

Approaches and Methodologies Employed in Constructing Ratings for the Social-Economic Performance of the Constituents of the Russian Federation

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Abstract: The article examines the major approaches used in constructing ratings for the social-economic performance of the constituents of the Russian Federation (RF). The work also presents a methodology for constructing such ratings, which is based on aggregating various indicators characterizing crucial factors that define the economic standing of a particular region. The article concludes that these ratings help define the standing of any particular region on Russia's economic map.

Key words: Economic development • Ratings for social-economic performance • Indicators • A region's position • Investment attractiveness • A region's economy • A region's potential

INTRODUCTION

Russia has been characterized by highly uneven economic development territorially. This unevenness is to a large extent predicated on natural resource capacity, historically accumulated infrastructure, climatic conditions, the population's mentality and other objective factors. Furthermore, apart from objective factors, regional development is substantially influenced by the authorities' economic policy.

Currently, there is a whole array of indicators that help implement the monitoring of the social-economic situation in regions and draw conclusions based on the findings. However, any system of indicators is a reflection of the region's standing in a multidimensional space, which makes it hard to adequately compare various regions throughout the coordinate system.

As of 2010, experts in the RF run ratings on the social-economic performance of RF constituents. The ratings system developed by experts at *RIA-Rating* is a rather effective instrument for monitoring the state of the economy in RF regions, which makes it possible to define any given region's position on Russia's economic map [1].

Currently, these ratings have the highest popularity as they reflect the real social-economic state of RF regions. Therefore, the study of approaches and

methodologies for constructing these ratings will be of use to economists engaged in exploring regional economy issues.

In making up the ratings, experts use only formalized (numeric) official statistics indicators, which helps avoid distortions resulting from biased assessments and makes analysis results as objective and transparent as possible. The source of information used in the analysis is data provided by Rosstat (the Russian Federal State Statistics Service) and the Ministry of Finance of the RF. The ratings cover 82 RF constituents.

The result of processing data is a ranked list of RF constituents, which characterizes their comparative positions based on social-economic performance.

Indicators Used in Making up the Ratings: Let us examine the indicators used in making up the ratings for the social-economic performance of RF regions and see how well they reflect the real social-economic state of any given region and its position relative to others [2].

In making up the ratings, experts conduct an analysis of an extensive array of indicators characterizing the various aspects of the social-economic situation in RF constituents. As a result of the analysis, we get a set of key indicators that make it possible to determine each region's positions by the level of social-economic development. The indicators analyzed are nominally divided into 4 subgroups:?

- Indicators for the scale of the economy;
- Indicators for the economy's efficiency;
- Indicators for the budget sphere;
- Indicators for the social sphere.

The first group includes indicators for the scale of the economy. This group brings together indicators characterizing the absolute volumes of goods and services output, the budget volume and the availability of labor resources. The analysis of this group helps assess the scale of a RF subject's economy and its input in the formation of all-Russian indicators. The group includes three indicators:

- The volume of goods and services output. This indicator characterizes the cumulative volume of goods and services output in the territory of a RF constituent across the major sectors of the economy (the industrial sector, construction, the agricultural sector, the services sector) and the contribution of a RF constituent to Russia's GDP.

A RF constituent's volume of goods and services output is calculated as the sum of the volumes of goods shipped, works and services performed across such types of economic activity as "Mining", "Manufacturing" and "Production and distribution of electric power, gas and water", the volume of agricultural output, the volume of paid services for the population and the volume of works performed in the "Construction" type of activity. The source of information is Rosstat data on the volumes of goods and services output as of the end of the financial year.

- The volume of consolidated budget revenues. The volume of a RF constituent's consolidated budget revenues indicates the level of the region's financial resource capacity, which characterizes the administration's capacity for developing the region and ensuring social stability. The source of information is data from reports on the administering of the consolidated budgets of RF constituents, which are published on the website of the RF Ministry of Finance and contain the latest information on the administering of RF constituents' consolidated budgets as of the end of the financial year [3].
- The size of the economy's workforce. This indicator characterizes the region's labor market capacity. In analyzing RF constituents, the source of information

is Rosstat data on the average size of the employed and economically active segment of the population as of the end of the financial year.

The second group includes indicators for the economy's efficiency. These indicators characterize labor productivity, investment activity and the financial state of a region's enterprises. The analysis of these indicators helps produce a comparative appraisal of how efficiently the region's potential is put to use.

