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### **Clustering as a component of economic institutional reforms (on the example of Siberian region)**

Tomsk Polytechnic University

Maria Klimovich <sup>a</sup>

<sup>a</sup> Institute of Humanities, Social Sciences and Technologies, Tomsk Polytechnic University

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#### **Abstract**

The article gives the definition of the local cluster as a spatial and sectoral concentration of interconnected companies, the end product or service that is exported outside of the local territorial entity. The cluster approach of solving the problems of economic development of the Siberian region is reflected in the "Strategy of socio-economic development of Siberia till 2020". It summarizes the experience of formation of high-tech clusters in Siberia. Marked economic perspective directions of clustering region. Tomsk region is marked as a regional with a great innovative potential in forming clusters and other innovative structures. The basic problems in the way of implementation of the cluster approach and related institutional changes in the economy are identified.

*Keywords:* Cluster, regional cluster, high-tech sector, institutes of innovative economy.

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#### **1. Introduction**

Currently experts recognize formation of high-tech clusters as one of the most promising directions in the field of institutional economy transformation, foreign experience of functioning high-tech clusters is demonstrated the effectiveness of this form of organization in the conditions of innovation model of economic development.

#### **2. Clarification of the definition: local cluster**

The purpose of this article is to identify the potential existing in the Siberian regional for the implementation of the cluster approach in the economy based on the analysis and experience learned. Considering the clusters in a regional format, it is appropriate to talk about the local clusters. If the cluster is in the most general sense foreign researchers defined as the spatial and sectoral concentration of interconnected companies, the local cluster is a spatial and sectoral concentration of interconnected companies, the end product or service that is exported outside of the local territorial entity [5]. The need for such clarification at the local level due to the fact that the main (though not the only) effect, which the cluster brings to area, is the inflow of financial resources. That inflow of financial resources in the local economic system determines the intensity of its economic development, standard of living and other important characteristics. Clarification

of the definition of the cluster explains the reasons of the interest of local authorities in the development of clusters, and above all, high-tech clusters.

### **3. Implementation of the cluster approach in the Siberian region**

The cluster approach of solving the problems of economic development of the Siberian region is reflected in the "Strategy of socio-economic development of Siberia till 2020" [2] developed in the Siberian Federal District. The strategy provides the formation of high-tech sector through the creation of innovation and technology clusters (for example, in Novosibirsk - Instrument cluster, power electronics, biomedical, IT-industry, in Tomsk - information, telecommunications and nanotechnology, and biotechnology cluster, in Irkutsk - nanotechnology in Krasnoyarsk - solar energy, communication and navigation systems, including space and ground segment, and others).

Siberia's development strategy is designed with real financial base, it takes into account projects already carried out, as well as investment plans of large and medium-sized companies. The analysis of the socio-economic trends in Siberia, Russia, and on the world stage was made, assessment of promising sales markets was also made. We take into account the possibility of funding from the state, regions. Investments from the federal government are also required firstly in the large infrastructure projects that private business can't afford, but they can draw on one ruble of government funds five to seven rubles of private investment.

The implementation of the planned projects in the document should contribute to the solution of resource, energy, technology and population security problems in the Russian Federation and Siberia, and provide national strategy interests of Russia in the world community. Thus, Siberia as a geography and resource center of the country will take its rightful place in the territorial division of labor.

Many of the large-scale projects announced in the Strategy of development of Siberia until 2020, has now been already realizing. Thus, the concept of creating a special agricultural area "Integrated development of the Altai Ob" includes a set of projects: deep wheat processing and ethanol production, the construction of modern cattle-breeding complexes, the release of a caterpillar tractor "A-600". Other large-scale projects implemented in the Altai Territory in the tourism sector. In the industry of the Krasnoyarsk Territory there are prerequisites for the creation of such clusters as fuel and energy, metallurgical, oil and gas, machine building, timber and paper, agribusiness. Clusters of transport, chemical and Innovation and Technology (the new cluster for the region) may be formed as a serving clusters. Omsk region also is aimed to develop modern technologies and modernization of the economy. The new industrial platform involves the creation in the region four clusters at the same time: biotechnology, petrochemical, forestry and silicon. An important role in the solution of national tasks could play a scientific, educational and industrial potential of the Novosibirsk region. About ten projects are already developed, they all are already financed and will be fully implemented in two years. For all of these projects expected to receive high-quality results.

### **4. Innovative development of Tomsk region**

One of the leading scientific and educational centers in Russia is Tomsk region. The largest universities of Tomsk are in the top five Russian universities. Research university activities and research institutions located in the Tomsk region, are aimed at long-term strategic directions such as: new materials and nanotechnology, biotechnology, information technology, medical devices, telecommunications, and precision instruments, petrochemicals. The contribution of scientific and

educational complex in GRP exceeds 7%. Tomsk regional program of innovative development has been realizing since 2003. In 2006 the number of organizations involved in innovation activities increased by 38 and totaled 219. The development of the innovation sector as a whole was characterized by a significant increase (18%) of the volume of innovation products our own production, works and innovative character of services [1].

The intellectual potential of the region in a new circumstances is considered as the main competitive advantage of the Tomsk region and its main strategy resource for development in the region economy to an innovative type based on integration of education, science and industry. The proof of this potential was the victory of the Tomsk region in 2005 in a government tender for the creation of the Special Economic Zone of technical innovation type, which was scheduled to be formed on the territory of two plots with a total area of 197 hectares. As perspective directions of development in the SEZ is scheduled information and communication and electronic technology, production of new materials and nano technology as well as biotechnology and medical technology [4].

The first area in Tomsk SEZ was established on the basis of JSC "Tomskneftekhim" in April 2006. Currently mainly the construction of engineer-term and transport infrastructure is finished, construction of industrial buildings is going by investors and residents. Residents will be more than 65 companies, including "Sibur", "VAVS", "Fazotron" NPO "Virion". By 2015 are provided more than 10 thousand workplaces [3]. In addition in the Tomsk region in recent years has been formed regional cluster operating in the interests of the oil and gas complex of Western Siberia. It includes universities, research and design institutes and technical project institutes, engineering and construction companies, small science companies. Formation of the cluster is carried out during the execution of the program of cooperation of enterprises and organizations of Tomsk with most cereal-governmental extracting and transporting oil and gas companies working in the Tomsk Region.

## 5. Conclusion

Nowadays in the Siberian region was made the seriously foundation for clustering of economy. Evidence of this is a significant number of well-functioning high tech-clusters and a clear awareness of the importance of these institutions for innovative economy in ensuring of competitive advantage of a number of economy sectors reflected in the "Strategy of socio-economic development of Siberia until 2020".

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