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METHODOLOGICAL TOOLKIT
OF REGIONAL TAX POTENTIAL ASSESSMENT

Abstract. In this article, the authors consider methodological tools for assessing the tax potential of the region. The relevance of the chosen topic was substantiated in the article. As methods used: deduction, induction and comparative-comparative methods. The authors analyze various approaches to the definition of the term tax potential. The author's interpretation of this concept is presented in the article. Next, methods for assessing the tax potential are considered. The first method analyzed was the method of a representative tax system. The second method is based on the gross regional product. The mechanisms of action of the assessment methods presented were considered. Using these methods, an analysis of the tax potential of the two regions - Almaty and Karaganda regions was carried out. With regard to the first method, it was noted that the Almaty region is unstable. The Karaganda oblast has an increase in the degree of realization of the tax potential in this indicator. According to the second method, there was an overfulfillment of the planned value in the Almaty region. While in Karaganda, this could only be fixed in 2017. In conclusion, ways to increase the tax potential of the region are given. The most effective of them is the improvement of the tax base of the region. As a proposal, tools have been described that can improve the accuracy of the assessment. These include a tax passport and a block-chain system. The results of the article can be used for further investigation of the analyzed issue. The proposed instruments can be used by local authorities for a more reliable assessment of their own tax potential.

Key words: tax potential, region, valuation method, tax passport, block-chain.

In modern conditions, the Republic of Kazakhstan has set itself the task of the country's dynamic social and economic development and its entry into the 30 most developed countries of the world. To achieve the goals, it is necessary to fulfill a number of conditions, among which it is necessary to note the effective assessment of the tax potential of the regions of the Republic of Kazakhstan and on this basis the further growth of their economy [1]. An effective assessment of the tax potential of the Kazakh economy requires a fair assessment of the revenue potential of each region's budget separately and of the economy as a whole [2]. The tax potential of the region is the most appropriate characteristic of potentially available financial resources, which will allow a rational assessment of the capabilities of each region and reduce the volume of transfers from small donor regions [3]. A correct assessment of the tax potential of the region makes it possible to assess the actual need for financial assistance, increase the autonomy of the regions, and to some extent eliminate the contradictions between the regions and the center due to the fact that the main reason is the injustice in the distribution of financial assistance [4]. Therefore, we are faced with the task of creating such a methodological tool for assessing the tax potential of the region, which will fully reflect the capabilities of the region, as well as identify sources of growth in tax revenues to the regional budget.

To accomplish the task, a number of the following methods will be used: deduction, induction, comparative-comparative methods, namely analysis, synthesis, comparison, classification, measurement, and factor analysis.

The most reliable assessment of the tax potential of each region is one of the most important factors in the formation of the budgetary and, therefore, the tax policy of the state as a whole, since this indicator is the most appropriate characteristic of available financial resources [5].
This topic is relevant for Kazakhstani practice in connection with the fact that in the Republic of Kazakhstan local budgets of the regions are differentiated by the volume of tax revenues. This is due, first of all, to their uneven development, which in turn is reflected in the level of the tax potential of the region. Thus, most of the regions of the Republic of Kazakhstan are recipients and need financial support due to the fact that their own tax potential of these regions is insufficient to fulfill the tasks assigned to them and cover their own expenses.

Ensuring political independence, industrial autonomy and economic independence of each region is a necessary element in the mechanism of accelerated, balanced and sustainable growth of the national macroeconomic system [6].

The tax potential in world practice is understood as the ability of the tax base, which is within the designated territory, to bring in tax revenues, i.e. income to local budgets. In turn, in the Republic of Kazakhstan, the tax potential should be understood as the maximum possible amount of tax revenues and other mandatory payments to the budget, calculated to determine the amount of revenue in the region [7].

The above concept in the author's interpretation took the following form: «The tax potential is not just a potential, possible amount of tax revenue, but a tax payment that does not lead to oppression of business activity and a decrease in the productivity of taxpayers, and this is the result of the interaction of tax authorities service with taxpayers and the effectiveness of fiscal efforts on the part of the state in the face of the tax authorities».

