

# Influence of Socio-Economic Factors on Spatial Development of Territories of Asian Russia (on the Example of the Tyva Republic)

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**Abstract:** This paper examines how socio-economic factors shape the spatial development of regions that are part of the Asian part of Russia, the study was conducted on the example of socio-economic indicators of development of the Republic of Tyva. It characterises the current socio-economic state of the region, strengths and weaknesses affecting the prerequisites for further spatial development.

## 1 INTRODUCTION

The Republic of Tyva is a border subject of the Russian Federation, which is part of the Siberian Federal District and the Angaro-Yenisei macro-region, bordering Mongolia to the south.

The Republic of Tuva is located in the south of Eastern Siberia, in the geographical Centre of

Asia and borders on Krasnoyarsk Krai in the north, Irkutsk Oblast in the north-east, the Republic of

Buryatia in the east, the Republic of Mongolia in the south and south-east, and the Republics of Altai and Khakassia in the west. The capital of Tuva (the city of Kyzyl) is located at a distance of 4668 km from Moscow in the geographical Centre of Asia at the confluence of the rivers Biy-Khem and Kaa-Khem.


The territory of the Republic of Tyva is characterised by unfavourable natural and climatic conditions for living and belongs to the territories of the Far North and equated areas. Mountainous relief occupies more than 80 percent of the entire territory of the Republic of Tyva, 20 per cent of the territory falls on the intermountain basins, within which most of the population of the Republic of Tyva lives. The Republic of Tyva is located in a seismically dangerous zone (8-10 points on the


Richter scale). The ecological situation is contrasting, from satisfactory in the mountainous areas to unfavourable in the hollows.


The territory of the Republic with an area of 168.6 thousand km<sup>2</sup> stretches from east to west over 700 km, from north to south in the eastern part - 450 km, and in the central part - 100 km. Tyva is located in the zone of transition from the South Siberian taiga to the Mongolian steppes and is a mountainous country with an alternation of high ridges and deep intermountain hollows.

The Republic of Tyva has significant mineral reserves. The region has more than 47 percent of all-Russian reserves of zirconium, more than 30 percent of uranium, more than 5 per cent of copper, molybdenum and nepheline ores, significant reserves of non-ferrous, rare-earth and noble metals, and coal. At the same time, the Republic of Tyva is characterised by a low level of socio-economic development. According to the indicator of gross regional product per capita in 2021, the Republic of Tyva ranked 78th among the subjects of the Russian Federation with a value of 267 thousand rubles, which is almost 3 times less than the average indicator for the country (831 thousand rubles).

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## 2 METHOD OF RESEARCH

The social and economic development of the Republic of Tyva is characterised by the following indicators:

- The Republic of Tyva is among the ten subjects of the Russian Federation with the lowest average per capita cash income of the population (at the end of 2021, the indicator was 20.1 thousand rubles with the average Russian value of 54.6 thousand rubles);
- The Republic of Tyva is among the ten subjects of the Russian Federation with a high share of the population with monetary incomes below the subsistence minimum established in the subject of the Russian Federation (at the end of 2022, the indicator was 28.8 per cent with the national average of 9.8 per cent);
- there is a significant migration outflow of population in the republic (according to the results of 2021, the outflow totalled 1,358 people);
- unemployment rate in 2022 was 8 per cent, i.e. decreased by 3.3 per cent compared to 2021 (11.3 per cent) with the average Russian value of 3.7 per cent. It is noted that in the first quarter of 2021 the Republic of Tyva reached the mark of 18 per cent, during the coronavirus pandemic the level reached the mark of 20.4 per cent. The total number of unemployed was 10.5 thousand people with a decrease of 3 thousand people. Tyva ranks 78th among 85 subjects of Russia in terms of total unemployment.

In the Republic of Tyva there is a high level of natural population growth, which in 2022 was 9.3 (3130) people per 1,000 inhabitants with the average Russian indicator of 7.2 people per 1,000 inhabitants. By birth rate the Republic of Tyva in 2022 ranks 1st (17.9 per cent) per 1,000 population, in the Russian Federation with a rate of 9.6 persons per 1,000 inhabitants in 2021. And 1st place in terms of the total fertility rate - 2.97 children per 1 woman in 2020. During the analysed period, the number of population under working age increased by 1.0 thousand people and at the beginning of 2022 was 113.0 thousand people (34.0 percent of the total population). The number of the population of working age increased by 5.2 thousand people and amounted to 184.6 thousand people (55.5 per cent of the total population). The number of persons above working age decreased by 1,000 persons and amounted to 35,000 persons (10.5 per cent of the total population). In 2021, the average age of the population of the Republic was 30.0 years, including men - 28.1,

women - 31.8, in the Russian Federation - 39.5, in the Siberian Federal District - 38.2 years.

