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THEORETICAL APPROACHES TO IMPROVING GOVERNMENT CONTROL SYSTEMS FOR EDUCATIONAL CLUSTERS DEVELOPMENT

The article solves the problem of theoretical interpretation of the territory institutional structure effects on the efficiency of a cluster development processes. The presented research findings could be applied to public management domain in the context of knowledge economy development.
Keywords: government control; economic institutions; economy clustering; institutional efficiency.

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ТЕОРЕТИЧНІ ПІДХОДИ ДО ВДОСКОНАЛЕННЯ СИСТЕМИ ДЕРЖАВНОГО КОНТРОЛЮ РОЗВИТКУ ОСВІТНІХ КЛАСТЕРІВ

У статті вирішено проблему теоретичного обґрунтування впливу інституційної структури території на ефективність процесів кластерного розвитку. Запропоновані результати дослідження можуть знайти застосування в галузі державного управління в умовах розвитку економіки знань.
Ключові слова: державний контроль; економічні інститути; кластеризація економіки; інституціональна ефективність.
Рис. 1. Літ. 10.

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ТЕОРЕТИЧЕСКИЕ ПОДХОДЫ К СОВЕРШЕНСТВОВАНИЮ СИСТЕМЫ ГОСУДАРСТВЕННОГО КОНТРОЛЯ РАЗВИТИЯ ОБРАЗОВАТЕЛЬНЫХ КЛАСТЕРОВ

В статье решена проблема теоретического обоснования влияния институциональной структуры территории на эффективность процессов кластерного развития. Предложенные результаты исследования могут найти применение в области государственного управления в условиях развития экономики знаний.
Ключевые слова: государственный контроль; экономические институты; кластеризация экономики; институциональная эффективность.

Problem statement. Implementation of the cluster policy for territorial development is based not only on building an innovation business support infrastructure but also on the formation of a network interaction structure between innovative businesses and government authorities.

Analysis of the existing methods. In today's conditions, competitiveness of a subfederal cluster territory is interpreted as a concentrated expression of production, scientific and technical, and organizational institutional advantages implemented in high technology goods and services (Porter, 2009). The multi-subject composition of parties in contract relations within a cluster can be classified according to subject composition of the "triple spiral" model, i.e. it enables to identify "the state" (state and self-government bodies), "business" and "universities" (Enright, 1996). The aggregate social and economic effect produced through governmental programs implementa-

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tion, achieved by applying structural modifications to the economy, can be used as the efficiency indicator (Feldman, 1994).

When analyzing the efficiency for control purposes, it is required to consider the main principles that the financing of state expenses is based on (including allotting funds intended for implementation of target programs). In this case, the methods used to assess educational clusters can be applied to control the efficiency of the state resources use (Dritsaki and Adamopoulos, 2005). The study of institutional environment of a territory as an evolving endogenous factor was initiated by the representatives of the school of economics of Washington University in the 1970s (Coase, 1992).

D. North (1994) uses the institutional environment term to define the institutional limits which exist at the macrolevel and determine the possible conditions of contractual agreements between individuals. O. Williamson (2000) defines institutional environment as an established system of the informal "game rules" which build the sociocultural context of economic activity.

In the framework of this research, institutional environment is interpreted as the aggregate of institutions and institutional connections which surround and fill the subfederal economic system and have their effect on it. Cluster institutional environment creates favorable conditions for the formation of an interaction network between cluster agents and governmental bodies (Murzina, 2014; Yalyalieva, 2014). At the same time, changing in the course of time, institutional aspects of the government control mechanisms form the limits of economic behavior of innovation companies, thus establishing the sociocultural norms having effect on the behavior of economic agents (Napolskikh, 2014).

The goal. In this regard, studying the institutional development aspects of government mechanisms used to control the cluster policy efficiency at the subfederal level becomes an important scientific task.

Key research findings. Using the territorial method to identify and assess the development of educational clusters allows assessing the synergetic effect produced by interaction between educational institutions and innovation businesses within a region. A local educational innovation is created on the territory of an educational cluster, which is intended for providing educational services, outside its region as well (Figure 1). With education clustering processes taking place at the labor market controlled by the state, the following aspects are examined: demand for corresponding specialists, employer requirements to specialists, market trends assessment, market segmentation.

