## FEDERAL STATE BUDGETARY EDUCATIONAL INSTITUTION OF HIGHER EDUCATION «RUSSIAN ACADEMY OF NATIONAL ECONOMY AND PUBLIC ADMINISTRATION UNDER THE PRESIDENT OF THE RUSSIAN FEDERATION»

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## ECONOMIC DEVELOPMENT OF BORDER REGIONS IN THE CONTEXT OF INTERREGIONAL INEQUALITY

Specialty: 5.2.3. Regional and Sectoral Economics

ANNOTATION dissertation for the degree of Doctor of Economics

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## Main results of the dissertation of N.S. Epifanova «Economic Development of Border Regions in the Context of Interregional Inequality»

N.S. Epifanova's dissertation for the degree of Doctor of Economics in the specialty "Complex 5.2.3. Regional and Sectoral Economics" is a comprehensive study of the patterns and factors of economic development in border regions in the context of interregional inequality as a significant socio-economic phenomenon from the point of view of the long-term development of the regional space of Russia.

The relevance of this dissertation subject is determined by the growing role of border regions in Russia's economic development. Interregional differentiation is increasing, and the connectivity between the European and Asian parts of the country is declining. At the same time, the external geoeconomic space is being transformed under the influence of military and political processes. Border regions act as distinct economic systems. For them, the state border is both a constraint and a resource for development. It shapes the conditions for cross-border interaction, concentrates spatial disparities, and impacts the country's economic security.

The socioeconomic indicators of border regions are generally comparable to those of inland territories. However, their economic structure is strongly focused on raw materials. Exports are characterized by low levels of processing, technological backwardness, and weak innovation. This is inconsistent with the goals of the Russian Federation's Spatial Development Strategy. Thus, in terms of development, border regions are not significantly inferior to inland regions. However, their economic profile is less technologically advanced and less innovative.

There is a significant contradiction between the goal of balanced development and the actual peripheral nature of border territories. Border regions occupy approximately 80% of the country's territory. They are home to only 52% of the population and produce approximately 42% of the total GRP.

The specific nature of development under the influence of borders manifests itself in the structure of the economy, the level of technology, the quality of infrastructure, and the degree of international engagement. It affects both working

conditions and quality of life. Therefore, the impact of the state border can be considered a significant factor in economic transformation and long-term growth.

In the post-Soviet period, a neoliberal approach dominated regional policy. Its stated goal was to reduce interregional inequality. In practice, however, the objectives were reduced to mechanically equalizing the budgetary resources of the constituent entities of the Federation. This policy widened the gaps between territories and contributed to the technological backwardness of border regions. In modern regional economics, border territories are treated as peripheries influenced by the state border. At the same time, they are part, often the core, of the cross-border economic spaces of two neighboring countries.

The border simultaneously creates risks and opens up development opportunities. Most border regions remain underdeveloped. This indicates that their potential remains untapped.

The degree of scientific development of the topic. The problem of economic development in border regions has a long history of study. It is considered in the context of interdisciplinary border studies. The first approaches to understanding border territories appeared in the second half of the 19th century in the works of classic scholars of political geography and regional economics. In these studies, borders were viewed as an important factor influencing the political and socioeconomic development of adjacent territories.

In the 20th century, particularly since the 1970s, an independent academic field, Border Studies, emerged in Europe and the United States. Within this field, borders began to be understood not as static lines, but as dynamic spaces of interaction. The methodological foundation of modern studies on border regions is formed by theories of the distribution of productive forces, spatial economics, and regional development. Contributions to the development of these approaches were primarily made by European scholars. Research by Western (European and American) authors laid the foundation for understanding the mechanisms of regional integration and the formation of a unified economic space at national borders.

In Russian scholarship, the systematic study of border regions began in the late 20th century. Contemporary research focuses on the peripheral nature of Russia's border regions, the ineffectiveness of regional policies, technological backwardness, and threats to economic security. Despite the large volume of publications, conceptual and methodological approaches to studying the economic development of border regions remain insufficiently developed.

Most contemporary studies employ panel data and spatial analysis methods. Border location is often treated as a dummy variable. In other words, the border is treated as a static factor that cannot be quantified, although its impact on regional development is significantly more complex and requires more precise instruments.

The object of this study is the spatial organization of economic activity in the border regions of the Russian Federation and their economic development. It is also recognized that each such region is part of a broader economic space formed jointly by the border regions of Russia and the regions of the neighboring state. This space varies across individual sections of the state border, each with its own specific structural and general economic characteristics.