The level of development of the social sphere in the republic and the quality of services have always been low, but this has hardly been reflected in standard statistical indicators. Due to the remoteness and inaccessibility of many districts and villages, almost all of them have health care and general education facilities. The network has not been reformed and is objectively hampered by settlement conditions.

The state of Tyva's economy shows that by the main socio-economic indicators the republic is in one of the last places among the regions of Russia and the Siberian Federal District. This is due to the fact that, compared to other subjects of the Russian Federation, the agro-industrial complex industries are the main donors to the regional budget. The systemic crisis in the country had a more acute impact on the economy of the republic, which led to a significant decline in living standards in the region. At that time, the state of socio-economic development in the republic reflects the general level of extremely high interregional differentiation in Russia, which, according to most experts, is unacceptable.

Due to the younger age structure of the population, including the employed, the coverage of vocational education is close to the Russian average, with 71 per cent of the Republic's employed population (the average for the Siberian Federal District is 70 per cent). The underdevelopment of industry has led to a low proportion of the employed having primary vocational education (working specialities). The share of those employed with secondary vocational education is higher than in the Siberian Federal District and the Russian Federation as a whole, while the share of those employed with higher education is close to the average.

The poverty rate in the Republic of Tyva is very high. The poverty rate is particularly high in the peripheral areas of the republic, where low-paid employment in agriculture and the public sector prevails, there are few other jobs and, in addition, the demographic burden is higher at the expense of children.

## 3 RESULTS AND DISCUSSION

The levels of socio-economic development of the Siberian republics naturally differ from each other, and during the period of the past reforms of the 1990s their differentiation has only intensified. In many respects, the determining factors of development are

resource opportunities, primarily "natural" ones. The combination of external and internal factors affecting the development of the republics, production specifics, labour market, specialisation in the market of goods sales, ethno-social features, socio-economic capital of the Soviet period and many other things have led to the fact that each separate republic has its own specific socio-economic situation. However, the Republic's accession to Russia was of fundamental importance. The Republic of Tyva has changed significantly since becoming a part of Russia: by 1990, the population had more than tripled and industrial production had increased by almost 80 times. From an agrarian region in less than half a century, by the early 1990s it had become an agro-industrial region. Industrial output per capita was only five times less than the Russian average, while agricultural output was 75% of the Russian average. The average per capita income of the population was growing and in 1990 was already 75% of the Russian average.

However, the relatively intensive growth of the republic's economy still did not ensure the achievement of the lost level of development: the industrial production index. The main constraint on the development of goods-producing industries was not only the lack of investment and markets for products, but also the underdeveloped transport infrastructure, i.e. the republic's isolation from the economic space of Russia. First of all, the lack of a railway had an impact, which resulted in the low level of development of rich natural resources and the development of industrial production.

Favourable geographical position of the Republic in terms of transit opportunities. Prospects of creating an international air transport, road transport, railway corridor through the Republic of Tyva, linking Russia, Mongolia and China.

According to the diversity of natural conditions and natural resources, the nature of economic development and transport links, Tuva can be divided into 4 parts: central, western, southern and eastern. From the position of natural conditions the geographical position of the republic is favourable. It is located at the junction of Siberian taiga and Central Asian desert-steppe landscapes - in a wide band of mountains and intermountain plains. By the character of relief the territory is divided into 2 parts: the eastern part - mountainous, covering the basins of the rivers Bii-Khem and Kaa-Khem, and the western part, including the Tuva Basin and surrounding ridges (Western Sayan, Shapshalsky, Tsagan-Shibetu, Western and Eastern Tannu-Ola. In general, mountain systems occupy more than 80 per cent of

the total territory of the republic and only less than 20 per cent are intermountain hollows: (dry-steppe Tuva, semi-desert Ubsu-Nur, taiga-forested Tojinskaya and Tere-Kholskaya). The average altitude of the hollows is 520-1200 m above sea level.

Economic assessment of the possibility of developing the mineral resource base of Tuva shows that the Central macro-region has the greatest potential of mineral resources, in the future it can become the centre of development of mining production of the republic, as it is here that the largest reserves of high-quality hard coal and building materials are concentrated.

The Republic of Tyva consists of 17 municipal districts, five of which are border districts: Erzinsky, Mongun-Taiginsky, Tes-Khemsy, Ovyursky and Kaa-Khemsy districts.

