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INTERCONNECTION OF ECONOMIC AND SOCIAL INEQUALITIES IN THE REGIONS OF RUSSIA

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Abstract

In this article, the authors show their own approach to understanding the issue of socio-economic inequality of Russian regions on the basis of dynamic, systemic and integrated methods applied to studying the problem of trans-regional inequality and systematizing theoretical research pursued by Russian and foreign scientists. This approach is based on the idea of the dual nature of the connection between economic and social inequality, which represent both forward and backward linkages between these types that further increase the asymmetry of spatial socio-economic development. The authors assessed the scale of inequality of Russian regions during 2000–2018 years and found the correlation between economic and social disparity of them. The article proves that despite implementing national policy aimed at leveling spatial development, regional economic inequality is increasing. The analysis showed the growth of the differentiation of GRP per capita that indicates the exacerbation of the asymmetry of the economic development of the regions. The high polarization of regions in the sphere of economic development is the cause of social inequality. This study shows a high differentiation in regionalized income per capita, but it is significantly lower than economic inequality and shows a downward trend. In the course of the correlation-regression analysis, the authors found an immediate connection between the GRP per capita and the average money income. If the effectiveness of regional policy in Russia is not increased, the authors predict further intensification of the economic polarization of regions because of the science and technology transformation of society.

Keywords: Development, economic growth, inequality, inclusive growth, regions

1. Introduction

The main goal of the economic system is the sustainable economic growth, which is a condition for increasing the level and quality of being the people. Contributing to welfare, the economic growth must be not only sustainable but inclusive one. Only as a result of inclusive development that is characterized by equal opportunities for economic agents in access to the market and resources the maximum number of entities will reap large gains from the economic growth. The concept of inclusive growth is contrary to any manifestation of inequality, including interregional one.

2. Problem Statement

The problem of asymmetric development of regions exists in every country, but it has grown into the most serious problem in large states of catching-up development. The objective reasons for interregional differentiation are uneven inputs of production, different resource endowment of regions and, as a result, different levels of concentration of production branches on their territory. Moreover, a number of factors influence regional economic systems, some of them lead to the corrective of territorial development, and the others exacerbate this inequality. The latter includes urbanization, the lack of a well-balanced policy for the development of the territories, miscalculations in fiscal policy, the transformation of technological modes, etc.

In 2019 the Spatial Development Strategy of the Russian Federation until 2025 was approved, according to which the main goal of regional development is ensuring stable and balanced spatial development of the country aimed at reducing interregional differences in the area of living standards and life quality of the population. As noted in the Strategy, the achievement of the goal is hindered by such problems as the high level of inter-regional socio-economic inequality, the significant lag of some regions in the main socio-economic indicators from the average Russian level. Due to the strategic significance, the timeliness and complexity of the problem solving, the study of the dynamics of socio-economic inequality of regions is an important theoretical and application task, the solution of which will promote the effectiveness of regional policy.

3. Research Questions

One of the most controversial problems of economic science in the sphere of studying inequality is the interconnection of uneven economic and social development of regions. The first question concerns the establishment of causal relationships between economic and social inequality. Is the social polarization of regions solely a consequence of their economic inequality, or is it a factor that increases it? The second question is how do the tendencies of economic and social differentiation of regions correlate? What kind of links exists between the dynamics of economic and social inequality? Finally, the third question is related to the trends of economic and social inequality in the context of the science and technology transformation of society. The answers to these questions are important for developing an effective regional policy of the state and ensuring sustainable inclusive economic growth.

4. Purpose of the Study

The purpose of the research is the formation of the special approach to the appreciation of the interregional socio-economic inequality problem, on the basis of which one can estimate the extent of inequality, determine the probability of its aggravation in the context of the shift to a new technological mode, make a connection between economic and social inequality of the regions of Russia.

5. Research Methods

The study of interregional inequality was carried out on the basis of the system of approaches and methods. The main ones are the dynamic, systemic and package approaches, involving exploring the regions and solving the problem of the asymmetry of regional development as a system that is continuously developing, and influenced by both external and internal factors. The research methods are computational-statistical and comparative ones. As the sources of information, the authors used the works of scientists dealing with the problems of regional inequality, open statistical data.

