

УДК 338.2

## **The Influence of Spatial Inequality and Asymmetry of Regional Development on the Economic Security of the Russian Resource Regions (on the Example of the Krasnoyarsk Territory (Krai))**

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*In the context of spatial inequalities and asymmetry in regional development, the research paper, on the example of the Krasnoyarsk Territory (Krai), considers general problematic trends in ensuring economic security of the resource regions of the country, which not only come from the “outside” with international sanctions and federal policy, but are created within the region. Partially, economic and social security problems are determined by historical specialization of the region and the population settlement system, human resources structure, remoteness from the main areas of economic activity and markets, extreme weather conditions, strong resource and natural potential. The combination of all these factors, for example, made the Territory (Krai) a “national repository”, defined its significant role in the national economy of the country within resource-export model of development, outlined the prospects for the development of industry and society. However, along with this, spatial inequality and asymmetry in regional development, which formed several paradoxes of economic characteristic of the region is increasing, and, along with it, the problems in ensuring economic security.*

*Keywords:* resource regions, economic security, spatial inequality and asymmetry of regional development, economic potential, regional independence.

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*Research area:* economics.

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### **Introduction**

There are two approaches when choosing directions for spatial development policy of

the country, including territories with the high level of socio-economic development and business environment differentiation. The

first one focuses on the alignment of the socio-economic situation of the country's regions (Mikheeva N.N., 2009), and the second one on priority stimulation and supporting the regions – the growth poles, the development of which will create conditions for dynamic development of the whole country (Lasuen J.R., 2010).

Currently, one of the vectors of the spatial policy of Russia, to ensure resource security of the country and under conditions of resource-export model of economic development, is based on the second approach. At that, such a model implementation is focused on supporting big business projects in the resource extraction types of economic activity in the eastern regions of the country, including the Krasnoyarsk Territory (Krai) as well.

The choice of spatial policy priorities and tools for its implementation considerably determine its security.

### **Problem Statement**

In the rapidly changing environment of the modern economy the ability to ensure the security of the country against internal and external threats determines the level of its competitiveness and the dynamics of socio-economic development. The signs of global crisis in industrial, food, energy, financial and other fields make us also pay special attention to such a concept as economic security of the regions. According to L.I. Abalkin, “*economic security* is a state of the economic system, which allows it to develop dynamically and efficiently, and solve social problems, and in which the state has the possibility to develop and implement an independent economic policy” (Abalkin L.I. 2004). In the “National Security Strategy of the Russian Federation until 2020” the concept of national security was defined “as a state of security of the individual, society and

the state against internal and external threats, which allows to ensure constitutional rights and freedoms, decent quality and the standard of the citizens' living, sovereignty, territorial integrity and sustainable development of the Russian Federation, as well as defense and national security (National Security Strategy of the Russian Federation until 2020, 2009).

*Economic security of the region* is a complex of measures aimed at sustainable, continuous development and improvement of the region's economy that necessarily involves a mechanism to counter external and internal threats. From the standpoint of ensuring economic security, an important problem discussed in this paper is the study of the influence of all the expected threats, as well as economic and non-economic effects on the level of security, and the most important – timely identification of the possibility of slump and reaching a critical threshold of the indicators of socio-economic security. At the same time, along with predictive and analytical task, the inverse task which consists in the development and implementation of measures aimed at preventing the crisis and overcoming the critical threshold arises. So, at the present time the state of economic and social development of the Krasnoyarsk Territory (Krai) reflects the same macroeconomic tendencies that are associated with the development of the world, European and Asian economies, as well as socio-economic processes in the Russian Federation. As the region is highly dependent on external markets on the one hand, and is incorporated in the economic relations of Russia on the other hand, it experienced all the negative effects of the economic crisis of 2014-2015, and sanctions policy of Western countries towards Russia. In this context, the analysis of conditions that ensure the economic security of the region is extremely important.

