

# CLUSTERS AS A BASIC OF IMPROVING THE ECONOMIC COMPETITIVENESS

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**Abstract:** World practice shows that support of high-technological clusters development is the important constituent of the innovative activity. It's proved that creation of the such clusters in different countries leads to a considerable progress at development fields and regions, which were at unfavorable economic state. This article explains what a cluster is and how can help a cluster policy of Russia to increase national and regional competitiveness.

**Keywords:** cluster, competitiveness, Porter, cluster policy, innovative capacity.

## **Clusters: how they entered into scientific and practical turnover.**

The concept of "cluster" in relation to industries and companies was introduced into scientific circulation by the American business economist M. Porter in 1990 together with his conception of the rhombus of national competitive advantage, which is the most famous among all the research on national and regional competitiveness. (Porter, 1990)

In general, the term "cluster" had established meaning and has been successfully applied to the economy in most natural sciences. So how Porter came to the "cluster" and what he puts into this concept?

Based on the accumulated material about the competitiveness of companies, Porter constructed the following logical chain: if there are competitive domestic companies, they form competitive sectors of the economy, which in turn support the state's overall competitiveness in the world markets. Porter was not focused on the economy as a whole and on specific sectors and sub-sectors of the economy and the main indicator of achieved "success" was the proportion of exported goods in world exports of this kind of product, which was produced with the help of local capital.

The main tenets of his concept are the assertions: "National prosperity is not inherited - it is created" and "the only reasonable concept of competitiveness at the national level is productivity". (Попреп, 2002)

All considered goods were grouped by sectoral basis into 16 sectors (clusters), divided into three groups: (1) basic sectors, (2) industries and supporting sectors, (3) final consumption and services. Based on the analysis a pattern was revealed: each of the 10 surveyed countries has its own set of 3-6 the most competitive sectors.

For example, the U.S. was the most competitive in five sectors: "semiconductors / computers", "vehicles", "office equipment", "telecommunications equipment", "military-industrial complex".

The main result of this research was the creation of a well-known in our country a rhombus of competitive advantages consisting of four determinants: (1) the conditions for the factors of production, (2) the state of demand, (3) related and supporting industries, and (4) sustainable strategy, structure and rivalry, and two independent variables: government and the case, which, according to Porter, determines the competitiveness of countries in the world economy. In terms of determinants of competitive advantages of the country, you can identify which determinant needs to be improved and what is necessary for improvement.

During the investigation, it became clear that the most competitive industry didn't develop in isolation, but in collaboration with a number of related industries, thereby developed a contact between the business community, that accelerates the process of invention and innovation. Porter wrote that "...the competitive industries in nation will not be evenly distributed across the economy, but they are linked in what I call a cluster of branches of the economy of the country, linked together by various connections". (Porter, 1990)

Porter argued that industrial clusters created the best conditions for increasing competitiveness, but the government should support the development of all clusters without an exception because it is impossible to predict which cluster will develop faster and which slower. Therefore, the policy of the

government, in which the assistance is provided only to industrial clusters currently having high rates of development is misguided.

One of the main disadvantages of the term "cluster" is its unclear definition and difficulties in identifying its boundaries in space. (Пилипенко, 2005)

Thus, R. Martin and P. Sunley found 10 different definitions of clusters. (Martin et al., 2003)

Using classical definitions, we can identify the cluster the following way: "Cluster is a group of companies concentrated in a particular region, interconnected, with the inclusion of specialized suppliers of raw materials, components, products, services and organizations associated with the activities of companies (from educational institutions to specialized government agencies)". (Мария Глухова: Кластеры – нужны ли они российской экономике? [сайт]. URL <http://www.promros.ru/magazine/2012/oct/mariya-gluhova-klastery-nuzhny-li-oni-rossijskoj-ekonomike.phtml>)

Thus, the cluster consists of different types of participants:

- basic subjects - large, small and medium-sized companies;
- innovation, research and educational units (universities and other educational institutions, research companies, centers of commercialization and technology transfer, engineering companies, etc.);
- authorities of national / regional / local level, development institutions;
- unit of companies providing related services (financial institutions, consulting companies, etc.).

