

Lyudmila Yu. Filobokova, Alexandra Yu. Zhdankina

State and directions of development of the industrial sector of the Sakhalin Region of the Russian Federation

KEYWORDS

industrial sector;
Sakhalin Region;
Far Eastern Federal District;
Russian Federation;
mineral wealth exports model;
oil and gas sector;
investment activity



Word Cloud Generated by:
<https://wordscound.pythonanywhere.com/>

ABSTRACT

Introduction. This study is relevant in connection with the search for new points of development of the Sakhalin Region in new sectors of the economy that are not related to the mineral wealth exports model of the economy. The purpose of the paper is to assess the state of the industrial sector in the Sakhalin Region and consider the directions of its development.

Materials and Methods. Federal Acts and other regulations of the Russian Federation, data from Rosstat; papers in periodicals on economics, management, and regional studies were used.

Results. According to a number of indicators characterizing the state of the economy, the Sakhalin Region occupies a leading position not only in the Far Eastern Federal District but also in the entire country.

In 2019, the index of industrial production in the Sakhalin Region decreased by 4%, in particular, the index of production in mining in 2019 decreased by almost 5%. At the same time, about 90% of this type of activity falls on the oil and gas sector. The growth rates of mineral extraction are declining against the background of the growth of other industries: manufacturing (112.7%), electric power, etc. (104.5%), water supply (165%).

Discussion and Conclusion. A high level of depreciation of fixed assets of enterprises requires the activation of investment processes for their renewal and modernization. High investment activity is required, which will have a positive impact on the efficiency of production processes. It is necessary to increase the level of graduates training at the institutions of higher, secondary, and primary vocational education due to their insufficient practical training using modern equipment, and bad command of advanced technologies.

Filobokova, L. Yu., & Zhdankina, A. Yu. (2021). State and directions of development of the industrial sector of the Sakhalin Region of the Russian Federation. *Economic consultant*, 33 (1), 16-24. doi: 10.46224/ecoc.2021.1.3

FOR CITATION

INTRODUCTION

The relevance of studying the main directions of industrial development of the Sakhalin Region is caused by the search for growth points in new sectors of the economy that are not related to those that form the main gross regional product of the region: oil and natural gas, coal mining, fish and food, construction.

Federal Act No. 488 of December 31, 2014 “On Industrial Policy in the Russian Federation” identified the following targets of the industrial policy pursued in the Russian Federation:

- the formation of a high-tech, competitive industry, ensuring the transition of the national economy from the mineral wealth exports type to the innovative type of development;
- ensuring the national defense and state security;
- ensuring employment of the population and improving the standard of people’s living [5].

The systemic achievement of the set goal on the transition of the national economy from the mineral wealth exports type to the innovative type of development is possible only in conditions of sustainable development, provided, first of all, via effective measures of strategic management.

It is interesting to consider the transition of the economy from mineral wealth exports to an innovative type of development in relation to a separate region of the Russian Federation, which has its own specific features of socio-economic development.

The purpose of the paper is to assess the state of the industrial sector of the Sakhalin Region of the Russian Federation and consider the main directions of its development.

MATERIALS AND METHODS

The study used the following materials: Federal Acts “On Industrial Policy in the Russian Federation” and “On Territories of Advanced Social and Economic Development in the Russian Federation”; data from the Federal State Statistics Service; the Strategy of Innovative Development of the Russian Federation for the Period up to 2020; the Strategy of Social and Economic Development of the Sakhalin Region for the period up to 2035. The authors used a theoretical analysis of publications in periodicals on economics, management, regional studies, etc. For the purpose of comparative analysis, the growth rate was used: an indicator of the intensity of changes in the level of a series, which is expressed as a percentage.

LITERATURE REVIEW

According to Russian economists, over the past nearly 130 years of economic exploration and development of the Far East, two long waves of economic dynamics can be distinguished – 1890–1928 and 1930–2006 [17].

The first wave was associated with the initial development (colonization) of the region, and the second – with industrial development, but both waves have the same structure. The years 1928–1930 were the borderline of the transition from one combination of factors of production to another, when the main changes concerned the transformation from the agricultural type of colonization to industrial development, which meant, on the one hand, a significant increase in the share of capital, and on the other hand, a dramatic increase in the scale of the applied factors of production. The changes also affected the natural resource basis of industrial development – new types of mineral wealth were involved in circulation, the scale of exploitation of raw stock significantly increased, which marked the transition from one long wave (1890–1928) to another (1928–2006). The change in technology was not associated with massive innovations due to a change in the institutional mode of the functioning of the national economy in general and the Far East in particular. The authors believe that the beginning of the third wave of economic dynamics was typical for the Russian Far East in 2015-2016.