The subject of the study is the interconnections and interdependencies that arise between different regional economies in the process of formation and functioning of economic spaces, which are influenced by large-scale interregional disparities and various factors of differentiation of geoeconomic space.

The theoretical basis of the study is formed by theoretical and conceptual developments by domestic and international authors in identifying patterns of economic activity distribution in space, patterns of regional economic system development, and factors that contribute to regional economic development and improve the quality of management of this development. Theories containing such developments include theories and concepts of regional development that substantiate the spatial principles of organizing socio-economic systems (classical and neoclassical theories of industrial location, theories of growth centers and poles, theories aimed at identifying the optimal size and structure of the regional economy, integrated theories linking locational and regional issues, theories of interregional

innovation diffusion, infrastructural theories of regional development, agglomeration approaches, theories of unbalanced regional growth, and theories of demand-driven regional growth).

The methodological basis of the study is formed by methods of analyzing the modern economy that lie at the intersection of regional economics, macroeconomics, and international economics, combining macro- and microeconomic approaches, as well as certain analytical methods used in economic geography, geoeconomics, and development economics. The study also utilizes econometric modeling and estimation methods, mathematical statistics, comparative and retrospective analysis, and systems analysis.

The research information base consisted of information and analytical materials from the Ministry of Economic Development of the Russian Federation, the Federal State Statistics Service of the Russian Federation (Rosstat), the Territorial Bodies of the Federal State Statistics Service of the constituent entities of the Russian Federation, the Federal Service for State Registration, Cadastre and Cartography (Rosreestr), the Federal Customs Service (FCS of Russia), the Ministry of Transport of the Russian Federation (Ministry of Transport of Russia), as well as national statistical services of other countries and international economic organizations.

The aim of this dissertation research is to develop methodological and applied approaches to assessing and regulating the economic development of border regions in the context of interregional inequality and differentiation of economic space and to develop a methodological approach to assessing the prospects and directions of economic development of border regions.

In accordance with this goal, the following tasks are defined::

1. Develop a theoretical approach to studying the economic development of border regions as an independent economic system, taking into account the diversified and relational interactions of economic entities and the influence of the state border.

- 2. Substantiate an economic-limological approach to studying border regions and develop a typology of regions based on the principle of commutism.
- 3. Develop a methodological approach to quantitatively assessing the influence of the state border on the economic development of border regions based on a methodology for ranking regions according to the severity of this influence.
- 4. Identify the specific features of the economic development of Russia's border regions in comparison with internal regions and assess the relationship between the economic development of border regions and interregional inequality.
- 5. Develop and test a methodology for assessing the commutative interactions of Russia's border regions with regions of neighboring states and determine its impact on economic convergence processes.
- 6. Substantiate the dependence of the economic development potential of border regions on the economic development of regions in the neighboring country, identify barriers to integration, and provide recommendations for improving the effectiveness of interregional interactions.
- 7. Develop a concept for state policy for the regional development of border regions, including differentiated regulatory instruments and consideration of the specific structural and general economic characteristics of the economic development of border regions; formulate recommendations aimed at substantive transformation of the federal center's regional policy towards Russia's border regions.

The main scientific result is a solution to a major national economic problem: the balanced economic development of Russia's border regions in the context of interregional inequality. This problem stems from the lack of scientifically sound methodological tools that would allow for a quantitative assessment of the impact of the state border on socioeconomic processes and the development of differentiated regional policies. This dissertation addresses this methodological gap, enabling the development and implementation of state support mechanisms for border territories based on measurable parameters of cross-border

interaction, economic structure, and institutional conditions. This has significant economic implications for Russia's spatial development.

Scientific novelty of the research results, received by the author, corresponds to the scientific specialty of the Higher Attestation Commission of the Ministry of Education and Science of the Russian Federation 5.2.3. Regional and sectoral Economics (the nomenclature of the scientific specialties approved by the order of the Ministry of Education and Science of the Russian Federation No. 118 of 24.02.2021 is indicated in brackets) and includes the following:

- 1. A conceptual understanding of a border region as an independent economic system operating in a diversified relational space is substantiated. Unlike traditional approaches that treat a region as an additive component of the national economy, a border region is viewed as a system of interacting economic entities whose behavior is determined by the choice of location of production and innovation potential, the level of competitiveness, and the nature of the relationships with domestic and foreign economic space.
- 2. An economic-limological conceptual approach to studying border regions has been developed, providing for a differentiated assessment of the impact of the state border on their socioeconomic development. This approach is based on the limological characteristics of the formation of economic spaces and the principle of communism, which has allowed for the development of a typology of border regions and the proposal of scientifically substantiated directions for adjusting cross-border interactions with the territories of neighboring states.
- 3. A methodological approach to studying the economic development of border regions in the context of interregional inequality has been developed, overcoming the limitations of existing models based on the representation of economic space as homogeneous. The developed approach takes into account the mutual dependence of border regions' economic development on their shared borders and the nature of cross-border interactions. This made it possible to quantitatively assess the impact of state borders and rank regions based on their economic development.