## Methods

The study of economic security of the resource regions through the example of the Krasnoyarsk Territory (Krai) was conducted on the basis of comparative economic and statistical analysis of the official data of federal and regional statistics for the country in general and the Krasnoyarsk Territory (Krai). As an information object of the economic security study at the regional level, indicators of the flows of cash, goods, services and resources, both in the territory of the subject (including municipalities) and in connection with the centre and other subjects involved in economic cooperation, are usually considered. Dynamics of the indicators level was compared to the threshold values for regional security. The main groups of information objects for the indicative analysis of economic security of the region could be the dynamics of gross regional product (GRP) in general and per capita, the volume of investments per capita, fixed assets depreciation and the degree of their congestion, the share of manufacturing sector in the total volume of industrial production, the proportion of imports in domestic consumption of the population, the percentage of citizens with incomes below the subsistence level, indicators of income differentiation of the population, expected lifespan, unemployment level, the ratio of the region's debt to GRP and the ratio of budget deficit to GRP in comparison with threshold values.

Ensuring economic security of the Krasnoyarsk Territory (Krai) has a well-defined specific feature. It is connected with the combination of various unique resource conditions of the first order: geographical location, climate, endowment of the territory with natural resources and population.

The geographical location of the Krasnoyarsk Territory (Krai) in the center of Russia (occupies 13.9% of the territory of the country) determines

transport transit role of the region in ensuring territorial cohesion of the country in the latitudinal and meridional directions. However, most of the length of the Territory (Krai) with the sparsely populated areas and concentration of the population in the southern part of the Territory (Krai) along the Trans-Siberian Railway acts as a kind of brake for sustainable economic growth and a risk factor for the economic security of the region. Climatic conditions, and the Krasnoyarsk Territory (Krai) is characterized by sharply continental climate with characteristic strong temperature fluctuations during the year, due to the great meridional length of the Territory (Krai), determine the allocation of climatic zones with the Arctic, sub-Arctic and moderate climate. The climate characteristics greatly influence agriculture development – 2/3 of the total area of the Territory (Krai) is in the zone of risky agriculture. The Territory (Krai) is very rich in natural resources (Fig. 1), but most of them deposit in remote northern territories (“Natural Resources of the Krasnoyarsk Territory (Krai)”, №26, (October 2015); **Geology Museum of Central Siberia**, 2015).

The Territory (Krai) has vast **land resources** (Fig. 2). They can serve as a basis for extensive development of industrial, municipal and transport construction and development of agriculture.

The Krasnoyarsk Territory (Krai) belongs to the regions of Russia with good availability of **water resources** (Fig. 2). There is a natural transport system, consisting of a well-developed river network in the Territory (Krai).

The population of the Territory (Krai) according to the data of the Federal State Statistics Service of the Krasnoyarsk Territory (Krai) on January 1, 2015 amounted to 2,858,773 people, while the population density is 1.21 pers./km<sup>2</sup>, at that the urban population amounted to 76.74% of the total number of the Territory (Krai)

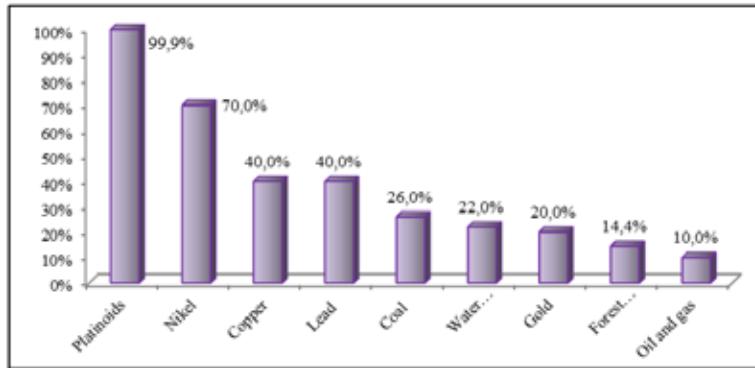


Fig. 1. The share of Krasnoyarsk Territory (Krai) in Russian Natural Resource Stocks