6. Findings

Regional inequality has been the subject of economic study for more than two centuries, starting with the works of A. Smith, who pointed to resource endowments and geographic location as the factors of inequality, and K. Marx, who saw the causes of spatial polarization in the uneven distribution of income between classes and territories. In modern literature, the problem of spatial inequality is studied in various aspects. Friedmann's (1966) "core-periphery theory" is popular, proving that scientific and technological progress has a significant impact on the asymmetry of economic development. Nobel laureate Krugman's studies are widely known. Krugman (1991) proposed a typology of factors of regional development (objective factors of the first nature and factors of the second nature, which are the result of human and social activities). Later, studies were aimed at solving such problems as interregional inequality and dynamics of public spending (Lee & Rogers, 2019), regional differentiation in individual countries: Mexico (Re & Sastre, 2010), Great Britain (McCann, 2020), China (Wei & Ma, 1996) and others. The transition to a knowledge-based economy has led to the using non-standard research methods, for example, the study of regional incomings inequality based on satellite data (Lessmann & Seidel, 2017).

Among Russian economists, it is necessary to single out the outstanding scientist Granberg (2006), who considers the heterogeneity of the economic space as one of the serious problems of Russia.

There are two interrelated types of inequality – economic and social, depending on the causes and forms of manifestation. Scientists note that modern research is often characterized by a lack of consistency, focusing on one type of inequality to the detriment of another (Lipps & Schraff, 2020). The author's approach to the assessment of inter-regional inequality is based on the idea of the dual nature of the connection between economic and social inequality, which represent both forward and backward linkages between these types that further increase the asymmetry of spatial socio-economic development.

The economic inequality of the regions of Russia is primarily due to their different resource potential, as well as different conditions for forming competitive advantages. As a result, the contribution of the regions to GDP is also sharply differentiated. As of January 1, 2021, there are 85 constituent territories in Russia united in 8 federal districts, including 9 territories, 22 republics, 46 regions, 3 cities of federal status, 1 autonomous region, 4 autonomous districts. According to the occupied space, excluding cities of federal status, the regions differ 857 times (the largest – 3,083.5 thousand square kilometers in Republic of Sakha (Yakutia), the smallest – 3.6 thousand square kilometers in the Republic of Ingushetia); in terms of population size – 174 times (the largest – 7690.9 thousand people living in Moscow region, the smallest – 44.1 thousand people living in the Nenets Autonomous District); the indexes of supportability of mineral products, water resources, forest reserve and agricultural lands also differ significantly.

As a result, the value of the gross regional product is also extremely varied. In Russia, there is a significant regional economic polarization, which is expressed in differentiation of GRP per capita. The largest GRP in 2018 with a large margin from all other regions was observed in Moscow (17,881,516.2 million rubles), the Khanty-Mansi Autonomous Okrug – Yugra is in second place (4,447,475.7 million rubles), the smallest is in the Altai Republic (50,566.8 million rubles), that is, the difference was 354 times. As a result, there is a significant polarization of regions in terms of economic development, which is expressed in a significant inter-regional differentiation in GRP per capita (table 1). As the indexes of differentiation, we took the number of regions the indexes of which deviate in a larger (smaller) direction from the average, the range of variability, the oscillation coefficient, the mean deviation, the standard deviation and the variation coefficient. The calculations were made on the basis of the data given by the Federal State Statistics Service of the Russian Federation (statistical digests "Regions of Russia. Socio-economic indexes").

Table 1. Assessment of differentiation of regions rating according to the level of GRP per capita in 2000 and 2018

Indicators	2000	2018
Average GRP per capita, rubles	39 532,3	578 740,0
Number of regions with above average GRP per capita	17	17
Number of regions with a per capita GRP below the average	63	68
The range of variations in GRP per capita, rubles	170 270,0	6 837 862,1
Oscillation coefficient, %	430	1180
Average linear deviation, rubles.	18 403,9	413 991,0
Linear coefficient of variation, %	46,6	71,5
standard deviation, rubles	25 280,0	981 006,0
Coefficient of variation, %	63,9	169,5

The analysis of the scale of interregional economic inequality of Russian regions allows drawing a number of conclusions. First, there is a high degree of differentiation of GRP per capita (the oscillation coefficient is more than 11 times in 2018, the linear coefficient of variation is 71.5 % and the coefficient of variation is almost 170 %). Secondly, in the period from 2000 to 2018 in Russia there was a deepening of the asymmetry of regional development: the oscillation coefficient increased from 430 to 1180 %, the linear coefficient of variation increased by approximately 1.5 times, and the coefficient of variation

increased by more than 2.5 times. Thirdly, the region rating according to the level of GRP per capita is quite stable.

