

Prerequisites of emergence of the theory neo - industrialization and its applied opportunities

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Abstract— The purpose of article consists in reasons for need of formation of the theory neo - industrialization as one of the modern economic theories.

Achievement of this purpose assumes the solution of a row of scientific tasks:

- establishment of objective premises of formation of the theory neo - industrialization;
- disclosure of application-oriented opportunities of the theory neo - industrialization in relation to the system of the Russian economy.

Need of reconstruction on a new technological basis of an industrial complex of system of the Russian economy causes need for formation of the theory neo - industrialization. Act as premises of this process: negative effects of corrupting of an old industrial kernel of system of the centralized economy; overestimation of values in economic science and its internal conversion in the conditions of the modern crisis situation. The method of this theory is created on the basis of a synergy paradigm, in line with the systems concept, with attraction of cognitive opportunities of the theories demanded in a study of a phenomenon neo - industrialization.

The scientific novelty of article consists in receiving the following elements of an increment of scientific knowledge:

- objective premises of formation of the theory neo - industrialization are set;
- application-oriented opportunities of the theory neo - industrialization are opened and realized: a) the complex of the principles of formation of the new industrial policy demanded at the present stage of development of the Russian economy is reasonable; b) development of an algorithm of conversion of depressive industrial zones of the large cities is realized.

Keywords—*neo- industrialization, an industrial kernel, industrial zones, a human factor, economic transformations*

I. INTRODUCTION

The need to establish the prerequisites for the formation of the theory of neo-industrialization, the development of its foundations and the disclosure of its applied capabilities is due to a number of interrelated objective circumstances. The public request for the formation of this theory is due to the fact that the Russian economy is faced with the challenge of post-industrial transformations, without having an industrial basis sufficient for their productive implementation.

The need of restoration of competitive positions on many directions of development of industrial activity, the need for overcoming the heated lag in productivities of social activities, a complex of problems of technological updating of national economy – are that objective circumstances thanks to which this theory is demanded.

II. MATERIALS AND METHODS

The objective processes that determined the need to recreate the domestic industry on a technological basis are investigated in the works of S. Glazyev [1], S. Gubanov [2], R. Dzarasov [3], D. Lvova [4], D. Sorokin [5] and others.

The development of the subject area, method, paradigm and principles of new directions in the development of economic science are devoted to the work of A. Buzgalin [6], A. Kolganova [6], O. Mamedova [7], R. Nureyev [8], V. Ovchinnikova [9] and others.

To questions of transition to the sixth technological way, digitalization, innovative developments in the industry works of a number of foreign authors are devoted [10, 11, 12, 13].

The article uses the methods of systematic, monographic, structural and logical research. Each of the methods will be used based on functionally abilities.

To begin with, we will try to determine the objective processes that give rise to the prerequisites for the formation of the theory of neo-industrialization in the system of economic science:

- the process of market transformations taking place in the system of a centralized economy;
- the processes of profound technological changes and related socio-economic transformations occurring during the formation of a qualitatively new economy (knowledge economy);
- the processes of internal transformation of the system of modern science, giving rise to new theories.

Based on these processes, we will establish the objective prerequisites of the formation of the neo-industrialization theory that we are interested in.

A. Negative effects of destruction of the old industrial core in the system of the centralized economy in the course of market transformations. They manifest themselves at the start of market transformations and accumulate as they deepen, providing new sets of empirical data.

We will reveal the main totality of these data:

- forced retraining of the human factor of the industrial complex. It provides an array of data on the loss of a significant part of the resources from which the intellectual capital of the new economy could be formed;
- the gap of old economic ties. It provides an array of data on the loss of a significant part of the creative potential of an economic system, which may be irreplaceable for it;
- technological dependence on foreign equipment manufacturers and external generators of new technological ideas. It provides an array of data on the distance of the economic system from the core of world development and its pushing to the remote periphery;
- reduction of the average level of human factor training. It provides an array of data on the degradation of the economic system and its alienation from the strategic perspective of leaving the periphery zone into which it has gotten thanks to the market transformation;
- reducing the share of innovative products in GDP. It provides an array of data on a sharp decline in the levels of competitiveness and investment attractiveness the economy system;
- reducing the competitiveness of the economy system. It provides an array of data on the unsuitability of the implemented model of market transformations for this economic system;
- reducing of the growth of the economic system, strengthening of the processes of stagnation in it. It provides an array of data on the narrowing of the resource base for the implementation of any transformations.