The Republic of Tyva, being a border region of Russia, attaches special importance to the development of mutually beneficial cooperation with the new centres of economic and political influence located in the Asia-Pacific region - the People's Republic of China and Mongolia and has prospects to become a significant transport and logistics centre. With the international status given to the Bulgan-Takishken border crossing on the border of the Kobdon aimaq of Mongolia and XUAR of the People's Republic of China, it became possible to promote the Kyzyl-Urumqi cross-border corridor with a length of 1,790 kilometres. The most convenient and shortest transport route for access to the transcontinental transit transport corridors "Europe - Western China" and to the countries of the Asia-Pacific region is "Kyzyl (Tyva Republic, Russia) - Khandagaiti (Tyva Republic, Russia) - Ulangom (Mongolia) - Hovd (Mongolia) - Urumqi (China)".

The Republic of Tyva concluded an Agreement on cooperation between the Krasnoyarsk Krai and the Republic of Khakassia on the implementation of the "Yenisei Siberia" project (dated 17.04.2018, No. 3). The project "Yenisei Siberia" is an integration of economic, industrial, cultural potential, which sets the vector of spatial development of the Krasnoyarsk Krai, Khakassia and Tuva. The project is expected to form the Yenisei macro-region, which will provide additional effects of socio-economic development of the regions through coordination and joint management and spatial development. When fulfilling the tasks of the Yenisei Siberia project, spatial development of territories is possible by unlocking its potential, reducing infrastructural limitations to economic growth, developing promising specialisations in industry, ensuring the

availability of basic social services within the macro-region, and reducing inter-regional inequality. For the successful implementation of this Agreement, the "Main" competitive advantages of the Republic of Tyva have been identified:

1. Favourable geographical position of the Republic in terms of transit opportunities;
2. Prospects of creating an international air transport, road transport, railway corridor through the Republic of Tyva, linking Russia, Mongolia and China;
3. Rich mineral resource base, availability of coal, non-ferrous, rare and rare-earth metals, polymetallic ores;
4. Large reserves of forestry stock;
5. Availability of tourist and recreational potential;
6. Large reserves of territories free for business development;
7. Stable socio-political situation, absence of inter-ethnic and inter-confessional conflicts.

Weaknesses of the region are determined by remoteness from the world markets, low transport and communication development of the districts, low share of deep processing industries, low level of innovative entrepreneurship development.

"Promising" areas of economic development in the Republic include:

1. Entry into international transport corridors, expansion of transport and logistics flows, creation of a transport hub;
2. Production of environmentally friendly agro-industrial products and access to new markets;
3. Growing demand for environmentally friendly tourist destinations;
4. Growing demand for natural resources (water, mineral, forestry);
5. Development of co-operation processes within the Siberian Federal District;
6. Development of industries related to renewable resources - forestry and agro-industrial complex;
7. Introduction of energy-saving technologies and development of energy production from alternative sources;
8. Emergence of joint infrastructural, spatial and technological projects in the sphere of cooperation between Russia, Mongolia and China;
9. Formation of active trade interaction with the regions and realisation of high value-added products.

Table 1: The main areas of development of the Republic of Tyva and their problems.

Main areas	Uniqueness, competitive advantages, strengths	Key issues
<b>Resource potential</b>		
Geographical location	Advantageous geostrategic position of Tuva (the centre of Asia) - border area with Mongolia (access to the countries of north-east Asia); Tyva borders the republics: Altai, Khakassia and Buryatia, Krasnoyarsk Krai and Irkutsk Oblast.	Transport isolation: no railway connection, poorly developed air route network.
Natural-resource potential	High mineral resource potential: <ul style="list-style-type: none"> <li>– reservoirs of fresh and low mineralised groundwater;</li> <li>– mineral groundwater deposits;</li> <li>– Solid mineral deposits (gold, asbestos, mud, salts, polymetallic ores, sand, gravel and others);</li> <li>– Having its own raw material reserves for the development of the construction industry base;</li> <li>– Large forest reserves: more than 8 million hectares of Tuva's territory are covered by forests dominated by Siberian larch, cedar, pine, spruce, aspen. The total timber reserve is 1 billion cubic metres;</li> <li>– The presence of tourist-recreational and sanatorium-resort potential;</li> <li>– Soil and climatic conditions allow for organic farming.</li> </ul>	Insufficient utilisation of resource potential due to the lack of a railway; Weak investment activity.

## 4 CONCLUSION

Based on the results obtained, we would like to conclude that the Republic of Tyva has prerequisites and potential for spatial development in the socio-economic sphere. At the moment the region has certain difficulties, which it needs to solve for favourable development.

In solving the problems faced by the Tyva Republic, it is worth addressing the development and improvement of "promising" directions of economic development, which we have identified in the course of this study.

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