

Original article

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ELABORATION OF AN APPROACH TO THE EVALUATION OF THE BUDGET POTENTIAL USE (CASE STUDY OF THE HIGH NORTH REGIONS OF RUSSIA)

Tatiana I. Barasheva

Luzin Institute for Economic Studies of the Kola Science Centre of the Russian Academy of Sciences, Apatity, Russia, ORCID 0000-0002-1242-0884

Abstract. An important role in the implementation of the policy of sustainable socio-economic development in a difficult geopolitical situation belongs to strengthening of the financial basis of the Russian regions by increasing their budget and tax potential. It updates the problem of creating a reasonable and rationally constructed system of evaluating the budget potential, necessary for making managerial decisions. The purpose of the study is to clarify the indicators and develop a methodology for evaluating the level of the budget potential, which allows reflecting the prospects for regional financial security, depending on the efforts made by the authorities. Within the framework of the proposed approach, an analysis of financial security of the territory and evaluation of the quality of the budget process management, evaluating the use of its budget potential are carried out. The developed methodological approach, based on the use of indicative and matrix analyses, the methods of generalization and synthesis, tabular and graphical data presentation was tested using the High North regions as the case study. The paper presents the calculation results of the aggregate index and its constituent integral indices, on the basis of which the regions were grouped according to the level of the budget potential use. The trends are studied, the features and causes of the budget potential underuse are identified. The practical significance of the study is caused by the opportunity of applying the proposed approach by the territorial authorities to make decisions ensuring efficient management of the budget potential in the High North regions.

Keywords: budget potential, financial security, management quality, regions of the High North, types of regions, use of budget potential

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Научная статья

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РАЗРАБОТКА ПОДХОДА К ОЦЕНКЕ ИСПОЛЬЗОВАНИЯ БЮДЖЕТНОГО ПОТЕНЦИАЛА (НА ПРИМЕРЕ РЕГИОНОВ КРАЙНЕГО СЕВЕРА РОССИИ)

Татьяна Игоревна Барашева

Институт экономических проблем имени Г. П. Лузина Кольского научного центра Российской академии наук, Апатиты, Россия, ORCID 0000-0002-1242-0884

Аннотация. Важное значение в реализации политики устойчивого социально-экономического развития в сложной геополитической обстановке принадлежит укреплению финансовой базы субъектов Российской Федерации путем наращивания их бюджетно-налогового потенциала. Это актуализирует проблему создания обоснованной и рационально построенной системы оценки бюджетного потенциала, необходимой для принятия управленческих решений. Целью исследования является уточнение показателей и разработка методики оценки бюджетного потенциала, которая позволяет отразить перспективы финансового обеспечения региона в зависимости от прилагаемых органами управления усилий. Предложен методический подход, особенностью которого является оценка бюджетного потенциала с точки зрения его использования. В рамках подхода выполняется анализ финансовой обеспеченности территории и качества управления бюджетным процессом, оценивающих использование бюджетного потенциала. Разработанный методический подход, базирующийся на применении индикативного и матричного анализов, методов обобщения и синтеза, табличного и графического представления данных, апробирован на примере регионов Крайнего Севера. Представлены результаты расчета совокупного интегрального индекса и составляющих его интегральных индексов, на основе которых осуществлена группировка регионов по уровню использования бюджетного потенциала. Исследованы тенденции, выявлены особенности и определены причины недоиспользования бюджетного потенциала. Практическая значимость исследования обусловлена возможностью применить предложенный подход территориальными органами власти для принятия решений по обеспечению эффективного управления бюджетным потенциалом в регионах Крайнего Севера.

Ключевые слова: бюджетный потенциал, финансовая обеспеченность, качество управления, бюджетный процесс, регионы Крайнего Севера, типы регионов, использование бюджетного потенциала

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Introduction

The tasks of restoring sustainable growth of regional economies in the context of the crisis caused by sanctions and the global pandemic determine the particular importance of strengthening the financial base by increasing fiscal potentials of the territories that actualizes the problem of creating a reasonable system of their evaluation [1, 2]. The issue of financial support for territorial development is most acute in the High North regions, which is caused by increased production and livelihood costs due to the harsh nature and climatic conditions [3].

At present northern regions remain in a difficult financial situation: interregional differences in per capita budget security reach 11 times; most regions keep budget dependency on federal taxes and inter-budget transfers (in revenues share of federal taxes exceeds regional ones 3–10 times; share of transfers in regional revenues changes from 4 % to 76 %, and in 9 regions share of transfers is by 28 % higher than the Russian average; by 2020 number of regions having budgets with deficits increased from 6 to 11; growth of debt obligations is noted in 9 northern regions [4]; public debt in relation to tax and non-tax revenues exceeded the average for the Russian Federation in 9 regions (24.5 %) ¹.

Solving the issue of strengthening financial security is to a large extent connected to territorial budget potentials. A budget potential determines future financial revenues, while the budget resource base determines prospects of the regional economy reproduction, potentialities and responsibility of the government bodies on fulfilling the social obligations. Therefore, the issue of efficient use and growth of regional budget potential becomes one of the major problems in the financial science and practice [5, p. 380]. In this connection, creation of a substantiated evaluation system of the latter acquires a special importance. A rationally built system of budget potential evaluation allows planning revenues of regional budgets, revealing growth reserves for tax revenues, forecasting financial situations in regions, ensuring choice of methods of the state regulation of increasing budget potential and its efficient use [6].

