Modernization of Peripheral Region's Economy in Implementing Geostrategic Priorities

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Abstract: Economic modernization has recently become an integral part of regional policy. Along with that, the expert community consider solving tasks of modernizing peripheral regions' economy, including the Far East, to be one of the tough problems. In giving new impetus to the modernization of the regional economy, an important role is assigned to spatial transformations, for which the Strategy of Spatial Development of the Russian Federation until 2025 identifies geostrategic territories, within which the state uses a wide range of tools. This paper doesn't consider the determination of geostrategic territories as an element of a selective regional policy aimed at using the potential of the federal centre for implementing the goals of integrated regional development, but primarily as space within which conditions are created for implementing economic projects that ensure achieving state geostrategic goals. As a result, less-developed peripheral regions become centres of economic activity of large economic entities. For the Far East, one of the most important geostrategic goals is the creation of an export transport infrastructure that ensures integration into the Asia-Pacific Region. As part of this work, an attempt is made to assess the dynamics of processes taking place as large transport investment projects being implemented. The Amur Region, which has all the peculiarities of the regional periphery, was chosen for the research. Particular attention is paid to the remaining problems, including significant limitations in transport accessibility, a high deterioration of the transport infrastructure.

1 INTRODUCTION

The main target of regional strategies is economic recovery, modernization and improvement of the structure of the economic complex. However, after assessing the findings one can come to a disappointing conclusion that a regional state policy is not clear, and the problem of modernization of the archaic spatial organization of the economy and society as a whole is still not solved. As noted by academician P.A. Minakir: "there is no practical sense in these constructions, the simultaneous desire of all territorial subsystems to build some ideal economies in the complete absence of real resources only indicates designing a virtual additive system parts of which are not connected to each other either hierarchically or by cooperative interactions" (Minakir, 2015).

Therefore, one of the main issues in determining the spatial development strategy is to assess the potential of internal (endogenous) and external (exogenous) growth drivers. It seems to us that during such an assessment two aspects, based on an analysis of existing practices, should be taken into account.

First, the actual investments are spatially distributed primarily according to sectoral and corporate interests, so only a very small number of regions with certain market advantages can rely on exogenous growth drivers. Accordingly, the rest of the regions can only rely on endogenous drivers, focusing their attention, when developing strategies, on finding ways to use them most effectively.

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Secondly, the analysis of the accumulated experience of the regions, which are forced to rely only on internal growth drivers, shows that without the help of the centre, they can hardly count on high positive results. Various forms of "ethno-economy" replace investment resources due to their lack, thereby forming powerful mechanisms of inertia and counteracting modernization (Popov, 2010).

The peripheral regions are in a particularly difficult situation. The ongoing regional polarization increases the economic weakness of regional outsiders, the instability of territorial evolution and financial and investment dependence on the federal centre. Thus, the opportunities to modernize the regional periphery's economy at the expense of endogenous drivers are significantly narrowed, not allowing counting on high positive results. Lacking the market advantages that make the region attractive to large corporations, most of the peripheral territories cannot rely on external drivers of economic growth and modernization.

An important consequence of economic weakness is a high dependence on external influences (Eskelinen and Snickars, 1995), which often makes peripheral regions' strategic programs a pile of sectoral and corporate decisions, changes in which determine the need for the documents fixing the strategic guidelines to be systematically revised. As a rule, there are virtually no attempts to analyze the problems and prospects of growth in a new light. Thus, the question of responsibility for the initially accepted obligations loses all meaning.

A new attempt to implement institutional innovations in regional development was the determination of geostrategic territories, the priority of which is characterized by their essential importance for ensuring sustainable socio-economic development, territorial integrity and security of the Russian Federation (Strategy of Spatial, 2019).

In recent years, attempts have been made to find out if belonging to geostrategic territories can be used to improve regional strategies (Buchwald and Valentic, 2019; Mitrofanova et al., 2019). The analysis carried out only allowed identifying additional arguments in favour of the conclusion made by P.A. Minakir, who noted that "geostrategic territories" could be considered objects of spatial strategizing, "if they did not occupy almost half of the entire area of the Russian Federation". The result is a situation where "there is simply no real object of strategic planning for this area" (Minakir, 2018).

Determining geostrategic territories doesn't practically involve so much achieving the goals of integrated regional development, but rather isolating them as space within which conditions are created for implementing economic projects that ensure reaching state geostrategic goals. Expanding the backbone infrastructure and implementing major transport infrastructure projects are some of the priorities of national importance for the Far East to be developed. For this purpose, new institutions were introduced. They were designed to create the most favourable conditions for large corporations to invest in projects implemented as part of integration into the Asia-Pacific Region (territories of advanced development (TAD); free ports; some tariff preferences) (Ivanov and Buchwald, 2019; Gudkova, 2016).

