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INVESTMENTS INTO THE ECONOMY OF RUSSIAN REGIONS: ASSESSMENT OF INVESTMENT CONDITIONS

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Abstract. Within the framework of this article, we consider the investment climate of individual Russian regions, the regions of the Siberian Federal District of the Russian Federation, which are currently attractive for investment due to the natural resource reserves. The concept of investment climate is considered as a complex concept, including the evaluation of both qualitative and quantitative indicators that predetermine the investment conditions in the economy of a particular territory. The quantitative indicators are divided into blocks of indicators of investment potential (innovative, labor, financial and production, infrastructure potential, etc.) and investment risk (social, economic and environmental risks). The qualitative indicators of assessment reflect the investment policy of the authorities of the regions of the Russian Federation. The research is based on such methods as the method of ranking, integral evaluation, comparative analysis. The work is aimed at identifying the weak and strong points of the Russian regions studied, comparing regions with each other in order to identify regions with the favorable and unfavorable investment climate. The analysis of qualitative indicators makes it possible to find out in which regions the regional authorities create the most favorable investment conditions. These methods make it possible to identify the region's most attractive for investment in the Siberian Federal District of the Russian Federation in a single set.

Key words: investments, region, Russia, investment climate, risk, potential, assessment

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1. INTRODUCTION

Today an important condition for the development of the economy development and an indicator specifying the overall state of affairs in the country is the volume of investment and investment activity in every country in the world.

The investments affect the deepest foundations of economic activity, determining the process of economic growth of the country as a whole, its individual territories, as well as raising the level and quality of life of citizens. The activation of investment process is one of the most effective mechanisms for financing and implementing the social and economic reforms, oriented not so much to short-term improvement, but to achieving deep strategic restructuring in the state, society and business.

The investment issues are relevant for study. The investments in business (Stoddard, 2017) and the economy of the country (Kinda, 2010) are considered separately. At the same time, special attention is paid to attracting investments. The scientific works distinguish such concepts as investment attractiveness (Soboleva & Parshutina, 2016), investment risk (Böhringer, Löschel, 2008) and investment potential (Golaydo, Parshutina, Gudimenko, Lazarenko & Shelepina, 2017). In the framework of this study, we consider the notion of an investment climate, which is complex and includes an assessment of both risks and opportunities created for the investors.

It is necessary to take into account that the state, especially as large as Russia, is developing unevenly: some territories and regions are the most attractive for investment, rather than others. It is these territories that become the key ones in the development of the entire state. In this regard, many studies consider the investment conditions in certain regions of the Russian Federation (Golaydo, Parshutina, Gudimenko, Lazarenko & Shelepina, 2017) (Shaykheeva, Mustafin, Panasyuk, 2016) (Fedorova, Korkmazova & Muratov, 2016). In the framework of this study, we made the analysis of investment activity not in Russia as a whole, but in its individual regions. The regions of the Siberian Federal District of the Russian Federation were chosen as the object of study. This territory is extremely rich in natural resources, the extraction of which is extremely attractive for investment in the industry at the moment. In addition, the transport, innovation and industrial infrastructure is being actively created in these regions, which also improves the investment climate of these subjects of the Russian Federation.

In this regard, the main objective of this research is the study and assessment of the investment climate in the regions of the Siberian Federal District of the Russian Federation (the Republic of Altai, the Republic of Buryatia, the Republic of Tyva, the Republic of Khakassia, Altai Territory, Trans-Baikal Territory, Krasnoyarsk Territory, Irkutsk Region, Kemerovo Region, Novosibirsk Region, Omsk Region and Tomsk Region), identification of features, as well as possible directions for its further development.