In Russian and foreign practices there are various methodological approaches to evaluating the budget potentials of territories. At the same time, the choice of a system of indicators is significant. In methodologies of international researchers, who identify fiscal potential with tax potential, the criteria for evaluating the potential are: state and local tax and non-tax revenues [7], tax burden, tax load [8]. In the work of the Advisory Commission on Intergovernmental Relations (ACIR) [9, p. 11] the methodological approach of “representative tax

system” using the tax base and various tax rates is applied for tax potential evaluation. In the study “Understanding Countries’ Tax Effort” [10, p. 5] tax efforts and tax potential are evaluated, and its changes are analyzed depending on economic development of the countries, education levels, inflation and corruption, trade development, etc. The most common methods for evaluating the budget potential developed by Russian researchers [11, p. 37; 12; 13, p. 18; 14, p. 430; 15, p. 42], are based on the calculation of analytical coefficients describing the state of regional budgets in terms of its balance, sustainability, ability of the region to independently finance its needs. In the methodology of S. N. Yashin and N. I. Yashina it is also proposed to use budget coefficients, calculation of which is based on the preliminary “grouping of expenditures and revenues of the budgets, assets and liabilities of the balance sheet, depending on the priority of directions for the distribution of funds and importance of the territories’ budget sources”. [16, p. 37].

In later studies, Russian researchers actualize the issue of evaluating the budget potential use, paying attention to the management aspect. For example, A. A. Kuklina and K. S. Naslung along with the generally recognized budget indicators introduce additional indicators in the methodology that evaluate “the quality of planning, the focus of the regional budget, and the impact of the state of the budget on changing economic processes” [17, p. 397]. The methodology of E. N. Gladkovskaya proposes the criteria included in the information base of control bodies, which makes it possible to identify the targeted and effective use of budget funds [18, p. 34]. Elements of evaluating management impact on the level of budget potential are presented in works of such authors as L. L. Igonina et al. [19, p. 359], M. M. Suleymanov [20, p. 46], T. Yu. Tkacheva [21, p. 12], S. V. Zenchenko [6, p. 191], N. V. Zinchenko [22, p. 28].

Summing up, we note that considerable experience has been accumulated in the scientific substantiation of the methodology of assessing financial situations in the regions. The advantage of the methodological tools is the simplicity of calculations and the availability of information. The disadvantages include the following provisions. Many combinations of indicators are involved in the methodological approaches. At the same time, the indicators differ in name, but are the same in essence. Indicators, characterizing quality of the budget process management, are not singled out in the methods into independent blocks from the general evaluation indicators. As a rule, individual indicators are shown, instead of a system of indicators. Besides, evaluation of the budget potential in relation to the northern regions in the studies occurs sporadically. The insufficient elaboration of the issue in scientific studies, including that in relation to regions of the High North was the reason for searching for additional indicators

¹ Rating of RF regions by level of the debt burden. URL: <https://riarating.ru/> (accessed 03.08.2022).

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and evaluating the level of the budget potential use in northern regions.

According to the author, the basis for expanding the research field in terms of evaluating the budget potential from the point of view of its use are the following interpretations of “used” budget potential. On the one hand, a used budget potential can act as a sum of financial resources formed and accumulated in the regional budget at the end of the period. On the other hand, a used budget potential can also be considered as used by the authorities to perform budgetary functions in order to ensure development of the territory and improve the welfare [23]. Taking into account the above, as well as the fact that in modern evaluation methodologies the managerial component of analysis is not sufficiently informative, the following seems relevant. According to the author, evaluation of the budget potential in terms of its use should not be solely limited by budget coefficients describing the financial situation of the regional budget but also include in the methodology a separate block of indicators evaluating the quality of regulatory impacts from governmental bodies in the course of implementing the budgetary process, having direct impacts on changes in the budget potential.

The purpose of the study is to clarify the indicators and develop a methodology for evaluating the level of the budgetary potential use, which makes it possible to reflect the prospects for the financial security of a region depending on the efforts made by the authorities. The tasks are: to explore modern methods of evaluating the budget potential; to substantiate the selection of indicators for evaluating the level of the budget potential use from the standpoint of management impact on the process; to calculate integral indices evaluating financial security of the territory and quality of the budget process management, as well as the aggregate integral index; to form matrices that make it possible to carry out a typology of the High North regions² depending on the level of the budget potential use; for each group of the High North regions to identify the main problems hindering efficient management of the budget potential.

Materials and methods

The proposed methodological approach, which makes it possible to evaluate the level of the budget potential use is based on the application of indicative and matrix analyses, methods of generalization,

analysis, synthesis, and includes a system of evaluation parameters divided into two groups:

- indicators, evaluating the financial condition of the regional budget (sustainability and financial independency (Table 1));

- indicators, evaluating the quality of regulatory actions in the course of implementation of managerial functions during the budget process (Table 2).

² In the study 16 Russian regions are recognized as regions of the High North, which according to the RF Government Decree of 16.11.2021 No. 1946 fully (the Republic of Sakha (Yakutia), Kamchatskiy kray, the Magadan and Murmansk regions, Nenets, Chukotka and Yamalo-Nenets Autonomous Districts) or partly (the Republics of Karelia, Tyva, Krasnoyarsk and Khabarovsk krays, the Arkhangelsk, Irkutsk, Sakhalin regions and Khanty-Mansi Autonomous District) are included in the list of the High North regions.

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Table 1

Indicators, evaluating financial security of a region

Indicator	Characteristics	Authors, applying the indicator in calculation methods
1. The coefficient of financial independency is determined as the ratio between own and attracted revenues	It shows the level of financial self-sufficiency and independency on the federal center. The higher the coefficient value, the higher independency	Golodova Zh. G., Suleymanov M. M.
2. The coefficient of concentration of own revenues is determined as the ratio between own revenues and total sum of budget revenues	It shows the level of own revenues concentration in the regional budget. The growth of the indicator evidences increase in the budget potential and strengthening financial independency of territories	Golodova Zh. G., Suleymanov M. M.
3. The coefficient of coverage of expenditures by revenues is determined as the ratio between budget revenues and expenditures	It shows provision of expenditures with revenues. The higher the coefficient value, the higher the region's budget potential	Golodova Zh. G., Naidyonova T. A., Shvetsova I. N., Kurkin A. A., Naslugina K. S.
4. The coefficient of average per capita incomes is determined as the ratio between average per capita incomes in the region and average per capita incomes in the RF	It evaluates provision with incomes for fulfilment of obligations to the population in comparison with the average Russian level	Suleymanov M. M., Golodova Zh. G., Naidyonova T. A., Shvetsova I. N.

Note. Source: compiled by the author.

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Table 2

Indicators, evaluating quality of the budget process management in a region

Indicator	Characteristics
1. The coefficient of spending priorities is determined as the ratio between the sum of social expenditures to the total sum of budget spending	It evaluates spending priorities of regional budgets. The higher the coefficient value, the higher level of support to the population. Its value should not be lower than the Russian average
2. The coefficient of investment activities is determined as the ration between the sum of investments to the total sum of budget spending	It evaluates opportunities of the investment policy implementation in a region The higher the coefficient value, the higher level of investment activities in a region
3. The tax collection coefficient is determined as the ratio between the total tax revenues and possible tax revenues (the sum of taxes collected and tax debts to the budget, and other budget losses)	It shows the level of tax collection from potentially possible tax revenues, including budget losses due to budget debts, provision of benefits, etc. The higher the coefficient value, the higher tax collection level
4. The coefficient of tax efforts on tax on profit is determined as ratio between the total sum of tax on profit and the tax base for the tax on profit	It evaluates efforts on collection of the tax on profit. The higher the coefficient value, the higher the tax potential of a territory due to activities of the regional authorities to attract (preserve) large businesses as tax payers

Note. Source: author's development.

The reason for choosing the indicators of the first group is their scientific substantiation by Russian experts in the field of analysis of the financial condition of regional budgets. The indicators of the first group are a system of coefficients reflecting the results of the governing bodies' activities. The results were embodied in volumes of budget resources, which are evaluated from the standpoint of the ability to ensure balance, sustainability, and ability of the region to finance its needs independently.

The choice of indicators of the second group is caused by the necessity to evaluate the budget potential when fulfilling their budget functions by the authorities. Indicators of the second group are a system of coefficients, evaluating results of the public authorities' activities at individual stages of the budget process. In particular, the coefficient of investment activities characterizes intensification of investment processes in the region. Stable budget revenues cannot be provided without positive dynamics of investments. The cost priority coefficient reflects the participation of governing bodies in the social processes. The high socialization of budget spending is the evidence of support for the least protected population segments, the implementation of presidential decrees to increase salaries of the state employees, the healthcare system development, and measures to improve healthcare. Spending for the social sphere reflects positive trends of the regional socio-economic indicators. The growth of the tax collection coefficient indicates an increase in activities towards reducing tax arrears, identifying and cancelling ineffective benefits, etc. The coefficient of tax efforts on the tax on profit characterizes the systematic work of the authorities in interactions with large taxpayers, aimed at increasing the tax potential of the territories.

The two blocks of indicators proposed for analysis indirectly reflect the result of managerial influence on this process. At the same time, if the first block of indicators characterizing the financial state of the budget evaluates the consequences of making managerial decisions by both federal (determining the conditions for inter-budget regulation) and regional authorities, the second block of indicators characterizing the management quality during the budget process — by the regional government bodies.

The set of indicators used in the methodology is generally sufficient for analysis, since it characterizes the most significant aspects. At the same time, the system of indicators can be supplemented with other indicators that will reflect participation of governing bodies in the budget process implementation. The condition for their application is that they can be quantified, should be presented as relative indicators, and information on them should be available for researchers. For example, indicators evaluating results in the form of additional budget revenues from the control bodies' activities in the field of property management, etc. One can use an indicator describing the amount of funds received by the region as a result of applying the motivation mechanism for the proper quality of territorial budget management. Thus, in foreign countries grants can be given for efficient budget management [24], which provide additional financial resources to government bodies for fulfilling their obligations.

Based on the coefficients from group 1 an integral index evaluating the financial security level of a region is calculated. Coefficients from group 2 are used to calculate the integral index evaluating the quality of the budget process management. To quantify the budget potential use, the aggregate integral index is calculated on

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the basis of all eight coefficients. To bring the indicators to a comparable form a standardization procedure was carried out (individual values of the indicator for a region were correlated with the numerical value of this indicator for Russia). Integral indicators, both within the groups and in general were calculated by the geometric mean formula in accordance with the methodology of Zh. G. Golodova [11, p. 37]. The level of the budget potential use determined by calculations is the result of the aggregate influence of all the coefficients.

The integral indicators obtained make it possible to rank and classify regions depending on the level of budget potential use. The information source for the analysis included data of the Federal Tax Service of Russia, the Federal Treasury, and state statistics bodies for the five-year period (2016–2020).

Results and discussion

On the basis of the developed methodology the aggregate integral index determining the level of the budget potential use in the High North regions was calculated (Table 3), and the regions were ranked by this feature (Fig. 1).

Table 3 shows that the High North regions differ considerably by the level of the budget potential use. The first and the second groups with high and moderate levels include highly developed extracting regions of the High North. Within the third and the fourth groups there are most of the regions significantly differing by the level of economic development, and their levels of the budget potential use do not exceed the Russian average. During the analyzed period, a relative stability of the regions by the index of the budget potential use is traced.

Figure 1 presents the dynamics of the index of the level of the budget potential use, the High North regions are ranked as of 2019 (the year not affected by the pandemic). By the level of the budget potential use in 2016 and in 2019 Nenets Autonomous District was the leader, in 2020 — the Sakhalin region. During the whole analyzed period the Republic of Tyva had the lowest index of the budget potential use. To identify causes and problem zones in management of the budget potential the analysis is detailed studying impact of the components on the result. For this purpose, integral indices were calculated on the basis of coefficients included separately in the first (Table 1) and the second (Table 2) groups.

