

## Challenges of heterogeneity and sustainability of economic expansion of the Russian North\*

*The article deals with theoretical aspects and criteria of sustainability of territorial systems, taking into account both the objective conditions of heterogeneity of economic space related to geographical and natural factors and the subjective ones conditioned by historical trends and characteristics of state regulation. Particular attention is paid to the northern regions, including the positions of natural rent and intergovernmental relations formation.*

*Region, economy, space, sustainability, North, heterogeneity, regulation.*



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“Spatial science” as a special interdisciplinary scientific direction has received increasing recognition in the world science in the last decades. Thus, in contrast to regional studies it is structured in several ways.

Firstly, the concept of “region” is most often associated with territorial units, and “spatial economics” sees the water areas, aero areas and even the bottom of the oceans as its objects.

Second, the new line sees international spatial formations and mechanisms as its most important directions, and regional studies is limited, as a rule, by national economies. In this paper, the author is based on the traditional concepts, but in terms of growing globalization processes and the increasing “openness” of the regions at any level it considers necessary to reflect external factors of regional development to the possible extent.

The value of the North to Russia today on the one hand is conditioned by the fact that it is a vast vital part of the country with extreme conditions of life and a pronounced specific of socio-economic development. On the other hand, this macro-region is a zone of Russia’s strategic interests, as it has a unique geopolitical, natural resource and socio-economic potential.

Despite the importance of the northern regions for the world community and this country, in Russia, this part of the territory remains a problem zone. This is due, firstly, to the complexity and heterogeneity of socio-economic situation in these regions. Second, it is due to the lack of scientifically based, systematic and differentiated federal policy toward the North of Russia, which is inadequate to the growing role of the North in the development of the country and does not

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consider sufficiently the specific and interests of the northern regions. Third, it is due to the social and economic policies of the northern regions which is not enough well-designed, based on a scientific basis, the lack, in many cases, the active position of the regions in articulating and defending the interests of the northern territories.

The relevance of measurements of heterogeneity in the regional systems is objectively related to the fact that with the expansion and deepening of economic federalism the regions have additional rights and also additional responsibilities in the economic and financial spheres. For Russia, with its variety of climatic, geographical, historical and socio-economic conditions, there are problems of typology of the regions for the purposes of the current and future public policy. A complicating factor in the crisis process is a kind of regional “egoism”, the attempts to solve the problems through individual privileges and benefits, including the damage for other areas, and inter-regional relations.

The possible increase in self-sufficiency only reinforces the crisis, the main connecting links are legal institutions, common monetary and fiscal systems, and the most stable in all regions is the bank interest rate. Much of this behavior is explained by the possibility of external borrowings. While it is clear that in a large number of commercial banks and some competition in the credit market the differences can be quite significant. Thus, during the financial crisis of 2008 – 2009 the credit rate ranged from 15% to 30% per annum and the deposit – from 9% to 18%. In post-crisis in 2010, they decreased significantly in size and in range, but still account for 12 – 16% and 5 – 8% respectively. For all other indicators the fluctuations may be more significant, both in static conditions and in the rates. In this regard, each area can be considered as a separate macroeconomic entity.

For many areas, especially the frontier ones, the foreign trade activity is of great importance. In this case the comparison of import and export provides the insight into the peculiar balance of payments in the region. It must be borne in mind that the actual volume of such transactions is difficult to determine, as the subjects of the Russian Federation have no internal customs barriers and “re-imported” products are to be covered in those areas where they were consumed.

Some regions may have a large deductible base (advanced production and services sectors) and a relatively small amount of spending. Others, by contrast, have historically weak industrial capacity and need government subsidies.

Fiscal security is the quotient of the expenditure budget for the territory’s population. However, these costs are not always equal to their own revenues. In addition, it should be noted that since 2002, in the methods of the RF Finance Ministry on inter-budgetary relations more complex definition of this indicator are applied, which is calculated as the ratio of an index of tax revenues to the index of expenditure in the region. The latter is defined as the ratio of consumption budget in a given subject in relation to national consumer budget [1].