In these conditions, it makes practical sense to analyze the state and dynamics of transformations taking place in a region's transport complex, it will allow judging the course of a region's socio-economic development, implementation of decisions and their effectiveness.

This research attempts to assess the transformations taking place during the transport system modernization in the Amur Region, one of the most economically weak regions of the southern Far East that has significant growth prospects.

2 RESEARCH METHODOLOGY

The development level of the route network in a region and its condition are the most important factors in the development of other types of economic activity. The volume of transport services is in turn contingent on the FEA structure of the region and the economic situation in it. They determine the demand for the services of the transport complex. Thus, the main results of transport activity reflect the economic trends in a region's economy.

Besides, it should be taken into account that the state of the transport system significantly affects the current situation in a region, revealing and limiting the availability of goods and services and thereby affecting the differentiation of territorial localities.

A region's route network is important to observe because modernization taking place in it is the result of the economic activity of different types of economic entities that differ in many ways, which creates conditions for assessing their regional modernization potential.

3 RESEARCH RESULTS

3.1 Characteristics of the Amur Region as a Regional Periphery

The Amur Region is a typical representative of the regional periphery in many of its characteristics (Novotný et al., 2015; Marada and Chromý, 1999; Kaibicheva, 2018; Chromý and Jančák, 2005). Along with that, the combination of some qualities makes the region a unique object that has specific features distinguishing it so significantly that using general patterns for developing regional periphery cannot be correct with it in making management decisions and determining the prospects for socio-economic growth.

Among the issues that deserve attention in this regard, it is necessary to assess both the general and special characteristics of the region as a peripheral one. The importance of such a detailed analysis has been repeatedly emphasized in ongoing research (Granberg, 2009).

Among the most significant characteristics of the situation in the region, there is its low population, dispersion and small-scale settlement, significant territorial spaces equated by natural and climatic conditions to the Far North, limited significantly on their economic growth and not considered as a place of permanent residence (Burlayev at el., 2018).

An important geopolitical feature of the south of the region is its bordering on China. In the initial period of the region's development, the border position, the presence of a unique settlement development on both banks of the Amur River directly opposite each other, were an important advantage, ensuring the active development of foreign economic relations, the penetration of Russian capital into the border areas of China and the wide opportunities for using Chinese labour in economic activities in the border areas of Russia. As inter-country relations were getting more complicated, the growing tension in the border area has largely become a determining factor in deterring the deployment of large industrial enterprises, primarily of the military-industrial sector, on the territory of the region. Nowadays, the tendency of returning to a situation where bordering contributes to developing positive economic trends in the region is becoming more relevant (Dyachenko, Lazareva, 2018).

3.2 Development of the Amur Region as an Element of the Geostrategic Territory

In the structure of the gross regional product, the largest share is occupied by transport and communications - 16.3%, mining - 15.8%, manufacturing - 3.4%, agriculture, hunting and forestry - 8.0%, wholesale and retail trade - 11.0%. The structure of industrial production has energy and raw material orientation (Amur Statistical Yearbook, 2020).

Over the past two thousand years, the funds of mining and quarrying organizations have increased annually in the total value of basic assets in the region (from 1% in 2005 to 5.4% in 2018) (Basic Assets, 2020).

The region has recently implemented such major transport projects as building the Eastern Siberia-Pacific Ocean oil pipeline, the Amur and the Lena federal highways (within the federal target program), the construction and reconstruction of rail transport facilities (the access track to the Elginsky coalfield, bridges over the Zeya and Bureya Rivers), building the Power of Siberia gas pipeline in the region, and the construction of the Chinese-Russian highway bridge Heihe – Blagoveshchensk. In "electric-power industry", construction of the Bureyskaya HPP and the Nizhne-Bureyskaya HPP, electric and gas distribution networks in the region; in "mining and quarrying", the "Pokrovsky mine" and "Berezitovy mine" facilities, the "Olekma" processing plant, the ore mining enterprise of the Kuranakhskoye field, "Malomyrsky Mine" Ltd. The Amur Oil Refinery Plant for oil refining and transportation of petroleum products, gas processing and gas chemical complexes were built.

3.3 General Characteristics of the Route Network in the Amur Region

The transport complex is one of the economic sectors in the Amur Region, which occupies a leading place in the region's GRP structure.

The development of the route network is determined by its transit functions, the location of production facilities, and the economic specialization of territorial localities. Due to the region's bordering position, an increasing role in its transport complex is played by the route network elements that ensure the development of international transport and economic relations, thanks to which pipeline has been registered in the region, the highway infrastructure of

international transit is being built up, and international transportation by water is conducted.

The Amur Region's transport complex includes infrastructure facilities of railway and highway transportation, inland waterways, and civil aviation facilities (Table 1).

Table 1: Length of communication routes, km.

	2015	2016	2017	2018	2019
Railway tracks	3,134	3,123	3,113	3,112	3,110
Highways, including	17,099	17,397	17,147	17,320	17,171
paved roads, among them	12,647	12,936	12,851	12,923	12,992
roads of federal significance	1,483	1,483	1,494	1,494	1,494
roads of regional or inter-municipal significance	6,072	5,698	5,678	5,713	5,709
roads of local significance	4,801	5,318	5,259	5,242	5,302
Inland waterways, including	2,572	2,572	2,572	2,572	2,572
with guaranteed track dimensions	1,923	1,923	1,923	1,923	1,923

The significant investments made in the development of the region's transport system were not aimed at increasing the length of roads but at their modernization, improving the quality through repair work. Along with focusing on the condition of roads in agglomerations and between main settlement centres, significant efforts were directed to improving those parts of transport routes in the worst condition.

The region's transport system was modernized under the State Program "Development of the Transport System of the Amur Region for 2014-2020" and the National Project "Safe and High-Quality Highways", which includes the regional projects "Road Network", "System-Wide Measures for the Development of the Road Facilities" and the implementation of a comprehensive plan for modernization and expansion of the backbone infrastructure. Among the most important tasks of the program is to promote the activation of updating basic assets and increase the length of highways that meet regulatory requirements.

3.4 Analysis and Evaluation of the Activities of Sectoral Transport Complexes in the Amur Region

3.4.1 Railway Transport

Railway transport plays a leading role in providing international and interregional communication. The location of the region between the main economic centres of the Far East and the central regions of the country determines the high importance of the region's transit function. The modernization of the railway network in the region is carried out by "Russian Railways" JSC under the Strategy for the Railway Transport Development in the Russian Federation until 2030.

In recent years, significant investments have been made in the development of railway transport in the region. Thus, according to the government of the Amur Region, in 2020, Russian Railways invested almost 34 billion rubles to develop the capacity of the BAM and Trans-Siberian Railway (Transport and Communications, 2020). This allows increasing the traffic volume to 180 million tons by 2024. For comparison, 114 million tons of cargo were transported in 2019.

Commuter rail service continues to play a primary role in ensuring the citizens' mobility in the region while remaining accessible through state regulation of tariffs. The subsidies provided in 2018 from the regional budget to compensate for lost income, resulting from the fixed tariffs below the economically reasonable level, amounted to 144,301 million rubles. A subsidy of 4,053 million rubles was provided for preferential travel for students and a certain category of citizens. In 2018, commuter rail service in the Amur Region was carried out on 13 routes, including between localities where this type of transport is main and non-alternative.

The main problems of the development and functioning of railway transport in the region include:

- - insufficient carrying capacity, limiting the ability to use the country's railway network in providing international transit;
- - high deterioration of funds, primarily of rolling stock, track facilities, repair facilities, as well as low safety of movement and transportation of rolling stock.

3.4.2 Road Transport

Highways are the most important component of the industrial and social infrastructure of the region. The development of the region's economy, the expansion of markets for goods and services, and the expansion of inter-municipal relations expand the scope of truck transport, increasing the importance of highways in the socio-economic development of the region.

The development of road communication was active throughout the entire period of development. Only in the period from 2010 to 2018, the length of public roads increased from 8,464 km to 16,462 km.

Of the total length of public roads, the length of paved roads has increased from 7,795 km to 12,927 km (Transport and Communications, 2020). The most significant step in the region's transport development was the construction of the "Amur" federal highway, thanks to which a through highway service became available connecting the south of the Far East and the western regions of the country.

At the same time, the level of road infrastructure development in the region is characterized as low. Unpaved roads, the condition of which depends on weather conditions, make up 24% in the region, about half of the roads (51%) are gravel (slag) roads and require frequent repairs.

The road network is unevenly allocated about the region (Table 2) (Transport and Communications, 2020).

Table 2: Proportion of local public roads with improved pavement in the length of paved roads

	2015	2017	2018	2019
Total by region	24.0	25.6	26.6	26.7
Blagoveshchensk	59.2	58.3	58.3	58.5
Belogorsk	41.7	64.5	64.7	64.8
Zeya	57.1	57.1	63.1	63.1
Raychikhinsk	26.9	26.9	26.9	26.9
Svobodniy	100	100	100	100
Tynda	100	100	100	100
Shimanovsk	100	100	100	100
urban-type settlement of Progress	100	100	100	100
Arkharinsky	11.0	11.6	12.2	11.8
Belogorsky	21.6	-	-	-
Blagoveshchensky	20.4	19.3	19.8	19.7
Bureysky	20.1	21.0	21.7	23.7
Zavitinsky	21.9	18.7	41.1	38.2
Zeysky	7.2	7.2	7.2	7.2
Ivanovsky	12.0	28.4	28.4	28.0
Konstantinovsky	38.0	42.0	44.5	40.6
Magdagachinsky	23.2	10.1	9.0	8.9
Mazanovsky	9.3	8.2	8.2	8.2
Mikhailovsky	-	9.3	9.3	9.2
Oktyabrsky	-	-	36.5	38.8
Romnensky	5.1	5.0	5.0	5.6
Svobodnensky	-	100	100	100
Selemdzhinsky	8.3	3.1	3.1	3.3
Seryshevsky	19.3	14.2	14.2	14.6
Skovorodinsky	3.8	4.6	4.5	4.6
Tambovsky	44.5	43.1	43.1	43.1
Tyndynsky	-	-	-	-
Szymanovsky	9.8	9.8	17.2	17.2

The highest density of the road network is in the southern part of the region and it is concentrated around the regional centre and major cities. The road network in the north and north-west of the region is much less developed.

3.4.3 Air Transport

Air transport is an important part of the integrated transport system in the Russian Federation and the Amur Region.

Blagoveshchensk Airport is an airport of federal significance, used for domestic and local communications. It is connected by transit and direct airlines to the central regions of the country and has access to international air transportation services. The northern remote settlements of the region are served by airports located in the cities of Zeya, Tynda and the village of Ekimchan.

Most airports located on the territory of the region have a low level of equipment, the condition of runways and other ground infrastructure does not meet up-to-date requirements. The requirements for flight safety and the quality of public services are also increasing. To ensure sustainable passenger air routes and the safety of passenger transport, the state should actively participate in the reconstruction and overhaul of airport complexes and ground infrastructure.

3.4.4 Pipeline

Pipeline facilities are included in transport facilities besides road, rail and air ones.

Adding the Eastern Siberia - Pacific Ocean oil pipeline to the region's route network with access to China of the Selemdzhinsky District and the Power of Siberia gas pipeline gives not only large-scale export opportunities but also prospects for developing gas processing and oil refining. Currently, the capacity of the gas pipeline is being expanded, which will allow starting full-scale gasification works in the region. The total level of gasification of the Amur Region is planned to be raised from 0% to 11.6%.

4 CONCLUSIONS

Using the region's transit potential as a territory of geostrategic importance gave rise to its transport system in developing the Far East backbone transport network, providing access to the countries of the Asia-Pacific Region.

Among others, the priority task is to develop the backbone infrastructure, the main elements of which include the Trans-Siberian and Baikal-Amur railway lines, which are a key link in ensuring transport communications between Europe and Asia, realizing the railway transit potential of the Russian

Federation, and developing international transport corridors. Measures for railway infrastructure development, oriented to increasing the volume of cargo and passenger traffic, include the elimination of "bottlenecks", the construction of second and third tracks in the main directions.

Large-scale results have been achieved in the development of road transport in recent years. The most significant step in the region's transport development was the construction of the "Amur" federal highway, thanks to which a through highway service became available connecting the south of the Far East and the western regions of the country. At the same time, highway service in the region is not sufficiently developed. In the regional settlement system, there are still significant limitations in transport accessibility. One of the main problems of the transport infrastructure is a high deterioration of the main production assets of road transport, which limits their carrying capacity and requires a constant inflow of investments for repair work. Among the acute problems in the route network of the region, there is a low technical condition and poor development of the route network of local significance. In general, the existing transport infrastructure does not correspond to the current trends in passenger and cargo transportation

Important elements of the transport infrastructure in the region are bridges and overpasses, facilities for improving road safety, gas stations, etc. Many of the artificial structures are in poor technical condition, including a bridge crossing connecting the regional centre with the southern districts of the region.

The bordering position of the region creates conditions for expanding international cooperation, increasing the volume of export-import and passenger traffic. In 2020, the border bridge crossing of 1.3 km in length over the Amur River in the area of Blagoveshchensk (Amur Region) and Heihe was brought into service. To further increase the foreign economic potential of the region's transport system, it is necessary to significantly increase the logistics centres that meet domestic and international standards.

In the region's transport complex, despite the large-scale transformations, there are still systemic problems that indicate the necessity to eliminate the infrastructure limitations in the region for socio-economic development and performance of transit functions in interregional and international communication.

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