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Neoindustrialization of Former Industrial Regions of Russia: The Example of “Titanium Valley”¹

Abstract: Russian economy in the 20th century experienced complex transformational processes. Having introduced the principles of a market economy, Russia has found itself under pressures of globalization and neoindustrialization, which have had an effect on the nation’s industrial structure. Globalization has expanded state borders and opened the gates for Russian entrepreneurs to conquer world markets in oil and gas, ferrous and non-ferrous metals, engineering and chemical industries. The Urals region of Russia is developing in a very intensive way. The production cluster known as “Titanium Valley” was formed here. This article throws light on some of the special features of its activity.

Key words: cluster, titanium, globalization, investment

The process of globalization has had a dramatic influence on further development of the world economy. It has led to the spillover of commercial production across national borders, the development of financial markets, distribution of the same consumer goods in various countries and movements in the labor force. Independent transnational capital can be marked out. Based on the achievements of scientific and technological progress, globalization has opened new horizons for developing multi-aspect cooperation between different countries and regions. An increase in foreign direct investment together with advanced technologies, management and professional marketing has accelerated this process.

Multinational corporations are often named as the main regulators of the location of production capacity and the development of service industries on a global scale. Global actors have elaborated effective strategies for entrepreneurship, set up new business structures for production with high added value. They have coordinated production processes, financial and commercial activities of world-wide subsidiaries under international business cooperation and developed market conditions in specific regions and on a global scale.

As a result, globalization has led to a high level of competition in places of maximum concentration of production capacities in particular industrial areas of the world. Nowadays, specialists in economic geography and regional economics can point to the existence of

¹ The joint project with Dr. Elena Givental (University of California, Berkeley, the USA) and Prof. Irina Rodionova (People’s Friendship University of Russia, Moscow).

rivalries between world industrial regions for foreign direct investment. As a result, we can speak about the phenomenon of “neointustrialization” with the simultaneous processes of transformation and diversification of former industrial regions’ development. Innovative developmental research in the 20th-21st century has demonstrated that the transfer to a new “technological vector” of development would be impossible without the support of the so-called “cluster policies.” We define the term “cluster policy” in a traditional way as a set of activities aimed at raising national competitiveness through cluster development stimulation (see: Artobolevsky 2011: 237). Taking the definition given by foreign experts, we can stress that “clusters” and “cluster policies” can be identified as a phenomenon of intensive acceleration and development of national and world regions. The genesis and evolution of the “Silicone Valley” and “Bioengineering Valley” has shown that strategies of economic development in prosperous regions have been realized by means of implementing cluster policies. Under the conditions of international competition, cluster policies can be a tool for the innovative strategic positioning of particular regions.

Russian scientists started to show their interest in clusters only during the first decade of the 21st century, considerably later than their overseas colleagues. From a theoretical perspective, we should say that the word “cluster” has lost its original meaning and has evolved into a brand which is used by local authorities for raising investment attractiveness and changing the image of the particular region. Clusters are a vehicle for spatial regional development. The use of this tool corresponds to world trends that include the connection of industrial functioning to transnational networks, intensifying the role of multinational companies, priority collaboration of cluster enterprises with national and global delivery chains (Lavrikova 2008).

The genesis and evolution of clusters can be viewed as a result of market rivalry with the obligatory presence of spin-off processes from global actors and entrepreneurs who are able to start up their own business. We can distinctly observe contrasting vectors between the “continental” policy of cluster development (which is typical of Japan, Sweden, France and Italy), where the state worked through a control complex, 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” pattern model (which is used in the USA, Great Britain and Australia). The accepted innovative concept of long-term economic development in the Russian Federation (known as “Strategy 2020”)² takes into consideration the necessity to form territorial clusters in various Russian federal regions (Titanium Valley, November 3, 2012). We can include “Titanium Valley” alongside such already famous projects as “Skolkovo” and “Zhukov sky” which can be found in the Moscow area. “Titanium Valley” is a high-technology cluster within the space and rocket industries located in the Sverdlovsk region which is considered to be Russia’s administrative territory in the Urals Federal District, with the center in the city of Yekaterinburg. The Urals is one of the oldest resource-based industrial regions in Europe dating back to the beginning of the 18th century.

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.

As the importance of the natural resources factor in the development and allocation of production capacities in the world and national industries is steadily decreasing in general, its 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 employees have always been extremely important, but at present, this factor should be taken into account to a greater extent. Capital crosses 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 (Bazhenova 2009).

