

Розділ 4

Проблеми управління інноваційним розвитком

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DEVELOPMENT OF SINGLE-INDUSTRY TOWNS ON THE BASIS OF CLUSTER APPROACH

The possibility of development of one-industry towns of old industrial regions of Ukraine based on cluster approach is investigated in this paper. The system of organizational and economic support of the infrastructure enterprises management is proposed. The main characteristics of clusters which are factors in the decision on the sanitation of depressed areas and towns are highlighted.

Keywords: single-industry town, cluster, infrastructure of city, competitiveness of city, sustainable development.

Statement of the problem. Among the many today's important problems is the problem of development of single-industry towns of old industrial regions in Ukraine. It acquires the special value in the context of sustainable development of the country. Plenty of projects were launched at the state level in 2000-2013 years. These are the projects of the separate cities and regions, as well as individual projects supported by the European Union. Among them, for example, was the project "Sustainable Urban Development". The general purpose of which was the assistance to the sustainable urban development of the depressed small towns in Belorussia, Georgia and Ukraine, for the sake of increase of their competitiveness by Polish and Ukrainian experience in the field of the strategic planning [1]. But, unfortunately, this project was closed due to the situation in Ukraine in recent years. It should be noted that the single-industry towns of old industrial regions of Ukraine did not take part in such projects of sustainable development. This actual problem of their sustainable development is actual and needs immediate decision.

If we consider the term "sustainable development", it should be noted that in 1992 at the

Conference in Rio de Janeiro within the framework of acceptance of “Agenda on XXI age” it was defined as “the development which satisfies today needs without putting under threat the ability of future generations to satisfy their own needs” [2]. And it means that one of the basic principles of transition to sustainable development is the increase of production on account of reduction of costs of natural resources, introduction of energy- and resource saving, energy efficiency, second processing and technological improvements. But for today there are considerable problems with satisfaction of new requirements of sustainable development in single-industry towns of Ukraine where the basis of economy is industry (coal, metallurgical, chemical and others).

One of the variants of sustainable development problem decision of single-industry towns of old industrial regions in Ukraine is the formation of clusters what stipulate actuality of this research.

Transformational processes are observed at all territorial levels of the socio-economic systems. Constant movement of the market reforms increases the number of studies in the field of regional economic transformation at the national level and at the local level. These processes become increasingly significant, not only in Ukraine but also in countries of the near and far abroad. It increases the role of conceptual approaches development and strategic directions for transformations regulations of regional economic space.

The analysis of recent researches and publications. The leading Ukrainian and Russian scientists were involved into the study of cluster formation at the regional level and at the enterprise level.

Among the domestic scientists who studied the role of clusters in the current conditions of the economy can be highlighted: I.A. Brizhan [3], V.M. Osipov [4], S.I. Sokolenko [5], M.P. Voynarenko [6], E.M. Zabarna [7], V.I. Zakharchenko [4] and others. Such Russian scientists, as: A.N. Asaul [8], A.A. Bikova [9], P.Yu. Erofeev [8], M.Yu. Sheresheva [10], G.A. Yasheva [11] have also made a significant contribution to the development of the theory of clusters at the regional level. But they didn't pay enough attention to the impact of clusters on the development of single-industry towns of old industrial regions in Ukraine.

The purpose of the article is to find out the possibility of clustering at the level of single-industry towns of old industrial regions in Ukraine and to analyse possible influence of these clusters on the development of such towns.

The main material of the study. Today in many literary sources such terms as “monotown”, “monofunctional town”, “monostructural town”, “monotype town”, “monoindustrial town” and “single-industry town” are used. The author considers it expedient to use the last definition for towns which are investigated in this work.

It is advisable to give a definition of the term “single-industry town”. According to the authors, this is a town the economy of which depends on the activity of one or more enterprises of one branch.

It should be noted that single-industry town has several different characteristics from poly-industry towns, namely:

- 1) presence of great dependence of town budget revenues from deductions of the township-forming enterprises;
- 2) there is a great threat to the termination of activity of the township-forming enterprises of one branch, that will directly affect the general state of economy of the town.

The Law of Ukraine “On Approval of the National Program for the Small Towns

Development” from 03.04.2004 №1580-IV notes that the industries specialization of monofunctional towns are mining, energy, processing of agricultural raw materials, etc. [12].