Integral indices, evaluating financial security of the regions and calculated on the basis of the coefficients from group 1 (Fig. 2), in general demonstrate a higher level compared to the integral indicators, characterizing the quality of management of the budget potential and calculated on the basis of the coefficients from group 2 (Fig. 3).

It is noteworthy that over the period from 2016 to 2019 the studied group has seen a decrease in the

average value of the index of financial security and the index, evaluating the quality of management, the trend continued in 2020. To evaluate the impact of the index of financial security on the index of the budget potential use a matrix, comparing the levels of the index of the budget potential use and the index of financial security in 2016 and 2019 was compiled (Tables 4, 5).

Five groups of regions can be identified by the level of financial security: high level — Sakhalin region, Nenets and Yamalo-Nents Autonomous Districts, moderate level — (including average and higher than average) — Khanty-Mansi Autonomous District, Murmansk and Magadan regions, the Republics of Komi and Sakha, Krasnoyarsk kray; reduced (lower than the average) level — the Republic of Karelia, Arkhangelsk and Irkutsk regions, Khabarovsk and Kamchatka krays, Chukotka Autonomous District; low level — the Republic of Tyva. In the two latter groups the integral indicator did not exceed the Russian average. In 2016 and 2019 Sakhalin region, Nenets and Yamalo-Nenets Autonomous Districts demonstrate complete impeccability in terms of high level of financial security. The situation in Khanty-Mansi and Chukotka Autonomous Districts, the Murmansk and Irkutsk regions, and Khabarovsk kray worsened. Only Krasnoyarskiy kray moved to a higher level of financial security.

Integral indicators, evaluating financial security of territories, declined in all regions over the analyzed period that affected the value of the total index of the budget potential use. Out of all four coefficients involved in the calculation of integral indicators, the most impact was from *the financial independency coefficient*, which in 2019 on the average among regions decreased almost two times compared to 2016, and in 2020 — 3 times (except for Kamchatskiy kray).

The reason for the decrease in the coefficient value was the reduction in the growth rate of own income compared to the growth rate of gratuitous receipts (Table 6).

In 2019 and 2020 growth rates of own revenues were lower than growth rates of donations in 12 regions (Fig. 4). Exceeding growth rates of own revenues over growth rates of donations were noted: in 2019 — in Yamalo-Nenets Autonomous Okrug, the Republic of Tyva, Krasnoyarskiy Kray, Sakhalin region, in 2020 — in Khanty-Mansi Autonomous Okrug, Magadan region, Sakhalin region, Chukotskiy Autonomous District.

In 2019 the growth rate of own revenues, calculated in prices of 2016, was lower than in the previous year in the Nenets and Khanty-Mansi Autonomous Districts, the Republics of Sakha and Komi, and in 2020 — in all regions, except for Magadan region and Chukotskiy Autonomous District. Decrease in the coefficient evidences of increasing financial dependency of the most of regional budgets on financial support from a higher level.

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Distribution of the High North regions by the aggregate integral indicator

	2017	2018	2019
	<i>Group 1 — high level of the budget potential use</i>		
ug, ious	Nenets Autonomous Okrug, Yamalo-Nenets Autonomous Okrug, Sakhalin region	Nenets Autonomous Okrug, Yamalo-Nenets Autonomous Okrug, Sakhalin region	Nenets Autonomous Okrug, Yamalo-Nenets Autonomous Okrug, Sakhalin region
	<i>Group 2 — moderate level of the budget potential use</i>		
is	Khanti-Mansi Autonomous Okrug, the Republic of Komi, Murmansk region	Khanti-Mansi Autonomous Okrug, the Republic of Komi	Khanti-Mansi Autonomous Okrug, the Republic of Komi, region
	–	The Republic of Sakha, Murmansk region	–
	<i>Group 3 — reduced level of the budget potential use</i>		
с ikiy	Russian Federation, Krasnoyarskiy Kray, the Republic of Karelia, Arkhangelsk region, Irkutsk region, the Republic of Sakha, Khabarovsk Kray, Magadan region, Chukotskiy Autonomous District	Russian Federation, Krasnoyarskiy Kray, the Republic of Karelia, Arkhangelsk region, Irkutsk region, Khabarovsk Kray, Magadan Autonomous District	Russian Federation, Krasnoyarskiy Kray, the Republic of Karelia, Arkhangelsk region, Irkutsk region, the Republic of Sakha, Khabarovsk Kray, Magadan region, Chukotskiy Autonomous District
	<i>Group 4 — low level of the budget potential use</i>		
	Kamchatskiy Kray, the Republic of Tyva	Kamchatskiy Kray, the Republic of Tyva	Kamchatskiy Kray, the Republic of Tyva

are compiled by the author on the basis of calculations.