- 4. A methodology for comprehensively assessing the factors affecting border regions' economic development was developed and tested. This methodology includes a quantitative assessment of the severity of their border location based on an integrated index. The use of this index allowed for improved econometric assessments, identification of specific factors determining the economic development of border territories, and clarification of the influence of borders as an independent determinant of regional growth.
- 5. Empirical evidence has been provided that interregional inequality in the Russian Federation is concentrated primarily in border regions. It is shown that, despite the absence of significant differences in the level of socioeconomic development between border and internal regions, border territories are characterized by structural differentiation, low levels of economic diversification, technological backwardness, and a higher proportion of the poor. It has been established that these very characteristics form a stable zone of concentrated spatial inequality.
- 6. The influence of the nature of interaction with neighboring states on the economic development of border regions is substantiated. Using the examples of the Russian-Belarusian, Russian-Kazakh, Russian-Mongolian, and Russian-Chinese border areas, it is demonstrated that differences in the institutional environment, structural characteristics, and resilience of regional economies on both sides of the border determine the direction and intensity of convergence or divergence processes. It is shown that the inconsistency of regional policies and the structural lag of border economies hinder the realization of integration potential and exacerbate interregional inequality.
- 7. A concept for state policy on regional development in relation to border regions has been developed, based on the principles of differentiated regulation and consideration of the specific features of border locations. The application of a mechanism for the formation of zones of economic border interaction (both simulative and transnational) is substantiated, which ensures increased efficiency of

public administration, stimulation of integration processes and reduction of spatial disproportions in the socio-economic development of the country.

The theoretical significance of this study lies in its development of conceptual and methodological foundations for studying the economic development of border regions in the context of interregional inequality. The developed methodological approach expands the theory of regional economics by incorporating the spatial and institutional aspects of interregional inequality and provides a scientific basis for refining the concept of state policy for the economic development of border regions.

The practical significance of this study lies in the potential use of its results in the development and implementation of state regional development policies aimed at reducing interregional inequality and improving the balance of economic development in border areas. The proposed methods for quantitatively assessing the impact of state borders, the integrated border location index, and the typology of border regions can be applied in formulating socioeconomic development programs, improving cross-border interaction mechanisms, and prioritizing state support. The recommendations developed provide the basis for a differentiated approach to managing border areas and improving the efficiency of their economic potential.

Testing of research results. Research results were validated. The dissertation materials were presented and discussed at 19 international, national, interregional, and regional scientific symposia, conferences, seminars, meetings, and roundtables on regional economics and international relations.

The materials and results obtained during the dissertation research were also used in developing a course for RANEPA master's students entitled "Cross-Border Cooperation of Russian Regions." Furthermore, the dissertation materials are being used in the teaching of several undergraduate courses.

Some of the materials and results obtained during the dissertation research were discussed at events held by the Center for Economic Research and Graduate Education (CERGE-IE, Prague) and were also used in practical classes for students

of the Sino-Russian Institute at Heilongjiang University (Harbin, China) and master's students enrolled in CERGE-IE programs.

**Dissertation Structure**. The dissertation consists of an introduction, five chapters with conclusions for each chapter, a conclusion, a list of references, a list of abbreviations, and several appendices. The dissertation, 378 pages long, includes 36 tables, 45 figures, 33 formulas, and a list of 428 references.

This work was completed by the author personally, including defining the research goal and objectives, collecting data, developing the methodology, implementing calculations, and formulating conclusions, taking into account the approaches and results of several studies co-authored with other researchers.

**Publications**. The dissertation's main provisions were reflected in 33 scientific publications (a total of 29 printed pages, including at least 27 printed pages of author contributions): 1 monograph, 20 articles in scientific journals recommended by the Higher Attestation Commission of the Ministry of Education and Science of Russia (of which 5 were in journals recommended by the Academic Council of the Russian Presidential Academy of National Economy and Public Administration for the publication of articles on economic sciences), and 2 articles in journals included in the Scopus database.

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