Assessing the above negative effects, we note that the larger the scale and significance of these effects for the national economy system, the higher the level of motivation of

research participants to study the theory of neo-industrialization.

B. The need for the formation of a qualitatively new industrial core, capable of providing processes of profound technological changes and the associated socio-economic transformations. It can be realized based on the actively functioning industrial core of the economic system, which was previously destroyed. It should be noted that the complexes and domestic industries practically did not come out of the crisis. This allows us to formulate a conclusion about the predominance of negative effects that form new data arrays for economics.

B. Revaluation of values in the course of the internal transformation of economic science in the conditions of the current crisis situation. This prerequisite of the formation of the theory of neo-industrialization, forms gaps in the development of the existing economic theory. We will explain this judgment. The basic support element was removed from the old structure during the transformations, which led to the destabilization of the interaction of the remaining elements. This problem can be solved only by creating a qualitatively new design, the basic element of which should be the theory of neo-industrialization.

III. RESULTS

During the developing a new industrial policy, in our opinion, it is necessary to focus attention on its fundamental principles.

A. *The principle of reliance on the real results of the coordination of economic interests of the subjects of the economic system.* This principle involves the use of a public consent platform for the development of a new industrial policy.

B. *The principle of realization of the creative potential of the economic system, based on the relation of power-property, in the process of reconstruction and development of the industrial core of this system.* This principle involves the use of the unique capabilities of the economy, based on the power-property relationship, in concentrating resources in those areas of development that it has recognized as priorities. These opportunities have been repeatedly demonstrated, and in critical situations, to which this economic system is perfectly adapted.

C. *The principle of ensuring the proportionality of borrowing institutions and organizational innovations in the development of industry to the possibilities of mastering them by the institutional environment and organizational culture of the industrial complex of the national economy.* This principle implies the rejection of the excessive transfer of alien institutions and organizational innovations that were formed in the economic systems of other countries and are not compatible with the institutions and

organizational mechanisms that have grown in the industrial complex of the national economy.

D. The principle of consistent advancement of the promising goals on a new technological basis of recreating the industrial core of the economy system. In our opinion, this principle should be based on the key ideas of the theory of neo-industrialization and may involve the development of a national project “Neo-industrialization of the Russian economy” for a period of 10-15 years. This principle implies state support for the development of the theory of neo-industrialization and the practical implementation of its conclusions and recommendations in the process of reconstructing the industrial core of the economy system on a new technological basis.

E. The principle of generating a set of basic ideas of industrial policy on the basis of a system analysis of the advanced perspective goals put forward to recreate the industrial core of the economy. This principle involves focusing the state’s attention on the formation of the ideological core of a new industrial policy, as well as state support for the creation of scientific and practical centers of neo-industrialization. We believe that for the successful implementation of these transformations, a new format of science and education policy is needed, coupled with a policy in the field of neo-industrialization.

F. The principle of creating a set of territorial cluster neo-industrial bridgeheads. For the formation and development of such cluster bridgeheads, the use of resources of accumulated national rent, as well as funds of large corporations of the fuel and energy complex, is claimed.

IV. DISCUSSION

Next, we consider the practical possibilities of the theory of neo-industrialization in relation to the development of regions. Market transformations in the Russian economy led to the emergence of crisis zones on the industrial outskirts of many large cities. It was there that in the conditions of a centralized economy developed industrial-type complexes. In our opinion, the neo-industrial transformation of these zones should be based on the possibilities of public-private partnership and municipal authorities and private business. We will argue our assumptions.