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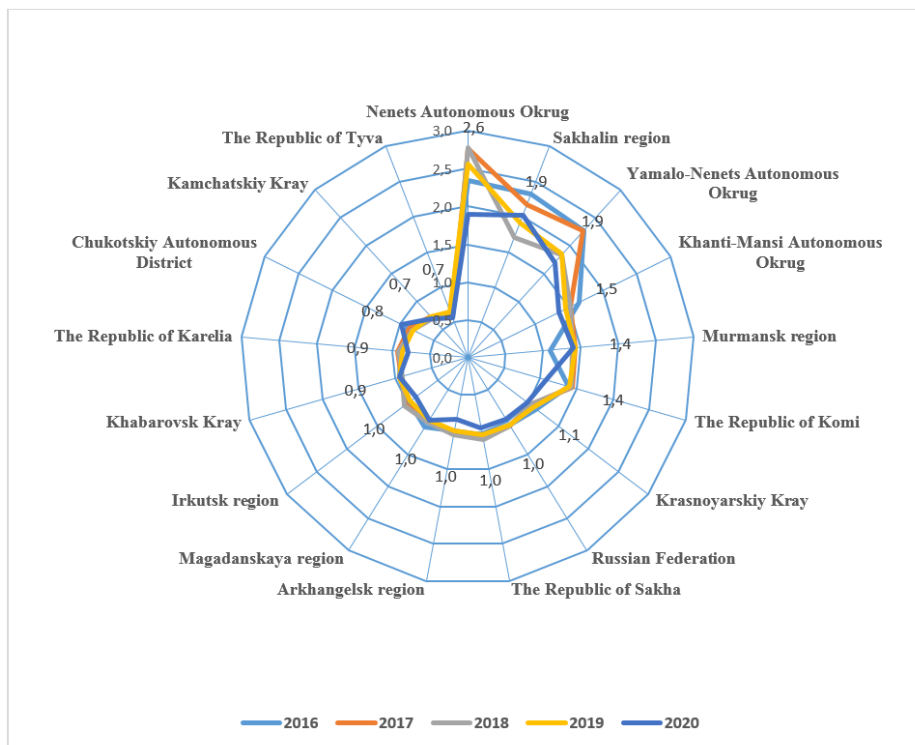


Fig. 1. Dynamics of the index of the budget potential use, characterizing the level of the budget potential use in the High North regions. The Figure 1 and the further figures (2, 3, 4, 5) are calculated and compiled by the author basing on the data of the Federal State Statistics Service of Russia. URL: https://www.gks.ru/bgd/regl/b20_14p/Main.htm (accessed 24. 07. 2022)

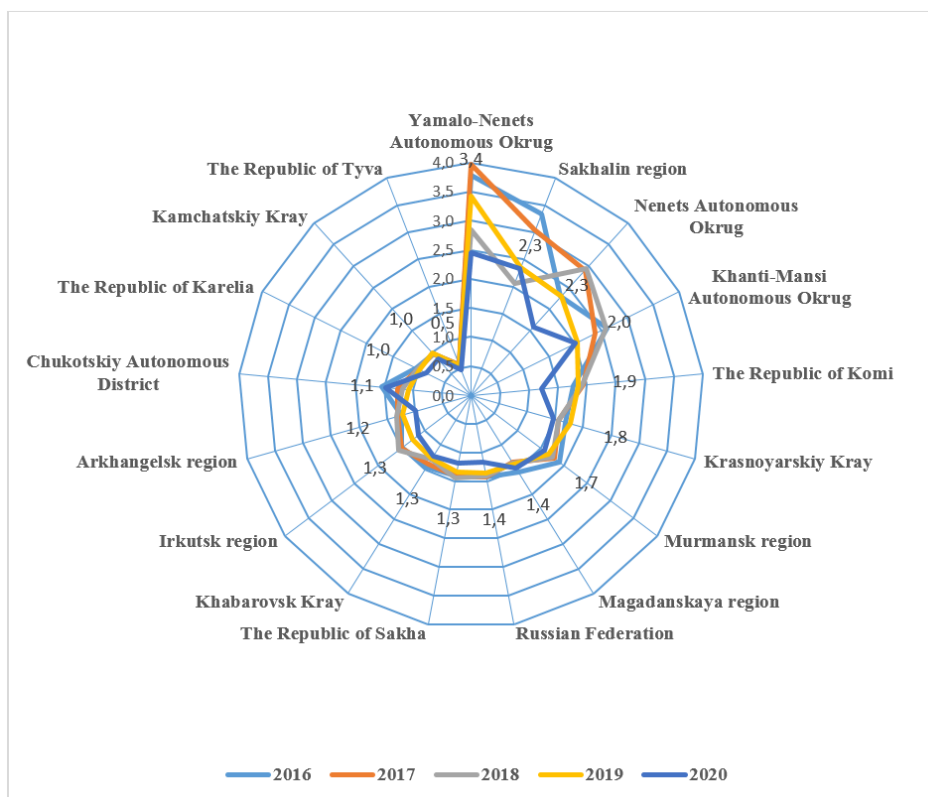


Fig. 2. Dynamics of the index, evaluating the level of financial security of the High North regions

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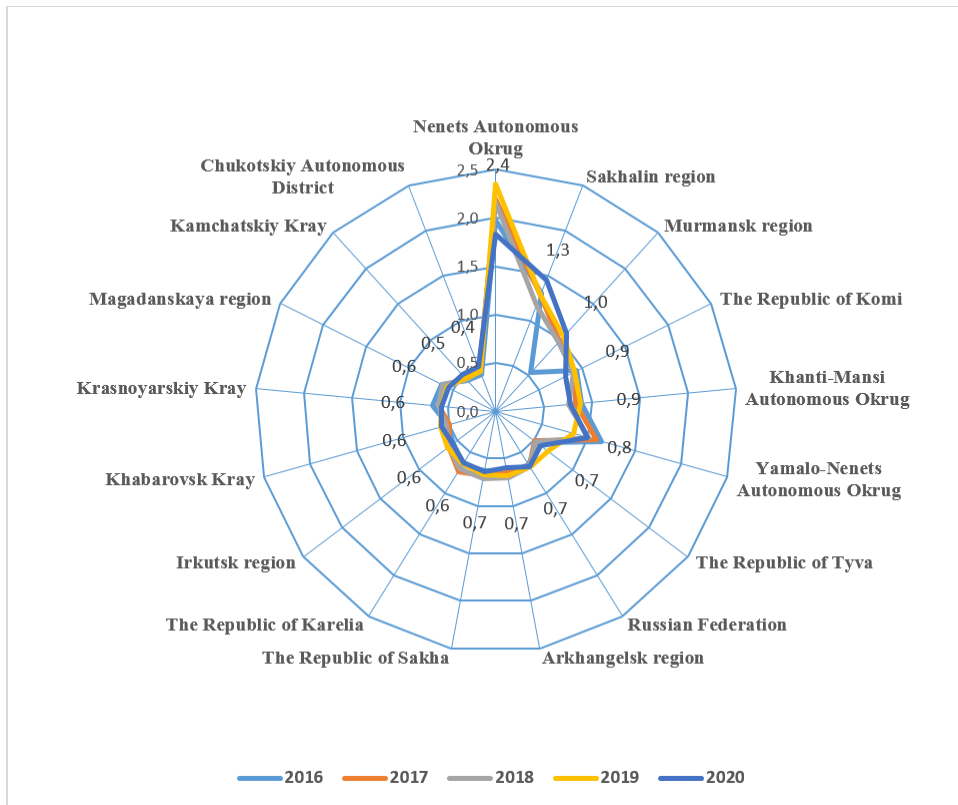