An assessment of the regional tax potential can be carried out in absolute terms or in indices that reflect the ratio of the sought-for indicator to the average value of the indicator on a country-wide scale or a selected group. Indices are a more fair reflection of reality, since they are less dependent on shortcomings in the methods of calculation used, and also reduce the influence of inflationary processes to a measurable extent [8].

In the world practice, there are many methods for assessing the tax potential, the most important of which can be called a method based on a representative system and a method based on gross regional product (GRP) [9].

One of the main methods for assessing the tax potential, as noted earlier, is the "method of a representative tax system". This system was developed by the expert commission of the United States of America on interbudgetary relations [10].

The essence of the use of a representative system as a method of assessing the tax potential is to calculate the amount of payments to the budget that can be collected under the conditions that the efforts of the tax authorities are at an average level, the structure of taxes and their rates are the same in all regions. According to the received data on collected taxes, the total amount of receipts is calculated, i.e. tax potential.

The main advantage of this method is that regression analysis can be used in it. Accordingly, the use of this analysis will reduce the amount of information necessary for measuring the tax potential. Consequently, the analyst will only need data on aggregate revenues in the analyzed region, as well as a set of several variables used in the form of indirect measures of regional tax bases [11].

Despite the existing advantages of the presented method of assessing the tax potential of the region, it has shortcomings, the main ones of which can be eliminated by improving the tax reporting used. To do this, it is necessary to carry out more operative work in the field of the formation of official information on taxable bases for a number of taxes used in a representative tax system (RNS) [12].

According to the GRP-based method, you can assess the level of the tax potential by using the product of the weighted average tax rate (in this case excluding cities of republican significance, based solely on these areas) for the previous period and the projected GRP value for the period under evaluation.

At the same time, the weighted average tax rate is measured in percent, calculated as "the ratio of the amount of tax liabilities of all regions to the total value of their GRP" [13].

Next, we calculate the tax potential for the above valuation methods for two regions of the Republic of Kazakhstan - Almaty and Karaganda regions.

The RNS method is applied in relation to budget-forming taxes, to which CIT may be attributed in the regions under consideration. The base of taxation, closely related to the volume of receipts of payments for the selected tax, is the profit before taxes (PDN) of companies. The first step is to calculate the weighted average representative rate for CIT. To calculate the regional tax potential of the analyzed
areas for 2017, the data on actual tax revenues for the CIT to the budget generated in the territories of the regions under consideration will be used, and as a basis for taxation it will be decided to apply the PDN indicator for 2016. The above mentioned data will be used to determine the weighted average tax rate.

Thus, the weighted average tax rate for CIT, calculated as the ratio of the average for the regions of the amount of actual collected CIT revenues and the average value of the tax base (PDN) in the regions of the country, was 0.2647 or 26.47% in 2016. Similarly, the weighted average tax rate for CIT for 2014 and 2015 was calculated. Thus, the indicator in question was 44.09% in 2014, 35.11% in 2015, and 26.47% in 2016.

The next step for calculating the regional tax potential for CPN for 2017 for the analyzed regions should be to multiply the weighted average tax rate for 2016 and the index of PDN for the same period. Thus, the calculation for Almaty oblast for 2017 is 89.24 billion tenge, multiplied by 26.47%, as a result we get 23.62 billion tenge – tax potential according to the CPI of Almaty region. Similarly, we will calculate the Almaty region for 2015 and 2016, then compare the obtained values with the actual volume of tax revenues by CIT, i.e. we will reveal the degree of implementation of the Almaty tax potential for CPN as the ratio of the actual volume of PDN and the forecast value multiplied by 100%.

A similar algorithm to perform calculations Karaganda tax capacity of the CIT for 2015 - 2017 as follows: the average rate of the country by region for the previous period multiplied by the index of the same period of PDN. For example, the Karaganda tax potential for 2017 is calculated by multiplying the weighted average tax rate in 2016 from the Karaganda oblast PDN for 2016. The results of the calculations are shown in Table 1.

