

Adaptation Mechanism for Adapting the Territory of Advanced Social and Economic Development in the Conditions of the Covid- 19 Pandemic: Based on Materials from the Sakhalin Region

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Abstract: Russia is strong in its regions and the level of its development is determined by the state, considered as the results of the management of territorially localized spaces, some of which operate in accordance with Federal Law-473 of December 29, 2014 "On Territories of Advanced Socio-Economic Development in the Russian Federation". Wherein, the global negative factor, the COVID-19 pandemic, predetermined the need to form a mechanism for adapting the management of the socio-economic development of territories, considering this impact. The management adaptation mechanism shall be directed not only to neutralize the negative impact, but also to create a stability margin that allows the systems of the regional economy to maintain a given reproduction trajectory. This task seems to be the most difficult for the regions recognized as the territory of advanced socio-economic development. The authors carried out the studies, the results of which are presented in this article, while a reasonable mechanism affects such management tools as strategic planning, management technology and industrial policy. The authors put forward and defend the hypothesis that in the context of the need to overcome negative consequences of a global nature, it is necessary to find additional support points for growth and intensify their use in management practice. The authors consider the oil and gas complex as such an additional reference point for the Sakhalin Region.


1 INTRODUCTION


The problem of implementing the policy of regional development in Russia is associated with presence of imbalances in socio-economic development, while the degree of differentiation of the levels of individual regions of the country is extremely high. Ensuring sustainable socio-economic development of Russia is viewed as a global goal, which is subordinate to strategic, tactical and operational targets, while having an independent content.

The Russian Far East is the largest region, covering more than 36 % of the entire territory of Russia. Development of the Far East is determined by a wide range of factors, some of which must be recognized as positive, such as the composition and capacity of the natural resource potential, the implementation of transnational oil and gas projects, and some of the negative factors are territorial

remoteness from the center, natural and climatic conditions, a high level of costs, due to the transport component. This circumstance often leads to the raw material specialization of the development of a territorially localized space. One of the independent subjects of the Russian Federation, which are part of the Far Eastern Federal District, is the Sakhalin Region, the development of which has been carried out since 2015 in accordance with Federal Law FZ-473 of December 29, 2014 "On the Territories of Advanced Social and Economic Development in the Russian Federation" [12].

It shall be noted that the theory of growth poles was considered by both domestic and foreign researchers, but its substantiation was first noted in the works of F. Perrou, defending the hypothesis that the activation of points of economic growth is capable of providing advanced development based on the processes of concentration of regional resources and

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the creation of sources for starting self-development [7].

In the territory of the Sakhalin Region, 3 projects are being implemented aimed at ensuring advanced socio-economic development - Mountain Air, Kuriles, Yuzhny. The Mountain Air project covers the tourist and recreational sector, the Kuriles project, the fishery complex, and the Yuzhny project, the agricultural complex. Implementation of these projects, no doubt, improves the quality of life of the population of the island region, making it less dependent on food supplies to Sakhalin Island and the Kuril Islands. However, the long-term nature of the COVID-19 pandemic and its negative impact on all aspects of public life, including the socio-economic development of the territory, predetermine the development and justification of the management adaptation mechanism, which was the purpose of the study conducted by the authors.

To achieve the goal, the following tasks were consistently solved:

- study of the existing management mechanism for the territory of priority socio-economic development - Sakhalin Region;
- assessment of the adaptability of the mechanism for managing the socio-economic development of the Sakhalin Region to the long-term nature of the negative impact of the COVID-19 pandemic;
- development and substantiation of measures for the control impact of the adaptation mechanism for managing the socio-economic development of the Sakhalin Region in the context of the impact of the COVID-19 pandemic, ensuring not only the neutralization of negative consequences, but also the involvement of new anchor points of economic growth in the process.

2 STUDY METHODS

The projects implemented within the framework of the law, designed to give impetus and ensure the advanced socio-economic development of the Sakhalin Region, affect three segments of the island

economy (agriculture and the agro-industrial complex, industrial fishing and the tourist and recreational sector), which, according to the authors, in the current situation (in the conditions of COVID-19) do not have the margin of safety (sustainability) that will neutralize the negative consequences and provide the region with a trajectory of outrunning growth.

Scientists of the German school - A. Weber, U. Izard, I. Thünen noted that the emergence of "growth poles" is determined by the existence of a key industry that develops most dynamically and is capable of being a locomotive for the development of the entire territory [5]. The authors share the position of these researchers and believe that such a locomotive that can give an impetus to self-development for the territory of the Sakhalin Region is an industrial complex, which provides more than 70 % of participation in the formation of GRP and more than 90 % of the contribution to the total amount of tax revenues to the budgets of all levels.