Fig. 3. Dynamics of the index, evaluating the quality of management in the High North regions

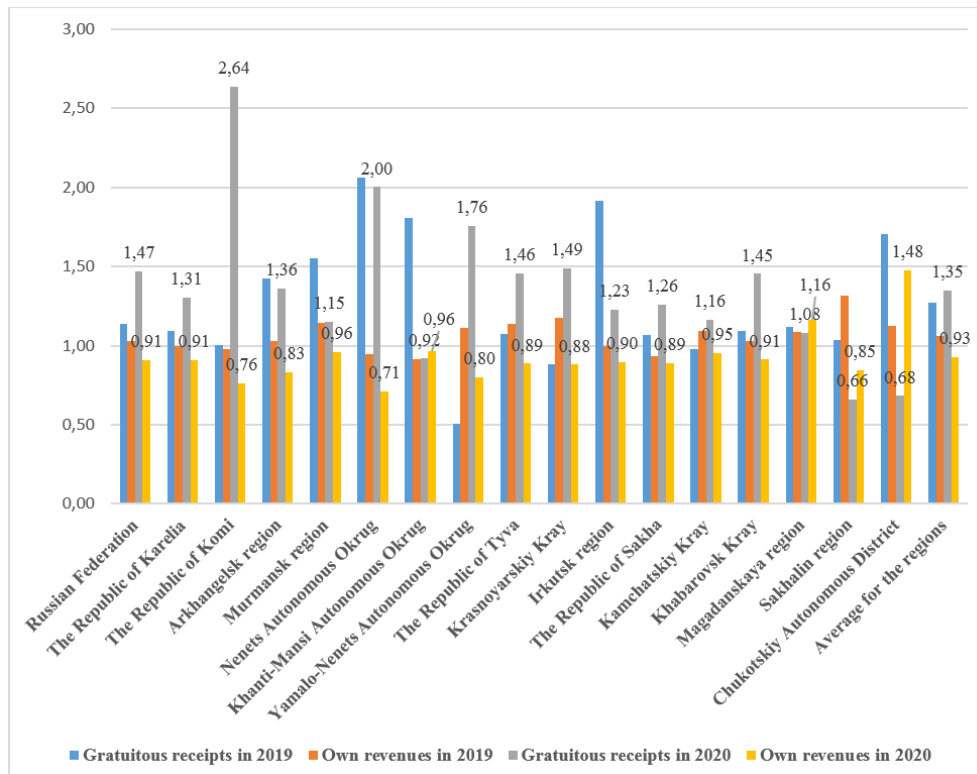


Fig. 4. Dynamics of growth rates of the main budget indicators

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in regions by the level of the budget potential use and i

Aggregate integral index, evaluating the level of the budget		Average (from 1.2
Higher than the average (from 1.5 to 1.8)		
ous Okrug, utonomous region	Khanti-Mansi Autonomous Okrug	–
	The Republic of K Krasnoyarskiy Kra	–
		–
		–

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Regions by the level of the budget potential use :	
Aggregate integral index, evaluating the level of the t	
Higher than the average (from 1.5 to 1.8)	Average (from 1.2 to 1.5)
-	-
The Republic of Komi, Khanti-Mansi Autonomous Okrug Murmansk region	-
-	-

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Table 6

Dynamics of growth rates of the main budget indicators

	2016	2017	2018	2019	2020
Own revenues (average for the High North regions)	1,05	1,05	1,15	1,10	1,00
Gratuitous receipts (average for the High North regions)	1,06	1,09	1,71	1,32	1,46

Note. Calculated and compiled by the author basing on the data of the Federal State Statistics Service of Russia. https://www.gks.ru/bgd/regl/b20_14p/Main.htm (accessed 11. 04. 2022).

There is also a download trend in the regional average *coefficient of revenues concentration*, which is connected to the decreasing share of own revenues in total revenues of region's budget as well as increasing transfers. In 2019 own revenues increased 1.39 times compared to 2016, and gratuitous transfers included in revenues — 2.2 times. In 2020 growth of own revenues was only 1.37 to the level of 2016, while transfers grew 3 times. Decrease of the coefficient in 2019 was noted in all High North regions, except for the Republic of Komi and Kamchatka kray. In

2020 negative dynamics was noted in all 16 northern regions.

The *cost-to-revenue coverage coefficient* in the High North regions also decreased considerably. Its maximum growth was noted in 2018, while in 2019 and 2020 it declined due to the excess of expenditures over revenues growth rates over revenues (Fig. 5). As a result, the balance of budgets was disturbed that led to an increase in the budget deficit in a larger number of northern regions.