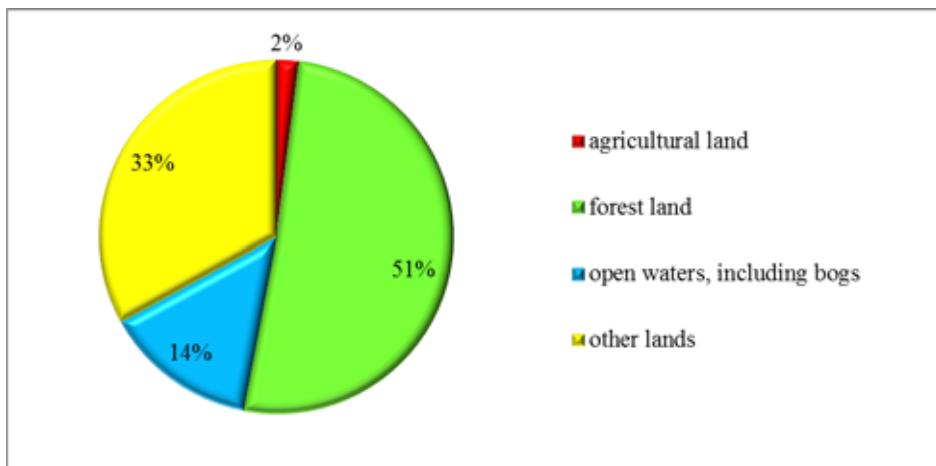


Fig. 2. Shares of land areas in the Krasnoyarsk Territory (Krai), % (The source: The Territorial Body of Federal State Statistics Service of the Krasnoyarsk Territory (Krai), <http://krasstat.gks.ru>)

inhabitants. About 80% of the Territory (Krai) population lives to the south of the Angara River in one-tenth of the Territory (Krai).

Three-quarters of the Territory (Krai) population lives in cities and towns of the Territory (Krai), with nearly a third of the Territory (Krai) population lives in the city of Krasnoyarsk (Fig. 3).

Thus, the presence of natural resources in the Krasnoyarsk Territory (Krai) as a whole is the guarantor of stable economic growth and economic security of the Territory (Krai), however, the asymmetry of the natural factors and

population distribution in the territory and small populations of the Territory (Krai)'s municipal districts carry out the threat of the shortage of human resources for the development both of the separate areas of the Territory (Krai), and the whole Territory (Krai) in general, what acts as a brake for economic growth.

## Discussion

The analysis shows that the specific characteristics of the Krasnoyarsk Territory (Krai) define rather favorable conditions for economic security, which must be maintained in

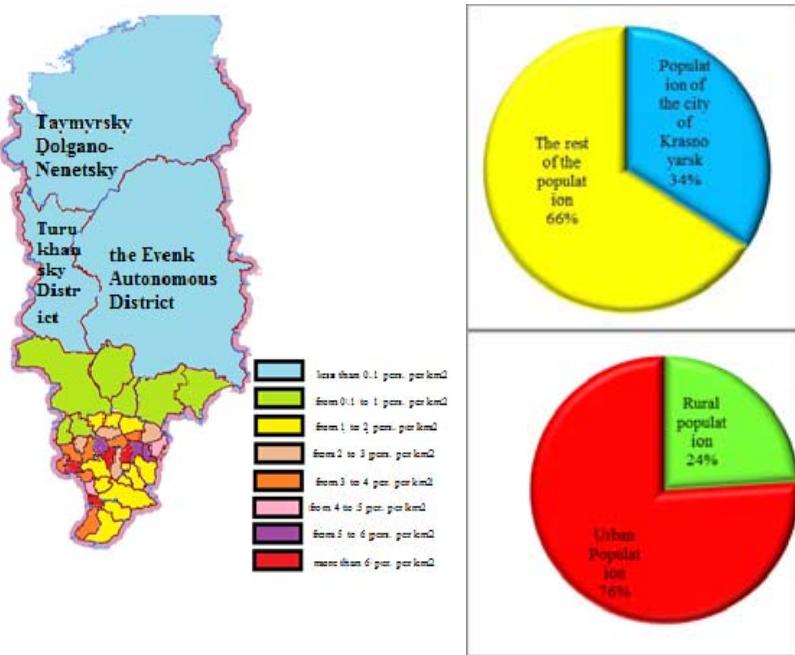


Fig. 3. Distribution of the population of the Krasnoyarsk Territory (Krai) on 01.01.2015 (The source: The Territorial Body of Federal State Statistics Service of the Krasnoyarsk Territory (Krai), <http://krasstat.gks.ru>)

the three areas: independence, sustainability and ensuring reproduction.

