

FACTORS OF FORMATION OF INTELLECTUAL POTENTIAL OF REGIONAL ECONOMIC CLUSTERS

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Abstract. The article considers the problems of managing the development of intellectual potential of regional economic clusters. In our work we studied the influence of regional factors on the development of intellectual potential of clusters, increase the efficiency of formation and use of intellectual potential of regional economic clusters, its adaptation to innovative changes. The methodological basis of the study is theoretical-empirical, retrospective, statistical approaches, which we used to determine the influence of various factors and indicators of the formation of intellectual potential of regional economic clusters. The article considers the formation of a cluster policy for the development of the region, identifies the main subjects of this policy, which allowed to provide the author's definition of the definition of «regional economic cluster». The intellectual environment of the regional economic cluster and its subjects is analyzed. It is determined that the intellectual potential of regional economic clusters and components of its subjects is formed under the influence of a number of factors: intellectual climate, conjuncture, policy and system in the region. Accordingly, the article provides a specific description of each presented factor with a specific definition of the impact of this factor on the intellectual potential of regional economic clusters.

Keywords: intellectual potential, cluster, factors, region, intellectual environment.

JEL Classification: O30, R58, R11

Formulas: 0; **fig.:** 3; **tabl.:** 0; **bibl.:** 9

Introduction. The problem of managing intellectual potential in the context of new economic relations and granting independence to the regions is quite new for public administration. It is obvious that the intellectual potential is manifested in the process of its use in the economic and social sectors of the region's economy. Intellectual potential is formed by individuals, organizations, industries and the region as a whole.

The most complete intellectual potential is manifested in promising organizational forms of management, which, in the first place, include innovation clusters. Clusters are the most adequate formations of macroeconomics for the formation and realization of intellectual potential, from the fundamental scientific idea to the practical implementation and operation. The clusters accumulate processes of scientific, design, educational nature, which contribute to the development of intellectual potential. The intellectual potential of regional economic clusters is a complex multilevel system. In its formation, the interests of many actors collide.

Literature review. The intellectual foundations of innovation processes were considered in the works of J. Schumpeter, P. Doyle, B. Santo, B. Twiss, and others. Regional economic clusters considered in their research E.A. Borodin, T.V. Myrolubna, B.C. Papkov, M. Porter, V.I. Samaruha, A.V. Scotch, A.R. Sulimani, V.P. Tretiak, T.V. Quiet, R.H. Khasanov and others.

However, the problem of managing the development of intellectual potential of regional economic clusters requires in-depth consideration. There is a need to study the impact of regional factors on the development of intellectual potential of clusters, increase the efficiency of formation and use of intellectual potential of regional economic clusters, its adaptation to innovative changes, which determined the choice of research topic.

Aims. The purpose of the scientific article is a theoretical study of the main factors and indicators of the formation of the intellectual potential of regional economic clusters.

Methods. The theoretical basis of the study is work in the field of clustering, intellectual potential, state regulation of regional development. The empirical basis of the study is represented by the materials of scientific works and analytical studies of the author. The methodological basis is theoretical and empirical, retrospective, statistical approaches. The information base of the work consists of legislative and normative documents, reference materials of official statistical bodies, public administration bodies of the region, data of periodicals, Internet sources.

Results. The cluster policy of the region development contributes to the formation and use of the intellectual potential of the subjects, which initially have different intellectual potential of employees in its classical sense. The presence in the cluster of scientific institutions and educational organizations, which concentrates a large number of people with the highest levels of education, degrees and titles, as well as those who have the rights to discoveries and inventions, helps to combine potential and synergies objects.

The effect is manifested for all subjects as a result of combining theoretical knowledge with the possibility of their practical implementation. The cluster is a spontaneous or planned mutual enrichment of the intellectual potential of workers and production in general. Thus, in a cluster the financial problems connected with the rights to intellectual property and a possibility of its transfer for use by other subjects of a cluster are quite effectively solved (fig. 1).

Thus, in our opinion, the regional economic cluster is a set of enterprises and organizations united by a single strategy and goal within the program of socio-economic development of the region, which forms the total intellectual potential. Combining the intellectual potential of the main, auxiliary and service enterprises, as well as the state, allows you to form the total potential of the cluster and the most effective way to use and build it. It is the concentration of different organizations and enterprises allows to obtain a synergistic effect of the development of the intellectual potential of the cluster, as well as the efficiency and purposeful use of intellectual resources. The issue of competitiveness of the regions of Ukraine should be

considered through the prism of the intellectual potential of regional economic clusters.