<table>
<thead>
<tr>
<th>Year</th>
<th>Almaty region</th>
<th>Karaganda region</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tax potential, billion tenge</td>
<td>Actual tax revenues, billion tenge</td>
</tr>
<tr>
<td>2015</td>
<td>28.72</td>
<td>11.2</td>
</tr>
<tr>
<td>2017</td>
<td>23.62</td>
<td>24.95</td>
</tr>
</tbody>
</table>

Note – Calculated by the author on the basis of source data [14]

Thus, we assessed the regional tax potential for CIT for the two analyzed areas for 2015-2017 as part of the RNS method. Dynamic analysis of the forecast value of Almaty tax potential according to CIT showed that this indicator differs by instability in the period under review. In 2016, the indicator in question decreased in comparison with the previous period by KZT 14.67 billion or 51.1%. This significant increase is due to a simultaneous decrease in the two components. First, the reduction of the average weighted tax rate by 8.98%. Secondly, the narrowing of the tax base for CIT in the region under consideration, i.e. a decrease in the PTP indicator by KZT 25.12 bln. or by 38.6%. In 2017 there was an increase in the absolute value of the forecast value of the tax potential of the analyzed region due to a significant increase in the volume of MAP and a reduction in the average weighted tax rate by 8.64%.

With regard to the Karaganda region, we can note a similar situation, i.e. in the period from 2015 to 2016, there was a reduction in the forecasted indicator of the tax potential by 8.64 billion tenge in absolute terms and by 28.2% in percentage terms. And in the next period there is an increase in the indicator under consideration, which amounted to 2.72 billion tenge or 12.4%. The reasons for such fluctuations are similar to those noted for the Almaty region.

According to the data of Table 18, in 2015 the Almaty region did not realize the existing tax potential. In 2016, the degree of implementation of the regional tax potential for CIT increased significantly (by 118.94%). This increase can be explained by a decrease in the forecasted value of the tax potential for CIT, along with an increase in the actual accumulated tax revenue for the tax analyzed. The increase in the degree of implementation of the regional tax potential in 2016 is replaced by a fall of 52.31% in the subsequent period. This is due to the simultaneous increase in the forecasted value of the regional tax potential and the actual volume of tax revenues for the analyzed tax, but has a different growth rate of 68% and 12%, respectively.
When comparing the extent to which the regional tax potential is realized for the tax in question in Almaty and Karaganda oblasts, it can be noted that the latter shows an increased level of tax burden arising from the production of actual tax revenues in excess of the forecast value of the regional tax potential. Regarding the dynamics of the indicators analyzed in both regions, growth in the analyzed period can be noted, but at the same time, in the Karaganda region it is characterized by high speed, as it increased by 246.86% in 2015-2017.

Thus, we assessed the Almaty and Karaganda tax potential for CIT for 2015-2017. Based on the results of the comparative analysis, it was revealed that the dynamics of the regional tax potential for the tax analysis of Almaty oblast and the degree of its implementation are characterized by instability. While the Karaganda region, on the contrary, is characterized by a stable increase in the degree of realization in the period under study.

Next, we calculate the level of tax potential of the analyzed regions for 2015 - 2017 using the GRP-based method. To do this, we will calculate the average weighted tax rate for 14 regions of the Republic of Kazakhstan for 2014-2016, as noted earlier, excluding cities of national importance that have significant amounts of GRP and tax revenues, which leads to a distortion of the average rate for the country. For clarity, consider the calculation for 2016, which relates the total value of tax revenues (KZT3,489.28 billion) and the GRP amount of 14 regions of the Republic of Kazakhstan (KZT31,333 billion). Thus, the weighted average tax rate for 2016 was 11.1%. In 2014 and 2015, the indicator was 11.2% and 10.3%.