2. METHODS

The scientific works use different methods of assessing the investment conditions with emphasis on different factors: development of financial infrastructure (Kolmykova, Chernih & Sitnikova, 2014), availability of natural resources, (Jongwanich & Kohpaiboon, 2008) social and environmental conditions, etc (Meißner & Grote, 2017) Due to the fact that the concept of investment climate is perceived as complex in this study, its evaluation requires an analysis of a number of indicators. For this purpose, the indicators were grouped into two groups - investment potential and investment risk, each of which included several blocks of indicators, indicated in Table 1.

Table 1. Indicators for assessing the investment climate in the Russian regions

Investment climate			
Investment potential		**Investment risk**	
Block 1. Financial and production potential	1) gross regional product per capita;	Block 7. Economic risk	1) unemployment rate;
	2) investments in fixed assets per capita;		2) consumer price index;
	3) industrial production index.		3) specific weight of unprofitable organizations;
Block 2. Labor potential	1) average annual number of persons employed in the economy;		4) depreciation degree of fixed assets
	2) expected life expectancy;		
	3) number of students.		
Block 3. Consumer potential	1) consumer spending on average per capita;	Block 8. Social risk	1) number of population with cash incomes below the subsistence minimum;

	2) total area of living quarters per one inhabitant on average;		2) demographic load ratios;
	3) number of own cars		3) number of registered crimes
Block 4. Infrastructure potential	1) density of public roads with hard surface;		
	2) density of railways at the end of the year;		
	3) number of connected subscriber units of mobile radiotelephone communications per 1,000 persons of population		
Block 5. Institutional potential	1) number of small businesses;	Block 9. Environmental risk	1) pollutant emissions into the atmosphere;
	2) number of small businesses;		2) discharge of contaminated sewage water into the surface water facilities
	3) number of personal computers		
Block 6. Innovative potential	1) advanced production technologies developed;		
	2) innovative activity of organizations;		
	3) scope of innovative goods, works, services.		

Each of the indicators specified in Table 1 was assessed for the period from 2007 to 2015. The values of the indicators are taken from the collections of works "Regions of Russia. Main Features of the Subjects of the Russian Federation" (n. d). and "Regions of Russia. Socio-Economic Indicators" (n. d).

The normalized indicator was calculated for each individual indicator using the following formulas:

$$R = (Xi - X\,min) / (Xmax - Xmin),$$

if the best indicator has a maximum value, or

$$R = (Xmax - Xi) / (Xmax - Xmin),$$

if the best indicator has a minimum value. Where Xi – the value of the regional indicator in the specified year, Xmin and Xmax – minimum and maximum value of the indicator among the evaluated regions for the studied year. All calculated values are in the interval of [0; 1] as a result of linear scaling, where 0 corresponds to the minimum value of a feature, and 1 - to the maximum value. To calculate the integral index of the region for an individual block, we used the arithmetic mean of the normalized indicators for each year.

Calculation of the integral index for the investment potential and for the investment risk is carried out as the geometric mean of the indices for each block in the year under consideration. This enables us to assess the dynamics of investment potential and investment risk changes from 2007 to 2015, as well as compare the risk and potential of each region and compare the regions with each other.

Also, the research methodology includes an assessment of qualitative indicators related to the activities of public authorities in the regions under consideration: creation of specialized bodies that accompany and advise the investment projects, development and adoption of specialized strategic programs to enhance investment and innovation activity, creation of special areas associated with the provision of tax incentives, creation of innovative infrastructure, etc.

3. RESULTS

Initially, we carried out a quantitative analysis of the investment potential. On the basis of calculations, we identified the leading regions and the outsider regions for each block of indicators. The result is presented in Table 2.