According to available data there are 111 monofunctional cities in Ukraine: industrial centers (the coal mining – 32 towns, mining of ore and non-metallic materials – 7 towns, energy – 9, processing industry – 27, chemical and petrochemical industry – 6 towns), agro-industrial centers (18 towns), transport centers (9 towns), medical and health centers (2 towns), the center of artistic trades (1 town).

These cities have specific development problems, among which the most serious:

- the limited financial resources, both private and from the state budget;
- the absence or limited economic opportunities of township-forming enterprises;
- difficult situation in the sphere of employment due to the limited choice of professions;
- very outdated housing fund and social infrastructure;
- emergency state of objects of the systems of water, energy and heat supply in many small towns;
- very low level of development of urban infrastructure, social services, cultural facilities;
- poor ecological state of the monofunctional towns territories;
- limitation of the use of the newest means of informatisation at social facilities;
- an insufficient level of urban territories defense from hazardous exogenous geological processes [12].

It should be noted that existing information is quite old. This law was passed almost nine years ago. During this time, changes took place, especially concerning population in urban areas, the level of employment, the income of local budgets and other economic and social indicators.

The single-industry town as the socio-economic system has two subsystems of different level of complication: town-forming and town-serving subsystem. The most important town-forming basis in modern conditions is the industry with inherent to it technology and instrument [13, p. 17]. If the town-serving enterprises are those that are important for the town and are the basis of the urban economy, than the town-forming enterprises affect the location of this town in the town system.

In this case, the town economy as a set of economic relations which arise due to the production, distribution, exchange and consumption of material goods and services contains also the relationships that arise between these two subsystems. In the conditions of expansion of rights concerning self-government of local communities exactly the last relations become the decisive factor of stable development of the town [14, p. 54].

Nowadays the problem of development of single-industry towns in Ukraine, where are among the 448 cities are 122 single-industry towns (or 27%). It is especially true for the old industrial regions of Ukraine (Dnipropetrovsk, Donetsk, Zaporizhia and Luhansk regions), where are the towns in which the companies operate mainly in one industry branch. It is the so-called “miner's” towns. But single-industry towns can also be referred to the resort towns where only one recreational area of functionality is developed and the further effective development of the town depends on it (for example, Sviatohirsk, Truskavets).

Creating the conditions to accelerate economic growth and improve living standards in the regions of the country is determined by the level of enterprises development of social and economic infrastructure. Investigation of the process of formation and development of

enterprises of social and economic infrastructure of Donetsk single-industry towns revealed that they are in relationships under the terms of networking (cluster ideology) with market infrastructure, economic structures of the city, which form its economy, and also with consumers of the goods and services.

In our view, to the socio-economic infrastructure of single-industry towns is inherent to the corresponding network of institutions, enterprises and organizations of production and non-production. The classification of the institutional framework of the social and economic infrastructure of the single-industry towns is presented in the Table 1.

Table 1 – The classification of the institutional framework of the socio-economic infrastructures of the single-industry towns (compiled by the authors)

Composition of socio-economic infrastructure of the town	Institutional base of socio-economic infrastructure of the industrial town
Social Infrastructure (non-production)	Housing and communal services
	Domestic consumer services of population (unproductive)
	Health care
	Physical culture
	Public education
	Culture and Art
	Public catering
Economic Infrastructure (production)	Transport
	Connection
	Production of the second energy (electric and thermal)
	Distribution of the second energy (power lines, hot-water systems)
	Environmental protection
	Municipal communal economy (water-supply, collection and processing of wastes, and so on)

Under the system of organizational and economic support of enterprise management of the socio-economic infrastructure of the town (SEIT) should be understood the set of subsystems and elements of the market environment.

We can offer a system of organizational and economic support of management of the enterprises of infrastructure of the town (Figure 1).

The study of the institutional and legal support of the development of regional economies shows that social and economic systems have formed a general set of tools that allow you to define the cluster potential of territories and towns. However, the variety of forms of clusters makes it impossible to develop a single universal approach, which could be used for their identification.

Analysis and evaluation of the nature of the economic benefits that business structures receive (mainly in the area of infrastructural complex areas and towns) from the membership of the cluster are caused an increased interest to their organizational nature.

At the same time, the transformation of clusters into the instrument of development of regional economies, including the cities, districts, local territories, as open socio-economic systems, needs more diligent researches concerning the participation of governmental institutions and the elements of infrastructure in the forming of territorial and sector integrations (mainly on principles of cluster ideology), as new institutes of modern regional economy.

