Absolute and Relative Leadership of the Ural Region in the Budget and Debt Sphere

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Abstract The main idea of this paper boils down to the totality of the results of a study of the absolute and relative indicators of consolidated budgets and debt parameters of the Ural regions, on the basis of which conclusions are drawn on the definition of leading regions in the budget and debt sphere. We prove that a leader region in absolute terms may not be a leader in relative terms (respectively, a leader region in relative terms may not take a leading position in absolute terms). It has been established that the regions of the Urals are not characterized by simultaneous leadership both in terms of budget and debt indicators; at the same time, a stable leader was noted in terms of absolute budget indicators, relative budget indicators and absolute and relative indicators of regional debt. Conclusions are presented that the management of regional public debt indicators and the achievement of leadership in this indicator is carried out to a greater extent in connection with the implementation of the state's guidelines for controlling the debt situation in the territories.

Keywords: absolute leadership, relative leadership, Ural region, budget sphere, debt sphere

1 Introduction

States that occupy large territories are historically divided into a set of administrative-territorial units (states, regions, provinces, etc.). Such a division ensures the effectiveness of government and the implementation of national policies in all areas throughout the country.

An objective feature of large states is a different set of socio-economic, natural, and other characteristics inherent in individual territories. Differences in the administrative units of the state according to certain characteristics allow ranking, as well as positioning and identifying leaders.

The fiscal and debt sector is the most common area for identifying leading territories due to the unconditional certainty and clarity of the criteria for comparison. Territories can be compared in terms of consolidated budget revenues, budget deficits, the absolute amount of public debt and municipal debt (if there are municipalities). In this case, the identification of the leader is based on a comparison of absolute indicators. At the same time for a qualitative study of the leadership of territories in the budget and debt sphere, it is important to calculate relative indicators adjusted for the number of people living in certain territories. The use of relative indicators allows you to supplement (adjust) the conclusions regarding the leading territories by absolute indicators.

In this paper, we carry out the definition of territorial leadership in the fiscal sphere by absolute and relative indicators using the example of the Ural region as an important territorial part of Russia. In addition, we attempt to measure the absolute and relative leadership of the Ural region in the budget and debt sphere. Our research is based on the official information from government agencies on the budget and debt parameters of each region.
2. Leadership of the Ural region in the public sector: absolute and relative indicators

In the era of the digital economy, an abundance of open data it is necessary to ensure that citizens have an understanding and interpretation of this information, for example, when choosing the optimal place of residence, investors when forming a portfolio and authorities when making decisions on inter-territorial alignment. And in this case, a comparison of the subject of the Russian Federation with other regions for given characteristics contributes to a “more objective choice” (Emelyanova 2008). At the same time numerous characteristics complicate the perception of the assessment, therefore, “we need to move from a set of indicators characterizing the subsystem to one numerical characteristic – ratings” (Baranov et al. 2008).

The ranking of territories is often used in the practice of determining leadership by any one attribute or by several. The research conducted in Russia can be divided into several groups - an assessment of social, environmental, or economic leadership and an assessment of the effectiveness of territorial management, often associated with the personality of a regional manager. Most of the studies using the ranking method are devoted to economic issues: investment and innovative attractiveness of regions, competitiveness, development of individual sectors of the economy (for example, identifying leading regions by the level of development of agriculture, tourism, education, healthcare, informatization, etc.). As part of the subject of this article, the budget sphere should be highlighted. Here, ranking is carried out according to the level of openness of budget data based on the application of the practice of The International Budget Partnership, budgetary security, debt burden, tax collection, budget potential, or even based on the integrated characteristics of the consolidated budget. Most often, the constituent entities of the Russian Federation are ranked by any one criterion, less often a group of indicators is used that correlate among themselves in a special way.

On the one hand “the development of a methodology for determining the ratings of constituent entities of the Federation is a task in which simplifications are unacceptable” (Voronov 2008), but on the other hand the number of indicators used in the assessment does not always translate into quality. The issues of the quality of statistical information, the methodology of its processing and analysis, and, ultimately, the objectivity of the assessments made are becoming increasingly relevant (Piskunov et al. 2009). This study allowed us to highlight the following methods for compiling ratings of constituent entities of the Russian Federation in the budget sphere:

- methodology of the consolidated standardized indicator calculated on the basis of fourteen budget coefficients (Yashina et al. 2008; Emelyanova 2008);
- methodology for a comprehensive assessment of the regional budget potential, taking into account the formation of “model budgets” (Yashin 2019). At the same time, the budgetary potential of a constituent entity of the Russian Federation is understood to mean such a level of development of the region’s capabilities to increase revenues, improve the quality of financing costs and ensure the optimal level of debt obligations, which will ensure the constant development of human potential, improve the quality of life of the population (increased education, longevity, fertility, and elevation morality, spiritual wealth of the population);
- methodology for assessing the budget potential of a region, aimed at analyzing budgetary security and evaluating the effectiveness of control activities by the control and accounting authorities of the constituent entities of the Russian Federation (Gladkovskaya 2018). The budget potential in this technique is interpreted as the financial self-sufficiency of the regional budget - its provision with tax and non-tax potential for financing current expenses;
- methodology of ASF (analysis of the functioning environment) (Piskunov et al. 2009);
- principal component method (Baranov et al. 2008).

The methods used in research for ranking the subjects of the Russian Federation differ primarily in the number of indicators used. The ASF methodology includes only 13 indicators, not only budget ones, but also general economic ones. The methodology of the consolidated standardized indicator uses 14 coefficients, which are based on 24 indicators that characterize exclusively the types of budget revenues and expenses. The methodology for a comprehensive assessment of the budget potential of the regions, taking into account the formation of “model budgets”, provides for calculations for three groups of indicators, combining two dozen indicators, most often relative, reduced to the GRP. Another option for assessing the budget potential offers nine coefficients, divided into two groups - coefficients directly of the budget potential and coefficients of the effectiveness of control activities by the control and accounting bodies of the entities, for the calculation of which a total of almost three dozen budget indicators are needed. The method of principal components allows the researcher to independently determine the number and list of necessary indicators. A logical question arises: how many indicators are optimal for constructing a “budget rating» of territories? The answer is found in the study of Piskunov et al. (2009): “The two most important factors are: the completeness of the factors that characterize a particular indicator, and the degree to which the particularities of the regions are taken into account ... it’s
impossible to build up this matrix, which already has dozens of indicators». Therefore, in this study, we do not seek to include many indicators in the methodology, but we take them simultaneously in absolute and relative terms.

The study and calculations (table 1) allow us to single out the Khanty-Mansiysk Autonomous District as the undisputed leader in terms of absolute revenue indicators of the consolidated budget of the region. This region during 2015-2019 had the largest budget, only in 2017 losing the leadership of the Sverdlovsk region. The Sverdlovsk region in the period under review also quite steadily occupied the second place, except for 2017. Note that the key characteristic of the leader region was the resource component of the regional economy (this feature quite naturally determined the appearance in the top three in absolute terms of the budget of such a region as the Yamalo-Nenets Autonomous District). The Khanty-Mansiysk and Yamalo-Nenets Autonomous Districts are defined as “growth poles”, as they have a commodity export orientation (Arkhipova et al. 2019).

Analysing the indicators of the consolidated budgets of the constituent entities of the Russian Federation, it can be stated that the industrial regions of the Urals, such as the Chelyabinsk and Sverdlovsk regions, are inferior in absolute terms to resource regions (the Sverdlovsk region is inferior to the Khanty-Mansiysk Autonomous District, and the Chelyabinsk region, ranking third in 2015-2016, ceded this position to the Yamalo-Nenets Autonomous District). See Table 1 that follows for more details.

Table 1. Absolute and relative indicators of the regions of the Urals in the public sector

<table>
<thead>
<tr>
<th>Year</th>
<th>Kurgan region</th>
<th>Sverdlovsk region</th>
<th>Tyumen region</th>
<th>Chelyabinsk region</th>
<th>Khanty-Mansiysk Autonomous district</th>
<th>Yamalo-Nenets Autonomous district</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>34003.5</td>
<td>222907.2</td>
<td>151409.9</td>
<td>153519.0</td>
<td>275321.1</td>
<td>137630.2</td>
</tr>
<tr>
<td>2016</td>
<td>37905.1</td>
<td>242877.6</td>
<td>142508.1</td>
<td>165008.7</td>
<td>245709.0</td>
<td>155155.8</td>
</tr>
<tr>
<td>2017</td>
<td>39783.4</td>
<td>262934.9</td>
<td>158955.1</td>
<td>173669.5</td>
<td>229177.9</td>
<td>184358.4</td>
</tr>
<tr>
<td>2018</td>
<td>45596.7</td>
<td>302088.3</td>
<td>228084.0</td>
<td>206323.1</td>
<td>324663.1</td>
<td>235177.8</td>
</tr>
<tr>
<td>2019</td>
<td>54445.6</td>
<td>313423.2</td>
<td>241192.4</td>
<td>215264.3</td>
<td>318634.7</td>
<td>257244.3</td>
</tr>
</tbody>
</table>

