

The Economic Potential of the Region: Methodical and Practical Aspects of Evaluation

E.V. Gorshenina

Private Higher Education institution Yuzhny institute of Management,
Russian Federation
gorsheninae@yandex.ru

Abstract— The article deals with the methodical and practical aspects of the evaluation of the Russian Federation Regions' economic potential. The writer uses multidimensional evaluation of the economic potential on the basis of regional labor resources and fixed capital endowments, and also considers financial sustainability and availability of investments. The method is based on the author's interpretation of the term "economic potential" and includes the classification of the regions into six groups. Special attention is given to the credibility of the raw data and to the comparison of the economic potential on the basis of multidimensional average. The authorial methodology of the economic potential evaluation of the Russian Federation Regions is based on four methodological principles and on practical focus. The article introduces results of practical calculations done with the use of the authorial methodology.

Keywords— *RF region, evaluation and classification of the regions, region's economic potential, regional labor resources endowments, regional fixed capital endowments, financial sustainability of the region, availability of investments in the region.*

1. INTRODUCTION

Territorial problems in Russia have been actively developed for many decades, but economic reform dictates new directions for research and solutions of the problems of regional development. Today, we need to move to the actual management tools based on innovative reorientation and taking into account the potential of the regions. One of these management tools is the evaluation and classification of regions according to their economic potential. This is an important scientific and practical task, the solution of which will provide a significant contribution to improving the efficiency and competitiveness of Russian regions.

Regional problems of economic development and economic policy have always been under the scrutiny of domestic scientists. The most known scientific approaches to the study of the Russian Federation region-subject belong to the following scientists: A.I. Tatarkin [18, 19], A.A. Rumyantsev [15], G.A. Unthura [21,22], A.S. Marshalova [8] A.S. Novoselov [8,9], V.N. Leksin [3,4,5], A.N. Shvetsov [3], P.A. Minakir [6,7], S.A. Suspitsyn [16,17]. Despite the attention of researchers to the issues of regional development and despite numerous works, many aspects of this complex problem are not resolved, are controversial and require, in our view, further development. This approach includes a comprehensive assessment of the Russian Federation regions'

capacity to expand production and takes into account the main factors of development and the economic potential of the territory.

2. PROBLEM STATEMENT

The development of the directions of the regional economic policy depends directly not only on a clear idea of the ongoing processes in the region itself, but also on the place that it occupies among other regions of the Russian Federation. This approach involves the assessment and classification of the regions based on data on the economic potential of the territory. In this regard, two problems arise: first, selecting an adequate methodology of the typology of regions; and second, ensuring the objectivity of the source data.

Numerous studies on the assessment and classification of Russian regions make up a colorful picture [1, 2]. The approaches presented in them differ considerably. The author's methodology of assessment and classification of the Russian Federation regions focuses on the average level of economic potential. That's exactly the approach that will allow us to know the extent to which the region meets Russian realities and to establish the achievable "level" of development.

There is no common opinion on the interpretation of the term "economic potential" among Russian scientists. Therefore, there are some methodological difficulties in selecting particular indexes or indicators for the assessment of the economic potential. Apart from that, the needed indicators have to meet the following requirements: first, to reflect quantitative measurements of separation of the regions; second, to be common to all regions; third, be comparable over time and across place. Meeting these requirements is ensured by the use of official statistical data (Rosstat) and by the original science-based methodology adjusted to specifics of Russian regions development.

2. METHODOLOGICAL ASPECTS OF ECONOMIC POTENTIAL ASSESSMENTS

There are many interpretations and types of investigation of the economic potential of the region [20, 23, 24–27]. The author's methodology of assessment and classification of the Russian Federation regions on the economic potential consists of four sections.

The first section of the methodology is the consideration of the following methodological principles [2]:

- 1) complex evaluation and multivariant calculations;
- 2) consideration of regional specific features;
- 3) information supplying of research with the actual reporting and statistical data;
- 4) practical feasibility, the use of relatively simple methodological techniques and bringing conclusions to the level of specific recommendations.

The second section of the methodology consists of six stages of evaluation and construction of a typology.

At the first stage, initial data are collected from sources of official statistics. The second stage involves calculations of the indicators and giving them a positive character. The third stage is the procedure of normalizing the indicators (converting into a comparable form) on a 100 point scale. At the fourth stage the weight coefficients of the indicators are determined. Calculation and ranking of the aggregated descending rate (indicator) in scores occurs at the fifth stage. The sixth, final stage is devoted to the classification of regions by points, construction of rating tables and graphs.