Wherein, it shall be noted that the COVID-19 pandemic, which is of a global nature, negatively affected the development results of the industrial complex of the Sakhalin Region in 2020 (Table 1).

In general, for the full range of industrial enterprises of the Sakhalin Region in 2020, there is a decrease in the rate of industrial production by 22.49 %. As positive shifts, it seems possible to recognize the growth rates in manufacturing industries. The region's foreign trade turnover also significantly decreased (Table 2).

Table 2: Dynamics of the foreign trade turnover of the Sakhalin Region for 2018-2020 (billions of US dollars)*.

Indicators	2020	2018	Rates of growth, %
Foreign trade turnover	12,224.3	15,963.1	76.58
including: export of goods	11,323.7	15,272.7	74.14
including import of goods	900.6	690.4	130.45

*developed by the authors on the basis of data from the statistics authorities of the Sakhalin Region

Table 1: Dynamics of the volume of shipped goods by the full range of industrial producers of the Sakhalin Region in 2018 - 2020 (billion rubles)*.

Industries of industrial production	2020	2018	Rates of growth, %
1. Shipped goods of our own production	843.4	1,088.1	77.51
2. Including mining	752.4	1,006.0	74.89
3. Manufacturing industries	68.6	60.8	112.83
4. Supply of electricity, gas and steam, air conditioning	18.2	18.4	98.91
5. Water supply, sewerage, organization of waste collection and disposal, activities to eliminate pollution	4.2	2.9	144.83

*developed by the authors on the basis of data from the statistics authorities of the Sakhalin Region

Table 3: Dynamics of the population permanently residing in the Sakhalin Region in 1994 - 2020 (people).

Indicator	1994	2010	2014	2019	2020
Population permanently residing in the region	688,848	501,279	491,027	488,948	485,621

Despite the implementation of one of the projects of advanced socio-economic development "Yuzhny", the purpose of which is to reduce the region's dependence on external food supplies, the import of imported goods in 2020 increased relative to the corresponding period of 2018 by 30.45 %.

However, the most convincing evidence of the need to make adjustments and develop an adaptive mechanism for managing the socio-economic development of the Sakhalin Region is the negative dynamics of the population living in the region (Table 3).

The mechanism for managing the development of the Sakhalin Region is represented by a wide range of tools, the main of which the authors highlight is strategic planning. The main planning documents, which secure the regional development of the region for the period up to 2025, are:

- the strategy of socio-economic development of the Sakhalin Region for the period up to 2025, approved by the resolution of the Government of the Sakhalin region on March 29, 2011. No. 99 (as amended by the Decree of the Government of the Sakhalin Region No. 10 dated January 15, 2014 and No. 192 dated April 25, 2015);
- the investment strategy of the Sakhalin Region for the period up to 2025, developed in accordance with the requirements of the standard for the activities of the executive authorities of the constituent entity of the Russian Federation to ensure a favorable investment climate in the region, approved by the decision of the supervisory board of the Autonomous non-profit organization "Agency for Strategic Initiatives to Promote New Projects" dated May 03, 2012 [9].

Strategic planning of these documents was carried out using the methodology of target program planning. The methodology of this toolkit was developed during the period of the planned economy by domestic scientists and assumed the "directive" development of the task and bringing it to the performers. The authors of the study express their doubts about the use of this toolkit for strategic management of the socio-economic development of the region, both as a whole in a market economy, and in the context of a long period of negative impact of the COVID-19 pandemic.

The authors agree with the conclusions of experts about the advantages of the program-targeted method of management, the main of which they admit are the indicative, systemic nature of programs, the possibility of concentrating limited resources. Wherein, the authors focus on such aspects as:

- the lack of regulatory legal acts that make it possible to form an adequate organizational structure for managing the subject and its economic entities (there are 4 economic zones in the territory of the Sakhalin Region) in the context of the COVID-19 pandemic;
- the local nature of the measures taken and the lack of interconnection with the imperatives of a prompt and adequate response to the ongoing negative changes caused by the pandemic;
- the imperfection of the methodological base, allowing to find the main and additional anchor points that can be the framework of the regional system in overcoming the negative consequences of the COVID-19 pandemic.