We can outline some detailed characteristics of the situation in one of the Ural regions. In selecting the “Titanium Valley” for the formation of the cluster, we single out the leading enterprise of this sector in Russia, “VSMPO-AVISMA” – VSMPO – Verkhnyaya Salda Metallurgical Production Association (city of Verkhnyaya Salda, Sverdlovsk region); AVISMA – Titanium and Magnesium Plant (city of Berezniki, Perm region), 20% of world titanium production or 100% of titanium and titanium composites domestic output (*Titanium Valley*, November 3, 2012). VSMPO-AVISMA occupies the central part of this “proto-cluster”. During the era of the planned-administrative economy, this was part of the military-industrial complex, while under the process of conversion that was carried out during the transition to a market economy, it became a competitive enterprise focused on titanium production and has since developed a wide network of subcontractors and customers.

The investment attractiveness of 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 corporate culture. The region’s resource potential gives reason to believe in the future diversification of the “Titanium Valley”, should there be a downturn in macroeconomic trends in of titanium and magnesium production.

The positioning of “VSMPO-AVISMA” by the Central Urals authorities as “a growth pole” in the former industrial region with the aim of additional investment inflow from the potential investors of world space and rocket complex was down to the progressive development of the enterprise in the early part of the 21st century (Pyatinkina, 2008).

The process of creating this proto-cluster requires some historical explanation. In order to attract foreign investors, the special economic zone³ “Titanium Valley” was created in 2005 in the Verkhnyaya Salda district of Sverdlovsk region. This zone is located 180 km from the regional capital, Yekaterinburg, between the cities of Nizhny Tagil and Verkhnyaya Salda. Its aim was to attract the largest industrial producers to organize new, modern, high-technology enterprises and conditions for further integration of the Russian economy into the world economy (Launching the project in the Sverdlovsk region will bring more than 17,000 new workplaces). Enterprises located near the “Titanium Valley” are responsible for more than 40% of all metallurgical goods. The state planned to invest approximately 16.5 billion rubles in this infrastructure while the total volume of investment by 2020 is set to be 64.5 billion rubles. According to the agreement, companies may only function as industrial producers, and furthermore, they must invest 3 million euro in the project during the first three years.

³ A special economic zone is a territory with a legal position, customs and tax preferences for entrepreneurs, developed industrial, business and social infrastructure.

The implementation of several strategies of the “Titanium Valley” connected with the development of raw materials base of titanium production has been planned:

1. Raw materials base development will be aimed at advanced sources for titanium and alloying composites. First of all attention will be paid to 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 welding wire manufacturing and thin-walled wrought pipes produced from titanium composites.

3. Component production for the aircraft industry (special attention is paid by UAC – United Aircraft Corporation, which plans to have a routine fabrication of “Super Jet 100” passenger aircraft in Komsomolsk-on-Amur), including manufacturing of spare parts for aircraft and other machines.

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.

For effective work, residents of a special economic zone “Titanium Valley” get:

– guaranteed provision of social, business and cultural infrastructure;

– personnel training for professional activity;

– necessary plots of land (average price for plots in the “Titanium Valley” Special Economic Zone is 75,000 rubles for renting one hectare, 250,000 rubles per hectare if purchased – 2011. If foreign goods are imported on the territory of “Titanium Valley”, VAT is not paid).

The particularities of “VSMPO-AVISMA” are well-known in the world titanium and magnesium sectors. Under conditions of intense competition with American, Canadian and Japanese titanium and composites producers, VSMPO-AVISMA is the biggest producer of large-sized, pressed items of aluminum composites, semi-finished goods from alloyed steel and heat-resistant nickel composites. The corporation exports 70% of all its titanium products, with 30% retained for the domestic market. The competitive advantage of the “Titanium Valley” cluster is considered to be the concept of development which is based not on a traditional “Greenfield” model, whereby the available empty area with the infrastructure is currently inhabited by residents, but, vice versa, it is based on an already prosperous enterprise through attracting further companies involved in the titanium sector.

Thus, the “Titanium Valley” cluster, according to its evolutionary type, can be classified as a regional industrial cluster which represents the group of neighboring 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 rivalry leads to an increase in efficiency, promotes innovation and intensifies international and transnational division of labor.

The Sverdlovsk Region government is trying to establish a favorable business climate by offering reduced taxes in this special economic zone and increase the investment promotion. It is strongly believed that localized zones of economic activity may significantly improve regional economic indicators and job creation. The Titanium Valley is an industrial

model, based on a manufacturing enterprise and sponsored by federal and regional governments in their effort to promote cluster policies.

The cluster policy of the “Titanium Valley” represents a 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. The analysis of Titanium Valley’s evolution may become a valuable case study for regional performance in transition economies.

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