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FROM THE CHIEF EDITOR

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What does the coming day hold for the country?

Delivering his Address to the RF Federal Assembly in December 2012, V.V. Putin, who was elected to a third term as President, noted the following: **"The authorities must not be an isolated caste. This is the only way to build a strong moral foundation for creative work, an affirmation of order and freedom, morality and civic solidarity, justice and truth, and nationally oriented consciousness"**[1]**.** The President pointed out that the fulfillment of the goals set out in the Decrees as of May 7, 2012 is in its essence the programme for providing the decent standard of living, the significant enhancement of Russia's competitiveness in the world, reduction of threats to its national security.

However, the outgoing year shows that, unfortunately, there was no such spirit in the activities of the RF Government in the implementation of specific measures aimed at "ensuring the country's dynamic development in all the spheres".

In his Address to the Federal Assembly on December 12, 2013 V.V. Putin stated: **"A year and a half has passed since the executive orders were issued. You know what I'm seeing? Either things are being done in a way that elicits a negative reaction among the public, or nothing is done at all. Clearly, we will fail to achieve our stated goals with this kind of work"** [2]**.**

Throughout the year, the Government four times reduced the main forecast indicators that show the development of Russia's economy *(tab. 1)*.

Back in September 2012 the Ministry of Economic Development forecasted for 2013 that Russia's gross domestic product would increase as compared with the previous year level by 103.7%, in April 2013 – by 102.4%, and in December – by only 101.4%.

[1] Putin V.V. Presidential Address to the Federal Assembly, December 12, 2012. Available at: http://news.kremlin.ru/transcripts/17118

[2] Putin V.V. Presidential Address to the Federal Assembly, December 12, 2013. Available at: http://news.kremlin.ru/transcripts/19825

Table 1. Forecast of the main macroeconomic indicators of development of the Russian Federation in 2013, as a percentage of those of the previous year (in comparable prices)

Indicators	Dates of provision of the forecast				
	September 12, 2012	December 14, 2012	April 12, 2013	August 26, 2013	December 4, 2013
GDP	103.7	103.6	102.4	101.8	101.4
Industrial production index	103.7	103.7	102.0	100.7	100.1
Investment in fixed capital	107.2	106.5	104.6	102.5	100.2
Inflow (+), outflow (-) of capital, billion US dollars	-10.0	-10.0	-50.0	-70.0	-60.0
Source: RF Ministry of Economic Development.					

December 2013 witnessed the stagnation of investment instead of the previously forecasted 7 percent growth. The December forecast indicated that the planned sharp reduction in the volume of capital exports from the country would not be achieved. Moreover, the index had an upward trend.

The crisis of regional finance has been aggravating. The parameters for 2013, set out in the three-year forecasts of the regions' budgets, are deviating more and more from the projects, which proves the poor quality of budget planning. According to estimates, the territorial budgets' own revenues in 2013 will be reduced by a trillion rubles, or by 13% compared with the three-year budget for the period of 2013–2015, and their deficit will increase in 3.8 times *(tab. 2)*.

At that, the decline in the profit of economic entities is the key factor in the reduction of the regions' own budget revenues *(tab. 3)*. This is mainly the result of the fact that oligarchic corporations have lobbied for a new order of assessing the tax base through the formation of consolidated groups of taxpayers, which led to a deepening crisis of regional finances.

The Chairman of the Government D.A. Medvedev and senior government officials throughout most of the year explained the situation by external factors, namely, deterioration of the situation in the world market.

In his Address to the Federal Assembly on December 12, 2013, V.V. Putin made a statement of principle: **"Of course we are feeling the effects of the global economic crisis, but let's be frank: the main reasons for the slowdown in our economy are internal rather than external in nature"** [3].

During the year the President more than ten times publicly reproofed the Government and Federal Ministers for the low level of organizational activity on the implementation of the set goals, the inefficiency of governmental decisions on the support to necessary economic growth[4].

It appears that V.V. Putin has every reason to move from a regular criticism of D.A. Medvedev's inefficient government to coercive measures and to transfer "slow-witted" cabinet officers to the expert community.

An objective analysis conducted by the institutes of the Russian Academy of Sciences[5], including ISEDT RAS, proves that as a result of neoliberal market reforms Russia has

[3] Ibidem.

[4] See Appendix on page 10.

[5] See the recent works: Glazyev S.Yu., Lokosov V.V. Assessment of the critical threshold values of the indicators of the state of Russian society and their use in the socio-economic development management. Herald of the Russian Academy of Sciences. 2012. Vol. 82. No.7; Glazyev S.Yu., Fetisov G.N. On the strategy of Russia's sustainable development. Ekonomist. 2013. No.1; Russian transformation: 20 years later. Ed. by J. Sapir. Moscow: Magistr, 2013; Assessment of the factors in growth and forecasting of socio-economic development of Russia's regions. Ed. by RAS Academician A.I. Tatarkin, RAS Academician P.A. Minakir; Russian Academy of Sciences, Ural Branch, Institute of Economics; Far-Eastern Branch, Economic Research Institute. Yekaterinburg: IE UB RAS, 2012; Osipov G.V., Kara-Murza S.G. Knowledge society: transition to innovation development of Russia. Moscow: Librokom, 2013; Russia on the way to the modern, dynamic and efficient economy. Ed. by Academicians A.D. Nekipelov, V.V. Ivanter, S.Yu. Glazyev. Moscow: Russian Academy of Sciences, 2013.

Table 2. The main forecast parameters of consolidated budgets of the RF subjects for 2013, billion rubles

Parameters	Budget forecast by draft laws for a three-year period			2013, assessment of expected parameters	Dynamics of assessment for 2013 in comparison with the projects			
					2011–2013		2013–2015	
	2011–2013	2012–2014	2013–2015		billion rubles	%	billion rubles	%
Revenues	7338	8134.3	9062	8909	871	11.9	-853	-9.4
Own revenues	6374	7047	7765	6767	393	6.2	-998	-12.9
Deficit	-136	-36.7	-121	-460	324	3.4 p.	339	3.8 times
Sources: RF Ministry of Finance; ISEDT RAS calculations.								

Table 3. Key indicators of the budget process in the regions of the Russian Federation, billion rubles

Indicators	10 months of 2012	10 months of 2013	Dynamics, %
Profit	6965.7	6324.9	90.8
Profit tax	1709.8	1457.5	85.2
Public and municipal debt	1364.3	1717.5	125.9
Debt load, %	25.8	31.7	5.9 p.p.
Sources: RF Ministry of Finance; Federal Treasury; ISEDT RAS calculations.			

developed a socio-economic system of a mixed oligarchic type, the main manifestations of which are the following:

– establishment of elitist oligarchic corporatism (as a result of unreasoned policy of privatization), which owns a significant part of state property and distributes its influence on the policies of the legislative and executive authorities;

– predominance of the bureaucratic system that solves pressing issues through continuous introduction of amendments in the current socio-economic system; moreover, these changes, are not connected, as a rule, with qualitative updating of this system;

– slackening of the state's control functions, primarily in the sphere of compliance with tax regulations and obligations, expansion of the scale of lobbying activity not regulated by the legislation and not accountable to the society.

Large-scale private ownership of strategically important economic sectors and natural resources does not allow the controllability of the economy to be ensured and the financial and economic resources to be allocated appropriately.

In the previous issues of our journal we published the main research findings of ISEDT RAS according to the results of the analysis of activity of Russia's leading ferrous metallurgy corporations[6]. Due to the fact that their products were exported by offshore traders at prices that were by 20–30% lower than the global ones, the approximate lost revenue for 2008–2011 amounted to 367 billion rubles. Profit tax from this sum could have added 11 billion rubles to the federal budget, and 66 billion rubles to the territorial budgets. Two-thirds of taxes paid by metallurgical corporations are returned in the metallurgical sector in the form of compensation of input VAT on export operations. All this is continuously depleting the federal budget and, especially, regional budgets, increasing their debt load[7].

[6] See: Ilyin V.A. Page unturned. Economic and social changes: facts, trends, forecast. 2013. No.1; Povarova A.I. Regional budget for 2013 – 2015: stability or survival? Ibidem; Ilyin V.A. National and regional security: a view from the region. Ibidem. No.3; Ilyin V.A. New agenda and state management efficiency. Ibidem. No.5.

[7] For details see: Ilyin V.A., Povarova A.I. Issues of state management efficiency. Budget crisis in the regions: monograph. Vologda: ISEDT RAS, 2013.

Table 4. How would you assess the current performance of the RF President?, as a percentage of the number of respondents

Assessment	2000	2003	2004	2007	2011	2012	2013	Dynamics (+/-), 2013 in comparison with				
								2012	2011	2007	2004	2000
I approve	66.0	67.6	64.9	75.3	58.7	51.7	55.3	+4	-3	-20	-10	-11
I do not approve	14.8	13.7	19.2	11.5	25.6	32.6	29.4	-3	+4	+18	+10	+15

Table 5. Assessment of the performance of the RF President by various social groups of the Vologda Oblast population (answer option "I completely and generally approve"), as a percentage of the number of respondents

Social groups	Year							Increment/decrease in 2013 in comparison with				
	2000	2003	2004	2007	2011	2012	2013	2012	2011	2007	2004	2000
Sex												
Men	66.0	66.1	66.2	73.6	55.6	48.9	52.4	3.5	-3.2	-21.2	-13.8	-13.6
Women	66.0	68.7	63.9	76.7	61.2	53.9	57.7	3.8	-3.5	-19.0	-6.2	-8.3
Age												
Under 30	66.2	71.2	69.0	76.6	58.3	49.7	52.9	3.2	-5.4	-23.7	-16.1	-13.3
30–55	66.4	66.5	64.4	75.1	57.6	50.9	55.4	4.5	-2.2	-19.7	-9.0	-11.0
Over 55	65.1	65.9	61.9	74.6	60.7	54.6	57.1	2.5	-3.6	-17.5	-4.8	-8.0
Education												
Secondary and incomplete secondary	64.0	62.7	62.7	70.3	54.9	46.0	51.4	5.4	-3.5	-18.9	-11.3	-12.6
Secondary vocational	67.7	68.5	66.5	76.4	59.8	51.8	55.8	4.0	-4.0	-20.6	-10.7	-11.9
Higher and incomplete higher	67.6	71.8	65.8	80.1	61.3	56.6	59.1	2.5	-2.2	-21.0	-6.7	-8.5
Income groups												
20% of the poorest people	56.4	57.1	56.9	65.1	45.7	40.9	49.6	8.7	3.9	-15.5	-7.3	-6.8
60% of the people with middle-sized income	68.9	70.7	67.7	78.0	60.4	53.8	56.1	2.3	-4.3	-21.9	-11.6	-12.8
20% of the most prosperous people	69.3	74.7	73.1	82.6	68.9	59.4	63.6	4.2	-5.3	-19.0	-9.5	-5.7
Territories												
Vologda	66.7	74.4	62.1	74.1	58.3	51.6	53.2	1.6	-5.1	-20.9	-8.9	-13.5
Cherepovets	62.2	64.4	64.0	82.8	68.5	62.3	63.7	1.4	-4.8	-19.1	-0.3	1.5
Districts	67.7	66.1	66.7	72.2	53.9	46.3	51.9	5.6	-2.0	-20.3	-14.8	-15.8
Oblast	66.0	67.6	64.9	75.3	58.7	51.7	55.3	3.6	-3.4	-20.0	-9.6	-10.7

In this regard, it is very important that part of the Presidential Address was devoted to counteracting the offshores. Putin proposed three new initiatives. The revenues of companies, registered in an offshore jurisdiction and owned by the Russians, ultimate beneficiaries, should be subject to Russian tax regulations.

Companies registered abroad, should be deprived of state support measures, VEB loans and state guarantees, they should also be denied access to the execution of public contracts and contracts between the structures and the state.

The President focused on the importance of civic participation in the life of the country,

the enhancement of public control. He showed that he felt the increased level of requirements of the society to the state and its leadership.

In many respects the 2013 Presidential Address is the logical continuation of his September speech at the Valdai International Club, when the Head of State clearly declared that moral values should prevail at all levels of executive and legislative power, for all levels of business, officials, public employees.

V.V. Putin's desire to improve the moral situation in the country, to strengthen the control of civil society over the activities of authorities at all levels finds growing support in the country.

The research carried out at ISEDT RAS shows that according to the results of six consecutive surveys conducted in 2013 in the Vologda Oblast, the indicators of approval of the President's performance increased in comparison with the results of 2012 from 3–5 points *(tab. 4)*. Moreover, positive assessments are observed virtually in all social groups *(tab. 5)*.

However, it is noteworthy that more than half of the respondents (57%) do not consider that the President's activity aimed at boosting the economy and wellbeing is successful *(see table on p.16)*. This assessment is largely formed due to uncoordinated actions of the RF Government. Under the influence of oligarchic corporations, it organizes the work like a circular firing squad. It is this style that has led the dynamics of the national economy development to the recession.

In our opinion, the President should not only remind the political elite of the necessity to execute the formal decisions; he should also force it to do so, and eliminate the "quasi-colonial part of the elite".

2014 should not become the year of missed opportunities for the RF President V.V. Putin with regard to the implementation of strategically important state tasks on modernization of the country, set out in the pre-election articles and stipulated by the Decrees dated May 7, 2012.

Appendix to page 6.

Concise list of essential activities and critical statements of Russia's President V.V. Putin with regard to the performance of the RF Government and government structures

Date, event	Content
September 19, 2012, Decree of the RF President (following the results of the meeting on the draft budget for 2013–2015)	Disciplinary measures in the form of a reprimand were taken against Education and Science Minister D. Livanov, Regional Development Minister O. Govorun, and Labour and Social Protection Minister M. Topilin.
January 31, 2013, Extended Session of the RF Government	V.V. Putin noted the deterioration in economic performance and the absence of a coherent strategy for the development of the country's economy.
February 4, 2013, Sochi, Meeting on improving the quality of housing and utilities services	V.V. Putin: "What this sector needs are not pinpoint decisions of the moment that only serve to patch up the holes, but long-term systemic decisions aimed at providing people with high-quality housing and utilities services at clear and affordable prices. We keep talking about improving quality but little actually changes".
April 16, 2013, Meeting in Elista (Kalmykia) on the issues of resettling residents of dilapidated housing	V.V. Putin: "Regional programmes for the resettlement of people from dilapidated housing designed for the next three years should have been approved by the regions by now. The deadline had been set for April 15, 2013. However, only three regions have approved such programmes so far… Why only three regions have approved their programmes? What is the date today? The 16th? Where are your programmes?". (off the air) V.V. Putin: "How do we work? The quality of the work is pathetic, everything is done superficially. If we continue this way, we won't do a thing! But if we work persistently and competently, we will make it. Let's raise the quality of our work. It ought to be done! If we don't do it, it will have to be admitted that it is either me working inefficiently or it is you failing to do your job properly. Take notice that, judging by the current situation, I, personally, lean toward the latter. I think it's clear. No one should have any illusions".
June 7, 2013, Meeting with members of the RF Government on the implementation of the Presidential Decrees dated May 7, 2012	V.V. Putin: "Implementing these orders is a top priority for all of our work, for the Government and all the ministries, and for the authorities at every level. The imperative is to produce real results and work not for the sake of reports and documents, but in the interests of our people". "I can see that the ministries, agencies, and the Government Staff have put in a lot of thorough work, [but]… the content and quality of these documents still does not meet the required standards".
June 10, 2013, Meeting with national security agencies, defence and law enforcement agencies on the plans of their activities to achieve Russia's socio-economic development targets	V.V. Putin: "What I have seen in your plans… partly… disappoints me". V.V. Putin pointed out the need for more brief ("we don't need big documents") and specific plans.
November 14, 2013, Meeting of the Agency for Strategic Initiatives (ASI) Reply to the question of the President of the Chamber of Commerce and Industry of the Russian Federation S. Katyrin on giving the MVD the right to initiate criminal proceedings for alleged tax crimes. At that, Mr. Katyrin noted that some government officials have already spoken out against this measure.	V.V. Putin: "I have just come back from Korea and Vietnam, so I am only now looking at who said what on this topic; I will talk with my colleagues and we will figure things out, but this issue can be resolved very simply. I will be obligated to remind them that there are certain practices in resolving such matters before going to the media. As we know, if somebody does not agree with something, as Mr. Kudrin did – he crossed over into the expert community…" We have a long-standing practice to discuss all issues together, either within the Government or the Presidential Executive Office, doing this jointly and fairly democratically… When making such decisions, we must make balanced choices that would ensure the interests of all groups in society: the business community and the rest of the public. This is highly important in order for everyone to understand that these decisions are balanced and fair".
December 4, 2013, Novo-Ogaryovo, Moscow Oblast, Meeting of the Economic Council	V.V. Putin: "Judging by the quality of administrative procedures in the construction sector, we are still at the bottom end of global rankings. Due to the lack of clear decisions we are not receiving millions of square metres of housing".
December 12, 2013, Annual Address of the RF President V.V.Putin to the Federal Assembly	V.V. Putin: "The May 2012 executive orders contain specific measures designed to ensure the country's dynamic development in all fields. In fact, the orders amounted to a unified action programme, reflecting the will of millions of people, the desire of all Russian people for a better life. Sometimes we hear that there are insufficient funds to realise all stated plans and goals, that we need to lower our standards and simplify our tasks". I think that it is impossible to elaborate policies following a formal approach… economic trends may and do change. But that is no reason to talk about revising our goals. We need to do real work, seek solutions, and clearly lay out budgetary and other priorities. I would ask you to update all state programmes accordingly".

Public opinion monitoring of the state of the Russian society

As in the previous issues, we publish the results of the public opinion monitoring of the state of the Russian society conducted by ISEDT RAS in the Vologda Oblast[1].

The following tables show the dynamics of a number of parameters indicating the social feeling and socio-political sentiment of the Vologda Oblast population on average for the last 6 surveys conducted in 2013 in comparison with the data for 2012, as well as for 2011, when D.A. Medvedev's presidential term was due to expire, and for 2007, when V.V. Putin's second Presidency was coming to an end.

Estimation of performance of the authorities

On average for 2013 in comparison with 2012, the assessments of the performance of Russia's President and the Vologda Oblast Governor have improved (the share of positive evaluations has increased by 4% and 3% accordingly).

However, so far the situation remains less favourable than in 2007. The trends in public opinion still remain negative with regard to the activities of the RF Government.

Table 1. Dynamics of the answers to the question: "How do you assess the current performance of..?", as a percentage of the number of respondents

Indicator	2007	2011	2012	Feb. 2013	April 2013	June 2013	Aug. 2013	Oct. 2013	Dec. 2013	Average for the last 6 surveys	Dynamics (+/-), the last 6 surveys in comparison with		
											2012	2011	2007
RF President													
I approve	75.3	58.7	51.7	55.5	55.5	54.3	55.1	54.3	57.3	55.3	+4	-3	-20
I do not approve	11.5	25.6	32.6	29.2	31.5	29.3	28.9	28.7	28.9	29.4	-3	+4	+18
Chairman of the RF Government*													
I approve	-	59.3	49.6	47.9	48.5	46.2	50.4	49.0	51.1	48.9	-1	-10	-
I do not approve	-	24.7	33.3	34.4	35.7	33.2	30.4	30.6	32.5	32.8	-1	+8	-
Governor													
I approve	55.8	45.7	41.9	43.0	44.4	44.3	44.8	45.9	44.1	44.4	+3	-1	-11
I do not approve	22.2	30.5	33.3	33.8	34.9	31.9	31.1	32.4	35.3	33.2	0	+3	+11

* included into the survey since 2008.

[1] The polls are held six times a year in Vologda, Cherepovets, and in eight districts of the oblast (Babayevsky District, Velikoustyugsky District, Vozhegodsky District, Gryazovetsky District, Kirillovsky District, Nikolsky District, Tarnogsky District and Sheksninsky District). The method of the survey is a questionnaire poll by place of residence of respondents. The volume of a sample population is 1500 people aged from 18 and older. The sample is purposeful and quoted. Representativeness of the sample is ensured by the observance of the proportions between the urban and rural population, the proportions between the inhabitants of settlements of various types (rural communities, small and medium-sized cities), age and sex structure of the oblast's adult population. Sampling error does not exceed 3%.

More details on the results of ISEDT RAS polls are available at http://www.vscc.ac.ru/.

Assessment of the RF President's performance in coping with key issues

2013, as compared with 2012, witnessed improvement in the estimations of the RF President's success in dealing with all the key issues. For instance, the assessment of strengthening Russia's international standing increased by 3%, the assessment of the RF President's success in imposing order in the country increased by 4%. However, it is alarming that over half of the respondents (57%) do not consider that the President's performance in dealing with the issue of economic recovery and increasing the citizens' welfare is successful.

Table 2. Dynamics of the answers to the question: "How successfully, in your opinion, does the RF President cope with the following challenging issues?"* (as a percentage of the number of respondents)

Indicator	2007	2011	2012	Feb. 2013	Apr. 2013	June 2013	Aug. 2013	Oct. 2013	Dec. 2013	Average for the last 6 surveys	Dynamics (+/-), the last 6 surveys in comparison wit		
											2012	2011	2007
Strengthening Russia's international standing													
Successfully	58.4	46.2	43.1	45.1	46.7	41.7	45.3	47.7	47.5	45.7	+3	-1	-13
Unsuccessfully	24.9	33.7	37.9	34.4	39.5	37.1	36.4	33.7	35.8	36.2	-2	+3	+11
Index of success	*133.5*	*112.5*	*105.2*	*110.7*	*107.2*	*104.6*	*108.9*	114.0	111.7	*109.5*	*+4*	*-3*	*-24*
Imposing order in the country													
Successfully	53.2	36.6	35.4	37.7	37.2	35.1	39.9	41.7	44.5	39.4	+4	+3	-14
Unsuccessfully	34.0	50.0	50.7	46.5	49.9	49.9	46.7	46.7	45.5	47.5	-3	-3	+14
Index of success	*119.2*	*86.6*	*84.7*	*91.2*	*87.3*	*85.2*	*93.2*	*95.0*	*99.0*	*91.8*	*+7*	*+5*	*-27*
Protecting democracy and strengthening citizens' freedoms													
Successfully	44.4	32.4	28.8	30.0	30.4	29.1	34.7	33.5	32.8	31.8	+3	-1	-13
Unsuccessfully	37.0	48.3	52.3	49.8	54.9	50.0	48.5	50.9	51.6	51.0	-1	+3	+14
Index of success	*107.4*	*84.1*	*76.5*	*80.2*	*75.5*	*79.1*	*86.2*	*82.6*	*81.2*	*80.8*	*+4*	*-3*	*-27*
Economic recovery and increase in citizens' welfare													
Successfully	47.2	30.7	28.5	30.7	31.9	28.2	32.6	31.9	32.6	31.3	+3	+1	-16
Не успешно	39.1	56.1	57.9	53.9	59.6	56.7	53.4	57.7	59.7	56.8	-1	+1	+18
Index of success	*108.1*	*74.6*	*70.6*	*76.8*	*72.3*	*71.5*	*79.2*	*74.2*	*72.9*	*74.5*	*+4*	*0*	*-34*

* Ranked according to the average value of the index of success for the last six surveys. For calculating each index the share of negative answers is subtracted from the share of positive answers, after that 100 is added to the obtained figure in order to avoid negative values. Consequently, fully negative answers would give the total index 0, fully positive answers – index 200, the balance between the former and the latter – index 100, which is, in fact, a neutral mark. The index of social strain has a reversed order of values: 0 points is an absolutely positive value, 200 points – an absolutely negative value.

Estimation of social condition

The share of positive assessments of social mood and stock of patience on average for 2013 has increased in comparison with 2012. However, on average for the last 6 surveys there has been an increase in the share of the oblast population, who consider themselves "poor" and "extremely poor".

Table 3. Estimation of social condition (as a percentage of the number of respondents)

Answer options	2007	2011	2012	Feb. 2013	Apr. 2013	June 2013	Aug. 2013	Oct. 2013	Dec. 2013	Average for the last 6 surveys	Dynamics (+/-), the last 6 surveys in comparison with		
											2012	2011	2007
Mood													
Usual condition, good mood	63.6	63.1	67.3	66.6	68.6	66.4	68.7	71.5	69.6	68.6	+1	+5	+5
Feeling stress, anger, fear, depression	27.8	28.9	27.0	30.5	26.0	25.9	26.3	24.0	26.2	26.5	-1	-2	-1
Stock of patience													
Everything is not so bad; it is difficult to live, but it is possible to stand it	74.1	74.8	76.6	75.5	77.9	77.8	79.7	81.6	83.1	79.3	+3	+5	+5
It is impossible to bear such plight	13.6	15.3	15.8	16.1	16.5	13.7	14.7	12.3	12.0	14.2	-2	-1	+1
Social self-identification													
The share of people who consider themselves to have average income	48.2	43.1	44.7	44.3	42.6	41.9	44.9	45.7	43.7	43.9	-1	+1	-4
The share of people who consider themselves to be poor and extremely poor	42.4	44.3	44.5	45.9	48.2	48.3	46.8	45.4	46.7	46.9	+2	+3	+5
Consumer Sentiment Index													
Index value, points	105.9	89.6	91.5	92.3	90.4	89.8	91.0	90.4	87.9	90.3	-1	+1	-16

Attitude of the population toward political parties

The dynamics of support to the party of power shows no positive changes. As in 2007 and in 2011, on average for the past six surveys, the level of support was 29–30%. At that, the significant share of the oblast residents consider that no political party among currently existing ones expresses their interests (in 2007 – 18%, in 2011 – 29%, in 2012 – 31%, on average for the last 6 surveys – 35%).

Table 4. Dynamics of the answers to the question: "Which party expresses your interests?", as a percentage of the number of respondents

Party	2007	Election to the RF State Duma 2007, fact	2011	Election to the RF State Duma 2011, fact	2012	Feb. 2013	April 2013	June 2013	Aug. 2013	Oct. 2013	Dec. 2013	Average for the last 6 surveys	Dynamics (+/-), the last 6 surveys in comparison with		
													2012	2011	2007
United Russia	30.2	60.5	31.1	33.4	29.1	30.5	28.5	31.3	29.6	26.9	29.5	29.4	0	-2	-1
KPRF	7.0	9.3	10.3	16.8	10.6	9.7	11.0	11.3	12.0	11.9	11.8	11.3	+1	+1	+4
LDPR	7.5	11.0	7.8	15.4	7.8	6.3	7.1	6.6	6.8	8.4	8.1	7.2	-1	-1	0
Just Russia	7.8	8.8	5.6	27.2	6.6	5.3	5.1	4.7	4.3	4.0	4.4	4.6	-2	-1	-3
Other	1.8	–	1.9	–	2.1	3.5	3.4	2.0	3.4	1.0	0.8	2.4	0	+1	+1
No party	17.8	–	29.4	–	31.3	35.3	37.1	31.7	33.4	37.3	34.4	34.9	+4	+6	+17
It is difficult to answer	21.2	–	13.2	–	11.7	9.3	7.8	12.3	10.5	10.5	10.9	10.2	-2	-3	-11

Priorities of long-term socio-economic development

On December 9, 2013 the report "Russia on the way to the modern, dynamic and efficient economy", prepared by the group of authors under the editorship of Academicians A.D. Nekipelov, V.V. Ivanter, S.Yu. Glazyev, was published on the website of the Russian Academy of Sciences. The report has been prepared on instructions from the President of the Russian Federation V.V. Putin; the Academicians were to develop a set of measures to ensure sustainable development of Russia under the conditions of global instability.

The report includes four sections: 1) General conditions of socio-economic development; 2) Priorities of long-term socio-economic development; 3) Improvement of institutions; 4) Socio-economic policy. The text of the report is provided with six appendices[1].

The Editorial Board decided to publish the second section of the report in the Journal for the readers' consideration.

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[1] Full text of the report is available at: http://www.ras.ru/news/shownews.aspx?id=4f0a07fe-8853-4eda-9428-574f5fcf0654#content

The formulation of priorities is a function of political system, which seeks to integrate the views of members of the society concerning public welfare. Sociological surveys of public opinion play an important role in identifying social preferences.

Moral and psychological climate in society and the state priorities

The future of Russia's economy cannot be designed without regard to the attitude of the country's population to its current condition, and their preference concerning the very future.

The first decade of reforms in the estimates and judgments of people appears as a flop, as the time of disappointed hopes, a series of ill-conceived, ill-coordinated radical measures, which have led, ultimately, to the impoverishment of the vast majority of Russians, and the country has slid significantly backwards with regard to its development.

The second 10-year period of reforms is estimated by the public as a decisive turn of political course to society, to the restoration of constitutional order in the country, bringing it out of the most acute phase of crisis and returning it to the path of sustainable and stable development. According to the assessments of the Russians, Putin's team has succeeded in the following: they have restored the role of the state in the social sphere, reduced the share of the poorest significantly, strengthened the army, raised the international prestige of the country, "soothed" the social pain and a feeling of shame in the mass consciousness for the state of affairs in their Motherland.

At the same time, certain serious problems, as a legacy of the 1990s, remain to this day. This includes pervasive corruption, profound social inequality, a huge gap in income and quality of life between the rich and the poor, moral and ethical decay of the society and large-scale rule skepticism.

The "pendulum" of social feeling has now once again swung back from the "positive" mark to the zero mark, and its further movement in an undesirable direction is being constrained only by a level of economic and political stability that is relatively acceptable to the population. At that, quite an exceptional public situation has taken shape, we can describe it as "scissor effect", when *along with the increased satisfaction of the majority of the population with their material wellbeing, the critical evaluation of the current situation in the country is growing in the mass consciousness.* It is conditioned mainly by the fact that the growth of financial stability is not accompanied by the improvement of other aspects of the quality of life of people.

The mass consciousness is filled more and more by the spreading feelings of injustice of what is happening, of shame for the scale of corruption, of the dominance of bureaucracy, and of the people's helplessness. This naturally results in mounting aggression among our fellow citizens.

The "foci" of adverse psychological climate in the society are fueled by the significant share (40%) of those who consider their standard of living to be low and who believe that they cannot rely on sickness, old age, unemployment, and disability benefits. The major losses that these people suffered due to the post-Soviet reforms include, primarily, the loss of confidence in the future.

The people's evaluation of their personal situation in the post-reform Russia can be generalized in the ratio of personal gains to losses from the reforms of the last two decades. The share of those who consider that they gained something is very small – only 10%, and it is 2.5-fold less than the share of those who consider themselves to be obvious losers (25%). Another third believes that they have neither won nor lost. Hence the constant question lingering in the "people's agenda" concerns the fact in whose interests the reforms were and are conducted.

Deterioration of social feeling of many of our fellow citizens is to a great extent conditioned by the reduction in opportunities for social

mobility. At present, the Russians almost lack an opportunity of improving their position in the society by changing their place of residence. The rare exceptions can be found, first of all, among those citizens who moved to the village, and also among the citizens moving from big cities to smaller ones.

Cross-settlement mobility is typical of different generations of Russians to a various degree, and, as a rule, people move to another settlement before they are 30. However, at present, though the mobility of young people is high (13% moved to the present place of residence during the last decade in the group of up to 30 years), they still show lower rates of mobility in comparison with the rates of mobility shown by the then young people who are now 40–45. This fact indicates that the potential of mobility of Russian youth is used insufficiently, and that the necessity to import labour force from abroad is dubious under the conditions when *the country already has the significant domestic resource for redistribution of already available workforce*.

The potential of outward migration from Russia is very large, and it has increased significantly over the last 10 years. Today about half the population express their readiness to leave Russia for various purposes, and the share of such people among those aged under 30 is even greater. 13% of the Russians would want to leave the country forever, which is twice more than 10 years ago; another 35% are ready to go abroad to find work. The fact that more than a third of the working Russians are ready to become migrant workers is a telling manifestation of the problems in the Russian labour market; it provides a better understand of the reasons for the discontent of our fellow citizens with the situation in the country.

No doubt, Russia's society is focused on raising the level and quality of life, which should find its powerful driving force in the modernization of national economy. The majority of the Russians consider that high-tech industries, advanced systems of education, science and culture, modern economic and political institutions are among the key national values. In addition, most of our fellow citizens do not agree that the distribution of benefits and costs with regard to the market reforms carried out in Russia is fair and justified; they count on the formation of a more equitable economic system[2].

Dynamic growth – the goal and the means

As noted above, the high level of accumulated socio-economic debt, primarily in infrastructure and public utilities, as well as the high rate of worn-out fixed assets retirement predetermine the lower allowable value of growth rates. It is equal not to 0%, but to 2–3% that are unable to provide the dynamic development of the economy, but they could maintain the current socio-economic situation at the present level. At the same time, it should be understood that the stagnation in the standard of living would mean the failure to fulfill the reasonable expectations of the population concerning its improvement in the near future. Therefore, the decline in the growth rate to 2–3% per year may be acceptable only for a very short period.

Claims concerning the absence of capacity for growth in the Russian economy are suitable only as a weak excuse for maintaining passive economic policy. In this respect, the references to the growth rates of developed countries seem all the more strange. Russia's situation is fundamentally different, and the challenges, that it has to face, are different, as well. In fact, the growth potential is determined by a whole range of factors, the analysis of which shows that Russia's economy in the short and medium term could demonstrate the growth rates

[2] According to opinion polls, 83% of the population believe that the differences in incomes are too large. At the same time, two thirds of the Russians think that the existing system of private property distribution is unfair. A similar share of the population believes that people are not remunerated properly for their skills, abilities and qualification. More than half of the Russians (54%) say the same about themselves, believing that, with regard to their qualification and the difficulty of their labour, they earn significantly less than they deserve.

that considerably exceed the level of 3–4%, especially if it managed to make efficient use of material, financial and human resources.

First, given the fact that new production capacities were launched in 2009–2012, the load of the key production capacities does not exceed the level of 2007, when Russia's economy showed high rates of economic growth.

Second, the development limitations are often associated with the fact that unemployment is at record low levels, and the amount of labour resources is insufficient for production growth.

Indeed, the shortage of labour resources is the most important constraining factor in the dynamics of economic development on the part of production. Calculations show that if the average productivity growth rates are equal to 4%, then the shortage of workforce will have reached at least 12 million people by 2025. At the same time, if the current employment rate among the population of working age and above working age remains the same, then the domestic resources could by 2025 have even exceeded the need for labour force, if it were possible to ensure the growth in labour productivity at the level of 5.5%–6.5% per year.

The analysis shows that currently the level of the workforce productivity index in Russia is very low (see Appendix 1. Labour productivity in Russia and some foreign countries), because of, among other factors, excessive employment at many enterprises. According to the estimates of RAS Institute of Economic Forecasting, excess employment in relation to the actual production volumes and technologies in the manufacturing industries alone was approximately 2.0 million people in 2012. Thus, the capacity for growth in labour productivity through the use of organizational component in this economic sector alone can be estimated at 15–20%.

Employment policy should also take into account the capacity of positive structural effects. For instance, the introduction of new technologies in agriculture will lead to labour saving and to a new wave of urbanization. The second wave will be "small towns – large agglomerations". On average, labour productivity at enterprises within an agglomeration is 46% higher than in settlements outside it. It is necessary to use these trends for creating new "points of growth" in Siberia and the Far East.

The issue of providing the economy with necessary labour resources should be handled by carrying out sound policies aimed at attracting labour force in the country. In addition, the government should conduct active social policy and employment policy for the maximum mobilization of internal reserves of labour supply. They include the following: the increase in the share of employment among the disabled; the increase in the share of employment among the people of retirement age; the reduction in the level of mortality in working age; counteraction against drug addiction and alcoholism; reduction in the number of administrative machinery officials, first of all, in supervisory bodies, and the RF Ministry of the Interior; the expansion of distance employment, etc. According to the estimates, these measures will allow the economy to get about 5 million workers.

In general, under the sound state policy in promoting the growth of labour productivity and employment, there is an opportunity to replace the forecasted workforce shortage by domestic human resources, gradually reducing the share of low-skilled foreign workers.

Third, the capacity for economic growth is determined by the opportunities for the increase in demand.

In this regard, there are some limits in the field of external demand. Moreover, it concerns not only the current contraction in demand in the post-crisis period, but also a more fundamental trend that is relatively independent of the phase of economic cycle and long-term growth rates of the global economy (see Appendix 2. External demand constraints on economic growth).

At the same time, such constraints with regard to the consumer and, especially, investment demand are simply absent in the short and medium term.

Investment demand is not just an opportunity to increase capital investment in the development of infrastructure and renovation of production. The increase in investment activity is the key element of economic dynamics, as it allows several goals to be achieved: to expand production capacities; to enhance the efficiency of production and, finally, to remove infrastructural constraints on development.

There is no alternative to the increase in investment activity for the next few years. Otherwise no institutional reforms will be able to return the lost dynamism of development into the economy; and the growth of limitations will make it impossible to respond consistently to emerging challenges, which will lead eventually to a new round of financial constraints and the final stalling economy on a path of inertial growth of GDP by 1–3% per year.

Note that the current characteristics of economic dynamics are also an important indicator of investment climate. From the viewpoint of an investor, the sustainable high growth rates of an industry demonstrate the significant potential of growth in demand for the goods, the demand for the products of related sectors, and a favourable price situation in the given market. This significantly reduces investment risks, enhances the opportunities for borrowing the necessary financial resources, and reduces the payback period of the projects.

The increase in average annual GDP growth rate of 6–7% in the medium term (up to 2020) is a fundamental prerequisite stimulating investment and innovation processes, which will make it possible to maintain high growth rates in the next 10–15 years.

Fourthly, Russia possesses considerable space for quantitative and qualitative growth. Under the space for growth we mean not the geographical area, but the economic concept associated with the concept of saturation. Our country is still very far from the saturation of basic needs: the level of housing availability, and provision with light motor vehicles in Russia is 3–4 times lower than in developed countries; the level of provision with durable goods is significantly lower; the lag in the level of development of transport infrastructure is huge; there also remains a significant gap in consumption of some of the major kinds of foodstuffs. The development of the huge Russian territory also defines a very significant potential of economic growth.

Fifthly, in today's Russia there are no serious resource constraints on the volume of investments: due to the high saving rate, the accumulation rate in the country's GDP can be increased without reducing the level of consumption. For example, in 2006–2012, savings rate was on average 30% of GDP, while accumulation rate was only about 20%.

Table 1 presents an assessment of the potential for economic growth in Russia for the period up to 2030. According to the assessments, the greatest potential for growth is observed in 2013–2020, and it is based mainly on investment and consumer demand. A key conclusion is that the available opportunities for development allow Russia's economy to achieve the average annual GDP growth rate exceeding 5% in the 2013–2030 period.

Development prospects for Russia's economy in the coming decades can be illustrated using scenario forecast calculations.

When elabourating the constructive scenario for socio-economic development, it is proposed to implement certain activities that make it possible to use the existing potential for economic growth to the greatest extent. A constituting sign of a constructive, internally oriented investment scenario consists in the high rates of economic growth, which, in turn, are crucially associated with the dynamics of investment and efficiency of their use.

The inertia scenario is considered as opposed to the constructive scenario, their comparison makes it possible to evaluate the efficiency of the measures implemented within the framework of internally oriented investment scenario.

The scale of Russia's economy, the demands of the society that remain unsatisfied, along with considerable resource provision and rather well-developed industry are a good base for economic growth. However, in the absence of targeted economic policy aimed at achieving the strategic goals of economic development, such growth can only be inertial in its nature.

The gradual growth in constrains associated with the number of working-age population, the condition of infrastructure, and availability of natural resources will lead to reduction in economic growth rates and preservation of the existing structure of the economy and it will also maintain the key structural and spatial imbalances in development.

The factors that will exert crucial impact on economic performance in the inertia scenario, should include the following:

– inevitable reduction in the number of working-age population in the 2012–2020 period, constraining the opportunities for the development of labour intensive sectors of the economy;

– impossibility of significant growth in production and exports of natural resources under the existing and prospective levels of capital intensity and tax burden;

– high dependence of economic dynamics on external conditions;

– growing demands for the increase in public investment in infrastructure development and defense industries; the growing burden on the budget in this connection;

– outrunning rates of consumer and investment demand with regard to the domestic production capacities;

– increase in the share of import on the domestic market;

– lack of efficient mechanisms of capital flow that impedes the modernization of production base.

Within the framework of listed constraints, the available resources can be focused on only a very narrow range of development objectives. Among such objectives we can point out the priority development of transport and energy infrastructure; support to raw materials sector; the development of individual enclaves of manufacturing industry that are often isolated from the rest of the economy.

If this scenario is implemented, the average growth rate of GDP in 2011–2030 will amount to 2.9%.

It should be noted that import will have a significant deterrent effect on economic growth during the whole forecast period; and its negative impact on economic dynamics will

Table 1. Assessment of the potential for economic growth in Russia, %

Indicator	2013–2015	2016–2020	2021–2025	2026–2030
Gross domestic product	6.1	7.0	4.6	4.1
Including:				
Final consumption expenditure:	6.0	5.2	4.4	4.0
of households	7.0	6.2	5.1	4.5
of state administration	3.4	2.0	1.5	1.5
nonprofit organizations, rendering services to households	1.8	1.0	0.5	0.5
Gross accumulation	13.9	11.2	4.6	3.2
including fixed capital	11.6	11.6	4.6	3.1
Export	2.1	3.3	4.1	4.6
Import	9.7	5.9	3.4	2.5

exceed the positive impact of investments in fixed capital. This result can be explained primarily due to the fact that the inertia scenario cannot provide the necessary volume of production of competitive goods for investment purposes in the condition of the increase in the fixed capital accumulation rate.

The share of investments in GDP gradually increases during the whole forecast period, but it will not exceed 26%. This is explained by the remaining shortage of financial resources in the production sector, especially in manufacturing industries, in the absence of satisfactory mechanisms that ensure proper access to loans.

Realization of the inertia option with a limited set of development guidelines implies the outrunning rates of production in the services sectors and industries focused on the satisfaction of consumer demand. As for high-tech and medium-tech industries, their development, despite the fact that it is more rapid in comparison with the economy's pace, does not allow their share to be increased significantly in the total production. The mining sector in the period after 2020 faces the problem of resources depletion in traditional mining regions against the background of the appreciation of capital expenses when new deposits are being developed (in the shelf, as well).

The production structure has undergone minimal changes, connected with the reduction of the share of mineral resources in the gross output (to 4% by 2030) and low-tech manufacturing sectors that the forecast period show the limitations explained by the saturation of domestic demand.

The structure of Russia's export is still dominated by natural resources. If the structure of exports remains the same, it will not allow Russia to increase its share substantially in the world trade in the 2012–2030 period. Export of high-tech products will remain low, and will not have exceeded 4% of the total export of goods by the end of the forecast period.

Relatively low rates of production growth in the sectors of investment complex along with the outrunning growth of investment in fixed capital will lead to the increase in the share of imports in the domestic market. The share of imports may grow most significantly in manufacturing sectors, communication and telecommunication complex. The share of imports by 2030 will have reached 65% in the market of high-tech goods, and 50% in the market of medium-tech industries.

The structure of investments in fixed capital against the background of the increase in capital intensity will experience the increase in the share of mining sectors. Under the relatively low rates of economic growth, the economy will have limited opportunities for attracting financial resources. The main flows of investments in fixed capital are concentrated in the sectors of traditional export and in a limited list of state-financed productions.

The increase in accumulation rate in the economy and the improvement of of production efficiency will lead to the enhancement of labour resources usage. Labour productivity in high-tech sectors is increases in 2.5 times; in agriculture – in 3.4 times; in trade – in 3.5 times; in finance and insurance – in 2.5 times. The total number of people employed in the economy will have amounted to 64 million by 2030, or 95% in comparison with the 2011 level.

According to the inertia scenario, by the end of the forecast period, Russia will not be able to carry out cardinal changes in its economy and increase the potential for further development. Most of economic growth factors have decaying nature. The rise in the efficiency of production will be significant, but it will not provide the necessary increase in the level of competitiveness in the conditions of global economic competition. GDP per capita by 2030 is estimated (in current prices) at approximately 36 thousand US dollars, that, with a minimal estimates of GDP per capita in the USA for this period (100 thousand US dollars) does not imply a

further reduction of the gap in the standard of living with developed countries.

The "internally oriented investment scenario" provides for the maximum use of the available potential for economic growth.

Key risks in the implementation of this scenario consist in the following: in order to maintain the high rates of economic growth in the period until 2020, it is necessary not only to ensure the growth of investment and consumer demand, but also to find (based on the development of domestic production) resources for the expansion of exports in the second half of the forecast period. Existing possibilities for acceleration of economic dynamics in this scenario are implemented through active measures of economic policy. The main ones are as follows:

– intensification in the first part of the forecast period (until 2020) of all the capacities for the growth of investments in fixed capital (at the expense of public, private, foreign sources). The achievement, by 2020, of nearly 35 percent of the standard of capital accumulation;

– realization in the period up to 2020 of the programme for the revival of investment machine building on the principles of establishing new domestic productions, and on the principles of establishing industrial assembly productions. Provision of the growth rates of production of investment goods, outrunning the growth rates of the domestic market of such products;

– increase of production capacities in the infrastructure and road construction in the period up to 2020;

– implementation of projects for maintaining and expanding the volumes of extraction, production and transportation of raw materials;

– attraction of financial resources into research and development in order to enhance the competitiveness of manufacturing sector and further increase the volume of commodity exports.

By implementing the set of measures to stimulate economic growth in the internally oriented investment option it is possible to achieve the average GDP growth rate of 5.1% in the forecast period.

The highest average rates of GDP growth (7%) are expected in 2016–2020, this period which accounts for the peak of investment and consumer demand. It is followed by a smooth slowdown in economic dynamics associated with the achievement of the high indicators of investment activity, overcoming the most acute constraints on the capital, as well as the saturation according to several items in consumer demand. Export makes significant contribution to the overall GDP growth (especially in the period after 2020). In comparison with the inertia scenario, its growth rates in the forecast period increase more than twice and by the end of the forecast period exceed the GDP dynamics. The import growth rates in this scenario, due to the increasing competitiveness of domestic goods and import substitution, are even lower than in the inertia scenario.

Household consumption makes the greatest contribution to the overall GDP growth. After 2020, economic dynamics will be influenced significantly by the expansion of export, primarily of non-raw material goods, and import substitution processes.

The investment nature of the scenario assumes the achievement of high indicators of growth in production efficiency. In particular, the GDP energy intensity in this scenario by 2030 is only 44% of the 2010 level, and electric intensity is 66%. A slower decrease in electric intensity is explained by the increased share of electricity consumption by the population under its simultaneous decrease in industry and services sector. Investment activity, creation of new productions in the industry contribute to the significant growth of labour productivity, which in comparison with 2010 is increasing by more than 2.7 times.

In the Russian economy the highest growth rate of production is typical of such branches as high- and medium-tech sectors, construction, real estate transactions, finance and insurance. Significant capital investments make it possible to maintain the positive dynamics in mining operations during the whole forecast period. It is also necessary to point out high dynamics in the research and development sector. The relatively low rate of production growth is observed in low-tech manufacturing industries.

By the end of the forecast period, the cumulative share of high-tech industries and medium-tech industries of the high level in gross output increases to 14.5% (8.5% in 2010). The share of trade in gross output is changed insignificantly and is equal to 17% in 2030.

By 2030, up to 20% of the overall increase in gross output of the economy is provided by high-tech industries and medium-tech industries of the high level (in the inertia option their contribution does not exceed 12%).

A key element of the scenario is found in the high level of investment activity. In particular, the average growth rates of fixed capital investment in the high-tech sector throughout the forecast period exceed 15%, in construction – 9%, in medium-tech manufacturing sectors – 8%, in finance and insurance – 8%, in hotel and restaurant sectors and in trade – 7%.

By the end of the forecast period, the structure of investments in fixed capital will be dominated by extraction of mineral resources (13%), transport and storage (15%), construction and real estate transactions (23%). On the whole, the scenario provides an outrunning renewal of production capacities and creation of new productions in the investment complex along with the maintenance of the high level of investments in extractive sectors.

The implementation of the internally oriented investment scenario results in a new quality of the structure of the Russian economy, which, on the one hand, has significant resource potential (oil production will be over 530 million tons by 2030), and on the other hand, can increase export by modernizing the investment complex and creating a new hi-tech complex.

One of the key characteristics in the implementation of the internally oriented investment scenario is the large-scale import substitution, which, despite the substantial growth in investment and consumer demand, makes it possible to reduce the share of import in the domestic market to the level of post-crisis indicators of 2010. At that, during the period of increasing the accumulation rate of GDP (up to 2020), the share of import continues to increase against the background of production modernization and purchase of new equipment. However, further on, the opportunities of the industry allow the needs of the domestic economy to be satisfied, and the share of imports in the domestic market to be reduced gradually. In particular, the share of import in the market of high-tech goods is decreasing from 62 to 55%, in the market of medium-tech goods of the high level of processing – from 42 to 36%.

The enhancement of competitiveness of domestic manufacturing industry in this scenario is the basis for the increase in exports of high-tech and medium-tech products of the high level, especially in the second half of the forecast period. By 2030, the share of these industries can account for 21% of Russia's total exports; at that, the share of mineral resources is reduced to 15%.

The increase in the efficiency of labour resources usage is an important element of the scenario.

Cumulative employment at the end of the forecast period is only a bit higher than in 2010, despite the significantly higher (in comparison with the inertia option) growth rates of GDP. At that, we can observe the increase in the number of the employed in the high-technology sector, construction, transport, hotels and restaurants.

Trade has the greatest potential for reducing the number of employed people. The budgetary sectors witness a smooth decrease in the number of the people employed in education at the simultaneous increase in the employment in health care. The increase in the investments in science determines the growth of employment in the research and development sector.

The change in the labour resources usage efficiency has significant influence on employment structure. Labour productivity grows most rapidly in high-tech industries (in 4.3 times), trade (in 3.6 times), medium-tech industries of the high level (in 3.4 times), finance and insurance (in 3 times).

Thus, the implementation of the internally oriented investment scenario makes it possible to use the development potential, available in the Russian economy, to the greatest extent. At that, consistent increase in investments in fixed assets, modernization of investment sector, increase in production efficiency and import substitution make it possible in the second phase of the forecast period to shift to the strategy of increasing the volumes of non-primary export, which expands the opportunities for the Russian economy beyond 2030.

In conclusion, firstly, let us give a comparative evaluation of the main macroeconomic indicators characterizing the two considered scenarios of the development of Russia's economy for the period up to 2030 (see tab. 2).

Secondly, it is necessary to note the following: due to the fact that, as of mid-2013, the efficient measures, mentioned above, had not been implemented, the actual growth rates of the economy in the first half of this year were even lower than the growth of the GDP dynamics according to the inertia scenario.

Table 2. Key parameters for the development of Russia's economy at the realization of the inertia and internally oriented investment scenarios

Indicator/period (years)	2006–2010	2011–2015	2016–2020	2021–2025	2026–2030
GDP dynamics, %					
Internally oriented investment scenario	2.3	5.8	7.0	4.3	3.6
Inertia scenario		3.8	3.1	2.5	2.1
Dynamics of gross output, %					
Internally oriented investment scenario	2.4	4.9	6.3	4.0	3.8
Inertia scenario		3.5	2.9	2.7	2.7
Indicator/year	2010	2015	2020	2025	2030
Labour productivity, times					
Internally oriented investment scenario	1	1.44	2.01	2.40	2.76
Inertia scenario		1.33	1.62	1.83	2.00
Energy intensity, times					
Internally oriented investment scenario	1	0.81	0.66	0.57	0.49
Inertia scenario		0.84	0.73	0.64	0.57
Accumulation rate, % GDP					
Internally oriented investment scenario	21.9	25.9	35.0	31.2	28.9
Inertia scenario		23.0	24.8	25.7	25.5
Share of import in the domestic market, %					
Internally oriented investment scenario	15.4	16.1	15.9	14.8	14.4
Inertia scenario		16.8	17.9	18.9	19.8
GDP per capita, thousand US dollars in current prices					
Internally oriented investment scenario	10.5	17.6	24.4	32.4	54.0
Inertia scenario		16.9	21.2	26.1	36.0

Competitiveness of the economy

The task of improving the competitive dynamics of the economy not related directly to the rate of growth of GDP or industrial production is as important as the promotion of economic dynamics. The enhancement of competitiveness implies the following activities: reduction of costs and establishment of production of new unique marketable products, and, at the same time, the shutdown of inefficient industries. That is why finding a solution to both of these tasks will promote the transition to quality, long-term growth and the cardinal enhancement of the population's standard of living.

The actual competitiveness of Russia's economy exceeds the estimates of some international research centres, first of all, those regularly published by the World Economic Forum, according to which Russia ranked 66th by the level of global competitiveness in 2011–2012. The calculations of the International Institute for Management Development (Lausanne) are viewed as more objective, it puts Russia on the 44th place in the competitiveness rating. As for the ratings of international consulting and audit companies, then, for example, Deloitte &Touche has put Russia on the 20th place according to the index of competitiveness of the manufacturing industry. According to the estimates of Ernst & Young, Russia's attractiveness for foreign investors, since 2005, has increased significantly. 75% of foreign companies pointed out the capacity of the internal market as the main positive factor, 69% pointed out Russia's telecommunications structure.

The similar share of companies are satisfied with the level of labour costs and qualification of the workforce, and the capacity for productivity growth. Although by the level of labour productivity (output per one employee) Russia's lagging behind the most developed countries of the world is greater than it was in the Soviet period (see Appendix 1. Labour productivity in Russia and some foreign countries), the country is almost three times ahead of the other BRICS states, including China.

Natural resources constitute the most significant competitive advantage of Russia: it possesses almost 6% of world reserves of oil, 24% – of natural gas, 8% of the world reserves of fresh water and arable land, 23% – of the forest land. Another competitive advantage is the receptive domestic market. Russia ranks 6th in the world according to this indicator. By the domestic market growth rates, Russia is ahead of all other countries, including India and Brazil, and it is second only to China. At the same time, Russia is characterized by the high level of population's savings.

Russia's geographical position, though it is not so advantageous than that of the USSR (in 1991 we lost the Baltic and Black sea ports – Riga, Klaipėda, Odessa), but it remains potentially good. External markets, which are geographically close to Russia, account for 36% of the world's GDP.

Another competitive advantage of Russia is connected with education; according to the level of education, Russia ranks 25th in the world among 139 countries, well ahead of Brazil (51st place), China (96th place) and India (108th place). The share of employees with higher education in our country is one of the highest in the world (after the USA), and the share of employees that have only primary education is only 7% against 10% in the USA, 11% in Estonia, 18% in Germany and 27% in France.

By the number of the largest companies capable of carrying out global functions, and by the degree of their capitalization, Russia lags significantly behind the advanced countries, primarily from the USA and China, but in general it ranks 11th, ahead of such countries as Sweden, Finland, Denmark and Singapore.

APPENDICES

Appendix 1. Labour productivity in Russia and some foreign countries

The level of labour productivity in Russia is 26.8% of that in the United States of America, 40% of that in Japan and Germany, 33.3% of that in France, 36% of that in Sweden. Russia lags behind a number of former Soviet republics, such as Armenia, Belarus, Estonia, Latvia, Lithuania, Kazakhstan. According to the labour productivity growth rate, Russia lags behind its BRIC partners. According to Rosstat, in 2010, labour productivity in the economy as a whole increased by 3%, while in China this figure was 8.5%, in India – 5.5%, in Brazil – 4%.

The enormous lagging behind developed countries by the indicators of labour productivity is currently observed in all the sectors of the economy: the lag is 3–4 times in relatively prosperous oil and gas industries, chemical and metallurgical complex, trade and banking sector; however, the lag in agriculture is 10–12 times. Modernization and technological re-equipment of production facilities can increase labour productivity by an average of three to five times. These indicators are observed in all the industries. A telling example of the potential for such growth can be find in the differentiation between enterprises within industries, ranging from 5 times in engineering to 13 times in metallurgy.

Appendix 2. External demand constraints on economic growth

Slow dynamics of the external demand for major goods of Russian export is a major constraint on Russia's economic growth. At that, we mean not only the current contraction in demand in the post-crisis period, but also a more fundamental trend that is relatively independent of the phase of the economic cycle and long-term growth rates in the global economy.

Since 2006 developed countries have been reducing the absolute volumes of oil consumption. This trend is of long-term character: the reduction takes place when GDP is reducing and when it is growing as well; what changes is the speed of reduction, and the differences between the countries are preserved. Economic growth is accompanied by the increase in their efficiency not only in developed countries but also in the largest emerging economies: China, India, and Brazil. An especially rapid decrease is observed in the specific consumption of energy resources, and in energy intensity of GDP.

Thus, the global economy will need much less oil than it seemed just a few years ago. On the other hand, the supply of oil will grow. So far, the OPEC nations, using quotas on oil production, are capable of restraining growth in the supply, and they maintain such a balance between demand and supply, which secures the current level of prices. However, if the production outside OPEC and in Iraq (to which the production quotas do not extend) increases and global demand slows down, it is very likely that the balance between demand and supply will be established on a completely different and much lower price level.

Natural gas consumption in the world will grow twice faster than oil consumption – by about 1.5% per year. The single global gas market has already started to form; it is based technologically on liquefied gas, the share of which in 2020 will make up to 50% of world trade. The main characteristics of this market will be as follows: (a) adequate supply to meet import demand; (b) the possibility of choosing the provider; (c) pricing that is independent of the prices for petroleum products, and that complies with supply-demand ratio. In these conditions gas trade will be based on the same principles as any other commodity market: the conclusion of long-term contracts on supplies; as for prices, they will be determined by market conditions at the time of delivery. Such a single global gas market will be formed within the next few years.

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ISEDT RAS Research and Education Centre – a focal point for the growth of the region's science and technology potential

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During the years of market transformation Russia witnessed significant reduction in the share of science-intensive sector in the national and regional economy (there has been a decrease in the demand for the results of R&D; the real wages of researchers declined; the value of professional research activity decreased in the eyes of the public; the inflow of young people in science reduced as well). Overcoming these negative trends requires new approaches to the formation of the country's research potential. The integration of education and science is the most important of these approaches.

The article covers the experience in this area, gained at the Institute of Socio-Economic Development of Territories of RAS through the establishment and organization of the work of the Research and Education Centre (REC) for Economics and Information Technologies, which has been functioning for ten years already.

The article presents certain conceptual and methodological approaches to the formation of REC, the teaching methods used for educating young people in the chain "school – university – postgraduate studies – research activity". The article shows the performance and efficiency of the work of REC in the development of regional scientific and technological potential. The article emphasizes the importance of joint work of school education, higher education, science, regional and municipal authorities.

The article provides the assessments of young people, who study at the Research and Education Centre, regarding their opinions on the forms and methods of teaching and on the efficiency of studying for the choice of profession.

Based on the accumulated practice and performance of the Research and Education Centre, the authors substantiate the prospects of its development as an educational institution of a new type that implements the full cycle of training of highly qualified personnel in the field of economy, management, and information technologies.

Science and technology potential of the region, training of researchers, ISEDT RAS Research and Education Centre, talented youth, organization of research activities.

Transition to innovation economy

Innovation-driven development is the key trend in modern economies. Over 80% of the GDP growth in the states that follow this path is provided at the expense of high technology products and services, and the supply of innovation developments exceeds the demand for them[1]. Currently this process is called *knowledge economy*.

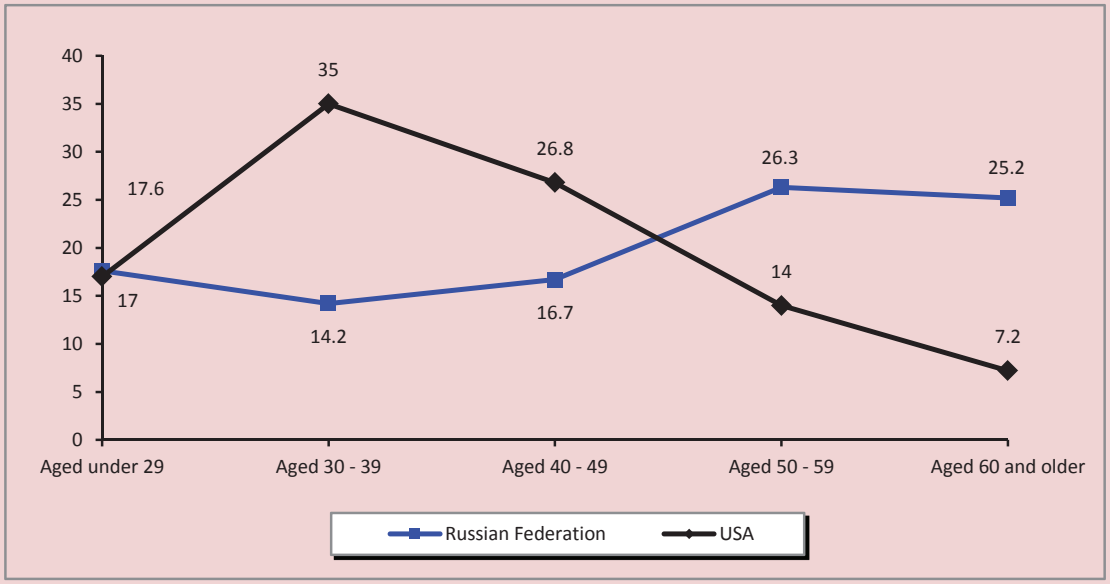
In Russia the movement toward knowledge economy as the strategic pattern of development took shape only in the beginning of this century. However, due to a number of objective and subjective reasons, the Russian science and high-tech industries found themselves in a difficult situation in the period of transformations. First, science-intensive space has narrowed sharply. Currently, Russia accounts for less than 0.3% in the world markets of high technologies. Over the past two decades, the number of people employed in high-tech production and innovation sphere in Russia has decreased twofold. It goes against the worldwide trend of increase in the share of researchers in all the G-8 countries and in Asian countries[2], especially China, where the number of researchers per 10 thousand inhabitants increased from 5.5 to 10.7 people (twofold) in 2000–2007. The reproduction of research personnel in Russia witnessed a great demographic failure in the generation of people aged 30–49, i.e. in the age that is the most effective for engaging in research. In the USA, for example, this age group of researchers is 64%, and in Russia – only 32% *(fig. 1)*.

The outflow of young researchers from R&D is directly associated with the lack of funding of this sector. The amount of R&D expenses in the Russian Federation (as a percentage of GDP) leaves much to be desired in comparison with foreign countries *(fig. 2)*.

[1] Innovation policy: Russia and the world: 2002–2010. Under the general editorship of N.I. Ivanova and V.V. Ivanov; Russian Academy of Sciences. Moscow: Nauka, 2011.

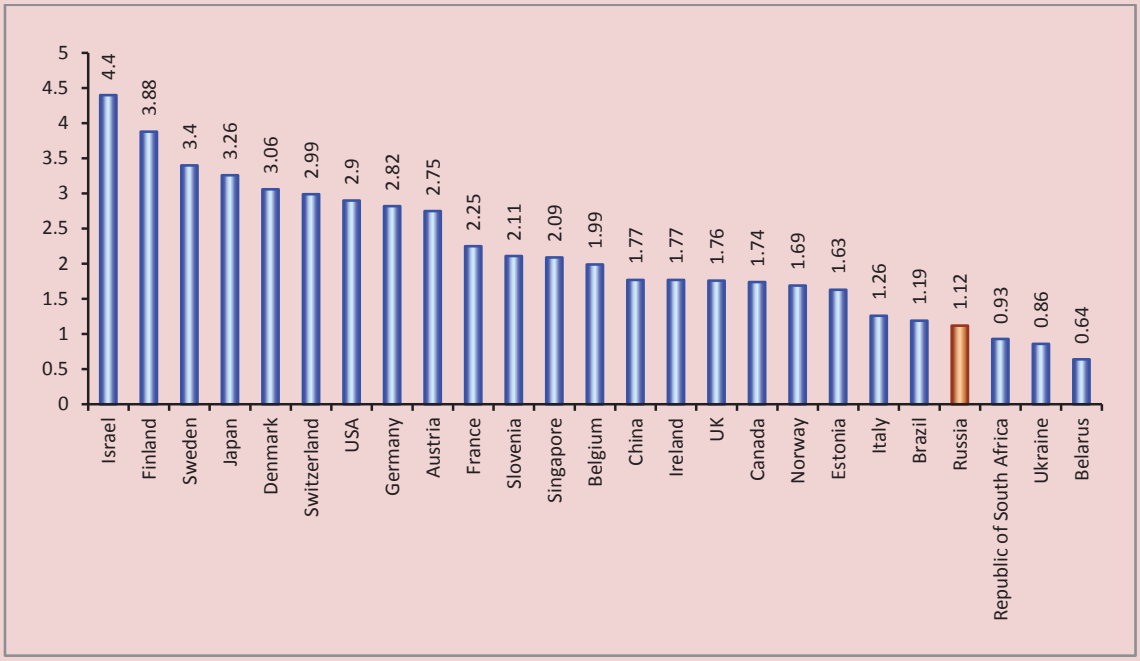
[2] Ilyin V.A., Gulin K.A., Leonidova G.V. The extended reproduction of research staff as the key link in the progressive development of territories. Priorities of scientific and technological development of the North-West of Russia. Materials of the session of the Inter-Agency Northwestern Coordination Council under RAS on fundamental and applied research. Under general editorship of V.V. Okrepilov. Saint Petersburg: SUAI, 2011. P. 144-161.

Figure 1. Distribution of researchers (%) by age groups in Russia (2008) and USA (2004)



Source: Indicators of science. 2009. Statistical digest. Moscow: SU–HSE, 2009. P. 34.

Figure 2. Domestic expenditures on research and development (as a percentage of GDP), 2011*



* Or the nearest years for which the data is available.

Source: Indicators of science: 2013: statistical digest. Moscow: NRU HSE, 2013. P. 349.

Although the share of R&D funding in Russia has increased slightly since 2000 (by 0.2%), this indicator is still much lower (in 2 times) than in the countries leading in research and technological development. For this reason, the wages of people employed in Russian science lags significantly behind foreign indicators. The value of professional research activity is declining, which is aggravated by the overall lack of demand for science in most spheres of national economy.

Strategic goals of Russia's socio-economic development define the need to change the immediate situation. Russia should, as quickly as possible, become a country *"...the wellbeing of which is provided by intellectual resources..."*[3]. The implementation of "innovation breakthrough" requires human resources, in which the key element is the highly qualified specialist, who possesses systems thinking, the required volume of complex specialized knowledge and, simultaneously, sensitive to the challenges of accelerating scientific and technological progress. Such specialists are necessary as a whole generation, emerging from the school years and further on developing continuously and actively throughout life.

According to the majority of Russian scientists and renowned workers of education, these issues can be handled most efficiently by creating a system, in which students (schoolchildren, university students) would be included in scientific research and practical innovation activities during the process of education. This goal can be achieved by using integration mechanisms that envisage participation of not only research teams and education workers, but also business structures in educational process. We mean, essentially, that educational process should be embedded in the innovation chain, facilitating the modernization of domestic socio-economic system in a short term.

Interaction of research and educational structures in the country was officially stipulated by the federal target programme "State support to the integration of higher education and fundamental science in 1997–2006"[4], which was followed by the programme "Integration of science and higher education for 2002–2006"[5] adopted in 2001. The implementation of these programmes facilitated the creation of integrated research and education structures in the form of departments and laboratories; intensified the involvement of research staff of the Academy of Sciences in educational process, etc. However, it was not possible to validate the established mechanisms of interaction during the implementation of the programmes[6]. And when the term of their action expired, the pace of integration processes has slowed down considerably, though these issues were not left unnoticed by the scientific community and the country's leadership. For instance, in 2007, the issues concerning the flaws in the legislative framework of integration processes were handled to a certain extent, which was reflected in the changes in the then effective laws[7] "On education" and "On science and on state policy in the sphere of science and technology". In 2009 the federal target programme "Research and scientific-pedagogical personnel of innovation Russia" was adopted; after that, the definition of research and education centres appeared,

[3] Verbatim report of the meeting of the Presidium of the State Council, the Council for Culture and Arts and the Council for Science, Technologies and Education. April 22, 2010. Available at: http://www.kremlin.ru/transcripts/7530. Retrieved May 12, 2010.

[4] Approved by the Resolution of the RF Government No.1062 dated September 9, 1996.

[5] Approved by the Resolution of the RF Government No.660 dated September 05, 2001.

[6] Innovation policy: Russia and the world: 2002–2010. Under the general editorship of N.I. Ivanova and V.V. Ivanov; Russian Academy of Sciences. Moscow: Nauka, 2011.

[7] Federal Law No.308-FL dated December 1, 2007 "On the introduction of amendments in separate legal acts of the Russian Federation on the issues of integration of science and education".

they were seen as "structural units (or part of structural unit, or set of structural units) of a research or educational organization that conduct scientific research by the general research direction, and that are engaged in the training of personnel of the highest qualification".

A number of research institutions under RAS and universities continued developing cooperation. An example can be found in the union of the Russian Academy of Sciences and Lomonosov Moscow State University. Moscow Institute of Physics and Technology (MIPT) was the first higher education institution that implemented the system "school – university – graduate school". It was established on the basis of the special faculty at Moscow State University, and it developed a special training system, now known as "Phystech system". It includes three fundamental and inextricably linked components:

– targeted selection of talented school-children in all the regions of the country for admission in MIPT through an extensive system of pre-university training (correspondence physics and technology school, olympiads, off-site admission committees, etc.);

– fundamental character of general education in natural science and humanities in the first, second and third years;

– in-depth professional training in the second and up to the sixth year in the framework of specialized faculty courses and directly at the basic departments of MIPT under the institutes and scientific centres of RAS and also in several leading joint-stock companies and holding companies of high-tech sector.

The research and education complex at Ioffe Physical-Technical Institute (founder of the institute – Nobel laureate Zh.I. Alferov) in Saint Petersburg was established in 1998, and it is another telling example of integration cooperation. Currently it functions as Saint Petersburg Academic University – nanotechnology research and education centre under RAS (the Academic University).

In short, integration of research and education activity has been moving forward step by step, becoming more and more advanced, making samples for creative replication.

Prerequisites and ideas for the establishment of the regional research and education centre

The history of establishing the research and education centre under ISEDT RAS has a number of significant features. One of them is that there were no institutions of academic science in the Vologda Oblast till the end of 1990, despite the rapid development in 1960–1980 of ferrous metallurgy and chemical production in Cherepovets, mechanical engineering in Vologda, and also the growth of production in the timber complex. A small department of the Institute of Economic Problems of Kola Scientific Centre was established in Vologda only in the end of 1990. With the support from RAS, the department expanded and obtained the status of the CEMI RAS Vologda Scientific Coordination Centre (VSCC) to the mid-1990s. Further development of the young academic unit faced great difficulties in recruiting qualified personnel. The establishment of graduate school did not contribute to the development for the same reason.

Then the leadership of the Vologda State Technical University was involved in handling those issues. The basic section of regional economics was established at the Chair of Economics and Management of the Economics Faculty headed by Doctor of Economics, Professor A.P. Dorogovtsev. The VSCC academic staff with degrees started teaching students of the basic section in economic disciplines on a part-time basis, and the leading professors of the Chair supervised the dissertation research of graduate students at the Centre. The integration process was developed also by the joint implementation of research based on

federal grants and programmes. But still the scale of joint activities increased slowly. There was an increasing necessity for creating an organization that would enhance the interest of school graduates in research in the sphere of economics.

In this period, the idea of establishing the regional research and education centre under VSCC took shape on the basis of the existing experience in the country. Practical implementation of the idea was viewed in the comprehensive chain of professional training according to the algorithm "school – university – graduate school" by pooling the efforts of research and education institutions, regional and municipal authorities.

And it became possible to put this idea into practice, first of all, due to the fact that government authorities and heads of education institutions not just supported the idea, but also took an active part in its implementation: the major contributors include the City Department of Education (in particular, Deputy Head O.Yu. Linkov), Vologda City Administration (Head of the City A.S. Yakunichev), school principals (Principal of the Vologda secondary school No.32 G.A. Manicheva), Vologda State Technical University (Rector, Doctor of Economics, Professor R.V. Deryagin), Saint Petersburg State University of Engineering and Economics (Rector, Doctor of Economics, Professor A.I. Mikhailushkin) and its Vologda branch. The Governor of the Vologda Oblast provided crucial support as well. Of special importance was the contribution of the leadership of the Russian Academy of Sciences, represented by its Vice-Presidents V.V. Kozlov and A.D. Nekipelov.

The joint written petition of RAS President Yu.S. Osipov and the Vologda Oblast Governor V.Ye. Pozgalev to the president of Russia V.V. Putin was also very important, because after that the President ordered the RF Government to work out the issues concerning the development of REC in cooperation with the Vologda Oblast authorities. This resulted in the fact that that the construction of facilities and infrastructure for REC was included in the RAS investment programme, in particular: construction of the building for education and research, a dormitory for young scientists, provision of modern technological equipment for educational laboratories, etc. In addition, the support provided by the Academy of Sciences in the framework of target financing under the programme "Support to young researchers" promoted the formation of skilled teaching staff at REC and also facilitated the development of education programmes, expanded the number students (for ten years, the number of REC students has increased 17-fold (from 34 to 590 persons), the number of university students – 8-fold (from 97 to 650 persons). Support from RAS also contributed to the increase in the range of academic disciplines, to the expansion of the REC activities to the interregional level, and to the elaboration of methods of work with talented children and young people.

Today, the ISEDT RAS Research and Education Centre is a multi-stage system of training and retraining of highly qualified specialists for science, business entities and regional authorities. The main mission of the centre is to create the conditions for revealing and developing the abilities of talented youth in the region and involving it in research sphere, and to recreate the environment for scientific search. The latter is the main priority in the activities of REC, as, on the one hand, it enhances the efficiency of acquiring knowledge, abilities and skills complying to educational standards and the efficiency of their further generation, i.e. the path of knowledge increment; on the other hand, it is a way of initial professional training for young researchers. This very context, in our opinion, sets children's motivation to work in high-technology industries.

Introduction of modern forms and methods of education at REC

Young people studying at REC are schoolchildren, university students and graduate students, that corresponds to the logic of integration cooperation between science and education, in the framework of which the Institute provides education activities (excluding graduate school) jointly with education authorities and education institutions. Cooperation geography is presented by the Vologda Oblast, and nine regions of Russia (Rostov, Murmansk, Leningrad, Yaroslavl, Ivanovo, Kostroma, Novgorod oblasts, Perm Krai, Republic of Karelia, Saint Petersburg). The last years witness the development of active cooperation with the Republic of Belarus (distance learning).

The organization of research activity in the REC ISEDT RAS school subsystem is aimed at the acquirement of research competences and is carried out in the following areas:

– elective course "Fundamentals of research activities" in the 5–11 grades in the framework of elective course in Economics;

– involvement of schoolchildren in the contests of research works and essays at REC ISEDT RAS, followed by a report at the conference "Economy of the region through the eyes of senior high school students";

– participation of REC students in external competitions, conferences and olympiads.

Along with traditional forms that promote the comprehensive development of the students' abilities (elective courses in Economics for schoolchildren from 5 to 11 grades, etc.), the Research and Education Centre uses various, first of all, creative forms of work with young people (Economic Internet School, scientific seminars and discussions; olympiads; discussion clubs, business role-playing games, summer research schools, etc.). That is, the priority role in the activities of REC belongs to the implementation of technologies that develop thinking and creative abilities. The share of active forms of education is 50% [11, p. 30].

Special importance in the activities of REC is attached to the organization of educational work at all the levels of educational chain; it is implemented in such main forms as discussion clubs, intellectual and business games, summer schools during vacation (in the framework of "economic" sessions in children's recreation camps), activities devoted to initiation into students and graduate students, etc. Practice has shown that discussions, for example, encourage students to express and defend their point of view; they also help develop tolerance, civility, ability to listen to other people – the qualities that are important for the development of civil society; that is, discussions create an environment for civilized communication. In the 2006–2013 period more than 800 people participated in the meetings of the Discussion Club (on average 4 meetings are held per year, each is attended by approximately 30 people) [3].

One of the innovation directions of the Research and Education Centre for Economics and Information Technologies is the organization of Economic Internet School. It was established after the two years of distance learning courses in Economics for the 10–11 grades schoolchildren from the towns of Sokol and Gryazovets, and the rural settlement of Ustye-Kubenskoye, all located in the Vologda Oblast. Since 2010, the internet school has successfully trained more than one hundred schoolchildren [3]; furthermore, since the project was launched, the number of distance learning students has increased more than twice (from 72 to 160), the geographic distribution of its participants has extended: 120 schoolchildren represent educational institutions of 11 regions of Russia, 40 schoolchildren represent the Republic of Belarus. It should be noted that the experience

of distance learning proved not only useful, but also efficient: for the three years of the school's functioning, the share of participants of competitions and olympiads among the distance learning students has increased in 2.7 times, while the number of prize-winning places according to their results has increased in 7.5 times [11].

Other forms of work are being developed in the framework of extracurricular activities at the Research and Education Centre: for example, open days are being held, the celebration of REC birthday is organized. The experience of educational work, accumulated at REC, the results of the analysis of events confirm the necessity to continue search for the most efficient forms of involvement of the youth in science.

Still, the involvement of talented youth in scientific search remains a priority direction of activity of educational chain of REC. REC has a continuously operating system of internal contests of research works in the field of Economics for schoolchildren and young scientists (university students and graduate students) of the Institute.

The principal (innovative) point of systemic work for engaging schoolchildren in research consists in the fact that this process actively involves graduate students, who are assigned to a group of schoolchildren as academic advisers during their education at REC. In the period of active preparation of research works for contests, graduate students meet with schoolchildren twice a week. They help students to choose the topic for research, to determine the object and the subject of analysis, etc. It increases the time of research activities of young researchers (up to two hours per week). Thus, the above methodological approach to the involvement of schoolchildren in research activity comprehensively affects the formation of environment for the development of scientific interest and realization of the practical importance of the activity.

Such practice is useful for young scientists as well, because it makes it possible to acquire skills in scientific supervision over research activities, since, while teaching others, they themselves are learning.

A more comprehensive studies of methodological and methodical fundamentals of research activity in the framework of the schools of sciences (there are four of them at the Institute) are provided by organizing scientific discussion seminars supervised by the leading researchers of ISEDT RAS. This form of work is very efficient: about 100 of such events are held each year with the participation of university students, REC schoolchildren, employees of Vologda organizations and enterprises. Such events are very important, because graduate students, young scientists acquire public speaking skills, the ability to put forward and substantiate scientific hypotheses, ask questions, find right answers, etc.

Main results of the ten-year work of REC

REC ISEDT RAS has developed a specific system of organizing research work of the students. Here an important role belongs to the joint activity of the research institution, universities and schools, to the unity of teaching and research work.

REC is an open rather than self-contained structure. Its openness, on the one hand, is projected on the established organizational forms of education activities (schools, universities, supplementary education institutions, which actively cooperate with REC). On the other hand, the project is open for integration with other structures, both within the Russian Academy of Sciences and in geographical terms (with institutions and business organizations of the region).

Today one can confidently say that the Research and Education Centre provides all of its participants with ample opportunities for intellectual, professional and personal development.

A large-scale social importance of REC is obvious, since it creates a favorable environment for revealing creativity and personal development of talented youth.

For ten years, nearly 500 students educated at REC have been involved in research activities. The growth in the number of school research demonstrates the efficiency of the project. The practical role of ISEDT RAS Research and Education Centre in the generation of knowledge of the region's talented youth is proved by the annual assessment of professional abilities of its students[8] and their leadership activity. The research shows that over the period of study at REC, communication skills are increasing significantly (for example, in 1.4 times from the 2008 to 2013 academic year), and a very high level of their development was demonstrated by almost 4 times more people (from 11.1 to 42.8%). The level of organizing skills increases significantly as well: according to estimates, 2.5 times more children demonstrated their high level during the study period (from 28.2 to 71.5%), and 1.5 times more children showed a very high level (from 14.2 to 21.4%). The developed skills help students in their vocational choices, in implementing their opportunities in various spheres, in particular, in research, which meets both the requirement of contemporary society and the goals of REC. for instance, from 410 students educated at REC in the period from 2003 to 2013, 90% (368 people) enrolled in universities, 33% (135 people) – majoring in Economics[9].

[8] A set of diagnostic methods in psychological testing involves the methodology developed by V.V. Sinyavskiy and B.A. Fedorishin "Communication and organizational inclinations"; the test of intellectual and professional abilities "TIPA-5" by R. Amthauer; test for assessing the degree of tolerance by V.V. Boyko, etc.

[9] Ilyin V. A., Shabunova A. A., Popova V.I., Leonidova G.V., Garmanova O.Yu., Yegorikhina S.Yu., Koroleva I.A., Kulakova A.B., Fomina Zh.V. "ISEDT RAS Research and Education Centre: 10 years. From inception to implementation". Book 1: Subsystem of additional education. Vologda: ISEDT RAS, 2013. P. 78.

The REC graduates point out that the development of research skills is one of the most important opportunities that were provided to them during their training at the Research and Education Centre. So, according to the graduates of 2004–2008, their education in economics, first of all, gave them the skills of planning and carrying out research work (51%; 19 people), the ability to think rationally (41%; 15 persons). The graduates of 2009–2012 mentioned more frequently the skills in planning and carrying out research work (82%; 44 people); *fig. 3*).

Assessments that schoolchildren give to the opportunities offered by the Research and Education Centre show that for the majority of children from 6–7th grades (86%) the most important is participation in public events held by REC (excursions, exhibitions, intellectual games). The opportunity to use Internet resources (84%) is also noted by schoolchildren as one of the most demanded resources of REC. Pupils of 8–9th grades are mostly interested in such resources as computer class (80%) and Internet access (93%), and students of 10–11th grades are interested in access to Internet resources and in public events (86% and 83%, respectively).

Practical significance of the work with students lies in the fact that they are directly involved in scientific research of the Institute already from the beginning; they analyze economic information on the most relevant problems of regional development, which forms the basis for their future graduation projects. This form of work is important, because the next stage of education for part of them is graduate school (in the period from 2008 to 2013, 21 graduates of the Vologda branch of Saint-Petersburg State University of Engineering and Economics enrolled in ISEDT RAS graduate school).

The most important indicator of performance of the graduate school is the number of completed dissertations in Economics.

Figure 3. Distribution of answers to the question "What did education in REC ISEDT RAS give to you?", %

The share of graduate students, who defended their dissertations, in the total number of those who completed their graduate programme, is 41% (for 1998–2012), which is quite high compared with the national data (26%).

The employment of students who completed their graduate degrees is an important indicator for the task of enhancing the region's intellectual potential. It should be noted that 39% of graduate students after completing their graduate programmes at ISEDT RAS continued their research activities at the Institute (21 people from 2000 to 2012).

For 10 years, more than 29% of REC graduates (28 people) have joined the academic staff of ISEDT RAS, 5% (5 people) were transferred to the government authorities (Vologda Oblast Government, Vologda City Administration, etc.), 20% (19 people) are engaged in teaching at the region's universities. As a result, the number of research staff in the region has increased by 12% (52 people).

The project is significant for the region, because it promotes the following:

– harmonious (intellectual, moral, and social) development of talented pupils and students;

– provision of support to young scientists, development of innovation projects in various sectors of regional economy, transfer of their research and experimental developments in practice;

– enhancement of the level of fundamental research in the region.

The efforts of REC concerning the creation of its own system of competitions in the region, and their dissemination to neighboring regions, including the Republic of Belarus, were noted at the federal level. For instance, in 2013 REC ISEDT RAS became a participant of one of the elite Russian competitions for schoolchildren – N.D. Kondratieff Interregional Economic Olympiad (starting next year, REC will be a member of the contest's jury).

Tasks for the future

Summing up, we should note that the model of research and education integration created by the Institute of Socio-Economic Development of Territories of RAS at the regional level takes into account both economic and administrative tools of influence on the goal-oriented reproduction of population's intellectual potential by boosting research

and education environment of the territory, and it finds a solution to the social task of overcoming technological backwardness of the region in the medium term. Over time, REC may turn into a kind of "Tsarskoe Selo Lyceum", which would educate, in competitive environment, the children not only from Vologda, but also from the whole oblast and neighboring regions. Thus, REC will be able to replenish the region's research personnel and become one of the mechanisms and sources of formation of modern managerial elite. At that, another major demand of the time will be fulfilled: the lifelong continuity of professional knowledge.

The Institute is ready for a more active work to create integrated structures providing the link between economic needs and the level of the latest achievements in domestic and world science (a kind of "synergetic centres for innovation growth"). The Cenre for Cluster Development is one of the ongoing projects of the Institute that has received federal grant support. For the near future, the Institute is also developing the centre for collective access to high-tech equipment that will be established on the basis of the Innovation Economics Department of ISEDT RAS. Back in 2005 the Centre for Technology Transfer (CTT), as an associated member of the Russian network, was established at the Institute. In 2008–2010 alone, CTT attracted 12.5 million rubles of investments into the development of innovation projects of enterprises and organizations of the region.

It should be noted that REC makes practical contribution to the development of research and technology potential of the region. 52 graduates of REC have joined the region's research team, which is 12.2% of the total number of researches (424 people in 2012). We can confidently say that the development of integration structures according to the model of REC in the universities of the Vologda Oblast is a way to build science and technology potential, its intellectual component. Besides, it would be possible to enhance the efficiency of regional research and education space, and establish an additional basis for dynamic development of the region's science and technology potential if the following activities were implemented: the realization of the standard model of research and education centres at all the region's universities (in different specializations: Physics and Mathematics, Natural Science, etc.), their provision with the necessary level of material and technology base with the support from the regional authorities, the development of common methodological and methodical approaches to searching for and identifying the most capable schoolchildren, young people and bringing them in accordance with the level of requirements of innovation economy.

Such mechanism of interaction between research and education institutions, business and authorities in the research and educational space makes it possible to draw some conclusions as to its applicability in other regions. It appears that in the next 2–3 years the development of the country's socio-economic system will have significant positive dynamics which will promote further development of REC. This will make it possible to achieve the level of development of international educational programmes with all necessary Russian and international certificates.

The achievement of this target will be promoted also by an agreement concluded in December 2013 between REC ISEDT RAS and Moscow School of Economics under Lomonosov Moscow State University, (the School is headed by Academician A.D. Nekipelov). The aim of the School is to provide fundamental economic education to students, their training in research activities and professional communication with foreign

colleagues. The leadership of MSE intends to make the school a leader in Russia and worldwide.

In conclusion, we point out that the results of the ten-year work of ISEDT RAS Research and Education Centre are presented in the monographs "ISEDT RAS Research and Education Centre: the first 10 years" and "ISEDT RAS Research and Education Centre: 10 years. From inception to implementation" (in two books), which have been prepared for the anniversary.

References

1. Science and Engineering Indicators: 2012. Available at: http://www.nsf.gov/statistics/seind12/c3/c3h.htm
2. Garmanova O.Yu. The role and place of distance learning in the system of schoolchildren economic education. Territorial development issues. 2013. No.2. Available at: http://vtr.isert-ran.ru/file.php?module=-Articles&action=view&file=article&aid=2698
3. Garmanova O.Yu. Organizational and methodical support of distance education (the case of economic internet-school at ISEDT RAS Science and education centre). Problems of development of territories. 2012. No.5(61).
4. Science indicators: 2013: statistical digest. Moscow: NRU HSE, 2013.
5. Innovation policy: Russia and the world: 2002–2010. Under the general editorship of N.I. Ivanova and V.V. Ivanov; Russian Academy of Sciences. Moscow: Nauka, 2011.
6. Concept 2020.
7. Leonidova G.V., Kulikova A.V., Kukushkina M.V. Research and Education Centre: systemic approach to the work with talented youth. Vologda: VSCC CEMI RAS, 2008.
8. Leonidova G.V. Regional research and education centre. Vologda: VSCC CEMI RAS, 2007.
9. Terebova S.V., Vyacheslavov A.M. Modernization of the system for the regional research and innovation sphere development management: final report on R&D. Vologda, 2013.
10. Science. Innovation. Information society: 2012: concise statistical digest. Moscow: NRU HSE, 2012.
11. Ilyin V. A., Shabunova A. A., Popova V.I., Leonidova G.V., Garmanova O.Yu., Yegorikhina S.Yu., Koroleva I.A., Kulakova A.B., Fomina Zh.V. "ISEDT RAS Research and Education Centre: 10 years. From inception to implementation". Book 1: Subsystem of additional education. Vologda: ISEDT RAS, 2013.
12. Popova V.I., Yegorikhina S.Yu., Zhdanova L.V., Koroleva I.A., Kulakova A.B. "ISEDT RAS Research and Education Centre: 10 years. From inception to implementation". Book 2: Subsystem of postgraduate studies. Vologda: ISEDT RAS, 2013.
13. Ilyin V.A., Gulin K.A., Leonidova G.V. The extended reproduction of research staff as the key link in the progressive development of territories. Priorities of scientific and technological development of the North-West of Russia. Materials of the session of the Inter-Agency Northwestern Coordination Council under RAS on fundamental and applied research. Under general editorship of V.V. Okrepilov. Saint Petersburg: SUAI, 2011. P. 144-161.
14. Verbatim report of the meeting of the Presidium of the State Council, the Council for Culture and Arts and the Council for Science, Technologies and Education. April 22, 2010. Available at: http://www.kremlin.ru/transcripts/7530. Retrieved May 12, 2010.
15. Fomina Zh.V. Students' research activity as a component of the competency building approach in education (in the case of ISEDT RAS Scientific and educational centre). Problems of development of territories. 2013. No.2(64). P. 113-123.

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On the role of investments in sustainable economic growth

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The article raises one of the most acute problems of the economy – promotion of sustainable economic growth. The article substantiates the relevance of the issue for global, national and regional economies. It argues that the goal of ensuring high economic growth rates is a strategic one for the Russian Federation; the achievement of this goal will allow Russia to retain its position among the world leaders. However, this requires, first of all, the transition from the model of economy oriented to raw materials export to the innovation model.

The article shows that investments play the most important part in the promotion of sustainable economic growth. Endogenous models indicate that long-term sustainable economic growth requires investments in machinery and equipment, in human capital and in the knowledge sector. At that, the investments in human capital and knowledge are more preferable.

The results of the investment processes analysis presented in the article allowed us to draw some conclusions concerning the situation that is taking shape in the Russian Federation. In particular, there has been a decline in the share of investment in machinery, equipment and vehicles; the structure of investments in fixed capital is not optimal; the share of investment in agriculture, manufacturing and construction is reducing; investments in mechanical engineering are extremely low while this sphere is crucial for the state of country's productive capacity. The knowledge sector and branches aimed at human capital development are funded on leftovers.

The current situation is largely determined by the fact that economic entities experience a shortage of equity capital; by unfavourable lending conditions that banks offer to the real sector of the economy; by the budget crisis and the low attractiveness of the Russian economy to foreign investors.

The article concludes that to change the situation it is necessary to adjust the socio-economic policy, to abandon the resource-based model of economic development.

Economic growth, endogenous economic growth models, investments, investment structure, investment sources, socio-economic policy.

Achieving high rates of economic growth is the priority task of any state. Successful solution of this problem ensures sustainable socio-economic development, enhances people's welfare, and determines the place and role of the country in the world economy. This explains the fact that not only economic scientists, but also politicians pay special attention to the issue of economic growth [23]. The issue becomes even more acute due to the alarming trends in the global economy that are acquiring more and more resistant character *(fig. 1)*. After the phase of recovery growth, the world economy is experiencing another recession. The results of 2011 and 2012 prove that growth in the world economy has actually slowed down.

The issue concerning growth is very acute for the Russian economy. In 2012 Russia's economy grew by 3.4 percent; however, the stagnation of the economy in January – September 2013 caused the downward trend in the forecast of the growth of Russia's GDP. In the end, the growth of Russia's economy in 2013 will be just above one percent.

The main reason for this situation lies in the commodity-based nature of the economy, the negative consequences of which were pointed out in the report of the Director of the RAS Institute for the U.S. and Canadian Studies, RAS Corresponding Member S.M. Rogov at the session of the RAS Presidium. "Today, almost a half (about 40%) of Russia's GDP comes from the export of raw materials. We have almost lost competitive science-intensive industry. Mechanical engineering, electronics and other high-tech industries form 7–8% of our GDP. Export of hi-tech products is only 2.3% of industrial export in Russia. In the USA this figure is 32.9% in China – 32.8%. Russia's share in the global export of science-intensive products does not exceed 0.3%. Domestic production accounts for no more than 1% of all machine tools, purchased by the Russian

Figure 1. Gross world product, growth rates in % [16]

business. Depreciation of fixed assets in 2009 reached 46%, and it exceeds 50% with regard to machines and equipment [2].

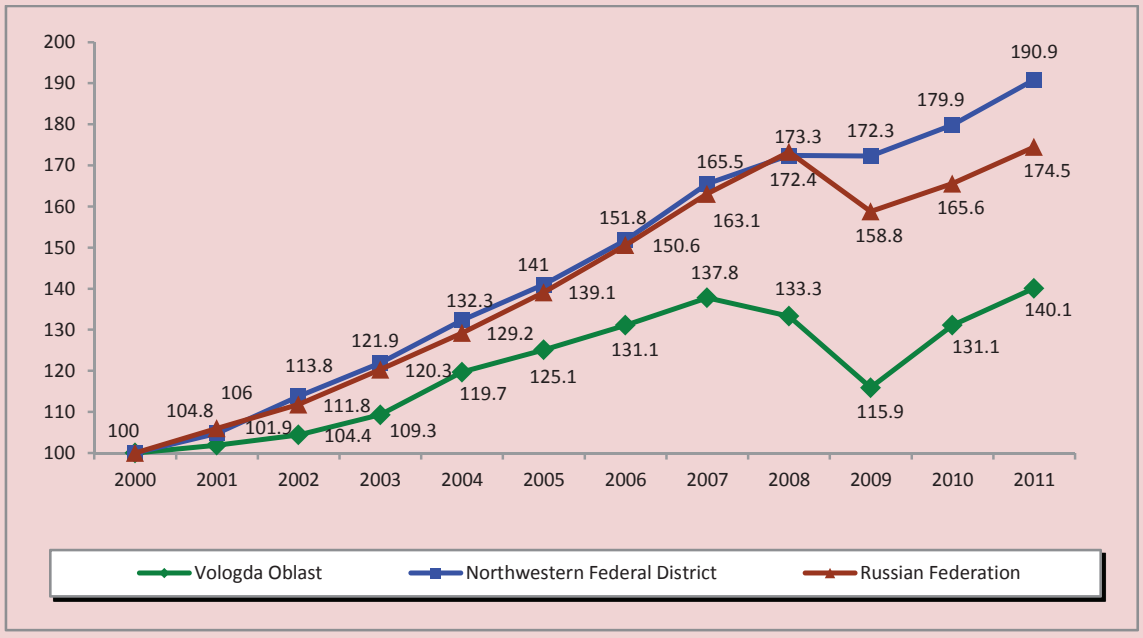
It is necessary for Russia to achieve such rates of economic growth that would exceed the global ones in order to reach the following strategic goals: to maintain the status of the great power and independent centre of influence for enhancing the population's welfare, and to develop the economy up to the level of advanced countries.

At the beginning of 2012 the then Prime Minister V.V. Putin emphasized that "it is necessary not just to increase physical volumes of GDP, but to fill the development with new quality". As President of the Russian Federation, he pointed out in his Address to the Federal Assembly on December 12, 2012: "One-sided commodity-based economy... is not just vulnerable to external shocks... And, finally, the reserves of the commodity-based model have been depleted, but Russia's development requires annual GDP growth by at least 5–6 percent in the next decade" [17].

The vulnerability of resource-based economy is clearly shown by the dynamics of the Vologda Oblast GRP *(fig. 2)*. Growth rate of the gross product of the Vologda Oblast is substantially lower than in the Northwestern Federal District and Russia as a whole. The main reason for such situation in the region lies in the dependence on the external market environment, where the demand for commodities (including metal) has dropped in recent years. It is necessary to point out that the share of metallurgical and chemical industries, i.e. primary sector of the economy, is very high (about 80%). At that, the share of high-tech industries is constantly decreasing. For instance, the share of machine building accounted for 6.2% in 2000, in 2011 – for only 3.8%; the share of woodworking for this period has decreased from 8.3% to 3.5%.

Low GDP growth rates in the conditions of high world prices for raw materials and products of the first processing prove the inefficiency of the selected model of the economy based on the export of raw materials. These circumstances

Figure 2. Index of physical volume of gross product, as a percentage of that in 2000 [1]



once again show the relevance of the research into modernization of economy, its transition to the innovation way of development for achieving sustainable growth.

The study of theoretical and methodological foundations for sustainable economic growth makes it possible to conclude that investments play the major role in dealing with this issue. This is shown in the studies initiated by the works of P. Romer, R. Lucas and, a little later, S. Rebelo. The contribution of P. Romer and R. Lucas resulted in the formation of a new direction of long-term economic growth called the endogenous growth theory [11, 22]. Depending on the sources of economic growth and investment objects, the endogenous models of long-term sustainable economic growth were created.

The models with the accumulation of physical capital assume that the technology and knowledge that are embodied in physical capital become public good and, due to the spillover effect, they influence economy-wide productivity growth *(fig. 3)*.

Assumption of R. Lucas about the possibility of continuous economic growth through investment in human capital, allowed him to create a model, according to which the investments in human capital generate an effect that increases the level of development of technologies faster than investments in physical capital do *(fig. 4)*.

The research into the origin of technological progress and the pattern of emergence and implementation of innovations facilitated the creation of models, which present two main

Figure 3. Model of economic growth with investments in physical capital that generate the spillover effect

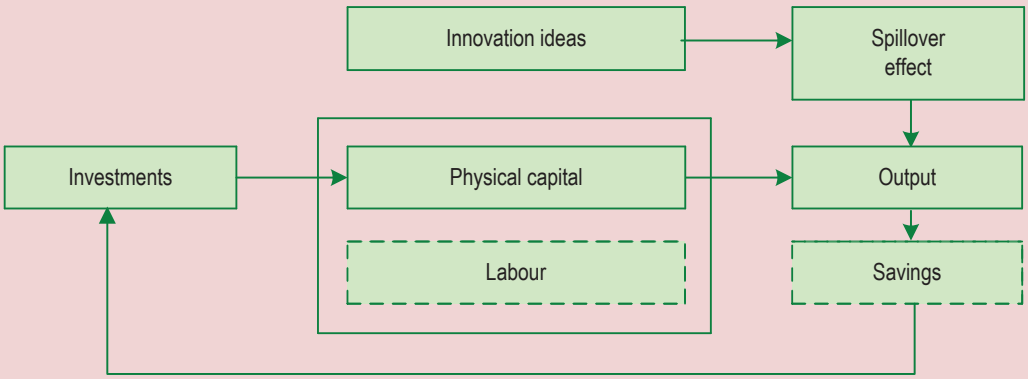
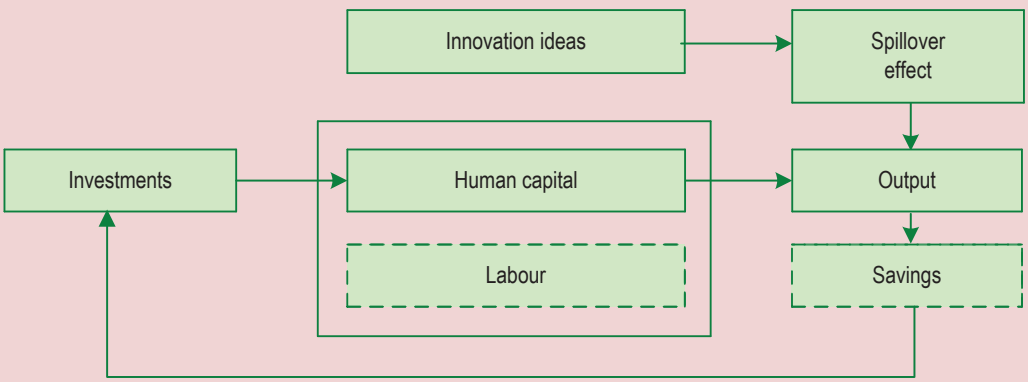


Figure 4. Model of economic growth with investments in human capital that generate the spillover effect



sectors of the economy, participating in the formation of science and technology progress: the sector for generation and accumulation of knowledge (ideas), the sector for production of goods (items) the means of production and the final product. Ideas are a tool for production of goods with a greater added value, and, therefore, they are a more significant factor in economic growth *(fig. 5)*.

Thus, ensuring sustainable economic growth requires investments in physical capital, first of all, in machinery and equipment, in human capital, and in the knowledge sector. At that, investment in human capital and knowledge are preferable because they create prerequisites for the emergence of scientific and technological innovations, which, in turn, serve as internal sources of sustainable economic growth.

At the same time, the analysis of investment processes in the Russian economy proves that the share of investments in machinery, equipment and vehicles is reducing. