientific Centre "Institute of Agriculture" NAAS of Ukraine; National Scientific Center "Institute of Mechanization and Electrification of Agriculture" NAAS of Ukraine; Institute of Agricultural Microbiology NAAS of Ukraine; National Scientific Center "Institute of Agrarian Economy" NAAS of Ukraine; Darnytsya center for assistance of investments, innovation and high technology; Kyiv Regional State Administration; National University of Bioresources and Environmental Science of Ukraine.

The researchers tend to share a viewpoint that some parks should be classified as scientific parks, because in this way they can gain more privileges associated with such a status.[38] In particular, among such parks are "Kyiv Politechnika", "Textile" based at Kherson National Technical University; "Agrotehnopark" at the National University of Food Technologies, and "Yavoriv" at National University "Lviv Politechnika".

Taking into account the existence of a developed network of educational institutions of the highest level of accreditation in Ukraine, research and development institutions, as well as formation of the modern business environment, we can assume that in the near future new powerful scientific parks will be created. Currently, a project aimed at creating a network of scientific parks in Donetsk region has been elaborated. The realization of this goal will entail the use of franchising replication around the nucleus of the network: Donetsk Scientific Center of National Academy of Sciences of Ukraine, Ministry of Education and Science of Ukraine, regional offices of the Chamber of Commerce and Industry of Ukraine in Donetsk and Luhansk.[39] In general, pilot projecting entails a choice among three possible ways of organization: (1) on the basis of a scientific

[38] L. Nemets, *To the question of technoparks operation in the world and in Ukraine*, L. Nemets, N. Hryshchenko (eds.), "Chasopys socialno-ekonomichnoyi geografiyi. Mizhregionalnyi naukovyi zbirnyk" 2010, No. 8, p . 62 (in Ukrainian).

[39] V. Lyashenko, *Prospects of development of science parks as elements of infrastructure for small innovative business in Ukraine*, V. I. Lyashenko, A. I. Zemlyankin, I. Yu. Pidorycheva, T. F. Berezhna (eds.), "Visnyk Ekonomichnoyi Nauky Ukrayiny" 2012, p. 89−109 (in Ukrainian).

institution; (2) on the basis of higher educational institution of the IVth level of accreditation; and (3) on the joint basis of a scientific institution and higher educational institutions of IVth level of accreditation. The recommended approach is the "bottom-up" approach, when science parks are formed by scientific institutions and universities of the IVth level of accreditation by joint initiative, given that authorities provide political support. At the second stage, the process of duplication will be done: the duplicates of scientific parks in another town of the region will be created under condition that the pilot scientific park has reached its objective. The third stage entails using the franchising replication in the form of a transfer based on commercial or other contract basis of the developed and tested scheme of functioning and duplicated scientific parks in order to establish similar parks in other cities and districts of Donetsk and Lugansk regions.

7. Conclusions

At the post-industrial stage of development, the world economy is observed to enhance the rates of regionalization. An important factor of its growing significance was the creation of local production systems of the cluster type. Today, they are represented by production-oriented clusters, technoparks and scientific parks. They all share a similar feature – the orientation towards ensuring of the innovative development. However, production enterprises are represented in different ways.

The Ukraine has started to introduce local production systems much later than these processes have started in the developed countries. Nevertheless, clusters, technoparks and scientific parks are currently being created in all regions of Ukraine, even though the country has so far failed to create strong clusters. At least the interest in realizing clustering initiatives is growing in Ukraine, which can be proved by the amount of efforts put into development of competitive cluster associations both in traditional and high-technology industries. Compared with European countries, the clustering policy has not yet become an element of economic reforms initiated by the government.

Solving the tasks of increasing the role of cluster systems in the economic development of Ukraine requires that cluster systems be created at the regional level. In this article, we study some directions of such activity, in particular new approaches to regional policy, creation of production factors and scientific parks. On the other hand, worth admitting is that Ukraine should apply the whole set of effective forms of territorial development, which were not subject of research in this work: creation of industrial districts, innovation clusters, alliances, partnerships and other local production systems and territorial-production complexes. At that, we should keep in mind that local production systems of the cluster type are not the panacea for solving all problems of the Ukrainian economy. Along with that, without the use of their advantages and opportunities, it is currently impossible to successfully finish the transformation period in the development of the national economy.

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Abstract

In this paper, the authors review local production systems that emerge and function on the basis of clustering principles of organization and cooperation. The authors develop the theory of new regionalism and show that formation of regions is not limited by national boundaries, but can include a part of territory of one or more countries. The authors single out certain aspects of self-formation of new regions, as well as elimination of the existing ones. In the methodological aspect, clusters are studied as a driving force of prosperity in the conditions of globalisation. The authors systematize the normative and legal foundations of clustering in Ukraine, and analyse the tendencies of Ukrainian clustering in production, construction, tourism, transport and logistics, services sectors, and in coastal regions. Finally, the authors study the state and prospects for development of science parks in Ukraine.

Key words: local production systems, cluster policy, benchmarking, Ukraine.