In determining the types, a multidimensional mean value is used and the ranking of the distribution is performed. Regions are divided into two groups, which fall into the types. The first group includes the regions with the level of economic potential above the average. There are four distinguished types in this group: the leading regions, the locomotive regions, the support regions, the developing regions. The second group consists of regions with a level of economic development below the average. This group includes two types: conservative regions, depressive regions.

The third section of the methodology is the evaluation framework and a set of indicators. The region's economic potential is viewed as a comprehensive assessment of the region's ability to expand reproduction, taking into account the main development factors. On this basis, a set of indicators of the economic potential of the region, a constituent entity of the Russian Federation is determined, taking into account its own regional resources for sustainable economic growth. The economic potential is measured by the availability of labor resources, fixed assets, finance and investments [2].

The availability of labor resources is evaluated by two indicators: the level of participation in the workforce and the dependency ratio. The trend towards the growth of each indicator reflects a positive dynamics and strengthening of the region's economic potential.

The level of participation in the labor force reflects the degree of employment of the working age population in the economy of the region. It is calculated as the ratio of the number of economically active population of a certain age group to the total population of the corresponding age group, in percentage.

The adjusted dependency ratio reflects the endowment of the region with people of working age and takes into account people of non-working ages. It shows the number of working age residents per 1000 of non-working age residents.

The availability of fixed assets is estimated by two indexes: capital-labour ratio and the degree of safety of fixed assets. The trend towards the growth of each index indicates a positive dynamics and strengthening of the region's economic potential.

The capital-labour ratio characterizes the quantity of fixed production assets per worker in the region. It is calculated as the ratio of the book value of these assets for a given year to the average annual number of workers employed in the economy, in million rubles per person.

The degree of security of fixed assets indicates the level of readiness of the region's enterprises for reproduction. It is calculated as the difference between 100% safety and wear percentage.

Financial and investment security is estimated by three indicators: security of the budget revenues, the proportion of profitable organizations, index of physical volume of investments into fixed assets. The trend towards the growth of each indicator shows a positive dynamics and strengthening of the region's economic potential.

The security of the budget revenues reflects the process of forming a regional budget. It is calculated in percentage, with taking into account the ratio of tax revenues and uncompensated receipts to the regional budget.

The share of profitable organizations characterizes the financial condition of the enterprises of the region. It is calculated as the difference between 100 percent and the percentage of unprofitable enterprises.

The index of physical volume of investments in fixed assets reflects the investment opportunities of the region and is calculated in comparable prices.

The fourth section of the methodology deals with the sources of information. In accordance with the author's methodology, all calculations are done only on the materials of official statistics. This study uses the statistical compilations "Regions of Russia. Socio-economic Indicators". This allows ensuring the reliability and credibility of the source data, transparency, objectivity and independence of information.

3. PRACTICAL ASPECTS OF ECONOMIC POTENTIAL EVALUATION

One of the variants of the author's methodology of assessing the region's economic potential was first tested in calculating the ratings of regions published in the "Ratings" magazine [11–14]. To date, the technique has been adjusted and consists of 6 stages.

Stage 1. Obtaining data from the sources of official statistics. The following data was taken from the statistical compilations "Regions of Russia. Socio-economic rates, 2017" [10]:

- average annual number of employed in the economy, thousands of people;
- level of participation in the workforce, %;
- dependency ratio;
- fixed assets in the economy (at full cost, at the end of the year), million rubles;

consumption of fixed assets (at the end of the year, in%);
 revenues of the consolidated budget of the subject of the Russian Federation (millions of rubles in total);
 uncompensated receipts in the consolidated budget of the subject of the Russian Federation, million rubles;
 specific weight of unprofitable organizations (in% of the total number of organizations);
 index of the physical volume of investments in fixed assets (at constant prices, as a percentage of the previous year).

Stage 2. Calculation of rates and making them positive. The following rates were processed:

- 1) the level of participation in the labor force,%;
- 2) the adjusted dependence ratio;
- 3) capital-labour ratio, thousand rubles per an employed;
- 4) security of fixed assets,%;
- 5) security of the budget revenues,%;
- 6) proportion of profitable organizations,%;
- 7) index of volumes of the investment into fixed assets.

Stage3. Normalization of indicators (bringing to a comparable form) on a 100-point scale. Calculations are carried out for the indicators given at stage 2.

Stage 4. Determination of the indicator weightings. The weights are distributed as follows (one of the possible variants): 1 – 0.2; 2 – 0.2; 3 – 0.1; 4 – 0.1; 5 – 0.1; 6 – 0.1; 7 – 0.2.

