

The Global Trends' Impact on the Non-Uniformity of the Infrastructural Environment's Development

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Keywords: Infrastructure environment, Non-uniformity development, Global trends.

Abstract: The article is devoted to the issues of non-uniformity in the development of the infrastructural environment of macro-regional economic systems (federal districts) and their constituent regions. The assessment of the state and efficiency of infrastructural environment's functioning in the macro-regions and regions of the Russian Federation is revealed. It is concluded that interregional non-uniformity in the provision of physical infrastructure and its condition affects the functioning and development of both regional economic systems and the economic system of the state as a whole. Attention is focused on the fact that the priority of state policy in the development of the infrastructure environment of the leading regions leads to labor migration to these regions, increases the burden on their budgets, further strengthens asymmetric regional development, contributes to the growth of social tension in regions with insufficient and degrading infrastructure environment.

1 INTRODUCTION

The development of Russia under the impact of the global trends has generated many serious problems, one of which was the gradual degradation of the infrastructure of most federal regions. Meanwhile, the presence of a developed infrastructure determines the country's place in the world economic system, since it is the dominant factor in the development of productive forces, the world market, creates conditions for human activity and determines the quality of his life (Hausmann R., Klinger B., Wagner R., 2008, Kuznetsova A.I., 2013). Today, Russia ranks 60th in the world ranking among 131 countries in terms of infrastructure quality, 113th in social spending per capita, 99th in terms of road infrastructure quality, 97th in health care quality (World Economic Forum, 2019). The indicator of infrastructure modernization to accelerate the energy transition and expand access to electricity and ICT in Russia is 57.21 points, and is estimated as the lowest

among 131 economies in the world. The total volume of infrastructure investments in 2020 amounted to 39.2 billion in Russia. US dollars per capita accounted for 268.6 US dollars, with a need of 420.1 US dollars, which is 3.5 times less than in the United States of America and 2.3 times less than in China (National Centre of SPC, 2020).

The problems of interregional asymmetry in the development of regions and their infrastructure environment remain debatable today, a unified position has not been developed, particularly on such issues as determining the optimal balance of stimulating and leveling measures, the priority of spatial alignment of Russia, effective methods of ensuring more equal access to public goods for people living in different macro-regions and regions of the country and others (Zubarevich, 2014).

The infrastructure environment cannot be completely new, even if it is 100% artificial, since it is always created around a person who keeps the memory of the environment. Along with new

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infrastructure elements, there will always be infrastructure objects already created in other formations. These postulates are the basis of this study and are taken into account by the authors when analyzing and assessing the state of the infrastructure environment, which we define as a set of conditions, institutions and objects that determine the level of development of the economic system and characterize the state of its subsystems.

The mechanism used in the country for financing regional infrastructure development projects provides for the allocation of funds from the federal budget on a competitive basis and subject to its co-financing by the subject of the Federation. Such a financing mechanism initially includes a system of restraining infrastructure development, since only 13 out of 85 regions have sufficient financial resources of their own (Ministry of Finance of the Russian Federation, 2019).

From the authors' point of view, such a mechanism can strengthen regional differentiation, since the leading regions get access to co-financing the development of regional infrastructure. It can be assumed that the growing asymmetry of the subjects of the Russian Federation in this case can be leveled in the future by redistributing the increased tax flow from the donor regions, only theoretically, since an increase in the burden on the budgets of the donor regions will lead to negative consequences for them and may cause an increase in social tension. The purpose of this study is to analyze the heterogeneity of the development of the infrastructure environment of the regions and federal districts of Russia, reinforced by high risks and uncertainty of the consequences of global factors, including the pandemic shock (COVID-19).

2 MATERIALS AND METHODS

The influence of increasing regional asymmetry in the provision and quality of the state of physical infrastructure on the degree of heterogeneity of the economic development of regions in the works of domestic and foreign authors in this context has not been studied. Meanwhile, the role of infrastructure in stimulating economic growth, its impact on solving the fundamental economic problems of the region, has been the subject of research by many foreign (Rosenstein-Rodan P., 1944; Hirshman A., 1958; Jochimsen R., 1966; Isard W., 1966, etc.) and domestic scientists (Terentyev V., 1979; Krasovsky V., 1980; Nosova S. 1984; Feodoritov V., 1985; Golts 1989).