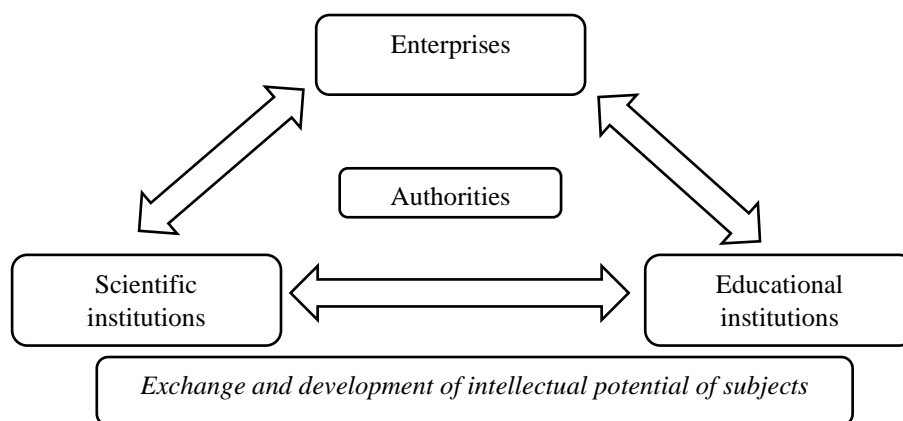


Figure 1. Subjects of cluster policy in the region

Source: developed by authors

The development of intellectual potential is influenced by two components:

- management decisions made at all levels;
- the influence of situational factors.

The intellectual potential of regional economic clusters and components of its subjects is formed under the influence of a number of factors (Fig. 2).

The factors of the regional environment include the intellectual climate, the situation, politics and the system in the region. The regional environment forms motivating motives and restrictions on the purposes and criteria of development of intellectual potential at subjects.

The intellectual climate of the region, in our opinion, is determined by a set of conditions to ensure the attractiveness of the generation of new knowledge and resources. The intellectual climate is created by a combination of efforts of government agencies and institutions of intellectual development in the formation of preconditions for the activation and increase of intellectual potential of the subjects. The intellectual climate can be formed in the form of benefits provided at the state level.

Regional and local governments also play a significant role. At the same time, the efforts of other subjects of the intellectual process are important - the population, the business community, etc.

The intellectual situation of the cluster is determined by the traditions and trends of intellectual activity in the region, as well as the influence of systemic and situational factors of regional development. The intellectual situation of the cluster is also greatly influenced by global and interregional processes, scientific and technological progress.

First of all, it should be noted the formation of the information society, which has turned views on the growth of intellectual potential. Informatization has affected all processes, including the processes of growth of intellectual potential.

Intellectual policy is determined by the activities of state and local authorities, as well as the policy of the socio-economic system of the region. Intellectual policy in

the set of other priorities determines the direction of financing the components of intellectual capital. This is especially true of supporting infrastructure financing.

FACTORS OF THE REGIONAL ENVIRONMENTPublic authorities

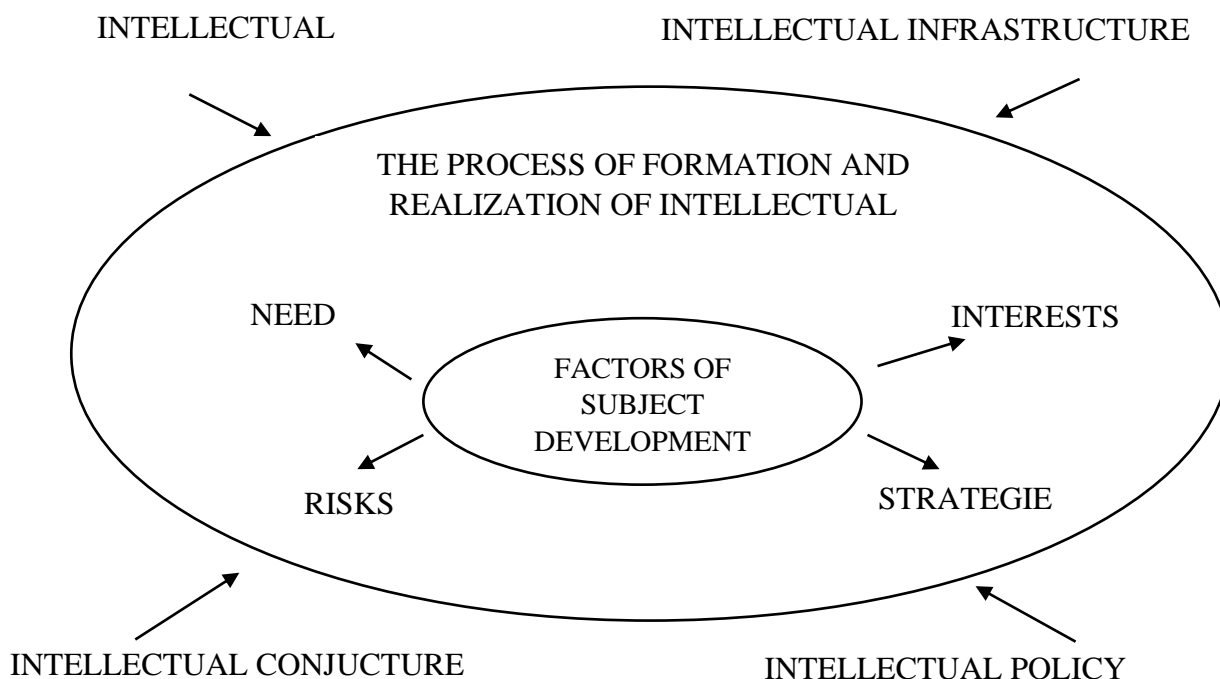


Figure 2. The intellectual environment of the regional economic cluster and its subjects

Source: developed by authours

Intelligent infrastructure in the region unites all actors involved in the formation and implementation of intellectual potential.