The list of leaders in 2000 and 2018 included the Khanty-Mansi and Yamalo-Nenets autonomous district, which were previously part of the Tyumen region, Moscow, the Republic of Sakha (Yakutia), Chukotka Autonomous District, Magadan and Sakhalin regions, and the Komi Republic. A study of the sectoral gross value added for the constituent entities of the Russian Federation showed that in most of the leading regions (except for Moscow), the GRP was formed due to the extraction of minerals. The list of outsiders consistently included the Republic of Ingushetia, the Chechen Republic, the Karachay-Cherkess Republic, the Republic of North Ossetia-Alania, the Ivanovo region, the Republic of Dagestan and Tyva. In the structure of the gross value added of lagging entities, the share of agriculture, trade, construction is high, and the share of industry is relatively low.

The high polarization of Russian regions in the sphere of economic development is the cause of social inequality, represented by the differentiation of regions by the average per capita monetary income of the population per month and the average monthly nominal wages of employees of organizations (table 2).

Table 2. Assessment of regional differentiation by incomes of the population in 2000 and 2018

Indicators	2000	2018
Average per capita monetary income of the population per month, rubles	2 281	33 178
The number of regions with average per capita population income above the average level	16	18
The number of regions with average per capita population income below the average level	64	67
The range of variation in population income, rubles	7 411	63 795
Oscillation coefficient, %	325	192
Average linear deviation, roubles.	868,74	10 103,1
Linear coefficient of variation, %	38	30,5
standard deviation, roubles	1 125,5	13 386,6
Coefficient of variation, %	49	40,3

So, the data indicates a high polarization of regions in terms of population income, but it is significantly lower than economic differentiation. The oscillation coefficient in 2018 showed that the degree of variation relative to the average was less than two times. The linear coefficient of variation also fell by more than seven percentage points to 30.5 % in 2018, and the coefficient of variation by more than 8.5 percentage points approached the mark (less than 33%) considered homogeneous for aggregates characteristic of distributions close to normal. In contrast to the deepening asymmetry of the differentiation of regions in terms of GRP per capita, in terms of the differentiation of regions in terms of the average per capita monetary income of the population per month, there was equalization in the country. The rating of regions by the average per capita monetary income of the population per month over the past 20 years has undergone structural changes. The list of leaders still includes regions focused on mining: Khanty-Mansiysk and Yamalo-Nenets Autonomous Okrugs, formerly part of the Tyumen Region, Chukotka and Nenets Autonomous Okrugs, the Republic of Sakha (Yakutia), Magadan and Sakhalin Regions, the Republic of Komi (4 subjects are part of the Far Eastern Federal District), but this

rating was also supplemented by the federal city of St. Petersburg and the Moscow Region. Thus, in contrast to the deepening asymmetry of economic inequality in regions, social inequality has decreased.

Meanwhile, in the course of additionally conducted correlation-regression analysis, a direct relationship was found between GRP per capita and average per capita money income. The analysis showed that with an increase in the value of GRP per capita by 10 thousand rubles per capita income of the population per month increased by 473.4 rubles.

7.   Conclusion

This approach is based on the idea of the dual nature of the connection between economic and social inequality, which represent both forward and backward linkages between these types of it that further increasing the asymmetry of spatial socio-economic development. In the context of the scientific and technological transformation of society, it is possible to predict a further deepening of the economic polarization of the regions. Digital dividends will be received by economically developed regions, because hi-tech and innovative activities are concentrated in Russia in the metropolitan agglomerations, which give them an additional source of competitive advantages. While the backlog of outsiders will increase even more, the receipt of technological rent by developed regions will provide them with an even greater superiority.

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