Revenues of the consolidated budget of the region per 1 resident, thousand rubles

<table>
<thead>
<tr>
<th>Year</th>
<th>Kurgan region</th>
<th>Sverdlovsk region</th>
<th>Tyumen region</th>
<th>Chelyabinsk region</th>
<th>Khanty-Mansiysk Autonomous district</th>
<th>Yamalo-Nenets Autonomous district</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>35.45</td>
<td>51.29</td>
<td>104.12</td>
<td>43.85</td>
<td>169.32</td>
<td>257.77</td>
</tr>
<tr>
<td>2016</td>
<td>44.37</td>
<td>56.10</td>
<td>96.42</td>
<td>46.55</td>
<td>149.33</td>
<td>289.47</td>
</tr>
<tr>
<td>2017</td>
<td>47.03</td>
<td>60.77</td>
<td>106.04</td>
<td>50.95</td>
<td>138.45</td>
<td>342.67</td>
</tr>
<tr>
<td>2018</td>
<td>54.61</td>
<td>69.99</td>
<td>150.26</td>
<td>59.36</td>
<td>195.13</td>
<td>434.71</td>
</tr>
<tr>
<td>2019</td>
<td>65.91</td>
<td>72.72</td>
<td>156.92</td>
<td>62.11</td>
<td>190.34</td>
<td>472.88</td>
</tr>
</tbody>
</table>


To calculate the relative indicators, the study uses the number of inhabitants of the corresponding constituent entity of the Russian Federation, since “an analysis of the data shows that the socio-demographic structure of the population is one of the key factors in balancing regional budgets” (Sheremeta 2020). When comparing the data on the absolute indicators of the budgets of the regions of the Urals with the relative indicators calculated on the basis of the population of the respective territories, an interesting regularity is manifested: the region, which occupied only the third place in terms of absolute indicators - the Yamal-Nenets Autonomous District - is the undisputed leader in relative indicators throughout analyzed period. At the same time, the stable leader in absolute terms - the Khanty-Mansiysk Autonomous District - is moving to the second position, which is also quite stable. The Sverdlovsk region, which was in second (in 2017, first) place in terms of absolute indicators of the consolidated budget, loses its position and gives way to third place in the Tyumen region (which loses noticeably in absolute terms).

The study showed that the weakest region of the Urals in economic terms, the Kurgan Region, constantly ranks last in the ranking of leading regions both in absolute terms and in relative terms during 2015-2019.

3. Leadership of the Urals regions in the debt sphere: absolute and relative indicators

In the studies of the subject's public debt the relative indicator is most often used - the level of debt burden (the ratio of the absolute value of debt to the amount of tax and non-tax revenues of the regional budget) (Merkushova 2018; Pirogova 2017; or Kozelsky 2012), less often the absolute indicator is used as one (Tagirova 2018). Let us compare the ranking results of the regions of the Urals by absolute and relative debt indicators.

The absolute leader according to the results of the study, both in terms of absolute and relative indicators of regional debt, is the Tyumen region. Despite the growth of debt in 2018-2019, the region ranks first among the studied regions of the Urals. It is important to consider that in the debt sphere, the leader should be considered the territory, which is characterized by the least amount of debt (in absolute terms and per capita). The economically weakest region of the Urals - the Kurgan Region - and the strongest resource region - the Khanty-
Mansi Autonomous District - share the second and third places in the study period in terms of absolute indicators of regional debt. In relative terms, along with the Khanty-Mansiysk Autonomous District, the Chelyabinsk Region is among the three leaders.

A higher level of differentiation is characteristic of indicators of municipal debt of municipalities located in the regions of the Urals. Therefore, a sustainable leader cannot be identified. In absolute terms of municipal debt, the leadership in various years belonged to the Kurgan region, the Tyumen region and the Yamalo-Nenets Autonomous District. Note that one of the leaders in terms of absolute indicators of regional debt - the Khanty-Mansiysk District - in terms of absolute indicators of municipal debt, takes only the fourth place out of six territories. If we consider the relative indicators of municipal debt, the conclusion about the instability of the position of the leading region is also confirmed. The first place in 2015-2019 was occupied by three regions (Kurgan region, Tyumen region and the Yamalo-Nenets Autonomous District), and two or zero indicators of municipal debt were characteristic of the two territories (Kurgan Region: 2015 and 2016, the Yamalo-Nenets Autonomous District: 2019). We note an important trend, a significant reduction in both regional and municipal debt in relation to the leader region in terms of relative budget indicators - the Yamalo-Nenets Autonomous District (Table 2).