Regional independence is the ability of the subject of the federation to form and pursue its own economic policy. Taking into account the principles of territorial governance in Russia and specific features of regions, independence can be understood as the frames in which the region is able to make its own economic decisions at the expense of its own internal resources.

The stability of the system of regional economic security characterizes the ability of the region's economy to ensure functioning and development of its economic structure under the influence of a variety of threats of natural and climatic, environmental and social character, as well as market fluctuations.

Comparative analysis of the current and threshold values of indicators characterizing the structure of production and consumption,

the level and quality of life of the population, financial position of the budget of the Krasnoyarsk Territory (Krai), shows that according to the one set of indicators the Territory (Krai) has a significant level of economic security, as their values exceed the threshold, but values of the other indicators of socio-economic security don't look well (Table 1).

So, in 2013-2014 the Krasnoyarsk Territory (Krai) occupied the 10<sup>th</sup> position in the ranking of the subjects of the Russian Federation on GRP (Table 2). It was a donor region, while GRP of the Territory was above 75% of the average value for the donor regions of the Russian Federation and, consequently, according to this index the Territory (Krai) has a high level of economic security. However, the level of GDP per capita of the Krasnoyarsk Territory (Krai), as an indicator of the economic security of the region is unfavorable, since in 2013 it amounted to 441 thousand Rub., what is below the threshold value

Table 1. Indicators of economic security of the Krasnoyarsk Territory (Krai)

Indicator of economic security	Typical threshold value	Real value for the Krasnoyarsk Territory (Krai)
<i>On the indicators of production and consumption</i>		
Gross regional product per capita, percentage	≥ 100	81,6
Proportion of processing industry in the general volume of industrial production, percentage	≥ 70	60,8
Proportion of imported products in domestic consumption of the population, percentage	≤ 40	55
<i>On the indicators of the level and quality of life of the population</i>		
Proportion of inhabitants with incomes below subsistence level, percentage	7	19,2
The Gini coefficient (income gap between 10 % of the top income and low-income groups of population)	≤ 8	14,9
Expected lifespan, years	≥ 70	69,2
Unemployment level, percentage	≤ 7	5
<i>On the indicators of financial position</i>		
The regional debt to GRP ratio, percentage	≤ 25-30	6,6
The budget deficit to GRP ratio, percentage	≤ 5	1,97

(The source: The Territorial Body of Federal State Statistics Service of the Krasnoyarsk Territory (Krai), <http://krasstat.gks.ru>)

of the average for the donor regions (540 thousand Rub. per person).

At that, during the recent decades the resource orientation of the economy in the Territory (Krai) strengthens (Fig. 4), which can lead to certain risks in ensuring economic security in case if the proportion of the extractive industry in the structure of the Territory (Krai)'s production will significantly prevail over other kinds of economic activity.

The volume of investments per capita was above average for Russia and the Siberian Federal District, what is determined by investments in extraction projects of fuel and energy resources in the north of the Territory (Krai).

The fixed assets depreciation and utilization rate reflect the state of production facilities, the speed of their upgrade and efficiency of use. According to the parameter of the fixed production assets depreciation, the Krasnoyarsk Territory (Krai) looks better than the average in Russia,

at that the degree of amortization in different industries varies considerably: fixed assets in the kinds of economic activities that provide services to the consumer market – transportation, agriculture and food industry are characterized by the high level of amortization. It is critical from the standpoint of development and can lead to the further increase in disproportions between the sectors of economy.

The most alarming situation is observed on the indicators of social security, characterizing the level and the quality of life (Table 1, Fig. 5). Their value is significantly below the threshold in two or more times.