Based on the results of research in the field of infrastructure obtained by scientists from different countries, and their conclusions that infrastructure stimulates the growth of economic development, it is logical to assume that the leveling of imbalances in the state of infrastructure and the provision of its facilities contributes to the process of convergence of regions, providing them with equal opportunities for dynamic development through access to modern infrastructure facilities.

The authors resorted to such methods of scientific research as a monographic review of publications on the topic of the article, evaluation of statistical data characterizing the state of the dynamics of the infrastructure environment of regions and macro-regions, logical analysis, quantitative assessment of key performance indicators and modeling.

3 RESULTS AND DISCUSSION

Infrastructure is an integrating organizational form of processes that occur at all levels of the socio-economic system, since it is identified with the internal environment of these systems. As an economic system of an environmental type, infrastructure contains interconnected and structured elements and subsystems, the quality and security of which determines the level of favorability of this environment.

Infrastructure is multidimensional, systemic and serves as a condition for the development of the economy in all its spheres. There is an indirect relationship between the quality of the infrastructure environment of the regions and the heterogeneity of their development.

Therefore, real investments aimed at the modernization and construction of buildings and structures, the transport system, and social infrastructure not only of the leading regions, but also of recipients (in order to provide balanced physical infrastructure that serves as the foundation of economic development) can positively and multiplicatively affect the development of the regional economy, and, therefore, reduce the level of asymmetric regional development.

At the same time, as world experience shows, investing in high-quality infrastructure of regions should be carried out taking into account their uniqueness, differentiation of production, the presence of problems associated with infrastructure development, the state of management, since they affect the economic effect of infrastructure investments. For example, according to McKinsey

experts, an increase in annual total infrastructure investments by 1% of GDP will create 3.4 million new jobs in India, 1.5 million jobs in the United States and 1.3 million jobs in Brazil.

The results of the study conducted by the authors showed that the tactics adopted in domestic practice of forming points of growth and polarization of the economy, when the priority of state policy is focused on the development of the leading regions, which in theory should become the driver of the development of the entire domestic economy, worsens the situation with spatial heterogeneity of the infrastructure environment, strengthens territorial differentiation. Reducing the growth of regional differentiation in conditions of budget constraints is possible through the involvement of a mass investor, that is, the final beneficiaries of infrastructure, in the implementation of small infrastructure projects with high social significance planned for implementation in the leading regions with a high level of quality of life (high income). In such regions, there are no obstacles to creating the basic conditions for infrastructure crowdfunding: a digital platform acting as an aggregator of investment proposals and/or a payment gateway, as well as regulatory conditions for attracting funds from unqualified investors. The released investment resources should be redirected to the implementation of infrastructure projects of outsider regions.

According to the conducted research, domestic and foreign investors are ready to invest up to 2 trillion rubles a year in the development of the Russian infrastructure market. However, their interest in such investments remains unrealized due to insufficient transparency of the infrastructure market and the lack of effective assessment tools for making investment decisions. In these conditions, the possible effects for the infrastructure market may be an increase in the quality of projects and the standards of their preparation and implementation.

4 CONCLUSIONS

The results of the study show that infrastructure is the driving force of economic prosperity and the foundation for sustainable, balanced and inclusive growth and development, which are key goals and are crucial for regional development priorities. However, most regions still face insufficient investment in new and existing infrastructure, which is a serious obstacle to economic growth and development or guarantees of reliable public and regional services.

The current trend of government spending on infrastructure is their critically low level. Investments in infrastructure in recent years have not exceeded 2% of GDP at the minimum required level of 4.5 - 5.0% of GDP. According to the Global Infrastructure Hub, in the period of 2021-2040, Russia will experience a shortage in annual investments in infrastructure facilities in the amount of ~ 1.9% of GDP.

In the conditions of restrictions caused by global trends and COVID-19, by the end of 2020, the revenue part of 40 regional budgets did not reach the planned indicators, construction volumes fell in 27 regions, and in 9 regions, infrastructure companies experienced a loss of revenue.

It is possible to slow down the growth rate of regional differentiation in conditions of a significant reduction in budget opportunities for launching new infrastructure projects by redistributing infrastructure investments planned for the leading regions to outsider regions.

In this regard, there is a need to introduce new project financing mechanisms that can attract additional extra-budgetary funds for the development of the infrastructure of the leading regions: perpetual bonds and infrastructure crowdfunding. financing.

It is important to start developing the institutional environment and improve expertise in structuring transactions, increase market transparency, and form best practices for the use of project financing tools. This would increase the interest, including institutional investors, in project financing bonds.

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