This group comprises five indicators:

- The volume of goods and services output per capita. This indicator characterizes the level of a RF constituent's economic development and labor productivity in the economy's primary sectors [4].

The indicator is calculated as the ratio of the cumulative volumes of goods produced and shipped, works and services performed across three types of economic activity ("Mining", "Manufacturing" and "Production and distribution of electric power, gas and water"), the volume of agricultural output, the volume of paid services for the population and the volume of works in the "Construction" type of activity expressed monetarily as of the end of the financial year to the average annual size of a RF constituent's population in the financial year. The source of information is Rosstat data.

- Investments in fixed capital per capita. Investments in fixed capital characterize the level of investment activity in a RF constituent and define the prerequisites for economic development. This indicator is calculated as the ratio of the volume of investments in fixed capital as of the end of the financial year to the average annual size of the population in the financial year. The source of information is Rosstat data.
- Foreign investments per capita. The volume of foreign investments characterizes the level of a RF constituent's investment attractiveness. The indicator is calculated based on Rosstat data through the division of the volume of foreign investments made in the financial year by the average annual size of the population in the financial year [5].
- The share of profitable enterprises. The share of profitable enterprises characterizes the financial state of enterprises in a RF constituent's territory and the

efficiency of their activity. A high value of this indicator indicates stability in economic development, for the unprofitableness of enterprises can, on one hand, lead to a decline in production volumes and GRP and, on the other, a decline in the population's income – and, consequently, a decline in the standard of living. Besides, a decline in the profitability of enterprises will entail a decline in budget revenues. The ratings are put together using Rosstat data on the share of large and medium enterprises in the total number of enterprises registered in a RF constituent's territory as of the end of the financial year.

- The tax collection rate. The indicator characterizes the tax discipline of economic entities and the efficiency of regions' tax authorities and implicitly characterizes enterprises' financial state. The tax collection rate is determined based on Rosstat data as the ratio of taxes and levies owed to be paid into the RF budget as of December 31 of the financial year to the volume of taxes, levies and any obligatory payments that have come into the RF budget in the financial year.

The third group of indicators includes indicators for the budget sphere, which characterize the sustainability of the budget system: the size of the liability load, possessing a sufficient quantity of one's own financial resources and the volume of the revenue base.

The source of information for the analysis of the budget system is data from reports on the administering of RF constituents' consolidated budgets, which are published on the website of the RF Ministry of Finance and contain the latest information on the administering of RF constituents' consolidated budgets as of the end of the financial year, as well as information on the size of RF constituents' state debt as of December 31 of the financial year, which is published on the website of the RF Ministry of Finance [6].

In assessing the budget system, the following indicators are analyzed:

- Consolidated budget revenues per capita. The volume of consolidated budget revenues per inhabitant demonstrates a region's financial resource capacity, which characterizes the administration's capacity for developing the region and preserving social stability. The indicator is calculated as the ratio of consolidated budget revenues as of the end of the financial year to the average annual size of the population in the financial year.

- The share of one's own revenues in the cumulative volume of consolidated budget revenues. This indicator characterizes the degree of a region's financial independence and the availableness of its own financial resources. The indicator is calculated as the ratio of consolidated budget revenues minus gratuitous payments to the cumulative volume of consolidated budget revenues as of the end of the financial year.
- The ratio of one's state debt to one's own consolidated budget revenues. The ratio of a RF constituent's state debt to its own revenues characterizes the size of the debt load and the coverability of one's debts using one's own revenue base. This indicator is calculated as the ratio of a RF constituent's cumulative revenue and the debt of this constituent's municipal establishments as of December 31 of the financial year to the size of consolidated budget revenues minus gratuitous payments as of the end of the financial year.
- The ratio of one's budget deficit to one's own revenues. The ratio of a RF constituent's budget deficit to its revenues characterizes the correspondence of the revenue base with financial needs crucial to a region's stable and sustainable development. This indicator is calculated as the ratio of the consolidated budget deficit as of the end of the financial year to the volume of consolidated budget revenues minus gratuitous payments as of the end of the financial year.