Guided by Article 8 of FZ-172 dated June 28, 2014 "On Strategic Planning in the Russian Federation", the authors offer the following methodological approaches to strategic planning as the main toolkit for managing the socio-economic development of the Sakhalin Region in the context of the COVID-19 pandemic:

- assessment and constant monitoring of changes in internal and external conditions, restrictions, imbalances, in the development of the region and its economic zones with development and introduction of appropriate corrective measures;
- introduction into the practice of planning the calculation and assessment of the effectiveness of corrective action measures in the relationship "deviation of the system from a given trajectory – identification of the causes and materiality of the impact – comparison of resource potential and alternative solutions (decision No. 1 ... n) – selection of the most optimal solution – testing and approbation of the solution – implementation of the solution – continuous monitoring – the result of implementation of the solution – control and analysis – adjustment";
- ensuring the practice of auditing the effectiveness of the strategy at the stage of developing a solution (developing a strategy and making adjustments).

Academician A.I. Tatarkin developed the theory of integrative strategizing of the development of territories and highlighted such principles as territorial determinism, verification of territorial decisions, taking into account territorial individuality, systemic and structural integrity, innovation priority [10].

The authors not only share the conclusions of the authoritative scientist of the Ural school of regional studies, but also note its importance in making decisions on the management of a region recognized as a territory of advanced socio-economic development while maintaining a given trajectory during the COVID-19 pandemic.

The principle of territorial determinism provides for identification of deterministic connections and relationships between:

- the result of the negative impact of the COVID-19 pandemic and the level of socio-economic development of the region;
- the level of socio-economic development of the region and the planned state of advanced socio-economic development;
- the main reasons-factors of negative influence and controllable variables that can neutralize them;
- resource potential and controlled variables that can neutralize the negative impact.

The principle of verifying territorial decisions, in essence, provides for the search for several alternative reference points for growth and advanced socio-economic development of regional economic systems.

According to the results obtained in the course of many years of the study into the cause-and-effect relationships of the state and socio-economic development of the Sakhalin Region (since 1994), the authors note that in their choice of pivot points for growth, development specialists focused on problematic aspects, without considering the potential and strategic prospects for development of Sakhalin Island and the Kuril Islands.

The oil and gas complex, which forms the basis of the island industry and the regional economy as a whole, according to the authors' conclusion, for a long time period (in the medium and long term strategic perspective) will remain the point of growth that can build the framework of the economy of the territorially localized space, give impetus for self-development and ensure diffusion of innovative processes to ensure not only neutralization of the consequences of the COVID-19 pandemic, but also create a margin of safety for advanced development.

Wherein, it shall be noted that the established practice of managing the oil and gas complex, in spite of the transnational projects it implements (Sakhalin 1-9), continues to be focused on export supplies of raw materials without deep processing. This is confirmed by the reduction in export earnings in 2020 relative to the corresponding period in 2019, with an increase in the volume of export supplies.

The most vulnerable point of the oil and gas complex, requiring the adoption of appropriate measures, is the low added value of the sold product due to raw material supplies (the region receives about 20 % of possible market prices in the context of deep processing of hydrocarbons).

The main reason for the decades-old situation is the underdevelopment of the region's infrastructure and the main focus of efforts in the development of an adaptation mechanism for managing the advanced socio-economic development of the Sakhalin region in the realities of the COVID-19 pandemic, the authors offer to direct it to its development (Fig. 1).

The main infrastructure base of the Sakhalin Region was formed in the post-war period and was completely focused on raw materials supplies of oil, timber, coal and other natural resources. The realities of today require developed infrastructural support that can form a base for deep processing of raw materials, a departure from the raw material economy, and two factors such as the capacity of natural resource potential and developed infrastructure support are basic controllable variables that can both neutralize the negative impact of the COVID pandemic-19, and create a margin of safety for the transition to a mode of advanced socio-economic development.

The authors consider the principle of innovation priority, substantiated by A.I. Tatarkin, it in the context of the developed approaches to filling industrial policy (Table 4).

The authoritative Russian scientist A.I. Tatarkin noted that "it is impossible to develop a region and develop development strategies without relying on regional production capabilities" [11]. This conclusion is relevant for the Sakhalin Region, which has a number of distinctive features of management, but the COVID-19 pandemic predetermines the introduction of adjustments to the complex and systemic process of managing the regional economy, responding to negative changes of a global nature.