Budget adequacy indicates what portion of the cost for a given level of fiscal capacity can be met from its own sources. At the same time from both the expenditure and revenue parts the subvention parts are excluded that belong to the authority of higher-level budgets.

Typically, the main groups except for people living below the poverty level spend not all the money. Part of the disposable income that is not spent on final consumption of goods and services in the accepted time period is called savings.

The calculation of this indicator is difficult for the territorial systems. To some extent, its counterpart in the national statistics is the

dynamics of household savings in deposits, treasury bonds, certificates, etc. presented in reference books. With a certain conventionality it can be used as an additional indicator of living standards, and as a relative measure of financial investment opportunities in the region. However, private savings may differ significantly from the general ones, because it does not take into account the budgetary balance (government) spending in the region.

Involuntary unemployment is of importance in the Russian reality; it arises because of the behavior of monopolistic industries, financial institutions, lack of economic culture, and finally the lack of development of the overall labor market. The average salary at power and rail transport enterprises is much higher, including for comparable occupations than in other industries, even in the base ones, such as chemical or forest complex. As a result of artificially high rates for the payment and reallocation of remuneration funds there is displacement of jobs. At the same time because of the unequal pay for the work which is equal in volume and qualifications there is the deformation of both regional and interregional labor markets, and rising social tensions.

The most important integral characteristic of sustainability is economic growth. It usually means the movement of economic life, the trends in key elements and indicators that characterize them (the volume of production, prices, employment, income, etc.). Growth is reflected in the increase of potential and real GRP, the growth of national wealth and economic power. Thus, the problem of growth is a central objective of all regional systems.

Growth is the component of economic development, and the latter is understood as a process comprising the steps of both the increase and the decrease, quantitative and qualitative changes in the economy. Growth is a positive trend of the economy; recession is a negative one, although this is true only for the general state of the system.

These concepts often have the opposite meaning for the individual phrases, factors and elements. For example, the nominal growth of GRP may be accompanied by an even greater rise in inflation, and in general the real product will not only grow short but also decrease. With regard to unemployment, its "increase" is almost always seen as a negative indicator. Although if unemployment falls significantly relative to its natural level its growth may be inevitable.

That is, sustainable development of the system may occur in conditions of instability of its individual components. Moreover, the term "sustainable development" becomes controversial, as the economic development suggests such its phases as a recession.

The major components of the theory of economic growth include:

- identifying the trends and sources of growth;
- measuring the factors and outcomes;
- ensuring long-term sustainability of growth;
- updating the structure of the economic system.

In Western literature among the whole complex of problems special attention is paid to the issues such as GDP growth, investments movement, trends in real incomes and wages, changes in the level of profit, patterns of consumption and savings, the level of savings against GDP, etc. [2].

Contemporary classical standards of sustainable development are somewhat different from the approaches of economic theory. They suggest that the economy should be equally oriented both to the needs of the present time, and to preservation of the ability of future generations to meet their needs. However, this definition is too broad, conceptual in nature and in analytical and forecasting activities and management decision raises more questions than it answers.

One such issue is the lack of common integrated indicators of living standards. For example, the trends of historical development, national characteristics, etc. are very important in their formation. Furthermore, the problem of future generations' needs is delicate enough itself, at least in two aspects.

First, the decrease in consumption in the present, even for effective interventions for the conservation or finding alternative sources of natural resources, one way or another is harmful to future generations. This is especially true in the crisis economies, where such a reduction is detrimental to physical health.

Second, these very needs of future generations, especially in the long term (50 years and over) are represented very vaguely, as well as the enabling technologies in such a long period though.

The stability of national and regional systems must be considered in terms of key social indicators. United Nations Development Programme (UNDP) has approved two of these indicators (or rather, a group of indicators) measuring the development or quality of life: human development index and the index of human freedom.

The index of human development includes [3]:

- income, as measured by GDP per capita in the light of different purchasing power in different countries and the effect of the distortions introduced by the official currency exchange rate (real GDP) and the decreasing efficiency of income;
- life expectancy, as measured by life expectancy at birth;
- knowledge or education level, as measured by the number of literate people and the duration of schooling, the number of people with higher vocational education.

The indices of human freedom are more extensive, and their number reaches 40, but as they are more socio-political in character, they will not be considered in this section.

We recall only one of them – the index of society differentiation by income, its expression is of the Lorenz curve and Gini coefficient. The latter is calculated by the ratios of areas of shapes formed by the Lorenz curve. If it exceeds 0.3, it is believed that society begins to deviate from the criteria of social justice [4].

Another indicator of social stratification is the so-called decile ratio – the ratio of incomes of 10% of the population with the highest level of income. For it there is also a standard criterion of 5-6, the excess of which shows negative processes in the distribution of income.

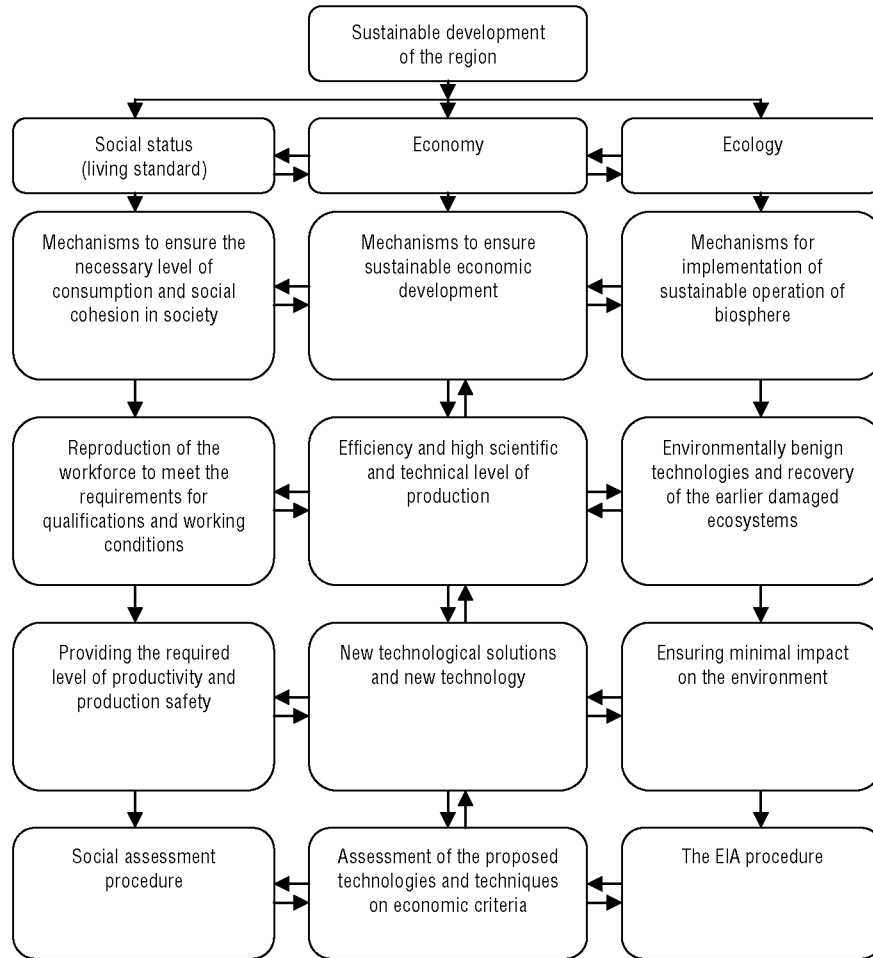
Thus, in the light of modern concepts sustainable development can be achieved only in cooperation and continuing coordination of priority of all directions of social development, primarily economic and social. They are so difficult to separate, that the term “socio-economic development” is usually used.

Besides, the term sustainable development implies that the society voluntarily restricts itself from the consumption of resources in favor of the interests of future generations. This is also a fairly complex problem, which manifests itself in particular in relation to ecology. Naturally, the “richer” one country or another, the more it can afford to spend for these purposes. Exemplary «triad» of sustainable development process is shown in *figure*.

