

## THE EVALUATION OF THE INFRASTRUCTURE PROVISION OF THE ENTREPRENEURSHIP OF THE REGIONS OF RUSSIA BASED ON THE INDEX METHOD

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**Abstract:** The system of the infrastructure provision in the Russian Federation and its regions is not allowed, which is due to its fragmentation in certain areas, the inadequacy of infrastructure of various types, the underestimation of factors that impede the development of the infrastructural provision of entrepreneurial activity, and the imperfection of the methodological apparatus for investigating its level of development. In particular, it is worth noting the current state of transport infrastructure in cities and regions. The article considers the infrastructure of entrepreneurship in the regions of Russia. In general, it can be noted that the activities and effectiveness of physical infrastructure are largely dependent on the regulatory actions of

the regions themselves. As a result of the study, the authors identified the three leaders in infrastructural provision: the Krasnodar Territory and the Republic of Tatarstan (0.72-0.80), and the Tyumen Region (0.9). Also, based on the results obtained, it can be concluded that in most regions there is a shortage of basic infrastructure, as well as its insufficiently efficient functioning.

**Keywords:** infrastructure provision, index method, entrepreneurship, Russia, regional development.

### Introduction

Increasing the competitiveness of the economy, including at the regional level, is impossible without providing it

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with modern infrastructure facilities. Infrastructural provision is the basis for the activity of small and medium-sized enterprises, which is an instrument for innovative development of the economy. In Russia and its regions, the functioning and development of business structures faces a number of problems, most of which are related to infrastructure provision.

## Methods

To assess the level of infrastructure provision of business in the context of the regions, it is proposed to use the integral indicator, which is calculated for the regions of Russia for 2016. The regions are selected according to the level of the balanced financial result of the organizations' activity: five subjects of the Russian Federation with the highest index and five with an average, similar in structure to the economy with the first five.

At the first stage of the analysis, 22 qualitative and quantitative indicators were selected, reflecting the level of equipment, availability, and quality of the infrastructure. The choice of indicators was significantly influenced by the availability of statistical indicators

for the analyzed period for all the regions studied.

At the second stage, the selected indicators are converted to a comparable form by the method of linear scaling. When feedback of the estimated indicator was calculated using the following formula:

$$I_j = \frac{X_{\max} - X_i}{X_{\max} - X_{\min}}$$

With the direct connection of the estimated indicator, the formula was used:

$$I = \frac{X_i - X_{\min}}{X_{\max} - X_{\min}}$$

Where: I - index of the indicator of infrastructure provision;  $X_i$  is the actual value of the i-th indicator;  $X_{\min}$  and  $X_{\max}$  - the minimum and maximum values of the indicator in the period under consideration among all the regions studied, i is the number of indicators.

In the third stage, three intermediate indices are calculated by the method of the arithmetic average of the corresponding indicators.

The integrated index of infrastructure provision of the enterprise of the region

is determined by the method of the average arithmetic intermediate indices:

$$I_i = \frac{1}{n} \sum_{i=1}^n \bar{x}_i$$

Where  $I_i$  - is the value of the integral indicator for region  $i$ ;  $n$  - is the total number of intermediate indices;  $\bar{x}_i$  - is the value of the intermediate index,  $\bar{x}_i = [0;1]$ , in which the value "0" corresponds to the minimum, and "1" - maximum value of the indicator among the analyzed regions.

The share of own expenses in the general expenses in the state programs on infrastructure development is determined by the following way:

$$Xi = \frac{Cr}{TC}, \text{ where } C_r - \text{ program costs}$$

of the region,  $TC$  - total program costs.

The program costs for one inhabitant of the region are estimated using the formula:

$$Xi = \frac{TC_{2016}}{N}, \text{ where } TC_{2016} - \text{ is the}$$

program expenditure for infrastructure development in the region in 2016,  $N$  - is the population of the region.

## Results and discussion

The cost of programs in 2016 aimed at developing infrastructure in the

region amounted to an average of 200 rubles per person on the studied regions. Most funds were allocated in the Krasnodar territory - 380 rubles per person, in the Murmansk region and in the Republic of Tatarstan 64% and 57% less than the regional average were allocated.

