

NEO-INDUSTRIALIZATION OF FORMER INDUSTRIAL REGIONS OF RUSSIA (THE CASE OF “TITANIUM VALLEY”)

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Abstract

Complex transformational processes in the Russian economy in the XX century, which exited a 70-year long experience of a planned-administrative economic system and transitioned to the market model, have led to unprecedented experimentation with the world economy. Having introduced the principles of a market economy, Russia has found itself subjected to the twin pressures of globalization and neo-industrialization, the results of which have proven to be very effective for its industrial structure. Globalization has expanded state borders and opened the gates for Russian entrepreneurs to conquer the world oil and gas markets, ferrous and non-ferrous metals sectors, engineering and chemical industries. The Urals region of Russia is developing in a very intensive way. The “Titanium Valley” production cluster was formed in this region. This article examines some of the special features of the functioning of this cluster.

Keywords: *cluster, titanium, globalization, transition economies, neo-industrialization, post-communist economies.*

The process of globalization has had a dramatic influence on the development of the world economy. Commercial production, the development of financial markets, the distribution of the same consumer goods across countries, and the considerable movement of the labour force have all spread beyond national borders. Amongst these factors, independent transnational capital can be singled out. Based on the achievements of scientific and technical progress, globalization has opened new horizons for development and multi-level cooperation between different countries and regions. The ever-increasing pace of direct foreign investment together with advanced technologies, management and professional marketing is accelerating this process.

Transnational corporations are often named as the main regulators of production capacities' location and the development of the service sphere on a global scale. Global actors have worked out effective strategies for entrepreneurship and constructed new business structures for production with high added value, coordinating the production process, financial and commercial activities of subsidiaries world-wide under the auspices of

international business cooperation and developing markets in separate regions and the world of business.

As a result, globalization has led to a high level of competition in places of maximum concentration of production capacity in specific areas of the industrial world. Nowadays, specialists in economic geography and regional economics with increasing frequency, state the existence of rivalry between world industrial regions for foreign direct investment as global actors. As a result, we can speak about the phenomenon of “neo-industrialization”, with its simultaneous processes of transformation and diversification of former industrial regions. Innovative developmental research in the XX-XXI centuries showed that the transfer to a new “technological vector” of development would be impossible without the support of so-called “cluster policies”.¹ If we take the definition given by foreign experts, we can stress the fact that “clusters” and “cluster policy” can be named as the “phenomena” of intensive acceleration and development of countries and world regions. The genesis and evolution of “Silicone Valleys” and “Bioengineering valleys” has proven that strategies for the economic development of prosperous regions are realized through implementing cluster policies. Cluster policies can frequently become tools for the innovative re-positioning of particular regions under conditions of global rivalry.

Russian scientists began to show an interest in clusters only in the first decade of the XXI century, later than their overseas colleagues. Theoretically speaking, we should note that the word “cluster” has lost its original meaning and has been transformed into a brand, used by local authorities for raising investment attractiveness and changing the image of a particular region.

Clusters are the means for spatial regional development. The use of this tool corresponds to world trends of cluster development, such as the connection of industrial activity to world networks, the intensification of the role of transnational companies, and the priority collaboration of cluster enterprises with national and global delivery chains.

As far as the cluster policy model of different countries is concerned, we can distinctly observe diverse vectors of the so called “continental” policy of cluster development (which is typical of Japan, Sweden, France and Italy), where the state worked through a complex system of controls, starting with the choice of priority clusters and finishing with the financial support of developing strategies and programs and key factors of successful functioning, and the “Anglo-Saxon” model (which is used in the USA, Great Britain and Australia). Under this model, genesis and cluster evolution are considered to be the result of market competition with the obligatory presence of spin-off processes from global entrepreneurs who are able to start up their own business.

The accepted innovative conception for the long-term economic development of the Russian Federation (named “Strategy - 2020”)² takes into consideration the necessity to construct territorial clusters in various Russian federal regions [1]. We can include “Titanium Valley” in the row of already famous projects such as “Skolkovo” and “Zhukovsky” which have been developed in the Moscow area. “Titanium Valley” is a high-technology cluster within the space and rocket sector, located in the Sverdlovsk region.

With the importance of natural resources as a factor in the development and allocation of production capacities in world industry and particular countries steadily decreasing, their

¹ We define the term “cluster policy” in a traditional way as a set of activities aimed at raising country competitiveness through cluster development stimulation. See: Regional development and regional policy in Russia during the transition period/ S.S.Artobolevsky, Moscow State Technical University, Moscow, 2011, page 195.

² “Strategy 2020” is a development perspective Russian program which was launched in 2008 and supported by social organizations. This strategy throws light on priority aspects of development in different spheres of economic and social life of the country.

influence on the allocation of new organizational and production models, social factors and public premises is becoming more significant. Different interregional prices and the professional qualifications of the staff have always been extremely important, but currently, this factor is being taken into account to an even greater extent. Capital now flows beyond national borders influencing the allocation of production capacities all over the world, including such previously closed regions as the Central Urals in the Russian Federation.