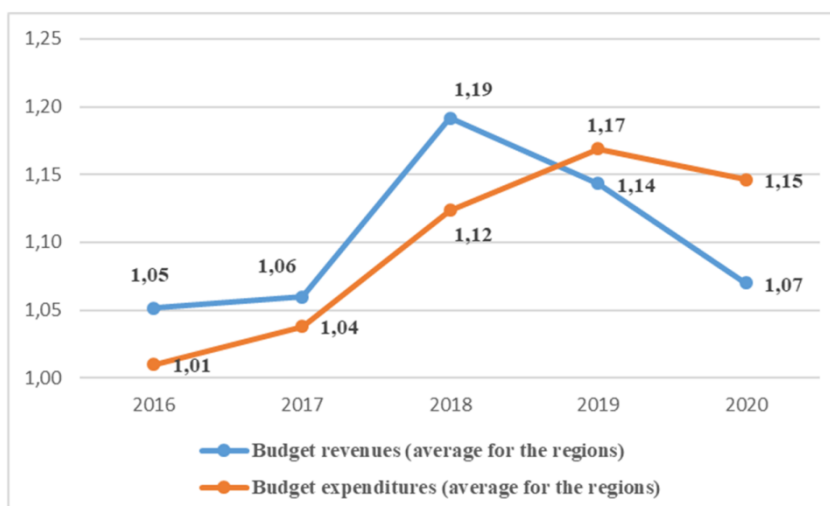


Fig. 5. Rates of growth (decline) of the budget revenues and expenditures

In 2019 in the Irkutsk and Magadan regions, Khabarovsk and Kamchatka krays, the Republics of Tyva and Sakha budget expenditures exceeded revenues. In 2020 already 11 northern regions found themselves in a similar situation.

The *coefficient of average per capita incomes*, characterizing the level of income security of the population relative to the Russian average indicator decreased in the Republics of Komi and Tyva, Khanty-Mansi Autonomous District, and Sakhalin region. The coefficients were lower than the Russian average in the Republic of Tyva, Khanty-Mansi Autonomous District, the Arkhangelsk and Irkutsk regions.

Thus, the integral indicators, evaluating financial security of the territories decreased in all regions for the analyzed period. It was reflected on the decrease in the aggregate integral index. At the same time, the level

of financial security was higher than the level, characterizing quality of the budget process management.

For a quantitative evaluation of the quality of the budget process, management integral indicators were calculated using coefficients of the second group for the period 2016–2020. On the calculation results, matrices making it possible to evaluate changes in the index values and its impact on the integral indicator of the budget potential use, were compiled (Tables 7, 8).

On the basis of the existing matrix, four groups of the High North regions can be identified, which have: a high level of management quality (the Nenets Autonomous District); moderate level (the Sakhalin and Murmansk regions); reduced level (the Yamalo-Nenets, Khanty-Mansi Autonomous Districts and the Republic of Komi) and low level (below the Russian average) — this is the most numerous group of the High North regions.

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egate integral index, evaluating the level of the budgi	
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(from 1.5 to 1.8)	
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Khanti-Mansi Autonomous Okrug	The Republic of Komi
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ФИНАНСОВО-БЮДЖЕТНАЯ ПОЛИТИКА НА СЕВЕРЕ И В АРКТИКЕ РОССИИ

the level of the budget potential use and managemem	Aggregate integral index, evaluating the level of the budget	
	Higher than the average (from 1.5 to 1.8)	Average (from 1.2 to 1.5)
	—	—
	—	—
Murmansk region	—	—
The Republic of Komi, Khanti-Mansi Autonomous Okrug	—	—
	—	—

It should be noted that the problems in terms of management in the northern regions are not less acute than financial ones. Despite the fact that the Sakhalin region and Yamalo-Nenets Autonomous District show a high level of the index of the budget potential use, which is ensured by a stable financial basis (in the rating on the financial security rating they occupy second and first places respectively), throughout the analyzed period, they have problems with the quality of budget process management. The aggregate integral index, characterizing the level of budget potential use, reflects the general influence of the eight indicators. In Yamalo-Nenets Autonomous Okrug high values of the coefficients characterizing financial security fostered growth of the aggregate integral index, compensating the low level of coefficients evaluating quality of the budget process management.

The Murmansk region has improved its position in the ranking by moving from a low level of management quality to the average by 2019. Khabarovsk kray, on the contrary, moved down one position.

Let us evaluate the impact of the coefficients applied for the calculation of the management quality index on the integral indicator of quality management and on the aggregate indicator of the budget potential use.

The tax collection coefficient, estimated on the basis of potential revenues, taking into account possible arrears deferred, suspended for collection and other types of debts, calculated for the High North regions, determines the efficiency of tax administration measures and demonstrates a higher efficiency of the control bodies work in most of the northern regions than the average for the Russian Federation. It had a positive effect on the aggregate index of the budget potential use. In 2019 compared to 2016 the coefficient increased in 15 High North regions (except for the Nenets Autonomous District, which was ensured by a reduction in tax arrears in certain regions and an increase in tax revenues), and in 2020 — in 11. In 2019 compared to 2016 debt growth is recorded in the Republics of Komi and Tyva, Khabarovsk kray, Nenets, Khanty-Mansi and Yamalo-Nenets Autonomous Districts, Irkutsk and Sakhalin regions, in 2020 it remained in the last five regions.

The coefficient of tax efforts on the tax on profit shows the activities of regional authorities to attract (preserve) large economic entities as taxpayers, which for the Northern regions are the main payers of the tax on profit. There is positive dynamics of the indicator in general in the northern regions for 2016–2019 (Fig. 6).