It must be borne in mind that no society can give more than it has. If consumption begins to exceed the gross domestic product, it begins “eating away” the accumulated potential wealth or the external debt is growing. Savings are terminated – investments are reduced, and the system loses its internal sources of development, becomes more unstable.

Social justice always causes some damage; it is to some extent opposed to economic efficiency. For example, high levels of unemployment benefits inevitably leads to a desire of a greater or lesser part of people not to work.

A comprehensive scheme of sustainable development



Funding sources are needed to perform any kind of social program, mainly these are taxes, but this is pressure, undesirable external effects for the production.

As for instability, the peculiarities of the transition processes in general, and in particular the Russian reality should be taken into account. Elements of instability are inherent in any, even the most prosperous economic system.

Thus, a necessary element of market economy is the availability of free resources in the labor market. On the other hand, unemployment is a sign of instability. Inflation is a certain “stimulant” of demand, but it also characterizes the negative trends especially if it is more than some “threshold” value.

If we consider the theoretical background and trends of regional development, as well as the elements of this process, it must be borne in mind that the initial state of a territorial system is of the importance, which includes:

- highly developed – in all major indicators (gross domestic product and disposable income per capita, employment, social status, etc.) exceed the national average, have a good production and technical potential and capacity for self-development;
- medium level – on the national level in some indicators, in another they are slightly different from them, production and technical and resource capacity allows to save the situation that has been achieved, but development is impossible without some federal support (transfers);

- underdeveloped – lagging behind in almost all major indicators, to maintain the socio-economic system they need continued subsidies, weak production and technical potential, development is impossible without large-scale foreign investment;
- pioneer exploration – matches the characteristics of underdeveloped, but there is no production capacity.

The very instability is manifested not only in the state, but also in the trends that may be inherent in any of the above systems. It is advisable to identify the following main categories of processes:

☞ slowing down – gross domestic product growth rates are close to zero, investment activity is reduced, nominal incomes are stabilized and savings increase is terminated;

☞ decline – real GDP is reduced, investment are significantly reduced, real incomes are falling, savings are declining, the bank interest rate increases, employment is reduced.

Crises can arise not only from depression, but also other, in particular political events, which increases their intensity. It is the depth and the scale of instability that is the hallmark of the general crisis of the system, including in relation to depression. We should also note that both recessions and crises can have a private character, that is to occur only in certain areas (employment, investment, currency, etc.) or regions.

As for the numerical characteristics of economic status indices, the indicators or criteria of “health” level of the system, there is no common view in economic theory at this point. We can assume that there is quite a narrow “corridor”, where you can talk about full sustainability. Deviation from it in any direction, exceeding the accepted “threshold” values indicates that the system is in an instable state, although, as mentioned above, the resistance should be viewed just as a special case of instability.

Currently, the North makes about two-thirds of the Russian Federation. The North is home to about 8% of the population, but produces, by different estimates, more than 20% of the gross domestic product.

Export potential of the North provides about 70% of foreign exchange earnings. About four fifths of products are given by the enterprises for extraction and processing of natural raw materials, fuel and energy.

The economic space of the North is geographically heterogeneous. The most advanced of its European part. Recently, the importance of this region for the national economy is increasing due to the presence of seaports here year round. The production of oil and gas sector of the North-Western Siberia has strategic importance for the country. The key importance in ferrous metallurgy, mining of diamonds, gold and rare earth metals, timber and fishing industries remain the companies of the northern Eastern Siberia and the Far East [4].

Instability in the Russian economy develops in a complex interweaving of various processes that impose an individual stamp in different territorial systems. In the regions these processes are characterized by the specificity conditioned by the peculiarities of the Russian economic space.

Remote and poorly developed territories occupying 3/4 of the Russian space adjust to changing economic conditions considerably slowly. Given the relatively high investment attractiveness due to resource potential, they have significantly lower rates of economic modernization. For the years of reform these regions have lost a significant part of the reproduction, especially of human capital.

In the past 20 years, more than 2 million people have left the northern territory of Russia. That is, almost 20% of the total population in 1990. It may be noted that the foreign North the opposite trend is observed: during the same period the population of Alaska has increased by nearly thirty percent, and its economic center Anchorage “caught up” Murmansk in population, although still in the same 1990 it was behind almost 2 times.