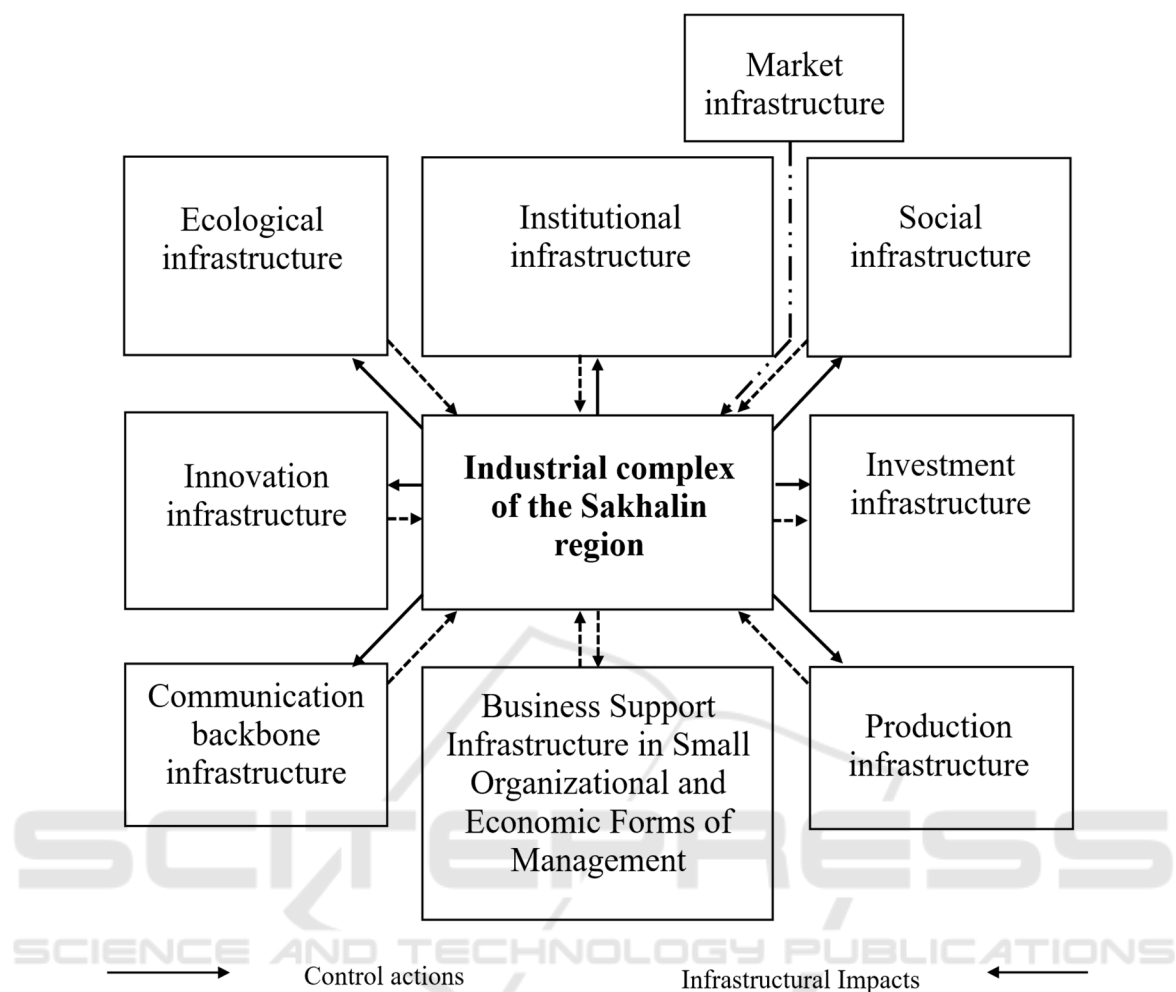


Figure 1: Multifunctional type of infrastructural support of the industrial complex of the territory of advanced socio-economic development - Sakhalin Region.

Table 4: Block model of industrial policy of the Sakhalin region in the context of adaptation to the imperatives of ensuring advanced socio-economic development in the context of the COVID-19 pandemic.

Block model of industrial policy and its constituent elements	Theoretical and methodological block, including scientific and research elements
	Program-target block adapted to the conditions of the region, the long-term nature of the COVID-19 pandemic, imperatives of advanced socio-economic development
	The resource block, represented by such elements as natural resource, personnel (human capital), innovation, and etc.
	The block of regulatory and legal support, including acts of the regional level, allowing to adapt the system of the regional economy both to the conditions, and the set development goals.
	Information support block, including digital technologies and tools
	Analytical support block, including data from independent auditors and consulting
	Control support block (including performance audit, monitoring and examination)
	The block of forecasting and planning by branches of the industrial complex, built into the general system of forecasting and strategic planning of the regional economy
	Management mechanisms of the industrial complex as a whole and its separate constituent element (the economic subject of the system), formed on the basis of flexibility, adaptability, complexity and prompt response to changes
	Methodological support of management tools, including scientific