The Sakhalin Region is part of the Far Eastern Federal District. The Sakhalin Region is one of the easternmost territories and the only constituent entity of the Russian Federation, completely located on the islands (Sakhalin Island and the Kuril Islands).

As of January 1, 2021, the population of the Sakhalin Region, according to Rosstat, was 485,627 people, and compared to the same date in 2020, it decreased by 2.6 thousand people.

Industry occupies a leading place in the economy of the Sakhalin Region, it employs almost 20% of the region's working population and creates more than 60% of the gross regional product. The leading industries in the Sakhalin Region are oil and gas, coal mining, fishing, and electric power. The dominant position in the region's economy is occupied by the oil and gas sector, which accounts for about 83% of the total industrial production.

Kornienko carried out a comparative assessment of the potential of the regions of the Far East [13]. The overall potential included five main components: socio-demographic, economic, natural resource, transport infrastructure, and international cooperation. As a result, the highest rank was assigned to the Primorye and Khabarovsk Territories, the lowest to the Jewish Autonomous Region.

Further, the authors cite the main indicators of the development of the Far Eastern regions for 2010–2014 and provide their comparative assessment based on ranking [14]. The Sakhalin Region in many respects is the leader in comparison with other regions, ranking second after the Primorye Territory only. As the researchers write, “the Primorye Territory remains in the group of leaders of the Far East in terms of the use of the overall economic factor and transport infrastructure, but at the same time, it has noticeably lost its position in the use of natural resources. During the 2nd and 3rd time intervals of the considered period, the Sakhalin Region significantly increased its potential – mainly due to the noticeably increased volumes of the gross regional product (including production and exports of hydrocarbons)” [14, pp. 42–43].

According to the “Strategy for the Socio-Economic Development of the Sakhalin Region for the Period up to 2035” for a number of indicators characterizing the state of the economy, the region occupies a leading position not only in the Far Eastern Federal District but also in the

entire country. In particular, the Sakhalin Region is included in the Top 20 Russia's regions in terms of socio-economic rating. In terms of GRP in 2017, the Sakhalin Region ranked 28th in Russia, and 2nd in terms of GRP per capita [22].

RESULTS

According to Rosstat, the index of industrial production in the Sakhalin Region decreased by almost 4% (see Table 1) [4].

Table 1

Industrial production index (as a percentage of the previous year)*

	2015	2016	2017	2018	2019
Far Eastern Federal District	104.4	103.4	103.1	105.4	106.6
Republic of Buryatia	100.9	88.9	101.3	102.4	112.1
Republic of Sakha (Yakutia)	105.8	100.8	102.5	107.6	111.2
Trans-Baikal Territory	98.8	104.8	103.7	103.8	105.6
Kamchatka Territory	103.4	110.1	105.7	112.8	95.4
Primorye Territory	90.5	106.0	118.7	96.4	118.2
Khabarovsk Territory	99.4	108.4	109.1	100.3	102.5
Amur Region	90.7	96.0	105.3	97.6	109.9
Magadan Region	106.4	101.9	107.7	109.6	112.6
Sakhalin Region	111.9	105.9	99.9	106.4	102.8

In other regions, with the exception of the Kamchatka Territory (-17.4%), there is a positive trend, that is, in the federal district as a whole.

Table 2 shows production indices by type of economic activity in the Sakhalin Region.

Table 2

Production indices by type of economic activity (as a percentage of the previous year)**

Types of economic activity	2015	2016	2017	2018	2019
Mining	112.5	105.5	100.0	107.0	102.4
Manufacturing	102.4	115.4	97.3	94.8	112.1
Supply of electricity, gas, and steam; air conditioning	104.2	102.6	100.3	106.1	102.7
Water supply; water disposal, organization of waste collection and disposal, activities to eliminate pollution	141.0	110.5	109.1	100.5	148.0

* Aggregated production index by types of economic activity "Mining", "Manufacturing", "Supply of electricity, gas, and steam; air conditioning", "Water supply; water disposal, organization of waste collection and disposal, activities to eliminate pollution". The data is based on the results of retrospective recalculation of production indices, carried out in connection with the transition in the calculations of production indices to the new base year – 2018.