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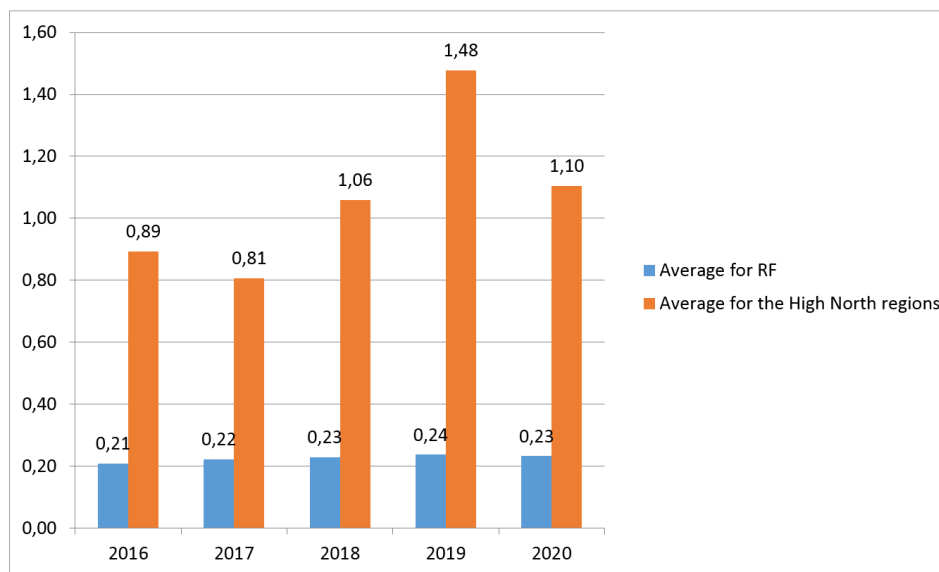


Fig. 6. Dynamics of the coefficient of tax efforts on the tax on profit. Compiled by the author basing on Federal Tax Service of Russia. <https://www.nalog.gov.ru>

At the same time, in the most productive 2019 in the Khanty-Mansi and Yamalo-Nenets Autonomous Districts, the Krasnoyarsk kray, and the Magadan and Sakhalin regions individual indicators decreased, the tendency continued in 2020 (except for the Sakhalin region). At the same time, in 2020 the average value of the coefficient for the northern regions increased relative to 2016, and its value was 4.8 times higher than the Russian average. The coefficient of tax efforts demonstrates the highest level of fluctuation among the analyzed indicators, as evidenced by the coefficient of variation, the value of which exceeded 200 %. The Nenets Autonomous District, the Sakhalin and Murmansk regions, and the Republic of Komi by this indicator retain the leadership among the High North regions. *The spending priority coefficient* shows that budgets of the High North regions are mainly socially oriented. At the same time, the Chukotka Autonomous District has the lowest level of social spending, which amounted to 34 % of all spending in 2016, 23.2 % — in 2019, and 32 % — in 2020. In 2019 the coefficient was below the Russian average in the Nenets, Yamalo-Nenets and Chukotka Autonomous Districts, the Republic of Sakha, Kamchatka kray, Magadan and Sakhalin regions, and in 2020 the situation worsened in Khabarovsk kray. The average indicator for the High North regions correlated with the Russian average, in 2019 and 2020 showed a negative trend and did not reach the level of the Russian average, which was reflected in a decrease in spending priority coefficient and on the index of management quality as well as on the aggregate integral index of the budget potential use.

Increased by 2018 investment activities in the High North regions and in the country as a whole decreased that influenced negatively the index of the budget

potential use. In 2019 the coefficient of investment activities decreased in half of the High North regions (Nenets Autonomous District, the Republics of Komi and Karelia, Sakhalin, Magadan, and Arkhangelsk regions, Krasnoyarsk kray). At the same time, throughout the entire analyzed period in the Yamalo-Nenets, Nenets and Khanty-Mansiysk Autonomous Districts, the Murmansk region the level of investment activities exceeds the Russian average.

It can be concluded that the low level of the studied coefficients indicates retaining problems in the budget process management. Decreasing level of the integral indicator, evaluating quality of the budget process management does not contribute to growth of the aggregate integral index.

Summarizing the research results, we should note that for 2016–2020 no cardinal changes in the territorial structure of the level of the budget potential use were revealed. At the same time, the aggregate integral index, characterizing the level of the budget potential use in the High North regions is decreasing in dynamics, mainly due to declining coefficients, evaluating financial security of the territories. The quality of budget process management remains at a low level in both economically developed and underdeveloped regions of the High North.

Conclusion

At this stage of the study various approaches to evaluation of the budget potential and the indicators applied are considered. It is determined that the available indicators do not allow full evaluation the level of the budget potential use. A methodical approach to evaluating the level of the budget potential use is proposed, based on the developed system of indicators that evaluate the financial security of the territories and the quality of budget

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process management. Approbation of the developed methodology performed on the data of the High North regions, made it possible to carry out a typological grouping of territories according to the level of the budget potential use and their ranking, to track the trends determining the features of the budget potential formation and use in the High North regions, and to identify the main problems of the studied processes.

Thus, regions with high levels of the index of the budget potential use are distinguished by a significant level of financial security. With a relatively high quality of management in general, some regions of this group have problems in terms of: weakening tax efforts of regional authorities to ensure of collection of the tax on profit, the payers of which are large export-oriented business structures; reducing the level of tax collection due to the growth of debts to the budget; slowdown in investment activities in the High North regions.

The regions where the level of the index of the budget potential use is determined as moderate experience problems in terms of management quality: declining activities in collection of the tax on profit due to reducing the tax basis; growing tax arrears; decreasing level of investment activities; limiting budget spending for social purposes.

Northern regions with reduced and low levels of the index of the budget potential use (it did not exceed the Russian average) are characterized by significant financial problems: low level of financial security due to limited opportunities to increase own revenues; dependency of revenue sources coming from the federal budget; a

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Об авторе:

Т. И. Барашева — канд. экон. наук, доц., ведущий научный сотрудник.

About the author:

T. I. Barasheva — PhD (Economics), Associate Professor, Senior Researcher.

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