### Table 2. Absolute and relative indicators of the Ural regions in the debt sphere

<table>
<thead>
<tr>
<th>Year</th>
<th>Kurgan region</th>
<th>Sverdlovsk region</th>
<th>Tyumen region</th>
<th>Chelyabinsk region</th>
<th>Khanty-Mansi Autonomous district</th>
<th>Yamal-Nenets Autonomous district</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
<td>Debt volume of municipalities located in the region, million rubles</td>
<td>The volume of state debt of the region, per 1 resident, thousand rubles</td>
<td>The amount of debt of municipalities located in the region, million rubles</td>
<td>Debt volume of municipalities located in the region, per 1 resident, thousand rubles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>11728.9(2)</td>
<td>66490.3</td>
<td>1139.9(1)</td>
<td>33445.6</td>
<td>14458.3(3)</td>
<td>35680.9</td>
</tr>
<tr>
<td>2016</td>
<td>15051.4(2)</td>
<td>72190.2</td>
<td>1208.9(2)</td>
<td>2626.5</td>
<td>1717.3(3)</td>
<td>33606.7</td>
</tr>
<tr>
<td>2017</td>
<td>16586.9(3)</td>
<td>75602.5</td>
<td>1600.2(2)</td>
<td>15606.5(2)</td>
<td>19095.3</td>
<td>25273.7</td>
</tr>
<tr>
<td>2018</td>
<td>16586.9(3)</td>
<td>72972.8</td>
<td>3576.2(4)</td>
<td>16614.7</td>
<td>14400.0(2)</td>
<td>16841.5</td>
</tr>
<tr>
<td>2019</td>
<td>16586.9</td>
<td>71878.7</td>
<td>3023.7(1)</td>
<td>15978.4</td>
<td>13000.0(2)</td>
<td>16410.9(3)</td>
</tr>
</tbody>
</table>


Animita et al. (2017) note that regional features of the economic development of the Ural macro region are prerequisites for its formation as a centre for the modernization of the Russian economy. And the leading role is assigned not to the raw material territories, but to the Sverdlovsk region, which “in the economic space of Russia can become a “technological breakthrough region of the 21st century”, developing the production of the fifth and sixth technological structures (Silin et al. 2016).

### 4. Conclusions

Generally, the absolute indicators of the regions in the budget sphere and the place of the region in the group of constituent entities of the Russian Federation are directly dependent: the larger the budget, the higher the region takes. Absolute indicators are the most obvious criteria for leadership. They allow you to arrange the subjects of the Federation from the least weak in economic terms to the strongest with the least expenditure of time and other resources. However, absolute indicators may not be correct enough, because objectively a region with a smaller population will have lower absolute indicators (primarily, indicators of a consolidated budget). In this regard, it is more correct to draw conclusions about the leading region on the basis of relative budget indicators (budget per 1 resident of the region). When using relative indicators, as a rule, there is either a change in the leader region or a movement in the top three regions (in comparison with absolute indicators).
The absolute indicators of regions in the debt sphere and the region’s place in the group of constituent entities of the Russian Federation are characterized by an inverse relationship: the greater the state debt of the region and the debt of municipalities located in the region, the lower the region’s place in the group. Actually, the presence of debt (both in the region and in municipalities) is a sign of insufficient resources. This may be due to objective features of the economy, as well as to inefficiency of management, redundancy of funded needs. It is important to note that with a tight debt policy in the region and constant monitoring of the financial situation in municipalities, it is possible for the same region to achieve leadership both in terms of regional debt and debt indicators of municipalities.

Both the absolute and relative indicators of the regions in the field of budgets, and similar indicators in the field of debt, are not characterized by a unique interconnected logic of formation. A region that is not a leader in terms of absolute budget indicators may take a leader position in terms of absolute debt indicators, and a leader region in terms of absolute budget indicators may lose leadership in terms of debt. Such diverse trends are also characteristic of the relative indicators of leading regions and outsiders.

It is important to understand that the movement of the region to leadership in terms of debt indicators is more under the control of the state authorities of the territory than the movement to leadership in terms of budget indicators. Therefore, effective financial management in the region can ensure a change in position and approach leaders in terms of absolute debt indicators in a fairly short time (the study revealed this trend in the Yamalo-Nenets Autonomous District). At the same time, both debt indicators and budget indicators are the basis for the development of budget policy measures at the regional level.

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