Table 2. Analysis of indicators of investment potential in the regions of the Siberian Federal District

Block of indicators	Leading regions	Outsider regions
Block 1. Financial and production potential	Krasnoyarsk Territory	the Republic of Tuva, the Republic of Altai, Altai Territory
Block 2. Labor potential	Novosibirsk Region	the Republic of Tuva
Block 3. Consumer potential	Krasnoyarsk Territory, Novosibirsk Region	the Republic of Tuva
Block 4. Infrastructure potential	Kemerovo Region	the Republic of Tuva, the Republic of Altai

Block 5. Institutional potential	Tomsk Region, Krasnoyarsk Territory, Novosibirsk Region	the Republic of Tuva, the Republic of Khakassia, Trans-Baikal Territory
Block 6. Innovative potential	Krasnoyarsk Territory, Novosibirsk Region	the Republic of Tuva, the Republic of Khakassia, Trans-Baikal Territory

Table 2 shows that the leaders and outsiders are virtually unchanged from 2007 to 2015. The main leaders in most indicators are the Krasnoyarsk Territory and the Novosibirsk Region. Kemerovo and Tomsk Regions were the leaders according to some indicators in some periods. However, their leadership is rather relative and associated with some temporary difficulties in other regions.

Regarding the value of rating indicators of the leading regions for individual blocks, we can say the following: the indicator value does not reach the indicator 1. Since the rating indicator is integral and is calculated as the arithmetic mean of normalized indicators, this fact shows that the best regions are the leaders not by all indicators, but by individual ones, which enables them to outstrip other subjects of the Russian Federation. That is, all the regions considered are not absolute, but relative leaders in comparison with other regions studied.

The Republic of Tuva is a constant outsider for all indicators. Such regions as the Republic of Altai, the Republic of Khakassia, Altai Territory and Trans-Baikal Territory were among the worst regions for some indicators in some periods. According to their rating indicators, these regions do not differ much from the absolute outsider - the Republic of Tyva. Therefore, these regions can be attributed to a group of regions with a relatively low investment potential. At the same time, the rating indicators of these subjects of the Russian Federation are often equal to 0, which indicates that the outsider regions are indeed in a distress situation for all the assessed indicators of individual blocks.

After that, we assessed the investment potential of each region in the period under consideration. This enabled us to assess a state of the region as a whole taking into account all the advantages and failures in the investment climate and compare the regions with each other. At the same time, the results were presented in the form of a petal diagram for clarity, reflected in Figure 1.

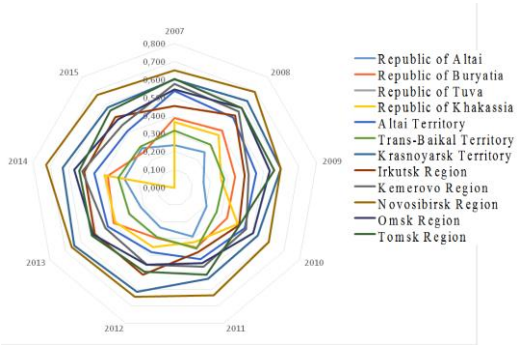

Figure 1. The level of investment potential of the regions of the Siberian Federal District for 2007-2015.

Now let us turn to the analysis of integrated rating indicators for the blocks of investment risk indicators. We also identified the leading regions and outsider regions in Table 3 among them.

Table 3. Analysis of indicators of investment risk in the regions of the Siberian Federal District

Block of indicators	Leading regions	Outsider regions
Block 7. Economic risk	the Republic of Buryatia, the Republic of Khakassia, Altai Territory, Krasnoyarsk Territory, Novosibirsk Region, Omsk Region	the Republic of Tuva, Trans-Baikal Territory
Block 8. Social risk	Kemerovo Region, Omsk Region	the Republic of Tuva, the Republic of Altai
Block 9. Environmental risk	the Republic of Altai	Kemerovo Region

When assessing the indicators of investment risks, there is no strong leader among the regions, which indicates that the investment risks are present in all, even the most developed regions. However, it

should be noted that the leading regions in the investment potential - the Novosibirsk Region and the Krasnoyarsk Territory, - have rather high rating indicators, which shows not the lowest level of risk, but relatively low compared to other regions.