The key difference of the cluster from, for example, an industrial district, is that companies of cluster not only compete but also cooperate when it comes to dealing with common tasks, from infrastructure development to addressing the issues of lack of personnel with necessary qualifications. In such conditions, a key role is played by the unformalized infrastructure of interaction - social networks, the level of trust between people in the cluster.

A separate issue is the role of government in creating the cluster. The fact is that the cluster can't be created only from above, there are more efficient mechanisms of economic development at the regional level for this, such as special economic zones.

Government can actually act as a "leading and guiding" force in the development of the clusters can create a demand for products and services produced in a cluster or create favorable conditions for improving the quality of educational services, the research unit in the cluster, etc. In many countries, the government sets priorities for clusters, but not just promotes idea of efficiency of cluster into the "entrepreneurial mass".

Simultaneously, the state can act as an active investor, primarily in the social, economic, environmental, infrastructure-oriented projects, which ensure the development of clusters. There are standard formats for government support, such as some form of tax incentives.

The Chinese experience is really interesting, where the government plays an active role in the development of clusters, uses a wide range of taxes and other benefits. In China a lot of industrial clusters operate successfully. The global financial crisis has hit the traditional export-oriented development zones, but clusters, focused more on the domestic market, continue developing quite successfully.

The cluster policy is an effective tool for strong advanced and for weak regions; for traditional commodity and high-tech. This universality is not specific to support tools.

#### **Does Russia need a cluster policy?**

Cluster policy has become one of the main directions of the state policy to increase national and regional competitiveness in developed and developing countries over the past 10 years.

Currently in Russia, according to Ministry of Economic Development, there are 25 innovative regional clusters (list was approved at the end of August, 2012). And the list of The European Cluster Collaboration Platform (ECCP) includes a large group of Russian clusters in different sectors of the economy of the five regions. (The European Cluster Collaboration Platform [сайт]. URL <http://www.clustercollaboration.eu/cluster-organisation>)

Cluster policy is clearly necessary to our country, because it is inherently focuses on solving the major problems of the Russian economy, analyzed in the Economic Report "Business Russia": (Пилипенко, 2007)

First, cluster policy is primarily directed to the development of a competitive market, and the Russian economy is currently characterized by high monopolization of regional and local markets, which reduces the overall competitiveness of the economy. Thus, with creation of productive environment some weaker and backward firms could improve their competitiveness.

Secondly, cluster policy focuses on microeconomics - analysis of local markets and companies based on not inherited (natural resources, etc.), but primarily produced factors of production (highly skilled workforce, available infrastructure, etc. ).

Third, the cluster policy is based on the organization of interaction between state authorities and local self-government, business and academic institutions to coordinate efforts to improve innovativeness of production and services that promotes mutual improvement and increasing of efficiency of work.

Fourth, the implementation of cluster policy aims at stimulating development and improving of innovative capacity primarily in small and medium-sized businesses, which in the Russian economy is still poorly developed in comparison with developed and developing countries.

According to experts, the development of economic clusters in Russia will be more effective if it will follow the principle of "smart specialization" - the gain of unique competitive advantages of the region. Now clusters are a very promising point of communication with foreign investors in the field of scientific and technical cooperation. For the regions clusters are an important factor in increasing the investment attractiveness. (Кластеры в РФ: не поддаются определению, но требуют поддержки [сайт]. URL <http://ria.ru/economy/20131118/977622203.html#ixzz317Q4zoNF>)

Thus, the cluster policy is the right set of measures that can help to solve the main problems: increase in the competitiveness of the Russian economy through the development of competitive markets, increase in innovativeness of various industries, accelerated development of small and medium-sized businesses, promotion of local initiatives and greater interaction between government, business and academia.

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