There follows a detailed breakdown of the situation in one of the Ural regions.

When selecting the territory for forming the “Titanium Valley” cluster, Russia’s leading enterprise in this sector, “VSMPO-AVISMA”,³ was singled out (this enterprise is responsible for 100 % of domestic titanium and titanium composites production and 20 % of world production) [2]. This enterprise is at the heart of this “proto-cluster”. During the era of the planned-administrative economy it was constituent in the military-industrial complex, and under the terms of the process of conversion, “VSMPO-AVISMA” became a competitive enterprise possessing unique resources used in titanium production, with a wide network of subcontractors and customers.

The investment attractiveness in locating high-technology manufacturing for foreign and local space engineering producers on the grounds of this enterprise is defined by the availability of existing markets, technological facilities for developing vertically integrated production and its corporate culture. In case of unfavourable macroeconomic trends in the sphere of titanium and magnesium production, the potential resources of the region give rise for hopes of possible diversification of the “Titanium Valley”.

The progressive development of the appointed enterprise in the first half of the XXI century was a necessary condition for the positioning of “VSMPO-AVISMA” by the authorities in the Central Urals as the “growth pole” in this former industrial region with the aim of additional investment inflow from potential investors from the international space and rocket sector [5].

Touching again on the historical process of creating this proto-cluster, the “Titanium Valley” was formed on the territory of Verkhnyaya Salda district in Sverdlovsk region with the aim of attracting foreign investors in 2005 to this special economic zone, which is located 180 km from Yekaterinburg between the cities of Nizhny Tagil and Verkhnyaya Salda.⁴ Its aim is to attract huge world producers from innovative industries, to develop new modern high-technology enterprises and conditions for the further integration of the Russian economy into the world economy⁵. Enterprises producing more than 40 % of all metallurgical products in the Russian Federation are located around the “Titanium Valley”, and the government intends to invest about 16.5 billion rubles in this infrastructure, creating a total volume of investment of 64.5 billion rubles in 2020. According to the agreement all participating companies are only permitted to function as industrial producers, and must invest 3 million Euros into the project during the first three years. Several strategies of the “Titanium Valley”, connected with the development of raw materials base of titanium production, are planned for implementation:

1. The raw materials base development will be aimed at the advancement of titanium and alloyed composites⁶.

³ VSMPO – Verkhnyaya Salda metallurgical production association (city of Verkhnyaya Salda, Sverdlovsk region); AVISMA – titanium and magnesium plant (city of Berezniki, Perm region).

⁴ A special economic zone is a territory with a legal position, customs and tax preferences for entrepreneurs, developed industrial, business and social infrastructure.

⁵ Launching the project in the Sverdlovsk region will create more than 17000 new jobs.

⁶ In the first instance, attention will be paid to the Kachkanar fields of titanium, magnesium, tungsten and molybdenum ores which contain alloying metals.

2. Production development of semi-finished titanium goods for aviation, medicine as well as wiring and thin-walled wrought pipes production from titanium composites.
3. Component production for the aircraft industry,⁷ including the manufacturing of spare parts for aircrafts and other forms of air transport.
4. Fabricated production assumes the creation of a machine-building complex which will be involved in making titanium combined equipment for chemical engineering, nuclear power engineering, mechanical engineering and nonferrous metallurgy.

As a work incentive, residents of the “Titanium Valley” special economic zone receive:

- guaranteed provision of production, social, business and cultural infrastructure;
- personnel training for professional activity;
- plots of land⁸.

The unique nature of “VSMPO-AVISMA” is quite well-known in the world titanium and magnesium sectors. In intense competition with American, Canadian and Japanese titanium and composite producers, this corporation is the biggest producer of pressed large-sized items of aluminum composites, semi-finished goods from alloyed steel and nickel-based heat-resistant composites. . The corporation exports 70 % of all its titanium products, with 30 % used in the domestic market. The competitive advantage of the “Titanium Valley” cluste, is considered to be the concept of development which is based not on the traditional “Greenfield” model, whereby available empty spaces with infrastructure is inhabited by residents, but, vice versa, based on the basis of a prosperous enterprise and attracting companies already involved in titanium projects.

Thus, the “Titanium Valley” cluster, according to its evolutionary type, should be classified as a regional industrial cluster which represents a group of neighbouring interdependent companies and organizations linked in titanium and composites production and spare parts for space engineering. The synergy of these companies in terms of market competition leads to a general increase in efficiency promotes innovation and intensifies the international, transnational division of labour.

The cluster policy of the “Titanium Valley” represents a whole complex of measures carried out by federal and regional authorities, aimed at cluster identification and implementing the general policy of cluster support in the country and in the region.

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⁷ Special attention to the cluster is being paid by UAC (United Aircraft Corporation), which plans to have a routine production of the “Super Jet 100” passenger aircraft in Komsomolsk-on-the-Amur.

⁸ Average price for lots in a special economic zone “Titanium Valley” is 75000 rubles for renting hectares, 250000 rubles per hectare if purchased [2011]. If foreign goods are imported on the territory of “Titanium Valley”, VAT is not paid.

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