

The impact of new industrialization on the quality of life of the population of the Arctic territories

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Abstract — At the present stage of development of the Russian economy, issues related to industrialization come to the fore. The development of industry should become the engine of sustainable development of the country as a whole. The transition from a raw-material economy to an industrial-type economy should allow not only to achieve annual growth of gross domestic product, but also to improve the standard of living of the population. At the same time, we should not forget about the ambiguous impact of industrialization on the quality of life: on the one hand, it contributes to the emergence of new jobs and the growth of incomes of the population, but on the other hand, leads to a deterioration of the environmental situation. All three components of sustainable development – economic, social and environmental – are particularly important to take into account when expanding industrial production in the Arctic.

Keywords — *new industrialization, quality of life, sustainable development, the Arctic.*

I. INTRODUCTION

The term "new industrialization" appeared in the Russian scientific circulation relatively recently and there is still no consensus on its interpretation. Moreover, in foreign practice, this concept often has a completely different meaning. Thus, the new industrialization in European countries is usually understood as the movement of industrial production from Asian countries and Latin American countries (that is, countries where the price of labor is not high) to Europe.

The discussion of the need and prospects for new industrialization largely coincided with the transition to the

process of import substitution. And often new industrialization and import substitution are considered in the relationship. Moreover, at the domestic level sometimes there is a substitution of concepts. That is, the new industrialization is understood as industrialization in the usual, generally accepted sense, only aimed at the development of domestic production in the conditions of bilateral sanctions, which is fundamentally wrong.

Along with the term "new industrialization" in the Russian scientific literature, there are such concepts as reindustrialization (overcoming the decline of industrial development after the 90s of the last century), neo-industrialization (reaching the world technological level) and superindustrialization (advanced development). V. M. Kulkov (2015) believes that the concept of "new industrialization" has an integral character, absorbing and reindustrialization, and neoindustrialization, and swarmintelligence.

At the same time, in the Russian scientific literature little attention is paid to the impact of new industrialization on the quality of life of the population in the context of the aggravation of environmental problems associated with the expansion of industrial production.

II. METHODS

This study was conducted on the basis of statistical data of the Federal state statistics service of Russia (Federal State Statistics Service of Russia), as well as publications of Russian and foreign authors. The methods of logical and statistical analysis and questioning are used.

III. LITERATURE REVIEW

In 2011, the book by American economist Jeremy Rinkin (2011) "the Third industrial revolution: how horizontal interactions change energy, the economy, and the world at large" was published, in which he concluded that traditional centralized business models should be replaced in the next half century by new structures, and the hierarchical organization of economic and political power should give way to horizontal interaction, in which hundreds of millions of people will generate their own green energy at home., in offices and factories and share it on the "energy Internet".

Thus, new industrialization should be linked not only and not so much to industrial development as such, but also to the development of technologies that ensure environmental safety at the country level and at the level of individual territories and even households.

A significant number of scientific publications of foreign scientists and economists devoted to the problem of increasing carbon dioxide emissions into the atmosphere due to the expansion of industrial production (Zhu Zh., 2017, Wang Q., 2018, Liu X., 2018, Feng Dong, 2019) This problem cannot but affect the quality of life of the population.

The impact of industrialization on the environment is the subject of a study by J. Cherniwchan (2012).

The structure of employment in different sectors of the economy has changed significantly over the past hundred years. Both in Russia and around the world, the labor force flowed first from agriculture to industry, then from industry to services. Is it to be expected that in the era of new industrialization there will be a reverse process?

Antoc (2018) explores the impact of industrialization on agriculture and labor mobility.

Yanlin Yang, Xu Shao (2018) mark, that «labour force mobility and reallocation among regions and sectors has been a major research issue for a long time in development economics. An interest revolves around the extent to how an employment situation differs with the levels of industrialization in unprecedented structural changes. And whether these patterns change during the industrialization?»

IV. THE DISCUSSION OF THE RESULTS

The concept of "quality of life" is complex, ambiguous and involves consideration of social, economic, political, natural and many other factors.

S. Pinto and others (2017) have come to the conclusion that despite the breadth of interpretations of the term, most researchers define the concept of "quality of life" as the perception of the individual's personal situation in your own life in the physical, social, mental and spiritual dimensions.

Biaggi and others (2018) draw attention to the fact that the quality of life is a key element of the competitiveness of cities, regions and countries, as it is a attracting and retaining factor for new residents and firms.

Industrialization has a direct impact on the quality of life of the population. The construction of new production facilities and the expansion of existing ones will lead to the creation of new jobs and the growth of incomes. Thus, industrialization has a predominantly positive impact on the economic component of the quality of life.

But at the same time, the growth of industrial production will lead to a deterioration of the environmental situation in the region. Environmental pollution is one of the factors in increasing the morbidity rate of the population. There is a clear relationship between the level of air pollution and respiratory diseases, as well as cancer.

According to the author, "despite the small number of works on the study of the impact of anthropogenic air pollution on the health of the population, the analysis shows that the main classes of diseases at the population level are determined by the relationship between air pollution and health problems. In almost all the studied diseases there is a tendency to increase along with an increase in the level of air pollution."

The results of a survey conducted by the authors in the Arkhangelsk region show that when deciding on the feasibility of building new industrial enterprises, the region's residents put the factors not economic, but environmental factors in the first place. 70% of respondents said that they are against the construction of mining enterprises in the region, as it aggravates the environmental situation. 18% of respondents said they would approve the construction if environmentally friendly technologies were used in production. 10% said that regardless of the technologies used, such construction will provide the region with new jobs, so they would vote "for". And only 2% of respondents found it difficult to answer.

The need for industrialization as such is not denied by anyone. But it is important that at this stage of development of the Russian economy, a fundamentally new approach was applied to the creation of new industrial enterprises and the expansion of existing ones.