The largest share of own expenses allocated for the implementation of programs is concentrated in the Tyumen region - 95.7%. In Irkutsk, Kemerovo regions, as well as in the Republic of Tatarstan and Udmurtia, the share of own expenses for the implementation of programs was about 81-82%. The lowest total of own expenses was allocated in the Murmansk region (0.4%), Krasnoyarsk territory (2.3%) and Tomsk region (16.2%). It is worth noting that, on average, this indicator, the share of own expenses for the implementation of state programs is high - more than 58%, which is due to the low level of income of the region. In 2016 in the regions studied, an average of 26 banks and branches operated, which is almost 3 times less than in 2010, due to the raising of the Central Bank of the Russian Federation by the minimum amount of authorized capital and changes in other standards in order to

consolidate the banks, which entailed processes of mergers, acquisitions or closures of banks, as well as in connection with the macroeconomic situation. Most of all credit institutions are registered in the Krasnodar territory and in the Republic of Tatarstan, which is 50 and 49, respectively. Outsiders in this indicator are the Murmansk region and Udmurtia, where values are less than 10.

Consequently, the number of structural units also tends to decline, which averaged 9% in 2016 in relation to 2010. The average value of internal structural units in 2016 was 683.

One of the most important objects of financial infrastructure is microfinance organizations that issue micro-loans up to 3 million rubles for a period of up to 5 years. Thus, the number of operating MFO on the average for the subjects studied was 75 organizations. The leader in this indicator is the Krasnodar territory, where the number of MFO exceeds the average by 55% and is 137 organizations. Less than 20 MFO are observed in the Murmansk and Tomsk regions, which are outsiders in this indicator.

The volume of loans granted to small and medium-sized businesses in

rubles in 2010-2016 decreased by 8.3% on average for the regions in question and in 2016 amounted to 100,247 rubles, which is the result of increased interest rates on loans and tightening of credit conditions. The level of rates for SMEs remains very high - a decline during 2015 and early 2016 was generally quite sluggish, and rates for SMEs lost only 2.5-3 percentage points. Thus, the largest volume of loans granted to SMEs in 2016 is observed in the Krasnodar territory (236,218 rubles) and in the Republic of Tatarstan (224,193 rubles), as in 2010-2015. Differences in the volume of loans granted are due to the number of financial institutions operating in the region. The volume of loans extended to SMEs in foreign currency follows the same trend as the previous indicator, which decreased compared to 2010 more than three times, due to the transition to a floating exchange rate and high volatility of the foreign exchange market.

Among the subjects studied, the vast majority (more than half) have less than 5 funds to support entrepreneurship, which is 35% below the regional average.

Thus, it should be noted that the financial infrastructure is well developed

only in the Krasnodar territory, where the arithmetic mean is 0.9. It is worth noting that the availability of credit in recent years tends to decline in the whole country, due to the macroeconomic situation and the policy of the CBR aimed at consolidating banks.

The physical infrastructure section is the most numerous group of indicators. In this study, the basic infrastructure is understood as the transport and logistics infrastructure, as well as the energy infrastructure, as well as specific infrastructure facilities to support entrepreneurship.

The existence of special economic zones (SEZ) is seen in the world as an active means of state policy, capable of equally resuscitating the depressed territory, and give an additional impetus to regional growth points. However, as Russian experience has shown, not all special economic zones can function successfully and effectively master federal funds. So, in 2016 the existence of 8 SEZs of Russia was prematurely suspended. According to the report on the results of the operation of the special economic zones for 2014 and for the period since the beginning of the operation of the special economic zones, the SEZ is most

effectively functioning in the Republic of Tatarstan (RT), Samara and Tomsk regions (from the regions studied). Also, it should be noted that the volume of investments from residents in these regions exceeded the amount of the invested funds of the federal budget. In particular, in RT in 2014, the volume of investments amounted to 27,966 million rubles, for the period since the beginning of the operation of the SEZ - 78,970 million rubles, which is 95% and 90% respectively of the Development Plan. The volume of taxes paid by residents of the SEZ to the budgets of all levels of the budgetary system of the Russian Federation for 2014 amounted to 1,497 million rubles, the actual figure since the beginning of the operation of the SEZ - 7,323 million rubles (51% and 68% respectively of the Development Plan). The volume of customs payments for 2014 amounted to 4,317 million rubles.

