

SUPPORT POINTS FOR THE FAR EASTERN TRANSFORMATIONS

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ABSTRACT

Interdependence of social and economic development of the Far Eastern regions of Russia and of prospects for construction of transport infrastructure is considered in the article as one of national strategic objectives. In addition the author justifies a particular importance of economic transformation of the Republic of Sakha (Yakutia), which has the largest area in the Russian Federation and the richest mineral resources, and assesses its transport-transit capacity, taking into account a possible expansion of a railway network and its integration with the system of international transport corridors.

ENGLISH SUMMARY

Background. According to experts, development of transport infrastructure in the East of Russia is a prerequisite for creation there of a comprehensive economic pattern with modern service sector and appropriate mechanisms, intended for dynamic economic growth and improvement of a demographic situation [1]. Today, due to insufficiency of transport infrastructure economic space of Siberia and the Far East is fragmented. Fragmentation, disintegration, heterogeneity hamper the implementation of economic reforms and hinder synchronous reforms in different regions [2]. The localization of economic space occurs, which is concentrated mainly in the southern regions of Siberia, in a narrow band around the Trans-Siberian railway and in major cities.

While China and other south-eastern neighbors of Russia demonstrate a rapid growth of economy, which attracts huge investment, eastern territories of Russia have been weakened as a result of out-migration, closing up of productions, increased isolation from the central regions of the country [3]. It is noted in the federal program for the development of the Far East and Trans-Baikal region that the economy in these regions in the coming years will not be able to compete with the countries of the Asia-Pacific region in production of engineering products, information technology, etc. Therefore, their positioning should be based on the extraction and processing of available natural resources and the use of local transit options [4].

In this regard, railway transport plays a crucial role. At the moment, large deposits of minerals are quite remote from the railways, but an accelerated development of rail networks can play a decisive role in the development of natural resources. In addition, it is worth noting that the construction and maintenance of motor roads in areas of Siberia and the Far East is hindered by difficult climatic conditions, lack of necessary construction materials, vehicle features. Transportation of extracted minerals using heavy-capacity vehicles (with a load of up to 15 tons per axle) leads to a destruction of pavement. These factors, as well as a relatively low traffic intensity on the Siberian roads significantly reduce the likelihood of the mechanism of concessions and construction of toll highways [5].

State, seeking to change the situation, should rely on regions, that should be a key factor for a transition to a successful development pathway [6]. The Re-

public of Sakha (Yakutia)¹, which is among the most important mineral resource and mining centers not only in Russia, but also globally, can be one of those strongholds [7].

However, a construction of railways only for the sake of development of mineral deposits has no long-term prospects, strengthens raw orientation of economic development, which cannot be sustained as a result of volatility in global commodity prices and inevitable limitations of the resource of mined deposits. Resource-oriented and cluster ways of development of the economy is likely to lead to the appearance of unpromising settlements, unemployment, abandoned roads after major mining companies close up their activities [5]. It is necessary to note that the territory of the republic is not only rich in natural resources, but also has a serious transport-transit potential.

Objective. The objective of the author is to assess strategic long-term potential of the Republic of Sakha (Yakutia) in terms of transport development strategy and the prospects of transport infrastructure construction.

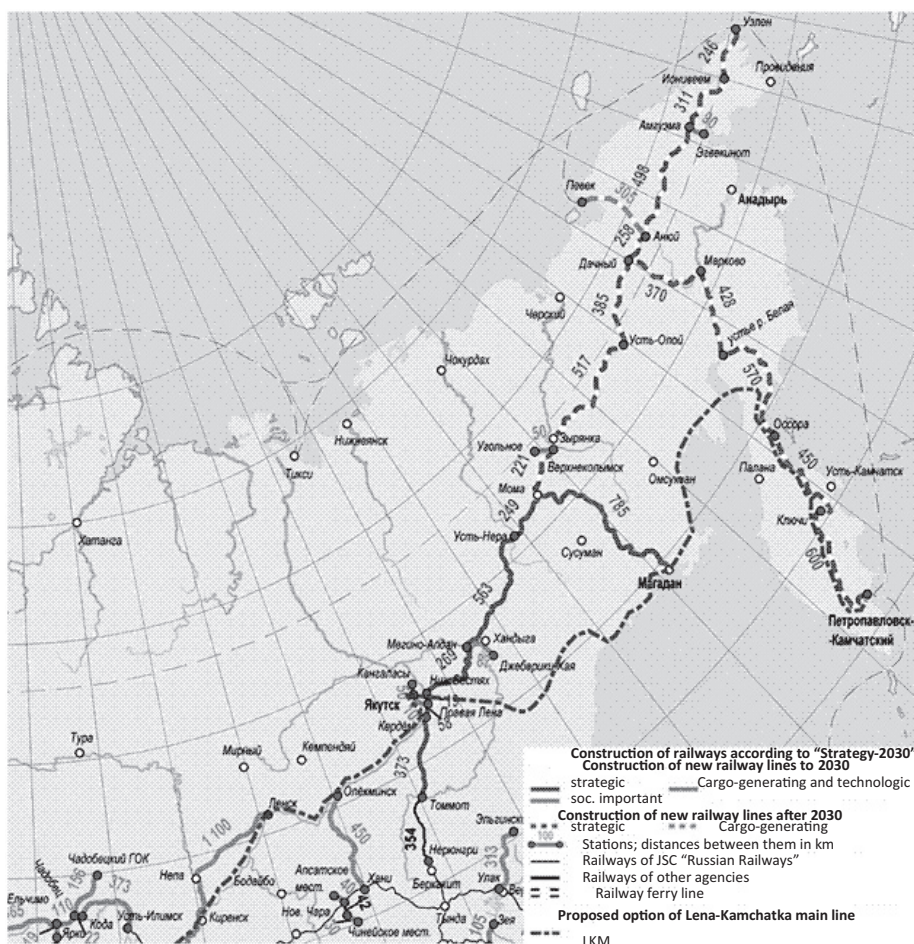
Methods. The author uses descriptive method and economic analysis, methods of comparative study and transport geography.