In many cases, in the pursuit of purely economic security, the main purpose of any economic system existence is neglected: it is not intended to ensure success of specific businesses and their founders, not only for creating a favorable business environment and high rates of GRP growth, but to create a

Table 2. Distribution of the subjects of the Russian Federation (donor-regions) on GRP and GRP per capita in 2013

Subjects of the Russian Federation	Position in the ranking on GRP	GRP ha per capita, thousand rubles	Position in the ranking on GRP per capita
Astrakhan Region (Oblast)	50	263.5	42
Irkutsk Region (Oblast)	18	329.1	24
Kaliningrad Region (Oblast)	47	289.2	32
Kaluga Region (Oblast)	44	292	31
The Krasnoyarsk Territory (Krai)	10	441	12
Leningrad Region (Oblast)	20	394.2	16
Moscow	1	965.8	5
Moscow Region (Oblast)	3	359.8	20
Nenets Autonomous Region (Okrug)	62	4003.4	1
Nizhny Novgorod Region (Oblast)	12	281.8	36
Omsk Region (Oblast)	28	280.3	37
Orenburg Region (Oblast)	19	352.6	22
The Perm Territory (Krai)	14	339	23
The Republic of Bashkortostan	9	311.7	26
The Republic of Tatarstan	7	403.9	14
Ryazan Region (Oblast)	46	243.9	47
Samara Region (Oblast)	11	324	25
Saint Petersburg	4	491.4	11
Saratov Region (Oblast)	29	211.5	59
Sakhalin Region (Oblast)	21	1369	4
Tomsk Region (Oblast)	36	377.2	17
the Udmurt Republic	35	266.8	41
Khanty-Mansi Autonomous Region (Okrug) — Yugra	2	1753.8	3
Yamalo-Nenets Autonomous Region (Okrug)	8	2540.5	2
Yaroslavl Region (Oblast)	37	283.7	35

(The source: Federal State Statistics Service, National Accounts Section, 2015, [www.gks.ru](http://www.gks.ru))

comfortable living environment and quality of life for an individual in any area of the region. In general, all the productive human activity, since its first primitive forms, has been aimed at increasing the quality and standard of living for people. In the secure society economy exists for a person, not a person for the economy. Thus, the indicator of the quality of life is the integral indicators of economic security of the region. In the context of the values of

integral indicators of the quality of life of the Krasnoyarsk Territory (Krai) the analysis shows the low level of security.

To the large extent, this situation is connected with spatial inequality and asymmetry of socio-economic development of the Territory (Krai)'s municipalities (Bukharova E.B., Semenova A.R. Samusenko S.A., 2014) (Fig. 6). The significant part of the Territory (Krai)'s municipalities has the lower values of the social development

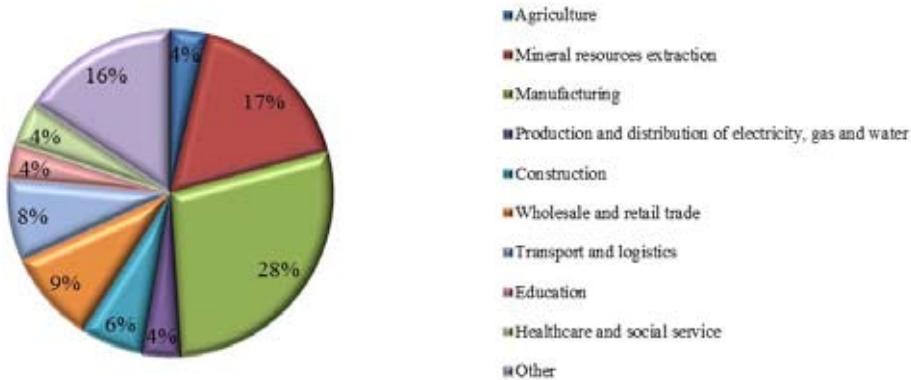


Fig. 4. The structure of Gross Regional Product in 2013, percentage (The source: The Territorial Body of Federal State Statistics Service of the Krasnoyarsk Territory (Krai), <http://krasstat.gks.ru>)