3 STUDY RESULTS

As shown by the results of the study carried out by the authors, the COVID-19 pandemic not only had a negative impact on the socio-economic development of regional economic systems, but also made it possible to "highlight" the problems, the neutralization and elimination of which need to develop a mechanism for adapting integrated and systemic management. This problem is most acutely manifested in those systems of the regional economy, the development of which is carried out in accordance with federal legislation on advanced socio-economic development. Assessment of the state and level of development of such a region - the Sakhalin Region, made it possible to identify the deterioration of the main socio-economic indicators and, as a result, a decrease in the population permanently residing in the region. Wherein, Sakhalin Island and the Kuril Islands are a strategic facility that ensures Russia's national security in the Far East. In order to neutralize the problematic aspects of the regional development of the Sakhalin Region, the authors have developed and substantiated measures to adapt the mechanism for managing the socio-economic development of the region in the direction of a given vector ahead of schedule. The offered measures affect such management tools as strategic planning and industrial policy aimed at developing infrastructural support, improving the planning methodological apparatus, and enhancing innovation processes. However, first of all, the authors offer variability – as a prerequisite for optimizing management decisions. The authors also draw the attention of the authors to the need for a multipolar approach to the identification of "growth points", considering the oil and gas complex as the most justified alternative activator of advanced development.

4 DISCUSSION OF STUDY RESULTS

Both domestic and foreign scientists, whose opinions and views on certain positions could not coincide, paid attention to the issues of formation of "growth poles".

J. Friedman, when substantiating the stages of formation of "growth poles", focuses on the concentration of resources in local cores [8]. The authors also believe that giving impetus to ensure the advanced development of territorially localized space, it is necessary to focus on those local nuclei

that are capable of providing a given trajectory of reproductive processes. This circumstance requires reflection in the context of substantiating the adaptive mechanisms for managing meso-level systems that are under the negative impact of the COVID-19 pandemic.

L.A. Abalkin, A.V. Buzgalin doing study in the field of the theory of economic development, given a special place to regional industrial policy [1, 4]. It is difficult to disagree with this approach, since industrial policy is one of the elements of the general mechanism for managing the regional economy. In the context of the COVID-19 pandemic, appropriate adjustments are required in the content of individual elements of industrial policy, which, according to the authors, will allow adapting to the ongoing negative changes.

L. Filobokova in her study draws attention to the need to use cluster forms of organizing the regional economy, allowing the use of pivot points of growth [13].

Modern scholars researchers also continue their study in the theory of "growth poles", in which the authors note E.I. Antonova, O.E. Gerasimova, A.E. Kogut [2].

Researches in the field of trajectories of sustainable development of regional socio-economic systems are being carried out by K. Ketov and D. Vavilova, giving a special place to labor resources and production capital [6]. The authors share the position of these researchers and note that in substantiating the reference points for the framework of the regional economy in its advanced socio-economic development, such a factor as production potential is of particular value.

S. Barmatova pays attention to the impact of the COVID-19 pandemic on the sustainability of the modern world order in her studies, considering the pandemic as an indicator [3]. The authors consider the pandemic not as an indicator, but as an external factor that has a negative impact on the state of regional economic systems and the effectiveness of their management. Assessment of the influence of this factor and the introduction of appropriate adjustments to neutralize them, according to the authors, shall become part of the management process, built on the basis of constant adaptation to the ongoing changes.

5 CONCLUSIONS

The COVID-19 pandemic is the global negative factor that has affected the entire world economic system, including its constituent element of the meso-

level, which includes the regional economy. The socio-economic development of all regions of Russia is subordinated to a single goal - improving the quality of life of the population and saving it, which corresponds to the strategy of sustainable (balanced) development. Wherein, in the composition of the constituent entities of the Russian Federation there are those whose development is focused on the vector of advanced socio-economic development. Such a region is the Sakhalin Region, which is completely located on the islands (Sakhalin and the Kuril Islands). The COVID-19 pandemic had a negative impact on both the economic and social processes taking place in the region, as evidenced by the decline in the population permanently residing in the region and the fall in its GRP. According to experts, this phenomenon will accompany social production for a rather long period of time, which obliges to develop mechanisms for adapting management in order to neutralize negative consequences, create a margin of safety for regional economic systems and ensure their movement along a given trajectory.

Within the framework of this understanding of the current situation, the authors conducted the study, the results of which are presented in this article. The stated goal of developing and justifying the management adaptation mechanism and the tasks requiring resolution to achieve the stated goal have been fully implemented. Wherein, it is not entirely correct to believe that this study is complete, since this process is continuous, despite a certain increase in scientific knowledge in the field of the subject and object of study.

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