Abstract. Mining regions have specific features that should be fully integrated into the strategy ensuring their harmonious development. Methodological principles and concepts for the recovery and sustainable development of these regions should be elaborated by means of tools for clustering. The analysis of the cluster concept and patterns allowed identification of the reasons for not employing cluster models existing in various regions for mining areas in Ukraine. The article stresses the necessity of creating specific clusters for mining regions that will have new design given the factors of the spatial allocation of productive forces, organizational culture and dynamic changes in the integration processes undertaken by economic agents.

Keywords: mining, mining region, cluster, efficiency, development.

Introduction

The present stage is meeting the development of Ukrainian regions regulated in accordance with the relevant programs, legislative acts and new state strategy elaborated for the regional development up to 2020. The main objectives of the strategy defined by public authorities in the long-run include economic restructuring of Ukraine's regions. Especially, it concerns regions and industrial centers having excessively concentrated heavy industry and suffering from environmental problems. Mining regions entirely meet all the features of the regions expected to be restructured.

Thus, the main objective of the state regional economic policy of Ukraine is to increase the national wealth through the efficient use of natural resources, labor, scientific and technical potential of the regions, as well as the improvement in the system of their local interaction for achieving internal regional balance.

However, modern regional economies, especially those of the mining regions, are functioning under the growing social and economic differentiation of the economic situation and future prospects, industry fragmentation and instability of the state support, which certainly block the rapid achievement of the sustainable development countrywide.

Consequently, the future economic development of Ukraine should be based on the conceptual changes in the policy being elaborated and adopted for the effectively functioning regions, as integrated systems. The development of regional economy should include signs of continuous positive dynamics of general vector of the regional development and strategic strengthening of regions in the short term.

The problems of productive forces distribution were discussed by V.V. Kovalevsky, A.L. Mikhailyuk and V.F. Semenov (2008). Financial aspects of the regional development were investigated by M. Kovalenko (2010) and N.L. Krempova (2011). The innovation infrastructure in the region was the core issue highlighted in research циклі by Z.V. Herasymchuk and N.T. Rud (2010). The dynamics of the investment potential of regions was analyzed by V. Lischuk (2011) and the scientific rationale of regulating the regional economy was presented in the works by M.S. Pashkevych (2012).

The course of the European Union to an active regionalization of the economy, that is shifting the emphasis and empowering regions in making decisions on spatial development, indicates that overcoming the crisis of the productive forces development is the challenge of not only national or local level, but the global one. Thus, research aimed at the development of the conceptual basis and elaboration of the effective mechanisms to stimulate regional economic growth, especially in mining areas in Ukraine, is extremely important.

Results. Effective growth and development of a region is a complex process that leads to solving the problems of the population at the regional level, improvement in the living conditions of the inhabitants of the region by balancing social, economic and environmental development that is based on the rational use of all
resource potential of the region, including geographical features of the region, and also features of the
economy, infrastructure and industry of small cities belonging to the region.

We must emphasize that conditions are changing, and problems of how to create conditions for effective
development of the region, enhance innovations, improve the structure of the regional economy and improve
competitiveness of products and services are becoming increasingly important.

Modern society shows that the integration of the Ukrainian economy into the global economic system is
not possible while ignoring the trend towards consolidation resulting in the appearance of cluster associations.

Foreign experience also proves that the cluster approach is the necessary condition not having
alternatives for a significant increase in competitiveness of countries and their regions. The deepening global
integration processes and worsening territorial competition necessitate updating mechanisms to ensure the
development of Ukraine's regions, particularly through the cluster approach.

The cluster approach is a new view of the regional economy, the essence of which is a combination of
benefits of cooperation achieved by closely related economic agents located within a single area, which
allows the region to get economic benefits in one or more field of business and industrial branches.

The problem of conceptual foundations for the formation of the spatial production clusters to encourage
the development of mining territories under social and economic depression has special relevance to Ukraine
because, unlike the EU, there are no specific legal documents governing the formation, operation and
liquidation of clusters in our country.

The analysis of conceptual approaches to defining the essence and models of cluster and factors analysis
of regional economic development revealed that presently existing cluster models cannot be adopted to
mining regions in Ukraine. This is connected with the following reasons. Firstly, in general, clusters are
specialized and refer to a specific branch. It means that they bring together businesses producing goods and
services relating to a particular industry. However, the mining industry, which is undergoing the slum stage of
its life cycle, cannot be the basis for creating specialized competitive clusters.