Stage 5. Calculation and ranking of the aggregated descending rate (indicator) in scores. Calculations for 2016 in regions-subjects of the Russian Federation were carried out.

Stage 6. Classification of regions against a ranking scale, building ranking tables and graphs. The classification and the rating of Russian regions for 2016 were done according to the economic potential (the multidimensional evaluation in scores). The results are presented below.

The leading regions are the Yamalo-Nenets Autonomous District – 74.50.

Locomotive regions: Kamchatka Territory – 57.52; St. Petersburg – 57.51; Moscow – 57.07; Khanty-Mansi Autonomous Area-Yugra – 56.13.

Supporting regions: Moscow region – 50.77; The Republic of Sakha (Yakutia) – 50.53; Chukotka Autonomous District – 50.28; Leningrad region – 50.19; Sakhalin Oblast – 49.42; Murmansk region – 49.14; The Republic of Komi – 48.39; Nenets Autonomous District – 47.92; Khabarovsk Territory – 47.65; The Republic of Tatarstan – 47.39; Irkutsk region – 47.29; The Magadan Region is 47.18.

Developing regions: Tyumen region – 45.91; Krasnoyarsk Territory – 45.72; Primorsky Territory – 44.98; Amur Region – 44.91; Arkhangelsk Region – 44.70; Vologda region – 44.02; Sevastopol – 42.15; Kabardino-Balkaria Republic – 41.44; Omsk Region – 41.31; Tomsk Oblast – 41.30; Smolensk region – 40.78; Belgorod Region – 40.71; Kaliningrad Region – 40.67; Tver Region – 40.59; Rostov Region – 40.48; Tula region – 40.47; Kursk Region – 40.39; The Kaluga region – 40.25; Yaroslavl Region – 40.15; Lipetsk region – 39.94; The Republic of Bashkortostan – 39.76.

Conservative regions: Nizhny Novgorod region – 39.72; The Samara region – 39.63; Voronezh region – 39.62;

Vladimir Region – 39.53; Novosibirsk region – 39.50; The Udmurt Republic – 39,00; The Republic of Mordovia – 38.99; Chelyabinsk Region – 38.94; Trans-Baikal Territory – 38.75; Astrakhan region – 38.71; Krasnodar Territory – 38.16; Novgorod Region – 37.97; The Jewish Autonomous Region – 37.87; Sverdlovsk Region – 37.84; The Republic of Dagestan – 37.69; Stavropol Territory – 36.48; Karachay-Cherkess Republic – 36.37; Saratov Region – 36.07; Karelia – 35.87; The Republic of Ingushetia – 35.67; Bryansk region – 35.64; Volgograd Region – 35.55; Perm Territory – 35.06; The Republic of Khakassia – 34.84; Chuvash Republic – 34.67; Kemerovo Region – 34.28; Kirov region – 34.23; Kostroma Oblast – 33.99; Orel Region – 33.96; Orenburg Region – 33.78; The Chechen Republic – 33.37; Pskov Region – 32.58; Ivanovo Region – 32.47; The Ulyanovsk Region – 31.95; The Altai Republic – 31.45; Altai Territory – 31.26; The Republic of Buryatia – 31.16; Republic of Adygea – 30.60; The Republic of North Ossetia-Alania – 29.82.

Depressive regions: this group includes the remaining eight regions from 29.30 to 25.28.

The distribution of region by types of rating changes annually, since the multidimensional average takes different values . For example, in 2011 – 41.31; in 2016 – 39.73. For the last 5 years the economic potential has decreased, as the following data indicates:

regions with an economic potential above the average: 2011 – 49.5%; 2016 – 44.7%;

regions with below-average economic potential: 2011 – 50.5%; 2016 – 55.3%.

The author's methodology allows for the evaluation of different options. An approximate list of analytical tables and graphs obtained as a result of the implementation of the evaluation methodology (multidimensional evaluation) includes the typology of the regions of Russia by rating types, ranking of Russian regions, the typology of Russian regions with breaking them by federal districts etc.

CONCLUSION

Practical implementation of the suggested methodology for assessing the economic potential of the Russian Federation regions gives a typology of the regions that adequately reflects their spatial and temporal differentiation. The place of a particular region in the typology reflects its ability to solve important socio-economic problems and achieve priority goals. It also complements existing assessments and provides independent expertise to regional authorities.

The typology of the regions- the constituent entities of the Russian Federation – gives each region the opportunity to develop directions of innovative economic policy in accordance with the place it occupies among other regions of the Russian Federation. In addition, the typology allows taking into account the capacities of regional projects, adequately assess the level of investment attractiveness and competitiveness of industries and activities that form the development potential in the region.

References

- [1] Gorshenina, E.V.: Problems of typology of regions-subjects of the Russian Federation. *Journal of Economic Research*, <http://erce.ru>, last accessed 2011/3.
- [2] Gorshenina E.V.: Regional economic research: theory and practice. Monograph. Tver. Tver State University, vol. 204, (2009).
- [3] Leksin V., Shvetsov A.: Programmatic methods of territorial development. *Russian economic journal*, pp. 58–62, last accessed 2013/2.
- [4] Leksin V.N.: Regional reality and regional studies. *Journal Region: Economics and Sociology*. pp. 7–38, last accessed 2014/2 (82).
- [5] Leksin V.N.: Regional diagnostics: essence, subject and method, specificity of application in modern Russia. *Russian Economic Journal*, pp. 73–77, 2011 / 9–10.
- [6] Minakir P.A.: Theoretical aspects of the study of spatial economic systems. *Journal of Economic Theory*, pp. 7–10, last accessed 2017/3.
- [7] Minakir P.A.: Economic growth and development: a regional annex. *Journal of Federalism*, pp. 49–62, last accessed 2013/2.
- [8] Novoselov A.S., Marshalova A.S.: Actual problems of developing a strategy for social and economic development of the region. *Bulletin of the Kuzbass State Technical University*, pp. 189–197, last accessed 2017/3 (121).
- [9] Novoselov A.S. Region: theory and practice of economic management. Institute of Economics and Industrial Engineering of the Siberian Branch of the Russian Academy of Sciences. Novosibirsk, vol. 466, (2011).
- [10] Regions of Russia. Socio-economic indicators. *Stat. Sat. / Rosstat*, 1402 p. (2017)
- [11] Ratings. Scientific and practical journal; ast accessed 2010/1.
- [12] Ratings. Scientific and practical journal; ast accessed 2011/12.
- [13] Ratings. Scientific and practical journal; ast accessed 2012/12.
- [14] Ratings. Scientific and practical journal; ast accessed 2013/12.
- [15] Rumyantsev A.A.: Institutional possibilities of development of innovative activity in the region. *Journal of Economic and social change: facts, trends, forecast*, pp. 184-198, last accessed 2016/4 (46).
- [16] Suspitsin S.A.: Measurements in the space of regional indicators: methodology, methodologies, results. *Journal Region: Economics and Sociology*, pp. 3–30, last accessed 2014/3 (83).
- [17] Suspitsin S.A.: On a new paradigm of relations between regions and the federal center. *Journal of Interexpo Geo-Siberia*, S. 13–19, last accessed 2016/3/3.
- [18] Tatarkin A. The strategy of balanced planning of regional development. *Journal of Society and Economics*, pp. 88–91, last accessed 2015/5.
- [19] Tatarkin A.: Regional institutes of modernization of spatial development of the Russian Federation. *Journal Modern productive forces*, pp. 102–104, last accessed 2015/1.
- [20] Ukraychuk E.V.: Theoretical and methodological approaches to assessing the economic potentials of Russia's regions for determining points of economic growth. *Journal of Modern Trends in Economics and Management: A New Look*, pp. 130–135, last accessed 2014/24.
- [21] Untura G.A.: Innovative development of Russian regions: unevenness, cooperation and competition *Journal Region: Economics and Sociology*, pp. 275–304, last accessed 2015/1 (85).
- [22] Untura G.A.: Strategic support of Russian regions: problems of assessing the status of innovation territories. *Journal Region: Economics and Sociology*, pp. 123–141, last accessed 2012/1 (73).
- [23] Federal Target Program "Reducing differences in socio-economic development of RF regions (for 2002–2010 and until 2015), LNCS Homepage, http://pravo.gov.ru/proxy/ips/?doc_itself=&collection=1&backlink=1&nd=201009482&page=1&rdk=0#10.
- [24] Chernitsky S.V.: Comprehensive methodology for assessing the economic potential of regions. *Journal of Historical and Socio-Educational Thought*, pp. 208–213, last accessed 2014/5 (27).
- [25] Shvetsov A.N.: Methodology and practice of studies of territorial systems. *Journal Region: Economics and Sociology*, pp. 292–297, last accessed 2011/2.
- [26] Shulaeva OV, Esenin MA, Agyakyan E.A.: Russian and foreign experience in the formation of a system of indicators for assessing the economic potential of regions. *Economics, statistics and informatics. Bulletin of UMO*, S. 225–232, last accessed 2015/3.