** The data is based on the results of retrospective recalculation of production indices, carried out in connection with the transition in the calculations of production indices to the new base year – 2018.

According to Table 2, the production index in mining in 2019 decreased by almost 5%. At the same time, about 90% of this type of activity falls on the oil and gas sector. The decline in oil production is mainly due to a reduction in production from the Sakhalin-1 and Sakhalin-2 projects in accordance with the production plans of the companies.

The growth of manufacturing is observed (+18%). Ninety percent of the industry is food production; beverage production; production of tobacco products. The Sakhalin fishing sector develops over 80% of the volume of aquatic biological resources permitted for fishing.

In 2019, there was a positive trend in the volume of shipped products for the full range of manufacturing organizations relative to the corresponding indicators in 2018 (see Table 3).

Table 3

Assessment of the dynamics of the volume of shipped goods for the full range of manufacturing organizations in the Sakhalin Region for 2018–2019 (million rubles)

Indicators	2018	2019	Growth rates, %
Mining	1,016,799	942,671	92.71%
Manufacturing	60,300	67,953	112.69%
Supply of electricity, gas and steam; air conditioning	18,063	18,879	104.52%
Water supply; water disposal, organization of waste collection and disposal, activities to eliminate pollution	2,621	4,328	165.13%

It can be seen that the growth rates of mining (92.7%) are decreasing against the background of the growth of other industries: manufacturing (112.7%), electricity supply, etc. (104.5%), water supply (165%). This is the current state of the basic industries of the industrial sector of the Sakhalin Region.

In the future, a decrease in oil production is expected: in 2021, the production index will be 88.0%, in 2022 – 88.6%, in 2023 – 97.4%.

According to the forecast of the socio-economic development of the Sakhalin Region for 2021 and the planning period of 2022 and 2023, the volume of industrial production in 2020 reached 1,044.6 billion rubles. The main contribution to the volume of industrial production is still made by mining (92.4%) [21].

DISCUSSION

State of the oil and gas sector. Currently, the Sakhalin-1 and Sakhalin-2 offshore projects, developed under a special tax regime, production sharing agreement, as well as the Sakhalin-3 project, which started in 2014, are in the active production stage, while the rest of the projects are in the earlier stages.

The oil and gas sector accounts for most of the total volumes of shipped industrial products, fixed capital investments, and consolidated budget revenues of the Sakhalin Region. At the

same time, the dynamics of oil, natural gas and liquified natural gas production cannot be characterized as positive; the industry is rather stagnating. The structure of the oil and gas sector is dominated by the extraction of crude oil and natural gas, while the role of services in the field of mining is relatively small.

Thus, a long-term problem remains in the industrial sector: the predominance of the volume of production of the extractive industries in the total volume of industrial production and the insignificant development of manufacturing industries.

State of the coal sector. Today, coal is mined exclusively by open-pit mining. At the moment, Sakhalin coal is competitive in comparison with Russian and foreign producers in the Asia-Pacific, South America, and Africa. The main consumers are China, South Korea, the Philippines, and Thailand.

The main problems of the coal industry in the region are the following: reduction of domestic demand for steam coal due to the transition to gas; a high proportion of transportation costs; deterioration of major mining equipment; lack of funds from coal mining companies for geological exploration and stripping works; shortage of key engineering and technical staff for the mining industry and basic production workers.

State of the agro-industrial sector. The sectoral specialization of local agricultural producers is potatoes, vegetables in open and protected ground, meat and dairy products, eggs and makes it possible, with own products, to satisfy the need of Sakhalin residents in potatoes, table vegetables and eggs – almost completely, in milk – by almost a third, and in meat – by only 16%. Key problems of agriculture are insufficient funding, high fuel prices, a high degree of deterioration of agricultural machinery, lack of highly qualified specialists.

State of the fishing sector. In the Sakhalin Region, the main catch comes from commercial fishing, in contrast to foreign countries with a high level of development of this industry (Japan, Norway, Denmark, Iceland, etc.), where coastal fishing is given priority. In terms of the catch of aquatic biological resources, the Sakhalin Region ranks third in Russia after the Primorye and Kamchatka Territories, mainly due to the catch of pollock and Pacific salmon.