Also, in addition to the SEZ, there are areas of advanced socio-economic development (TOR), which is understood as part of the territory of the subject of the Russian Federation, which establishes a special legal regime for business and other activities. The main difference from SEZ is that TORs are created for specific large investors who

have concluded preliminary agreements with the authorized federal body. To estimate the contribution of TORs to GRP is not yet possible, due to the beginning of their functioning only in 2016.

For 2016 in the regions studied, there are 4 business incubators on average. The leader in this indicator is the Tomsk region with the result of 12 business incubators operating mainly on the basis of technological universities.

The leader in the number of industrial parks and technoparks in 2016 is the Republic of Tatarstan with indicators equal to 19 and 10. Outsiders with a score of one unit are the Kemerovo region and the Krasnoyarsk territory.

Currently, the largest number of retail space in the modern format is for 1000 people accounts for Tatarstan, which is 40% higher than the average in 2016.

Among all the surveyed subjects, the largest number of international airports is observed in the Tyumen region (5), which is primarily due to the geographical location of the subject. The second place is occupied by the Krasnoyarsk territory with a score of 3 units.

Cargo turnover of airports in 2016 amounted to 2 752 180.14 on average for the analyzed subjects, most of which were cargo turnover of international airports. It should be noted that over the past three years there has been an increase in domestic passenger traffic and a reduction in international, due to the devaluation of the ruble, a decrease in the solvency of the population, as well as the lack of communication in three markets - in Ukraine, Egypt and Turkey. Freight traffic increased by 5% on average in Russia.

By the number of sea ports, the Krasnodar territory is leading with a score of 9 units in 2016. In the Murmansk region and in the Krasnoyarsk territory there are 3 seaports registered, and in the Tyumen region - one. In other regions there is no seaport.

The leader in the number of river ports in 2016 is the Tyumen region with an index of 11. The second place is occupied by the Irkutsk region, where 7 river ports are marked.

Thus, we can say that no region is provided with the necessary physical infrastructure, only in the Republic of

Tatarstan the arithmetic mean of this block exceeded 0.5.

### **Conclusion**

In general, it can be noted that the activities and effectiveness of physical infrastructure are largely dependent on the regulatory actions of the regions themselves. In particular, this is noticeable in the functioning of SEZs, TORs, business incubators, technoparks and industrial parks. Also, it is worth noting that most airports, sea and river ports do not meet demand, due to the deterioration of the infrastructure; low bandwidth; lack of logistics centers, airports and ports, as well as the lack of a unified transport network.

The group of indicators of administrative barriers shows the freedom of doing business for small businesses. According to the results of the analysis of the block of administrative barriers, the best result was shown by the Tyumen region, where the arithmetic mean is 0.9, where there is a high level of development of institutes for business (rated ASI "A"), high quality of The Federal Tax Service (5 points) With an indicator greater than 0,7 noted the Republic of Tatarstan and the Krasnodar territory, in which the rating

of the ASI is also equal to "A" and the high quality of services provided by the Federal Tax Service. Most of the pressure on entrepreneurship is in the Krasnoyarsk territory (0.16) and in the Irkutsk region (0.3), in of which rating ASI is «D» and «E» respectively. In other investigated subjects, this indicator has a result in the region of 0.5.

Thus, proceeding from all of the above, it is possible to determine the top three leaders in terms of infrastructural security in all three blocks: the Krasnodar territory and the Republic of Tatarstan (0.72-0.80), and the Tyumen region (0.9). Next is the Samara region with an indicator of 0.69. In a crisis situation, the Krasnoyarsk territory (0.16) and the Irkutsk region (0.31) are located (Appendix 2.23). It should be noted that in most regions there is a lack of basic infrastructure, as well as its insufficiently efficient functioning. In addition, it should be noted that financial resources, to date, most entrepreneurs are not available, as well as relatively high administrative pressure.

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