Intellectual development infrastructure includes:

- educational infrastructure;
- scientific infrastructure;
- information infrastructure;
- social infrastructure;
- infrastructure for capacity realization (industry, etc.).

Factors of the subject's development include intellectual needs, interests, risks and strategies.

Intellectual needs are a reflection of the need for change, felt by actors in their vision of development problems, goals and criteria for functioning.

Intellectual needs are both individual for the subject and regional.

Intellectual interests are the initiation of actions of participants in the development of intellectual potential. In principle, interests can be both realized and not realized as a result of the intellectual process, which leads to a lack of intellectual potential.

Intellectual risks determine the possibility of formation and realization of intellectual potential by the subject.

They are determined by two factors:

- intellectual potential of the subject in this area, formed as a result of previous activities;
- skills and ability to quickly adapt to change.

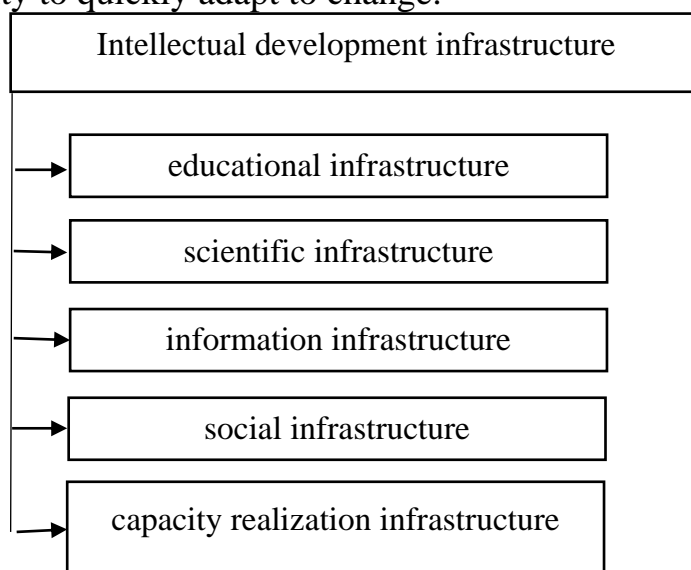


Figure 3. Infrastructure of intellectual development of the region

Source: developed by authors

The higher the intellectual potential and skills of the system, the less internal intellectual risks. It should be noted that currently the risks of formation and realization of intellectual potential are given insufficient attention, which leads to a reassessment of intellectual capabilities both at the individual level and at the level of the enterprise, cluster and the region as a whole. Thus, the attempt to develop highly intelligent businesses is faced with a lack of human resources and their own research and development and the impossibility of attracting them from outside for a number of regions.

Intellectual strategies are the ultimate tool for implementing the intellectual policy of the cluster entity. They define the goals, objectives, measures, mechanisms, tools and resources of intellectual development. They also form the possibility of assessing the effectiveness of intellectual activity through a system of indicators for assessing the intellectual activity of the entity as a whole, as well as assessing the effectiveness of the use of intellectual potential of the cluster.

The development of the intellectual potential of regional economic clusters is also significantly influenced by the national character and socio-psychological characteristics of the population. Many authors in their research pointed to information and communication, emotional, ethical and other specific qualities that lead to the formation of the specifics of the intellectual potential of individuals and the region as a whole.

In practice, this affects the ability and effectiveness of the formation of project teams in the development of innovation. The combined influence of regional and subjective factors determines the effectiveness of the process of formation, implementation and development of intellectual potential. It should be noted that as a subject of the socio-economic system, which participates in the development of

intellectual potential, act as individuals and enterprises, industries, territories and the region as a whole.

All entities involved in the formation and implementation of intellectual potential have economic and managerial freedom. Therefore, the degree of need for capacity development and strategy for its development is formed and manifested in each entity differently.

Discussion. Based on the above, we can say that the intellectual potential has a specific nature and is manifested depending on its carrier. The presence of a subjective component is the predominant difference of intellectual potential from other potentials of the socio-economic system, for example, economic, innovative and so on. Intellectual potential is formed at the time of development of the subject and is manifested in the case of the need to use it. That is, the greater this need, the more effectively the intellectual potential is revealed (and increased).

Conclusions. Intellectual potential, like any other potential, is manifested in the process of internal and external interests in its formation and use. Interests in the course of processes of their realization turn into needs and cause motivation of the subject to growth of intellectual potential. The set of external and internal interests determines the boundaries and criteria for the formation and development of intellectual potential for each subject. Intellectual potential consists of structural, process and situational parts specific to each region.

The intellectual potential of the region and its constituent subjects is formed under the influence of a number of factors. Factors in the regional environment include the intellectual climate, conditions, policies and infrastructure in the region. The regional environment forms motivating motives and limitations on the purposes and criteria of development of intellectual potential at subjects. The factors of the subject include intellectual needs, interests, risks and strategies of the subjects.

Author contributions. The authors contributed equally.

Disclosure statement. The authors do not have any conflict of interest.

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