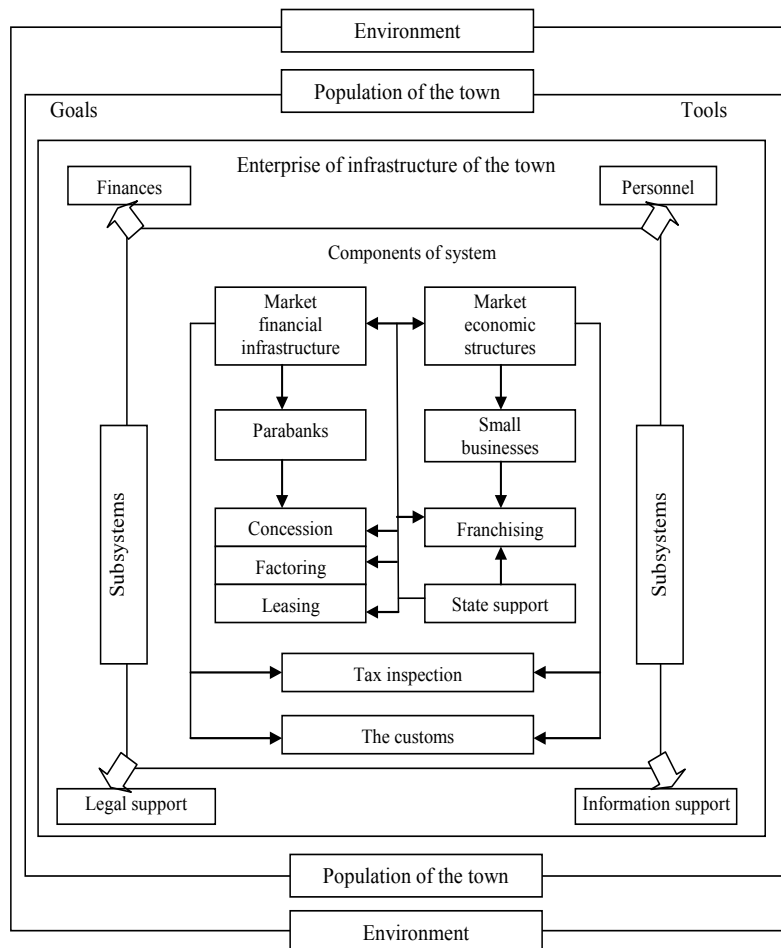


Figure 1 – The system of organizational and economic support of management of the enterprises of town infrastructure (authors' approach)

The duality of the state in the implementation of the cluster concept of regional development is manifested in the fact that local authorities act as coordinators, facilitators and direct participants in the network (cluster) structures. It is not always taken into account when exclusively organizational approach is used.

The appearance, the active introduction and development of clusters is a new approach to the formation of a modern regional economy. The cluster approach is essentially a system of widening of new knowledge, which is aimed at improving the efficiency of interaction between different economic entities, as well as the creation of new business units, which are more flexible to the constantly-increasing competition.

The main feature of the cluster approach is informal institutional environment based on mutual trust, cooperation traditions and culture). This environment determines the speed and scale of the formation of local production, communication and social networks, including

in terms of single-industry towns. The cluster includes enterprises, institutions and organizations that cooperate but also compete with each other. As part of the networking interaction cooperation and competition arise new concepts such as “win-win situation” or the concept of “competitive cooperation”.

For the conditions of industrial regions and their single-industry towns we can propose a modified scheme of organizational interaction of clusters (business structures) with the market environment (Figure 2).