Table 1. Indicators of socio-economic state of the RF northern regions [5]

RF subjects	Average monthly wages, thous. rubles.				Population migration, thous. people			
	2007	2008	2009	2010	2007	2008	2009	2010
Russian Federation	13.5	17.2	18.8	21.2	239.9	242.1	247.4	158.1
<b>Northern regions</b>	<b>24.6</b>	<b>29.0</b>	<b>32.4</b>	<b>35.7</b>	-20.8	-40.8	-28.5	-39.1
Karelia Republic	13.3	16.7	18.3	19.9	1.2	0.3	-0.6	-1.0
Komi Republic	7.1	20.6	23.1	25.7	-5.7	-9.1	-7.1	-8.6
The Republic of Sakha (Yakutia)	19.5	23.8	26.6	28.6	-5.5	-7.4	-7.0	-7.1
Arkhangelsk Oblast	14.5	18.0	20.0	22.2	-4.6	-6.5	-5.1	-8.0
Kamchatka Krai	21.9	27.1	31.7	36.5	-1.5	-2.2	-1.3	-0.5
Magadan Oblast	23.3	30.0	33.0	37.6	-2.3	-2.4	-1.5	-1.9
Murmansk Oblast	18.9	23.2	26.5	28.9	-4.9	-7.4	-4.8	-6.7
Sakhalin Oblast	23.1	30.4	33.3	35.8	-1.4	-2.9	-2.5	-3.1
Nenets AO	34.4	41.5	44.3	47.3	-0.1	-0.2	0.1	-0.1
Khanty-Mansi AO	32.3	37.2	39.1	41.5	4.9	1.7	4.8	3.7
Chukotka AO	31.5	38.8	42.9	47.4	-0.4	-0.9	-1.0	-0.9
Yamalo-Nenets AO	37.4	43.6	46.9	52.6	-0.6	-4.0	-2.4	-5.0

In the recent years, the intensity of out-migration has decreased somewhat, but it remains quite substantial, especially given the surplus of the Russian Federation. At the same time the outflow from the European North, as is evident from *table 1*, is almost 2 times higher than in North Asia. The only apparent reason is that it is harder to leave the latter (more expensive and longer).

An important factor in this situation is the state policy in the sphere of wages, or rather the lack of it. Regional coefficients and the northern allowances that, on the one hand, having compensated the high cost of living, but on the other, having formed the pent-up demand (including the ability to move beyond retirement age), long ago (back in the 90s) had lost their importance in the economic sphere. Because the employers carry out the tariff policy themselves, the coefficients and allowances have become largely a “backward” quantity, “reversing” the estimated earnings in the tariff. And in a low possibility of overflow of labor force in many specific (mining) specialties a monopsonic market is developing, distorting the real cost of labor.

In the past five years, the trend “washout” of northern guarantees is clearly pronounced in the public sector. Methodical aspects of

intergovernmental fiscal relations are framed in such a way that these guarantees have very little impact on federal subsidies, and in terms of the limiting level of centralization of the budget this factor is determinative.

For example, in the Murmansk Oblast (1.4 coefficient is set and 1.8 northern allowances), in 1995 the average wage was 1.8 times higher than the figure for the Russian Federation. As can be seen from Table 1, in 2007 the ratio was only 1.4, and in 2010 it was even less – 1.35. In essence, all the northern allowances were the “cleaned up”.

Despite the above-mentioned negative trends in migration and wages, the northern regions represent a fairly stable economic system. In any case, it showed better performance in the real sector than the national industrial production. As can be seen from *table 2*, for the period 2007 – 2010 the bulk of the regions showed the rates significantly above the average in the Russian Federation.

Characteristically, the crisis, in 2009, all northern subjects had an industrial production index better than the national economy. And five of the regions (Arkhangelsk, Magadan and Sakhalin oblasts, the Nenets and Chukotka AO) showed an increase in the indices; in the latter three it was very significant.