The basis of the Russian economy should be science-intensive production. Unfortunately, this is not possible until business owners stop focusing only on profit. The introduction of innovations in the production process does not always bring a quick return, and often to improve the profitability of production is easier to increase production using conventional equipment, rather than investing in new, environmentally friendly technologies.

So who should encourage entrepreneurs to invest in research and development aimed at improving the environmental performance of production? First of all, of course, the state. Although it is the market that should act as a regulator in a market economy, it is impossible to do without the state's participation in this process. Approval of quality standards, technical regulations and effective control over their compliance – all this is within the competence of state bodies. Of course, some penalties do not achieve the desired result, but for those economic entities that are focused exclusively on profit growth, this can be an additional signal that the usual approach to the organization of production in modern conditions still needs to be changed.

The task of state and municipal authorities is to find a compromise that will make it possible to combine economic efficiency with social justice and environmental safety as fully as possible.

The role of public control over the activities of industrial enterprises should also increase. Unfortunately, in Russia public control has not yet received proper development. The population passively refers to the activities of large industrial

enterprises, even if this activity directly affects the development of the territories of individual municipalities and the quality of life of the population.

However, there have been some changes in this issue. For example, some natural monopolies (Rosseti, Gazprom, Russian Railways, etc.) have already created or are planning to create consumer councils that will participate in the evaluation of investment programs of these companies. However, the effectiveness of such councils is still very doubtful. But the good thing is that the process of working on investment programs of monopolies is planned to be made public.

We believe that the construction of new industrial enterprises in the Arctic territories should be approached with particular care, because, firstly, the construction itself in the regions of the North that are difficult to access (in terms of transport communications) requires much more investment, and secondly, it is much more difficult to neutralize the possible damage caused to nature.

The Arctic territories have traditionally been the object of close attention of the world's largest powers, here are concentrated the main reserves of the most important minerals (gas, oil, hydrocarbons), which are crucial for the development of the economy. More than 11% of Russia's gross domestic product is created in the Arctic zone and almost a quarter of its exports are provided.

Industrialization in the Arctic required and requires high costs associated with the need to deliver to the North almost resources (including labor) necessary for industrial development. Poor development of transport and social infrastructure leads to an outflow of population and exacerbates the demographic situation.

Starting with the industrialization of the 30s of the last century, the development of the Arctic went on the focal type, that is, with a clear allocation of areas where the industry (primarily mining) was well developed, and a clear lag in the development of other areas, much of which do not have transport communications.

The Arctic zone of the Russian Federation has an area of about 9 million km², it is home to more than 2.5 million people, which is less than 2% of the country's population and about 40% of the population of the entire Arctic. Indigenous peoples of the North have a significant share in the population structure. They are characterized by higher levels of poverty and unemployment than the non-indigenous population. At the same time, they carry a unique traditional knowledge of the Arctic landscape, traditional values and culture. This potential should be used for creative development and innovative engineering solutions in the Arctic.

Unfortunately, in Russia, the rights of indigenous peoples are not always taken into account in decision-making at various levels of government. "This is evidenced, for example, by the removal of territories of traditional nature management from the category of specially protected natural areas. Such changes lead to the fact that ultimately the rights of the companies be more significant and prosperous than the rights of indigenous peoples. At the same time, insufficient legal regulation of the issues of interaction between indigenous peoples and industrial companies makes it necessary to pay more attention to the social responsibility of industrial companies in the Arctic." (Russian Arctic..., 2016)

It is difficult to argue with the fact that comprehensive and effective development of the Arctic territories is possible only on the terms of partnership between the state and business. But it is often forgotten that this partnership should involve a third party – the population of the developed territories.

Compared to the Central regions of Russia, the Arctic remains a relatively clean area. Many Arctic ecosystems can serve as benchmarks for natural complexes and processes, but they are extremely vulnerable and easily destroyed by human impact.

New industrialization in the Arctic is usually associated with the development of shipbuilding production, with new enterprises of gas, oil, diamond industry. The development of Russian national economic growth and the preservation of Russia's leading position in the global hydrocarbon market are connected with the development of new land and shelf deposits.

The Ministry of economic development of the Russian Federation has developed the concept of eight reference zones, where the territories on the basis of public-private partnership will be developed as integral projects: Kola, Arkhangelsk, Nenets, Vorkuta, Yamal-Nenets, Norilsk, North Yakut and Chukotka. At the same time, it is supposed to focus on the use of environmentally friendly technologies. At the same time, it is important that the declared principles of territorial development are actually observed in practice.

It is important that the Arctic territories become not only a platform for mining, but also retain their unique natural, recreational and cultural significance. The Arctic should become a region where, along with sustainable industrial development, areas of traditional nature management will be preserved.

Currently, the problem of new industrialization of the Russian Arctic on the basis of a new model of environmental behavior, which should be based on environmental safety, maximum resource efficiency, biodiversity conservation and ensuring a balance of interests of industrial companies and indigenous peoples of the North, is urgent.

V. CONCLUSION

As a result of the industrial development of the North, the territory of traditional nature management, a characteristic feature of which is a high degree of adaptation to the natural environment, has been reduced to a critical value. We believe that industrial reforms in the Arctic should be carried out in a reasonable combination of traditional and new types of natural resources. The Arctic industrialization strategy should focus on integrated and balanced spatial development, taking into account the low stability of ecosystems and the fragility of the natural environment, as well as the need to take into account the interests of the indigenous population.

New industrialization in the context of Russia's transition to the principles of sustainable development makes it necessary to take into account not only the economic interests of market participants, but, above all, the interests of social and environmental, and should be carried out on the basis of serious scientific research and competent strategic planning.

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