The development of the fishing industry is constrained by a number of factors: a constant rise in prices for fuel and technological equipment, an increase in tariffs for electricity and transport services; rapid deterioration of equipment used in coastal fishing, rapid deterioration of process equipment in workshops.

Conclusions. Thus, the main problems of the industries in the region include: a high level of depreciation of fixed assets of enterprises, which requires investment for their renewal and modernization; low investment activity, which has a negative impact on the efficiency of production processes; an increase in prices for the services of natural monopolies and, as a consequence, an increase in the production costs due to growing cost of energy resources; staff problem manifested in a shortage of highly qualified specialists, managerial personnel, main and auxiliary workers in all technological areas.

A significant factor constraining the economic development of municipalities is the insufficiently diversified structure of the economy, the predominance of the extractive industries

in the total volume of industrial output, and the insignificant development of manufacturing industries.

The level of graduates training at the institutions of higher, secondary and primary vocational education remains low due to their insufficient practical training using modern equipment, ignorance of advanced technologies, and a decline in the prestige of engineering and technical specialties and blue-collar positions.

CONCLUSION

From the point of view of the investment climate, Sakhalin is one of the problem regions: inadequate staffing, low infrastructure, island location, etc.

However, there are also prospects for the development of the region, in particular for:

- activation of investment processes for the renewal and modernization of fixed assets;
- increasing investment activity at the corporate level;
- improving the quality of training graduates from institutions of higher, secondary, and primary vocational education.

According to the forecast of the socio-economic development of the Sakhalin Region, the dynamic development of the food and processing industry (excluding fish processing) is expected in 2021–2023, which will be facilitated by the implementation of an investment policy in the region's animal husbandry. In 2021, it is planned to increase the catch upon the possible increase in the migration of Pacific salmon, as well as the development of reproduction and aquaculture in the Sakhalin Region. By 2023, it is planned to increase the production of unprocessed wood to 242.8 thousand cubic meters by improving the operation of timber sector enterprises [21].

The overcoming of infrastructural restrictions, the development of the industrial sector and the regional economy of the Sakhalin Region as a whole determines the development of the fuel and energy sector, which is not only the central subsystem of macro- and meso-level systems but also a subsystem that performs the infrastructure function of supplying energy and fuel. In the medium term, the successful implementation of the strategy for the socio-economic development of the region will largely be determined by the developing fuel and energy sector and the industrial sector as a whole – being the drivers of the growth poles, ensuring, first of all, the creation of innovations and waves of their diffusion.

Acceleration of the pace of development of the Sakhalin Region's industrial sector largely depends on the effective use of all factors of production, strengthening the material resources and engineering facilities of enterprises, the implementation of scientific and technological progress, investment, and innovation in the industry.

REFERENCES

1. Demyanenko, A. (2016). Once Again about the Implemented Academic Program of Research on the Spatial Development of the Country. *Russian Economic Journal*, 2(66).
2. Druker, P. (1986). *Innovation and Entrepreneurship (Practice Principles)*. Leningrad: Pan Books.
3. Ershov, Y.S. (2020). Interregional Differentiation and Donating and Recipient Regions: Diversity of Assessments and Conclusions. *Regional Research of Russia*, 10, 20–28.
4. Federal State Statistics Service. (2020). *Regions of Russia. Socio-Economic Indicators*. Retrieved February 15, 2021, from https://gks.ru/bgd/regl/b20_14p/Main.htm
5. *Federal Act FZ-488 "On Industrial Policy in the Russian Federation"*. (2014, December 31).
6. *Federal Act FZ-473 "On the Territories of Advanced Social and Economic Development in the Russian Federation"*. (2014, December 29).
7. Fischenko, K.S. (2017). Prerequisites and Conditions for the Creation of Advanced Development Territories. *Issues of Economics and Management*, 1, 123–128.
8. Golichenko, O. (2012). Development Models Based on Technology Diffusion. *Economic Issues*, 4.
9. Galetskii, V.F. (2006). The Russian Far East: Searching for a demographic development strategy. *Studies on Russian Economic Development*, 17, 655–661. Retrieved February 22, 2021, from <https://doi.org/10.1134/S1075700706060116>
10. Ivanter, V.V. (2016). Recovery of Economic Growth in Russia. Scientific Report of the Institute for National Economic Forecasts of the RAS. *Issues of Forecasting*, 5, 3.
11. Kleiner, G.B. (2016). The Stability of the Russian Economy in the Mirror of Systemic Economic Theory. Part 2. *Economic Issues*, 1, 117–137.
12. Klyuev, N.N. (2020). Current Changes on the Industrial Map of Russia. *Regional Research of Russia*, 10, 494–505. Retrieved February 22, 2021, from <https://doi.org/10.1134/S2079970520040140>
13. Kornienko, O.S. (2014). Comparative Assessment of the Potential of Regions in the Russian Far East. *Regional Research of Russia*, 4, 341–348. Retrieved February 22, 2021, from <https://doi.org/10.1134/S2079970514040121>
14. Kornienko, O.S., & Romanov, M.T. (2018). Assessment of the Development Potentials of the Far East Regions and Their Internal Relationships. *VSU Bulletin. Series: Geography. Geoecology*, 2, 40–50. Retrieved February 22, 2021, from <https://doi.org/10.17308/geo.2018.2/2211>
15. Livshits, V.N. (2015). On the Need to Change the Current Paradigm of State Management of the Russian Economy. *Economic Science in Modern Russia*, 1(68).
16. Litvinenko, T.V. (2011). Post-Soviet Transformation of Natural Resource Utilization in Eastern Russia. *Regional Research of Russia*, 1, 217. Retrieved February 22, 2021, from <https://doi.org/10.1134/S2079970511030075>
17. Minakir, P.A., & Prokapalo, O.M. (2007). Far East: Real Strategies and Imaginary Programs. *Bulletin of the FEB RAS*, 5, 13–21.