Results. Yakutia has a special economic and geographical position. It can refer to both the Eastern Siberia and the Far East. Its proximity to the Eastern Siberia can be seen through similar climatic conditions, unique natural resources (oil, natural gas, diamonds, coal), as well as the history of economic and transport development, interrelated transport projects like Lena inland navigation company and the Northern Sea Route. However, referring to the prospects for the development of transport and energy systems, and other inter-regional integration processes, geographical proximity to Asia-Pacific markets, it obviously gravitates toward the Far East.

In a globalizing world economy, with dynamic growth of trade flows between Asia Pacific region and Europe, the existing rail capacity will not allow Russia to use natural geographic advantages of transcontinental land «bridge» and threatens to convert the country into a peripheral position in the global transportation system. Hence there is a natural conclusion: development and expansion of a railway network in Siberia and the Far East has become a priority strategic objective of state policy [8].

With putting into operation of the railway Berkakit–Tommot–Yakutsk a promising meridional transport corridor is formed connecting the east-west main lines – the Trans-Siberian and Baikal-Amur Mainlines, on the one hand, and the Northern Sea Route – on the other hand. In view of expected construction of a bridge across the river Amur near Blagoveshchensk it enables the entire regional transportation system to gain international character, expand transit transportation and a network of a mixed type «railway – river – sea» from Asia Pacific countries and Japan to Europe and inversely. Option is rather attractive as the distance of trans-

¹The Republic of Sakha (Yakutia) according to the Constitution of Russia (ch.3 «The Federal Structure») is one of the subjects of the Russian Federation. – ed.note.



Pic. 1. Project of Lena-Kamchatka mainline (map, created under the guidance of Professor of MIIT B. Kosmin [9]).



Pic. 2. Three-dimensional economic map of Russia.

portation of goods using the Northern Sea Route might be reduced by 2–3 thousand km.

Further deployment and implementation of transport and transit potential of the republic requires the extension of the railway Berkakit–Tommot–Yakutsk through the Bering Strait to Alaska. When implementing such a project Yakutia could occupy a very significant place in the junction of strategic transport corridors: America–China, North–East of Russia–European part of Russia, China – Western Europe. That is, the railway will be part of an international network of trans-

port corridors, and not a dead-end infrastructure for the export of natural resources (Pic. 1).

Creation of a strong «band» for year-round operating transport system BAM (Baikal-Amur Mainline) – Lena–Yakutsk–BAM will promote solving economic and social problems, developing rich resource potential, but also will guarantee safety of living in those lands, the freedom of mobility of citizens.

The Republic of Sakha (Yakutia) is the largest in the territory and natural resources potential subject of the Russian Federation. Its area is 3083,5



thousand km², which is 20% of the territory of the whole country, or almost 60% of the land in Western Europe. However, population density in the republic is low, in 2013 the average population density was 0,31 persons / km², which is ten times lower than in European regions and the Russian Federation (in Russia the figure is 8.4 pers. /km²), and settlement is of focal nature [10].

From this perspective, to assess the current economic landscape, we consider a three-dimensional map of Russia [11], performed at Yale University by a group lead by B. Nordhaus within framework of a project G-Econ and implying geo-located economic information (Pic. 2). Developers give their own modification of GRP – gross regional product per «cell» of the earth's surface to the size of one degree of latitude and one degree of longitude.

Map feature is that GRP is tied to the size and density of population, producing GRP, since they are calculated on the basis of data on GDP per capita. Therefore, sparsely populated areas of Siberia and the Far East, despite the large amounts of GRP look like small hills on it, while southern regions look like a mountain range.

As professional geographers, the authors have constructed similar maps for most countries in the world and estimated regression dependence of the gross regional product from some geographical parameters. They concluded that «economic deserts in the world are cold regions». Once the aver-

age temperature drops below 20 degrees, the probability of being an economic desert exceeds 80%. These areas include Antarctica, Greenland, the northern parts of Russia and Canada [12]. From this conclusion, there is little to be for regional policy, but that way of visualization convincingly demonstrates the fact that there will be no economic life without residents.

Conclusion. In the existing situation it is hardly possible to develop expanses of the Far East, and particularly of Yakutia, which are mostly uninhabited. Experts claim that it is impossible to foresee consolidated development of the Far East and of Russia as a whole without a socially-oriented strategy. As the main focus, this strategy should contain a provision requiring a reasonable settlement of the region, which should be based on so-called «supporting rail transport frame». In other words, we need a steady year-round connection of the majority of territories of the Far East with the road network in other regions of the Russian Federation and of the world [13].

All this indicates that in the coming years the Russian authorities will be obliged to carry out an active regional policy, which would take into account the priority development of transport infrastructure. Moreover, such a complex problem needs to be addressed not only in order to accelerate an economic growth, but also to improve the social well-being, to foster intra-regional and inter-regional migration in national and state interests.

Keywords: economy, transport infrastructure, the Far East, Eastern Siberia, Yakutia, railways, projects, construction, international transport corridors, socio-economic prospects of the region.

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