Table 2. Indices of industrial production in the regions of the Russian North [5]

RF subjects	In % to previous year				2010 in % to 2006
	2007	2008	2009	2010	
Russian Federation	106.3	102.1	89.2	108.2	104.7
<b>Northern regions</b>					
Karelia Republic	116.8	100.0	90.1	110.6	116.4
Komi Republic	103.1	103.0	98.6	100.3	105.0
The Republic of Sakha (Yakutia)	100.3	104.3	91.3	117.5	112.2
Arkhangelsk Oblast	109.0	108.7	103.8	102.3	125.8
Kamchatka Krai	102.0	105.0	92.5	105.0	104.0
Magadan Oblast	84.9	102.4	105.9	103.8	95.6
Murmansk Oblast	98.2	97.3	93.6	104.0	93.2
Sakhalin Oblast	210.0	87.0	121.9	101.2	223.7
Nenets AO	103.7	104.1	130.8	96.2	135.8
Khanty-Mansi AO	102.8	101.2	98.6	101.8	104.4
Chukotka AO	94.0	107.6	138.1	93.8	130.9
Yamalo-Nenets AO	95.2	98.1	90.8	107.3	92.0

Although economic theory considers that commodity markets are the most “capricious”, that is they are subject to fluctuations in supply and demand in the maximum extent, and, consequently, to changes in pricing environment. This situation can be considered relatively new even in a theoretical sense, conditioned by both the peculiarities of the latest world financial crisis (it affected the real sector at least, and the financial sphere most), and the special position of the commodity sector in Russian economy, caused by:

- ✓ stable and large domestic demand for energy (cold climate requires more energy consumption);
- ✓ the existence of long-term export contracts with stable prices that are not subject to significant fluctuations in the medium term;
- ✓ high investment attractiveness of northern industries and regions ahead of time.

For today's Russia the zone of the North (64.7% belong to the Far North and localities equal to them) is of particular importance due to the fact that, on the one hand, it is a vast vital part of the country with extreme conditions of life and a pronounced specificity of socio-economic development. On the other hand, this macro-region is a zone of Russia's strategic interests, as it has a unique geopolitical, natural resource and socio-economic potential.

Traditionally, the level of regional economic development is assessed by gross regional product (GRP) per capita. However, the distribution of GRP by the regions is extremely uneven. Respect of the gross regional product (GRP) per capita the maximum difference between the regions is 36 times [6].

The dominant sectors of the economy of the northern regions are fuel, timber, wood processing, pulp and paper industry, nonferrous metallurgy and power industry. The share of fuel sector, for example, in 2006 was 64.9% of industrial production in the Northern Zone, non-ferrous metallurgy – 8%, timber, wood processing and pulp and paper industry – 5.5% and electricity – 9.6%. Basically, this industry specialization determines the nature of the spatial distribution of economic activity in the North and, consequently, the degree of differentiation or unevenness of the regions in terms of economic development.

The spatial distribution of Northern and Arctic regions of Russia in the existing classification of industries is rather conventional. Overall, however, the regions with a predominant development of mineral production (natural raw materials) accounted for 79.7% of industrial output, the regions with the predominant development of manufacturing industries – 18% and a third group of the regions – only 2.3%.



In the north of Russia, due to its resource-based orientation, the rent must have increased share in the regional product, but it is unlikely to exceed 10%. It might be enough to compensate for increased cost of production, but technical difficulty is to distinguish the rent component in the cost and price. Resource payments used for this purpose in the present, such as tax on reproduction of mineral resources or royalties are very small in size and do not perform compensatory functions of production costs. Rental income, which would compensate for cost rise in social activities in the cities of the Far North, do not exist in an explicit form. The powers and competences in the system of “public administration – local government – organization” in relation to resource management are vaguely defined.

Rents in the system of tax collection are small and tend to decrease, which is observed both in the whole of the Russian Federation and the individual, mainly raw regions, which include the Murmansk Oblast. In addition, that the size of rent payments is insignificant by itself, in the expenditure part it is “sprayed” on a number of channels and is almost never used for investment.

Thus, in the field of mineral resources the supply of reserves since 1990 to 2010, decreased by almost 2-fold: in the late 1980s, it approached on average to 20 years for all the groups, now it amounts almost 10 years. Particularly difficult is the situation with the hydrocarbon feedstock.

The tax system with the introduction of the Tax Code went through a transformation from the principle of “higher taxes and more tax breaks” to radically different principle of “lower taxes and abolition of tax benefits”. However, the change of principles is slow and while there is mixed system highly differentiated by the regions. In the rental taxation low rates and at the same time a great number of benefits are observed.

The tax system provides for virtually all rental payments to the federal level, which includes [7]:

- excise taxes on certain types of mineral raw materials;
- tax on natural resources use;
- tax on mineral resources reproduction;
- tax on additional income from hydrocarbons extraction;
- fee for the use of wildlife and aquatic biological resources;
- forest tax;
- water tax.

The only rental payments, which belongs to the local government level, is a land tax. However, its magnitude is so small that it is neither the incentive to improve land use, nor an important element of the fiscal system.

However, in the considered tax scheme, in fact, it comes to a part of absolute rent received by the state in an explicit, “direct” form. Its other part, the differential rent, is withdrawn and disbursed through other mechanisms. Firstly, some of it is needed by businesses, such as payment of wages in the amount, the minimum compensatory for the reproduction of labor resources in a high minimum consumer budget. Accordingly, the increased value added generates tax increase for this value. This mechanism has been repeatedly considered in details in terms of marine resources by the specialists of our institute [8].

A special rate of 10% has been established for fishery products (as for food products group) with general (standard) rate of 20%. Nevertheless, the VAT shall withdraw the rent from the industry in that part where in wages and profits (the elements forming the Value Added Tax) there are the components of super-profits.

Wages in the North regions is much greater than the average for the Russian Federation: in 2008 in the Murmansk Oblast it was of 1.37-fold, in the Republic of Sakha (Yakutia) of 1.64-fold, in Chukotka of 1.98-fold and in the Yamalo-Nenets Autonomous Okrug 3 times.

Even though these excesses, on the one hand, almost only compensate for rise in cost of living (consumer's budget), but on the other, they are determined by the system of guarantees and compensations established by the state, they "generate" the appropriate additional tax, coming almost entirely at the disposal of the federal government.

In world practice, the northern regions are purely subsidized. For example, Denmark allocates Greenland and the Faroe Islands with a population of just over 100 thousand an annual subvention of about 300 million dollars. Financial "injections" in Alaska back in 2005 exceeded 1 billion dollars. The Russian Far North is unique in that it, on the contrary, is a donor to the federal budget [9].

The consolidated budget of Russia the northern territories listed, as is evident from *table 3*, almost 2 trillion. rub., or 25% of all taxes and fees, including the federal budget received 1.46 trillion. rub. or 40% of total taxes. Of course, major donors are the major raw material provinces, such as the Yamal-Nenets and Khanty-Mansiysk district. However, in the north of Europe as a whole situation is rather stable and payments to the

federal budget reached nearly 50%, well above the average Federation. It may be noted that industrial regions, such as, for example, the Republic of Karelia, and Arkhangelsk region look relatively disadvantaged. However, the balanced outcome of the latter in conjunction with its member Nenets Autonomous Area is fortunate enough [10].

It must be borne in mind that in *table 3* do not include the customs duties, which are fully paid into the federal budget. And they are in the Murmansk region, for example, reach 30 billion rubles. per year, that is quite comparable with the total amount of taxes.