As a rule, crisis zones on the industrial outskirts of large cities are located in a development space densely filled with infrastructure, economic and social communications. It is here that the highly qualified human factor of the city is concentrated. In order to adapt organizational mechanisms to systemic changes, it is necessary to use the opportunities of public-private partnership.

Opportunities for public-private partnerships were used in the transformation of crisis zones on the industrial outskirts of large cities, in several cities in Europe and the USA. For example, they turned into qualitatively new business districts: the metallurgical and port zone of Bilbao (Spain), the outskirts of Paris Defense (France), the municipal district of

Dockland (Great Britain). In a number of cases, systemic transformation has affected the entire system of medium-sized cities - Temzmit Town (Great Britain), Linz (Austria).

The specifics of the Russian economy presupposes the existence of objective circumstances complicating the problem of transformation:

- the presence of crisis zones in the central part of the urban space, the need for urgent withdrawal of industrial enterprises from it;

- the crisis situation in the urban transport infrastructure, due to its disintegration into various and poorly connected fragments;

- the presence of abandoned parts of urban space that have fallen from the general system of the city;

- the need for renovation of entire residential areas that do not meet modern requirements;

- previous development of urban space out of touch with formally adopted master plans and development programs, etc.

These circumstances are inherent in the economic space of the city of Krasnodar. Using this city as an example, we are exploring the possibility of transforming crisis zones.

In a centralized economy, the structural organization of the economic space of the city of Krasnodar became asymmetric:

- small industrial and associated logistic zones were formed in the city center. The infrastructure in them was subordinated to the functional filling of the urban space, and the dwellings were under the pressure of unfavorable factors of production activity;

- on the periphery of the city were large undeveloped territories, and the embankment of the Kuban River was poorly equipped. In the north and southeast of the city there were large industrial zones in which about 75% of the industrial potential was concentrated.

Market transformations exacerbated the structural problems of the development of the city. All the large industrial enterprises established during the Soviet period ceased their activities, and the vacant industrial sites formed a zone of depression. The largest industrial zone in the north of the city, where the complex of industrial functioned of instrument-making and electronic industry previously operated, was freed up for further transformation.

In the early 2000s. site of the northern industrial zone of Krasnodar was filled with housing complexes, shopping and shopping centers. These transformations completely deprived of its elements of an industrial nature. As a result, the city, which was the industrial center of the region, lost most of its industrial potential. The released staff, possessing industrial competencies and organizational culture, was not in demand for its training profile. We believe that this transformation did not strengthen the city in socio-economic terms, but weakened it.

Before 2008-2009 in Krasnodar, a set of several large projects was developed to transform the structural organization of urban space. The scenario of the transformation of the city of this period exactly repeated the scenario of the early 2000s. The authorities have been tasked with the development of new territories on the outskirts of the city. This was supposed to be carried out by transferring lands of an urban area to a category of agricultural land. These plots of land were released after the cessation of activities of a number of suburban farms. In 2006, a project was developed to renovate a number of residential areas in the city center. It was planned to attract strategic investors, whose funds would improve the infrastructure and housing conditions for people. The specified project by the decision of the authorities of the region and the city received the status of a priority investment project of the municipal entity Krasnodar city. In 2009, the St. Petersburg Urban Institute developed a project for the reconstruction of the central zone of Krasnodar. The project included the systemic transformation of 310 quarters, of which about 200 quarters were agreed by the regional and city authorities with investors.

However, the global recession 2008-2009. made its own adjustments. Many of the planned changes in the framework of this project have not been implemented. Further stagnation of the economy and the budget constraints associated with it led to the revision of the project itself and the folding of many of its components.

A study of works on neo-industrialization has shown that it is necessary to choose the directions for the implementation of neo-industrialization based on the preserved infrastructure, the human factor and the organizational culture of the industry. This will allow to extract the optimal key effects for the economy of a large city. We highlight the possibility of neo-industrialization in the crisis zone of Krasnodar. Such a platform could be a machine-tool plant named after G. Sedin, in whose territory the industrial infrastructure, a part of qualified personnel and elements of the organizational culture of industry were preserved.