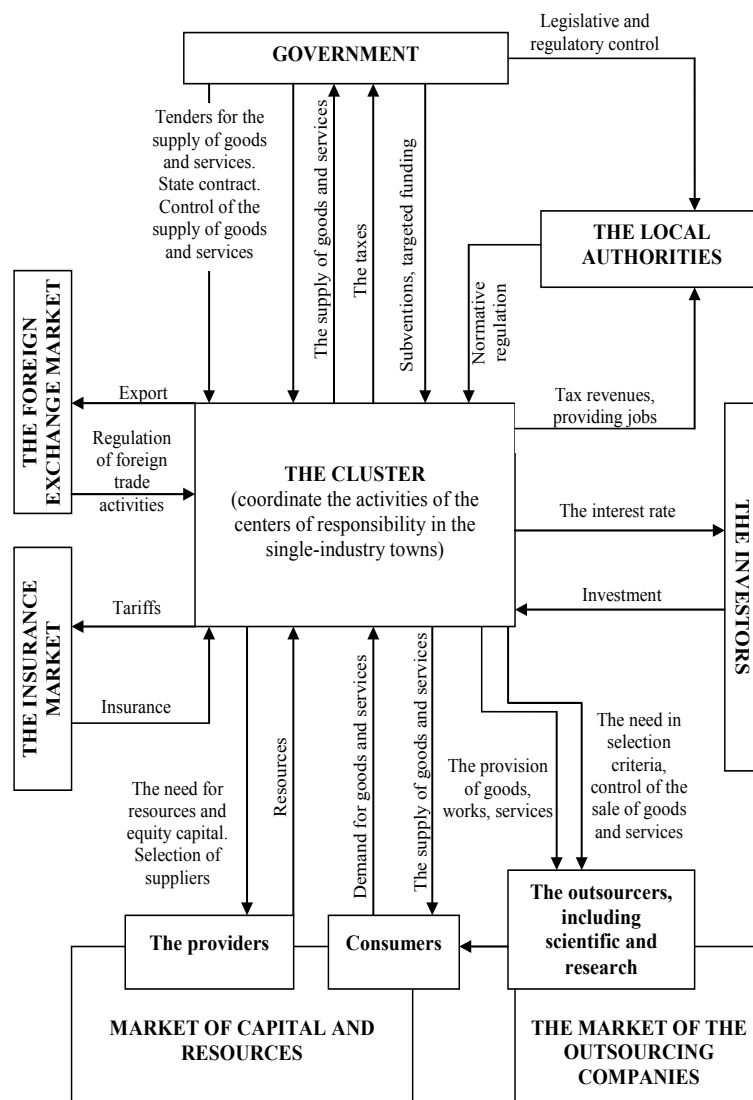


Figure 2 – A scheme of organizational cooperation of clusters with market environment (for the terms of the single-industry town) (authors’ approach [6])

The figure shows the system of the cluster interaction with the market environment in the single-industry towns. As we can see in a cluster should be coordination between all main components of the environment of town functioning which will allow carrying out effective work of the cluster and the town, in the whole terms of a public-private partnership.

Cluster mechanism for increasing competitiveness in the process of transformation of the regional-industrial complex within the framework of rehabilitation of single-industry towns is based on the effective combination of competition and cooperation, which are on different levels of hierarchy, however, are complementary, especially in the innovative transformation (restructuring, reengineering) business processes.

It is possible to identify the main benefits of clusters as factors of the addressing the issues of rehabilitation of depressed areas and cities:

– due to the clusters the access to a skilled workforce, suppliers, market and specialized information appears; in general the productiveness of business units on the territory where they were created is increased;

– due to the cluster the enterprises, which are included in their composition, can implement innovations, because they have better understanding of the market; they are flexible and have the lower cost of experiment);

– due to the clusters appear more opportunities to create new businesses. It is stipulated by the presence of necessary raw materials, component parts, production and transport infrastructure, as well as the labour force.

Conclusions. Thus, there is a need for improvement, stabilization and development of single-industry towns through the proper use of the cluster ideology which must be used at all levels of city life in the system of the country. Especially it concerns the old industrial regions that are inherently very different from other regions of the country.

In **further investigations** the authors consider it necessary to study the international experience of creating clusters at single-industry towns and on the basis of this offer “Ukrainian” approach to clustering of single-industry towns.

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Розвиток моногалузевих міст на основі кластерного підходу

У статті досліджено можливість розвитку моногалузевих міст старопромислових регіонів України на основі кластерного підходу. Запропонована система організаційно-економічного забезпечення управління підприємствами інфраструктури міста та виділені основні групи характеристик кластерів, що є чинниками рішення питань санації депресивних територій та міст.

Ключові слова: моногалузево місто, кластер, інфраструктура міста, конкурентоспроможність міста, стійкий розвиток.

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Развитие моноотраслевых городов на основе кластерного подхода

В статье исследована возможность развития моноотраслевых городов старопромышленных регионов Украины на основе кластерного подхода. Предложена система организационно-экономического обеспечения управления предприятиями инфраструктуры города и выделены основные группы характеристик кластеров, которые являются факторами решения вопросов санации депрессивных территорий и городов.

Ключевые слова: моноотраслевой город, кластер, инфраструктура города, конкурентоспособность города, устойчивое развитие.

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