Considering the peculiarity of the "product" of educational institutions, i.e. specialists being the consumer of educational services at the same time, it appears difficult to verify the quality of the knowledge they acquire at the moment when graduates are hired. Hence, it seems important to study and assess the institutional conditions and requirements for university graduates. As for the pricing policy at education market, the cost of a specialist can be determined on mutually beneficial terms, considering capacities and requirements in each sector of an educational cluster. One of the functions of educational clusters is the promotion of graduates at the labor market, e.g. establishing collaboration channels between its agents (direct contracts with companies, field experience with further employment and cooperation with public and commercial placement agencies), which also contribute to building the required image of the graduates and educational institution itself.
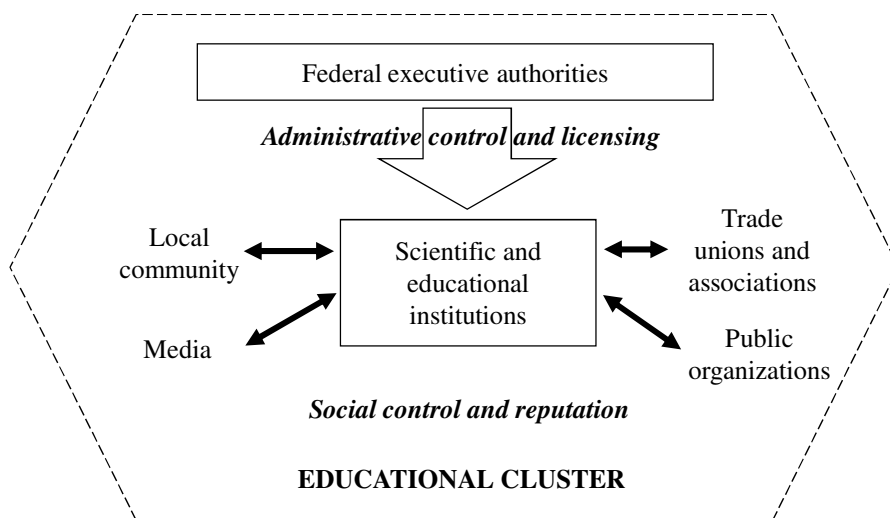
Figure 1. **Government control of educational clusters development,**
constructed by the authors

Using the education clustering concept when implementing the innovation model of regional social and economic development implies the following: considering the requirements of the labor market (both local and global), studying the groups of potential consumers of educational services (the direct relation principle), and improving the market mechanisms for educational services by using the marketing mix (the feedback principle).

We believe that government control over the educational clusters formation efficiency at the regional level should be started from determining the principles and development parameters a particular type of clusters has to follow. These parameters have to correspond to the requirements as follows: the parameters have to characterize the cost volume and the dynamics of services provided by the education system; they should indicate the position of those services in the total volume of paid services; since the costs of education sector are mainly built at the expenses of the budget system, the parameters have to characterize those costs; the parameters should reflect the structure of educational institutions and the number of students with respect to public and commercial organizations; the parameters have to characterize the industrial structure of a market, as well as the education forms and the implementation costs of educational process.

The efficiency parameters suggested above are intended to ensure the optimal ratio of educational organizations forming the educational cluster, based on the assessment of their competitive ability and innovativeness. When an educational institution joins an educational cluster, it improves the quality of its educational services provision thanks to elimination of duplicating educational programs and discontinuation of similar services provision by different institutions.

Thus, using the system of cluster institution environment development parameters ensures several basic tasks fulfilled in relation to governmental control of education system management efficiency: strategic planning of the number and composi-

tion of educational organizations, their compliance with regional demand for human resources, and costs optimization required for maintaining the property of educational institutions.

In the context of government control over the educational cluster efficiency it is reasonable to work out 3 scenarios (short-term, medium- and long-term), under which the system itself determines the number and particular composition of educational organizations making the cluster. The system is based on the methods of scenario modelling and allows performing scenario analysis subject to the variations of the forecasted demand for human resources in the region.

The task of control and monitoring, as well as efficiency assessment and optimization of institutional collaboration networks of educational organizations is common for the entire education system of the country.

Conclusion. An indisputable advantage of the suggested system of parameters for the purposes of government control of educational cluster efficiency is its versatility, as it can be adapted to any kind of education system and is valid in the conditions of establishing an uninterrupted (lifelong) education system.

Contemporary government control system of education efficiency is another step for Russia on its way to enter the European and the world educational space. The cluster institutional environment efficiency parameters suggested in this article were used by the government bodies of the Mari El Republic, Russia, when working on the programs for innovation development of the region and that of educational clusters in particular. It is planned to implement the results of scientific studies in Russian public management practice within the long-term collaboration programs of Volga State University of Technology and government authorities of the Mari El Republic, Russia.

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