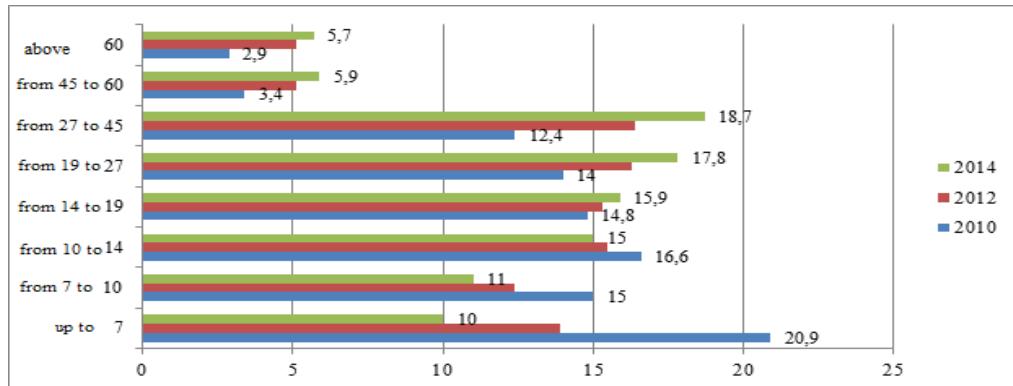


Fig. 5. Distribution of population based on the size of money income per capita in 2010-2014, percentage (The source: The Territorial Body of Federal State Statistics Service of the Krasnoyarsk Territory (Krai), <http://krasstat.gks.ru>)

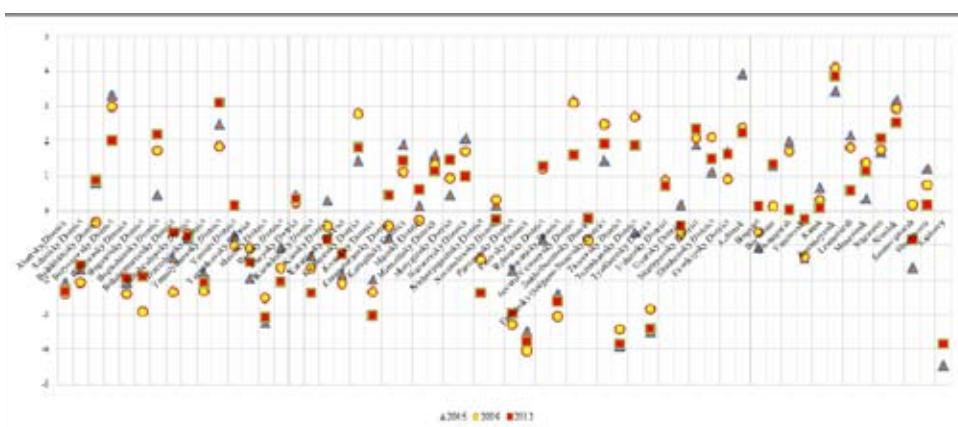


Fig. 6. Changes in the values of integral indicator of socio-economic development of the Territory (Krai)'s municipalities

and security indicators than the average in the Territory (Krai).

### Resume

Analysis of the economic security of the Krasnoyarsk Territory (Krai) has identified general problematic trends for the resource region, which not only come from the “outside” with international sanctions and federal policy, but are created within the region. Partially, economic and social security problems are determined by historical specialization of the region, human resources structure, remoteness from the major resettlement areas, extreme weather conditions and unbalanced distribution of resource and natural potential. The combination of all these factors made the Territory (Krai) a “national repository”, defined its role in the national economy of the country and outlined the prospects for the industry and society development. Along with this, spatial inequality and asymmetry in regional development are increasing in the paradigm of the resource-export model of economic development of the country, which are manifested in the form of the following paradoxes in social and economic image of the region that have a negative impact on the economic security of the Territory (Krai).