To determine the tax potential for the year 2017 for the Almaty region, we will multiply the weighted average tax rate of 2016 (11.1%) by the projected GRP for this region for 2017 (KZT2,004.3 billion). In the same way, it is possible to calculate the tax potential of the Karaganda region for 2017, multiplying the weighted average tax rate in 2016 by the forecast value of the GRP volume of the analyzed area for 2017. The value of the projected GRP indicators for both regions under consideration for 2015 - 2017 is shown in Table 2.

<table>
<thead>
<tr>
<th>Region</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almaty</td>
<td>1874.7</td>
<td>1930.9</td>
<td>2064.3</td>
</tr>
<tr>
<td>Karaganda</td>
<td>2753.3</td>
<td>2893.2</td>
<td>3003.2</td>
</tr>
</tbody>
</table>

Note – Calculated by the author on the basis of source data [16, 17]

As a result of the calculation, we get the value of the tax potential for 2017 for Almaty region equal to 222.48 billion tenge. Let's carry out similar calculations for 2015 and 2016 for Almaty and Karaganda regions. The results of the calculations are presented in Table 3.

<table>
<thead>
<tr>
<th>Year</th>
<th>Almaty region</th>
<th>Karaganda region</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Tax potential, billion tenge</td>
<td>Actual tax revenues, billion tenge</td>
</tr>
<tr>
<td>2015</td>
<td>209,97</td>
<td>253,43</td>
</tr>
<tr>
<td>2016</td>
<td>198,88</td>
<td>264,56</td>
</tr>
<tr>
<td>2017</td>
<td>222,48</td>
<td>318,57</td>
</tr>
</tbody>
</table>

Note – Calculated by the author on the basis of the data of Tables 2 and the source [18]

If we compare the values obtained as a result of the calculation in Table 3, it can be noted that the actual volume of tax revenues exceeds the forecasted volume of tax potential in the Almaty region for the entire analyzed period. The excess for three years averaged about 68 billion tenge.

With regard to the Karaganda region, it should be noted that the excess is observed only in 2017, and in previous periods there is an opposite tendency, i.e. the tax potential of the region in question was not fully realized. The excess of the forecasted value over the actual average for two years was approximately 55 billion tenge. This signals that in the Karaganda region there was a reserve of growth in the actual
receipt of tax payments to the budget in the specified amount, which was used in full in the subsequent period.

Thus, the level of regional tax potential largely depends on the chosen methodology for its assessment, which leads to the need to identify the strengths and weaknesses of the methods used to assess the regional tax potential. This information will be presented in the subsequent section of the master's thesis.

The assessment of the regional tax potential based on GRP and RNS showed that in certain cases the regional tax potential of the analyzed regions was not fully realized. Accordingly, the tax authorities face the task of increasing the degree of implementation of the regional tax potential by increasing the amount of tax revenues to the budget.

The most common ways to increase the volume of tax revenues in the revenue side of the budget are as follows:

- introduction of new types of tax;
- raising rates for existing taxes;
- improving tax administration;
- narrowing of the circle of subjects able to use tax incentives;
- direct reduction of the number of tax benefits;
- improving the tax base of the region.

To facilitate the process of assessing the regional tax potential, i.e. in order to make it less time-consuming, it is necessary to collect all the information necessary for analysis in a single document. In order to accurately and reliably assess the tax potential of each administrative-territorial unit, it is necessary to develop a tax passport for them on a regular basis.

A tax passport is a complex document, the use of which will allow us to assess the level of regional tax potential. This document will reflect the characteristics of the tax base of the region, the volume of tax revenues in general and separately for each type of tax in the dynamics. This will provide an opportunity to forecast future tax revenues for the medium term in accordance with the current legislation, as well as taking into account possible changes in it. The development of the study document will also provide an opportunity to model the indicators of the tax base and the future amount of tax revenue on the basis of historical data, as well as by making adjustments and adjustments to certain parameters of the tax base.