If there are no well-defined leaders among the regions, then the Republic of Tyva is again among the outsider regions. The only exception is the Kemerovo Region, which is the worst region in terms of environmental risk from 2007 to 2015. The Kemerovo Region has very developed industry, which reduces the economic risks, but seriously increases the environmental risks at the same time.

To demonstrate the overall results of the investment risk assessment, we drew up a diagram for each of the regions shown in Figure 2.

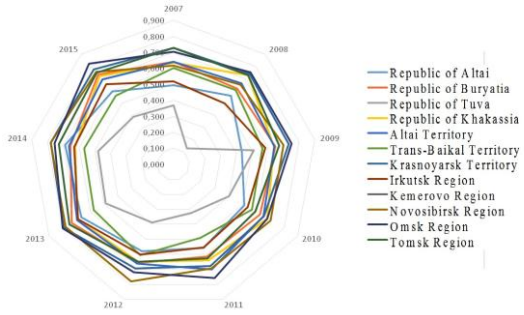

Figure 2. The level of investment risk of the regions of the Siberian Federal District for 2007-2015.

As can be seen in the diagrams, the Krasnoyarsk Territory and the Novosibirsk Region are leaders in terms of potential and low level of investment risk: their graphs are closer to the diagram edge, while the Republic of Tyva ranks last in terms of potential and high risk. Therefore, the graph of this region is the closest to the diagram center.

We also conducted a qualitative activity analysis of the authorities of the regions studied. It showed that the authorities in all regions worked roughly the same way. It was not possible to determine the direct dependence of the investment climate of the region on the number of management bodies that contribute to the investment activity. It was also impossible to determine the dependence of the investment climate on the number of regulatory acts and development programs adopted in the subject of the Russian Federation. It can be noted that the list of measures of state support for business and investors is approximately the same in all the regions studied (financial measures, tax incentives, consulting, etc.). They just differ in their volume, which depends on the regional budgets. Sure, the leading regions are wealthier. In this regard they provide benefits and help to more investors.

There is some relationship between the investment climate and the economy sectors, which are the most developed in the region. High-tech innovative sectors of the economy are developed in the leading regions (Krasnoyarsk Territory - machine building, Novosibirsk Region - aerospace industry, IT technologies, nanotechnologies). The development of these industries is closely interrelated with the development of innovation infrastructure in the territory of these regions (technology parks, business incubators, etc.).

However, the development of these industries and innovative infrastructure in these regions can be explained not so much by the policy of the authorities, but rather by the conditions created in the territory of these entities. There are a large number of qualified specialists, large universities and research centers on the territory of the leading regions. This is evidenced by the fact that the Novosibirsk Region and the Krasnoyarsk Territory occupy a leading position in such assessment blocks as "Labor potential" and "Innovative potential". This creates a basis for innovative development and contributes to investing money in the scientific developments.

Thus, it can be said that the quality indicators do not have such a significant impact on the investment climate as the socio-economic situation in a certain region. The qualitative factors are often a consequence of the achieved level of socio-economic development of the territory.

4. SUMMARY

The investment climate study results in the following conclusions. We studied the investment climate of a number of regions of the Russian Federation, which could potentially be attractive for investment. The analysis made it possible to identify the leading regions and the outsider regions among the subjects of the Russian Federation studied. At that, almost all investment conditions are developed in the leading regions, while there are almost no objective social and economic conditions necessary to attract investments in the outsider regions.

We also carried out a qualitative analysis of work of the authorities of the subjects of the Russian Federation in the field of investment policy. We

made a conclusion that, first of all, such indicators as orientation to certain production branches and creation of innovative development infrastructure, as well as creation of business and investor support by the state authorities in the form of tax incentives, financial assistance, etc. have some influence.

Thus, it can be noted that there are some regions attractive for investment among the Russian regions studied, but it is necessary to create favorable social and economic conditions for investors, which will be supplemented by competent policy of regional authorities for their development and increase in investment activity.

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