1. Being a donor region, included in the top ten subjects of the Russian Federation with the highest gross domestic product, the Territory (Krai) has deficit budget and increasing public debt.

2. Under crisis conditions, the region is characterized by disproportionate economic development – there is stable growth (even under crisis conditions) of the sectors and kinds of economic activity that provide external markets (metallurgy and mineral raw materials extraction) and minimization of business activity in the infrastructure and other sectors that provide

human life and activity (including agriculture and food industry).

3. Having high (and growing) workforce productivity index, which exceeds the average values for Russia and the Siberian Federal District, The Territory (Krai), nevertheless, faces reduction in real incomes and a drop in the current level of the standard of living. Thus, in 2014, for the first time in many years, cash expenditures of the Territory (Krai) population exceeded incomes, there is a negative balance of savings (i.e., the population was spending the savings from previous years for the current consumption).

4. The structure of the fixed assets of the Krasnoyarsk Territory (Krai) reflects its role in the country economy as a major extraction center and a leading industrial region, along with that the fixed assets in the sectors ensuring consumption and quality of life of the population (transport and communication, construction, trade, housing and utilities) are relatively small and worn out, even in comparison with disadvantaged average level in Russia;

5. According to the level of investment activity, the Territory (Krai) in general is secure. Dynamics of investments in general follows the trends of Russia and the Siberian Federal District, but it is more stable in the Territory (Krai), due to the presence of large companies implementing large-scale long-term projects. However, in comparison with Russia and the Siberian Federal District, investments are mostly made in the industrial sector and, to a lesser extent, in the social sphere and housing construction.

Thus, today, the major problem of the economic security of the Krasnoyarsk Territory (Krai) is that it is developing as *the region for corporations, not as the region for people*. The most important consequences of this is increase of differentiation in terms of regional conditions for development, deterioration of the urban

environment and ecology quality, healthcare standards decline and human capital outflow. The positive balance of migration gain of the Territory (Krai) is favorable in terms of demographics, but unfavorable from the standpoint of the quality of human capital: young skilled workforce leaves the Territory (Krai), and low skilled workers from the neighboring countries come to their place.

The main internal threats to the economic security of the Territory (Krai) are:

- asymmetry of socio-economic development of the Territory (Krai)'s regions;
- preservation of the export-raw materials model of economic development of the Territory (Krai);

- decline in competitiveness and high dependence of the most important spheres on external economic conditions;
- low rates of industrial and agricultural development;
- social stratification of the population.

At that, asymmetry of socio-economic development of the Territory (Krai)'s regions has a significant impact on reducing stability of the socio-economic security parameters. In case of spatial inequality decrease and asymmetry in regional socio-economic development, the economic security of the Territory (Krai) will increase.

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## **Влияние пространственного неравенства и асимметрии регионального развития на экономическую безопасность ресурсных регионов России (на примере Красноярского края)**

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*В статье в контексте пространственного неравенства и асимметрии внутри регионального развития рассматриваются на примере Красноярского края общие проблемные тенденции в обеспечении экономической безопасности ресурсных регионов страны, которые не только приходят «извне» вместе с международными санкциями и федеральной политикой, но и создаются внутри региона. Отчасти проблемы экономической и социальной безопасности обусловлены исторически сложившейся специализацией региона и системой расселения, структурой человеческих ресурсов, удаленностью от основных ареалов экономической деятельности и рынков, суровыми климатическими условиями, большим ресурсным и природным потенциалом. Все эти факторы в совокупности сделали, например, край «национальной кладовой», определили его значимую роль в народном хозяйстве страны в рамках ресурсно-экспортной модели развития, обозначили перспективы развития промышленности и общества. Однако наряду с этим усиливается пространственное неравенство и асимметрии внутри регионального развития, которые сформировали несколько парадоксов экономического облика региона, а с этим – и проблемы в обеспечении экономической безопасности.*

*Ключевые слова:* ресурсные регионы, экономическая безопасность, пространственное неравенство и асимметрия регионального развития, экономический потенциал, региональная независимость.

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*Научная специальность: 08.00.00 – экономические науки.*

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