All the above suggests that the rental model for the North and Arctic Russia as a whole to produce impressive results. However, the federal government does not consider the macro-regional characteristics and not only does not create a preference for regions and businesses, working in extreme conditions, but also denies the need for special controls, such as those associated with the payment of northern allowances and coefficients, or the need for rationalization of the population. Closing dozens of settlements in the Far North, primarily related to the depletion of raw materials or by closing the

Table 3. Receipts from taxes and duties from the northern regions to the budget system of the Russian Federation for 2008

Regions	Received taxes and duties		Including into the federal budget	
	mill., rub.,	%*	mill., rub.,	%**
Republic of Karelia	17302.6	0.2	2470.1	14.3
Komi Republic	103456.6	1.3	67383.7	65.1
The Republic of Sakha (Yakutia)	45438.5	0.6	6509.1	14.3
Arkhangelsk Oblast	24758.3	0.3	2221.2	9.0
Kamchatka Krai	11557.4	0.1	1509.4	13.1
Magadan Oblast	7427.4	0.1	1172.6	15.8
Murmansk Oblast	39951.8	0.5	9260.4	23.2
Sakhalin Oblast	52585.6	0.7	22625.0	43.0
Nenets AO	42290.0	0.5	30112.8	71.2
Khanty-Mansi AO	1291477.0	16.2	1063325.1	82.3
Chukotka AO	8317.6	0.1	2985.2	35.9
Yamalo-Nenets AO	337689.9	4.2	247167.3	73.2
Total for the Northern territories	1984757.5	24.8	1457058.1	73.2
Total for the RF (bill.)	7948990	100.0	3751900	44.9

\* In % of total all-Russian figure.  
\*\* In % of the amount of taxes and duties.

Table 4. Financial adequacy of the Northern European regions in 2008

Subject name	The of total transfers to the federal budget, billion rubles	In % of total expenditures
Arkhangelsk Oblast	6.5	23.9
The Republic of Karelia	4.1	21.5
Komi Republic	8.1	6.7
Murmansk Oblast	6.3	15.0
Nenets AO	1.5	3.5
Total	26.5	11.4

special (including defense facilities) remain essentially alone with their problems. Regional and municipal authorities to help them not in the state and the federal trust fund for sustainable development of northern territories and is not created.

There are additional indicators of intergovernmental relations, which even the European North of Russia show the application not the rent, but rather a coherently-colonial model of withdrawal of resources without any compensation not only for future generations, but modern people.

As can be seen from *table 4*, the reverse transfers do not reach even 25% of the regions reviewed, transfers to the federal budget, even without customs duties, which indicates the extreme imbalance of financial flows.

Differential rent is taken on a massive scale in the form of non-tax flows, such as customs duties and taxes, transportation costs, including pay for access to pipelines, participation in competitions (obtaining quotas) on natural resources.

Mining companies are forced to spend significant funds on the reproduction of mineral resources. Steadily deteriorated mining and geological conditions of extraction, transportation, etc., which also requires additional investment. Stricter environmental requirements and parameters, which also causes the increase in costs of enterprises. All this forces companies to “show” at least a part of rent payments from taxation. Particularly strong opportunities for this appear in the so-called vertically integrated structures.

Financial-Industrial Group (Holdings) was used for this purpose a number of techniques:

- 1) the acquisition by the parent company controlling interests in subsidiaries;
- 2) transfer of all domestic financial flows into a single control center for the preservation of its subsidiaries functions of the centers of costs;
- 3) use the mechanism of transfer pricing:
  - underpricing in the primary stages of production (primary production and processing of raw materials);
  - introduction of domestic means of payment (bills, bonds, parent companies);
  - translation of individual stages in the scheme of internal tolling (processing of raw materials to give and take basis).

Another issue that these funds are not always returned to the northern regions to the required size.

Thus, in order to use the principles and mechanism of rent payments to improve the sustainability of the resource sector to the national economy:

- identify factors that cause - the rise in production in special economic conditions and possible sources of compensation, including a transitional period when the market regulators still can not be applied in full;
- form the concept of a system in which components of rental prices in the first place would compensate for the increased costs of business entities, then municipalities and northern regions and is then sent to the federal budget;

- standard - procedure to determine the structure of ownership and tax payments, providing capacity given in the preceding paragraph schemes and enhance the sustainable management;
- provide - that as an objective deterioration of raw materials for a long time producing fields as local sources to serve as a growing part of the differential and absolute rent;
- limit the flow of funds from the Far North in a vertically-integrated structures with the use of transfer pricing and other tools;
- identify the development of new deposits of rental payments in the transformation of the mechanism of transfer of non-renewable natural resources in funding for collection development heritage.

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