We believe that for the implementation in the crisis zones on the industrial outskirts of large cities of neo-industrialization it is necessary to use a specific algorithm. We propose such an algorithm, based on previously obtained research results.

The main stages of this algorithm are presented below:

Stage 1 - Accounting and evaluation of the existing prerequisites for the implementation of the non-industrialization in the selected zone, including the budgetary possibilities of the city, territory, state.

Stage 2 - Development of a project for the implementation of neo-industrialization in the selected area of the city. Stage 3 - Conclusion of strategic agreements with private investors interested in this project.

Stage 4 - Personnel training for the recreated industrial complex.

Stage 5 - Marketing of the ongoing project, promotion of promising products to the markets.

The main stages of the presented algorithm are the accounting and assessment of the existing prerequisites for the implementation of neo-industrialization in the selected zone. At the same time, it is necessary to take into account the budgetary possibilities of the territory, as well as the conclusion of strategic agreements with private investors interested in the implementation of the project. Estimating the available prerequisites it is necessary to rely on independent and correct judgments of experts.

Strategic contracts with potential private investors in the project are aimed at including them in the process of non-industrialization. For this, it is necessary to harmonize economic interests for the long term. For the sustainability of such contracts, property guarantees are demanded that can be formed on the basis of a public-private partnership.

Public-private partnership acts as an adequate basis for the implementation of projects of neo-industrialization in the crisis zones of industrial outskirts of large cities. It allows you to align the interests of project participants and protect them from large-scale risks arising in crisis conditions. When implementing projects of non-industrialization, the following options of public-private partnership can be implemented:

- the option of interaction between the city and the territory with a private operator in the transformation of crisis zones, where several large owners of land area, infrastructure facilities and remain industrial assets are represented;

- a variant of cooperation of several participants in the project implementation in the presence of a complex structure of relations of ownership of land area, infrastructure facilities and balances of industrial assets.

In the first option, there is a clear separation of areas of responsibility for the results of the project between a private operator, city and territory, provided that the functions of general control over the public partner are fixed.

In the second option, it is difficult to ensure a clear separation of areas of responsibility for the results of the project, therefore, in this case, a public-private partnership leads to the creation of a special company that is entrusted with the project. The interests of the state and private business are ensured here by distributing shares in the capital of the company operating the neo-industrialization project.

Concluding the presentation of the algorithm, we will highlight the expectations of potential beneficiaries of the projects for the transformation of the crisis zones of industrial outskirts of large cities. Project operators can count on the provision by territorial and urban authorities preferences, which fully or partially compensate for such risks: tax benefits; organizational support, etc. This circumstance makes it possible to operate projects with a fairly attractive profitability. Business also receives in the form of neo-industrialization projects a means of ensuring long-term guaranteed participation in a profitable business. This is very

significant in the conditions of protracted stagnation in the domestic economy.

When implementing non-industrial projects, the authorities can ensure the growth of many parameters of the quality of life, as well as ensure the increment of the investment attractiveness of the relevant socio-economic systems.

By participating in the implementation of neo-industrialization projects in the crisis zones of large cities, federal government bodies benefit from the solution of complex problems despite the fact that they have previously required to allocate significant funds to protect the population. In addition, in the form of neo-industrialization projects, the state receives a tool for productively solving complex tasks, which has the potential for expanded use, as well as a tool for regulating the investment attractiveness of regional economy systems.

V. CONCLUSIONS

The article substantiates the conclusion that a qualitatively new industrialization, or neo-industrialization, is in demand, the content of which is the re-establishment of the industrial core of the economy system capable of being responsible for the development of this system, providing it with generating in their internal environment impulses of technological, organizational and institutional renewal. Simple restoration of old industrial complexes is impossible in the changed conditions of development.

There are certain conditions for such neo-industrialization.