18. Mishchuk, S.N. (2020). General Characteristics and Regional Differences of Migration Processes in the Russian Far East in the Post-Soviet Period. *Regional Research of Russia*, 10, 86–96. Retrieved February 22, 2021, from <https://doi.org/10.1134/S2079970520010074>
19. Mishchuk, S.N. (2013). Domestic and International Migration in the Russian Far East in the Mid-19th – Early 21st Century. *Regional Research of Russia*, 3, 348–355. Retrieved February 22, 2021, from <https://doi.org/10.1134/S2079970513040084>
20. Polterovich, V.M. (2014). Where to Go: Twenty-Four Messages. *Economic Science of Modern Russia*, 3, 66.
21. Ministry of Economic Development of the Sakhalin Region. (2021). *Socio-Economic Development of the Sakhalin Region*. Retrieved February 15, 2021 from <https://sakhalin.gov.ru/index.php?id=907>
22. *The Strategy for Innovative Development of the Russian Federation for the Period up to 2020*. (2011, December 8). Approved by the Order of the Government of the Russian Federation No. 2227-r.
23. Shvetsov, A. (2016). Growth Points or Black Holes? (On the Issue of the Efficiency of Governmental Stimulating of the Recovery of Local Economic Dynamics). *Russian Economic Journal*, 3(20).
24. Shvetsov, A. (2014). A Unique Academic Study of the Spatial Development of Russia (Conceptual and Methodological Foundations, Organizational Aspects and Results of the Implementation of the Interdisciplinary Program of the Presidium of the Russian Academy of Sciences). *Russian Economic Journal*, 3.
25. Yershov, Y.S. (2016). Features of Regional Economic Development in Russia in 1999–2013. *Regional Research of Russia*, 6, 281–291. Retrieved February 22, 2021, from <https://doi.org/10.1134/S2079970516040079>

INFORMATION ABOUT THE AUTHORS

1. **Lyudmila Yu. Filobokova** (Russia, Moscow) – Doctor of Economics, Professor of the Department of Innovative Entrepreneurship. Bauman Moscow State Technical University. E-mail: filobokova@list.ru. Scopus ID: 57190126440
2. **Alexandra Yu. Zhdankina** (Russia, Yuzhno-Sakhalinsk) – Lead Counselor. Ministry of Economic Development of the Sakhalin Region. E-mail: zh.alex@bk.ru



Available: <https://statecounsellor.wordpress.com/2021/02/23/filobokova-2/>

Received: Jan 12, 2021 | **Accepted:** Feb 13, 2021 | **Published:** Mar 1, 2021

Editor: Yuri I. Treshchevsky, Professor, Doctor of Economics. Voronezh State University, RUSSIA

Copyright: © 2021 Filobokova, L., Zhdankina, A. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Competing interests: The authors have declared that no competing interests exist.