Secondly, under modern conditions, the effectively functioning specialized cluster is supported by the
established and well-adjusted system for supplying a wide range of resources at the lowest cost - that is the
cluster is working due to the highly developed infrastructure servicing industrial processes. However, a mine
in Ukraine is a separate industrial facility located on a large territory without developed infrastructure and
with limited set of available sufficient resources. Therefore, the project of creating the cluster spatially located
in the mining region, as well as its further performing almost from a zero starting point, require a huge
amount of investments and make it virtually impossible to implement.

Thirdly, mining companies (independent mines) are complex geological objects. Some of them
principally cannot cease to function - that is to be closed, given the need, for example, of mine water
continuously to be pumped. In fact, such mines have to be constantly working in the mode of water pumping
facility to prevent flooding of the surrounding areas. Also, underground cavities of some mines contain
methane gas. It hides the threat of explosion and leads to the need of permanent measures to ensure the
ecological conditions of these regions at the minimum level.

Hence, these mines are constantly in need of significant financial resources for maintenance, which,
respectively, is a financial burden for the state and local budgets. At the same time, the potential cluster
organized on the territory, will have to compensate the cost of maintaining such mines through the allocation
of a certain percentage of its funds for these purposes. If the amount of expenses necessary for the
maintenance of mines that cannot be abandoned exceeds the profitability of cluster operations, it could lead to
no reduced costs saved by companies working in regional clusters.

Fourthly, specialized industrial cluster usually requires highly qualified experts to be employed through
the creation of favorable labor climate, motivation system and appropriate and well-developed social
infrastructure. For example, if you compare the Silicon Valley cluster having high internal standards of
corporate culture, team work behavior, social responsibility of government and business and social
infrastructure, with possible clusters in the territory of mining regions being areas of environmental, economic
and social depression, it becomes clear that it will be extremely difficult and almost impossible to effectively
implement the project of establishing the specialized regional cluster expected to ensure high environmental,
economic and social standards in these regions.

Fifthly, we need to emphasize that as a rule, industrial clusters are integrative units of high energy and
water consumption. These basic resources are to be supplied from the outside of the cluster, which,
respectively, affect the level of total costs and have the dynamic of growth under conditions of global energy and water deficit. At the same time, today there are no energy and water generating clusters – that is structures with a closed energy and water cycles, which would operate independently in terms of vital resources and have a certain level of resource and, consequently, production autonomy. Thus, these clusters would have their own resource center and provide autonomy in energy and water consumption.

Discussion

All said above allowed the conclusion that the process of implementing the cluster mechanism for effective regional development is to be studied properly. Cluster structures represent spatial forms of production organization focused on innovation and regional development. Cluster development, as a factor of activating the regional economic development, is a characteristic feature of the current style of economic management in the administrative territorial formations.

The world experience in economic clustering has shown that it makes a decisive influence on the process of strengthening competitiveness and fosters innovations. Presently emerging innovative economy is focused on the priority of cluster development which proved to be one of the most effective production systems of the era of globalization. This is a new economic phenomenon that allows us to face the onslaught of global competition and properly comply with national and regional development standards.

To deepen the understanding of the mechanism of implementation and the effective implementation of clusters in Ukraine, we should systematize the main factors of the regional economy development. However, modern scientific basis for the establishment of effective forms of cluster regional development and regional economic growth is not fully formed. Its implementation needs to be improved especially for the mining regions which have specific nature of mono industrial economy and are in a condition of economic depression.

In order to improve the theoretical and methodological bases of the creation of spatial industrial cluster forms for the optimization of the regional economy, especially in mining regions, we offered to consider the factors of territorial organization of productive forces, organizational culture, dynamic changes and the level of economic agents’ integration. Thus, the authors pointed out the need of creation of new clusters for mining regions, taking into account factors that are adaptive, dynamic and regulated in the context of economic changes. It is these factors of the regional development that are the levers for efficient clustering, especially in mining regions having their industrial characteristics. It will give impetus to the stabilization of the economic, social and environmental regional processes.

References

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