First and foremost, the tax passport meets the interests of public authorities in an objective assessment of the current situation in the field of taxation in the country, region, and will provide an opportunity to make decisions that increase the collection of tax payments and fees. In addition, the development of the document under study will ensure the availability of reliable information on the volume of tax revenues, as well as will determine the existing reserves of their growth. The certification of the regions is particularly relevant in the light of the ongoing fiscal policy on the decentralization of the regions of Kazakhstan, which was identified in the Address of the President of the Republic of Kazakhstan [19].

The document also suggests the use of a block-chain system for the administration of VAT refunds. Due to the fact that block-chain is a network that performs transaction binding in a continuous chain of transactions, each of which contains new information, plus previous data [20]. This technology can be used to store information about all taxpayers in the region, pay taxes to them, facilitate the rapid receipt of data on the tax potential of the region and find ways to increase it.

Thus, to date, the methodological toolkit for assessing the tax potential is imperfect. At the same time, it can be expanded and improved by introducing new information technology tools that are innovative for domestic practice. The proposed tax passport and block-chain can be used in aggregate, that is, all the marked information for a tax passport can be stored in a data chain and periodically updated, which will allow timely response to changes in the volume of the region's tax potential.

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АЙМАКТАРДЫҢ САЛЫҚТЫҚ ЕЛЕУЕТІҢ БАҒАЛАУДЫҢ ЄДІСТЕМЕЛІК ҚҰРАЛДАРЫ

Аннотация. Осы мақалада авторлар аймақтың салық елеуетін бағалаудың әдістемелік құрақтарының қарастырыды. Таңдалған тасқырмыйтын әскериілігі мақалада негізделген. Колданылатын әдістер: көрсету, әйін, салық кейбір әдістемелерінің құрылысы, әдістер. Авторлар мерзімді «салық елеуеті» анықтага әртүрлі тісілдерді пайдалы. Осы тәжірибелердің нәтижесіне байланысты, менен көрсету, әдістемелік құрылысын өзгертудің әдісін. Осы мақаладағы нәтижелер, аймақтың салық елеуетін бағалаудың әдістемелік құрақтарының қарастырымына қарай, жаңа әдістемелік құрақтардың құрылысын өзгертудің әдісін. Осы мақаладағы нәтижелер, аймақтың салық елеуетін бағалаудың әдістемелік құрақтарының қарастырымына қарай, жаңа әдістемелік құрақтардың құрылысын өзгертудің әдісін.
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МЕТОДИЧЕСКИЙ ИНСТРУМЕНТАРИЙ ОЦЕНКИ НАЛОГОВОГО ПОТЕНЦИАЛА РЕГИОНА

Аннотация. В данной статье авторы рассматривают методический инструментарий оценки налогового потенциала региона. В статье была обоснована актуальность выбранной темы. В качестве методов использованы: дедукция, индукция и сравнительно-сопоставительные методы. Авторы анализируют различные подходы к определению термина "налоговый потенциал". В статье представлена авторская трактовка данного понятия. Далее рассматриваются методы оценки налогового потенциала. Первым анализируемым методом был метод репрезентативной налоговой системы. Вторым — метод на основе показателя валового регионального продукта. Были рассмотрены механизмы действия представленных методов оценки. С применением данных методов был проведен анализ налогового потенциала двух регионов — Алматинской и Карагандинской областей. В отношении первого метода было отмечено, что Алматинская область отличается нестабильностью. Карагандинская область по данному показателю имеет рост степени реализации налогового потенциала. По второму методу в Алматинской области отмечалось перспективное планирование значения. В то время как в Карагандинской это может быть зафиксировано только в 2017 году. В заключении приводятся способы повышения налогового потенциала региона. Наиболее эффективным из них считается совершенствование базы налогообложения региона. В качестве предложения были описаны инструменты, которые могут повысить точность оценки. К ним относятся налоговый паспорт и система block-chain. Результаты статьи могут быть использованы для дальнейшего исследования анализируемого вопроса. Предложенные инструменты могут быть использованы местными органами власти для более достоверной оценки собственного налогового потенциала.

Ключевые слова: налоговый потенциал, регион, метод оценки, налоговый паспорт, block-chain.

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