The first condition is the availability of resource bases on which the industrial complexes of the territories and the whole national economy were based. However, as a rule, only enterprises of the extractive industry have survived and are operating, the products of which, after market transformations, are oriented towards the external market. Recreation of processing industrial enterprises, complementing the technological chain, the beginning of which is put by the activities of extracting enterprise will allow to solve the acute problem for the domestic economy of manufacturing products with a high share of value added. Recreation of processing industrial enterprises, complementing the technological chain, the beginning of which is put by the activities of extracting enterprises, will allow to solve the domestic economy's acute problem of manufacturing products with a high share of value added.

The second condition for the implementation of neo-industrialization is the human factor, previously employed in industrial enterprises and preserving the organizational culture, industrial skills and experience of industrial communications. At the same time, the new forms of activity mastered by this factor, the long period that passed after the

destruction of industrial complexes, the need to master qualitatively new competencies - all this makes it difficult for the former industrial enterprises to use the human factor in the neo-industrialization process.

The third condition for the implementation of neo-industrialization relates to the sphere of politics. Russia, which has been a world power for a long period of its history, is seeking to restore its status and therefore needs an appropriate economic system capable of making a significant contribution to the development of the global economy. The core of this economic system can only be a highly developed industrial complex based on modern technologies. Accordingly, there are conditions in the country for the manifestation of political will to launch the neo-industrialization process; at the same time, the existing strategic trajectory of development of the national economy provides a certain inertia of movement, and also determines the formation of interests opposing the interest in the neo-industrialization process.

References

- [1] Glazyev S. Yu. Development of the Russian economy in the conditions of global technological shifts [Electronic source]. Retrieved from <http://spkurdyumov.narod.ru/GlazyevSUR.htm>
- [2] Gubanov S.S. (2012). *Majestic break. Neoindustrialization of Russia and vertical integration*, M.: Book world, pp. 23-78.
- [3] Dzarasov R.S. (2010). *Russian capitalism: operation anatomy*, Alternatives, No. 4, pp. 45-49.
- [4] Lviv D.S. (2002). *Ekonomika of development*. M.: Examination, pp. 214-226.
- [5] Sorokin D. E. (2010). *Strategic reference points of economic development of Russia*, M.: Алтейя, pp. 63-86.
- [6] Buzgalin A.V., Kolganov A.I. (2017). *Planning in XXI century economy: what and for what?* Terra economicus. T.15. No. 1. pp. 32-34.
- [7] Mamedov O.Yu. (2010). *Modernization – deviant model of economic growth?* Economic bulletin of the Rostov state university, T. 8, No. 1, pp. 5-11.
- [8] Nureev R.M. (1993). *Asian way of production as economic system, Phenomenon of east despotism: structure of management and power*, M.: Science, pp. 34-47.
- [9] Ketova N.P., Ovchinnikov V.N. (2014). *The strategy of capitalization of innovative resources of peripheral regions of Russia taking into account their limitation*. Terra economicus, T. 12, No. 1, pp. 56-63.
- [10] Biermeyer, Thomas; Meyer, Marcus. (2018). *European Commission Proposal on Corporate Mobility and Digitalization: Between Enabling (Cross-Border Corporate) Freedom and Fighting the 'Bad Guy'*. European Company Law, T. 15, Vol. 4, pp. 110-111.
- [11] Erbasi, Ali. (2018). *Measurement and Application of Intellectual Capital at the Level of Districts*. Eskisehir Osmangazi Universitesi IIBF Dergisi-eskisehir Osmangazi University Journal of Economics and Administrative Sciences, T. 13, Vol. 2, pp. 163-184.
- [12] Huang, Yufei, Gokpinar, Bilal. (2018). *Tang, Christopher S. Selling Innovation Products in the Presence of Externalities. Production and Operations Management*. T. 27, Vol. 7, pp. 1236-1250.
- [13] Holttä-Otto, Katja, Otto, Kevin, Song, Chaoyang. (2018). *The Characteristics of Innovative, Mechanical Products-10 Years Later. Journal of Mechanical Design*. T. 140 Vol. 8.