The fourth group of indicators used in putting together the ratings includes indicators for the social sphere. The social situation and the population's standard of living in regions are assessed based on the analysis of the following indicators:

- The ratio of the population's monetary income to the cost of a fixed set of consumer goods and services. This indicator helps assess the level of the population's income and the population's purchasing power and characterizes the size of funds remaining at the disposal of a RF constituent's inhabitants after all the living expenses. The indicator is calculated as the ratio of the average annual expenses of one inhabitant in the financial year to the average annual value of the cost of a fixed set of goods and services in the financial year. The indicator is calculated based on Rosstat data as of the end of the financial year [7].

- The unemployment rate. The unemployment rate characterizes the situation on the labor market in particular and the social-economic situation at large. A high unemployment rate has a substantially negative effect on the social situation in a region, for it leads to a decline in the volumes of goods and services output due to not making use of the potential capacity of the economically active segment of the population. Another negative consequence of a high unemployment rate is the worsening of the criminogenic situation [8].

The findings of the study by RIA-Rating indicate that a crucial effect of unemployment is crime. We can trace quite a consistent dependency between the number of the unemployed in regions and the number of infractions committed. The coefficient of correlation between these indicators (exclusive of the Moscow Region, Saint Petersburg and the republics of the North Caucasus) is upwards of 0.9, which indicates a virtually linear dependency.

- Life expectancy at birth. This indicator comprehensively characterizes the population's quality of life, the quality of medical assistance and care, the state of ecology and the quality of social support. The analysis is conducted using Rosstat data on life expectancy at birth in RF constituents as of the end of the financial year. The source of data on life expectancy at birth is Rosstat.
- The infant mortality rate. This indicator characterizes the health level of a region's inhabitants, the quality of medical services and general living conditions. The analysis was conducted using Rosstat data on the number of children who died before 1 year of age per 1000 children born as of the end of the financial year [9].

After all the indicators have been determined, the ratings for the social-economic performance of RF constituents are constructed. The ratings are constructed using a certain algorithm for processing the indicators.

The ratings are constructed by ranking RF constituents in descending order by the value of the integrated rating score, which is calculated in three stages. The first stage determines a RF constituent's rating score by each indicator. The second stage determines a RF constituent's rating score by a group of indicators. Finally, the third stage determines a RF constituent's integrated rating score.

A RF constituent's rating score by each indicator is calculated within the range of values from 1 to 100. The value of the rating score is determined through processing the set of values of a given indicator for all RF constituents in such a way that a RF constituent with the highest indicator value would get a rating score equaling 100, while one with the worst value would get 1.

Note that in determining the rating score, the ratings take into account not only the position of each RF constituent in the list of all RF constituents by a given indicator but the degree of lagging behind the one with the best result [10].

A RF constituent's rating score by each group of indicators is determined as the arithmetic mean of the rating scores for all indicators that make up the group.

A RF constituent's integrated rating score is determined as the geometric mean of the rating scores of all the analyzed groups of indicators. Taking into account that the highest possible value of the rating score by each indicator is 100 and the lowest is 1, the highest possible value of a RF constituent's integrated ratings is 100 and the lowest is 1.

A RF constituent can get the highest possible value in the integrated ratings only if it occupies the first (best) positions by all the indicators analyzed.

As a result, we get the ratings for all RF constituents as well as the ratings for regions by groups, which are formed taking account of industrial specialization within the economy. Note that attributes by which regions are included in a particular group are to a large extent defined by historical and geographic factors.

In making up the ratings by groups, regions are compared with each other within each group and, consequently, each region's position in its group is determined.

CONCLUSION

Thus, the results of the ratings will help to not only come up with a comprehensive comparative appraisal of regions' positions but also define the dynamic of their development.

The topicalness of these ratings is predicated on the need for enhancing the information transparency of RF constituents, as well as demand for information on the real state of affairs in regions on the part of local authorities, federal institutions of authority and the business sector. Of principal importance is that the ratings are constructed on the strength of objective indicators from official statistics, which are accessible to a wide audience of

interested users. The ratings do not include expert assessments. On one hand, this somewhat narrows the range of indicators, but, on the other, helps avoid errors resulting from subjective thinking and bias, which is a more substantial argument [11].

In conclusion, the author would also like to stress that apart from being instrumental in illustrating the current situation in regions and serving as a base for assessing investment attractiveness, these ratings can become a benchmark for identifying issues on the resolution of which the future development path of any given RF constituent may depend.

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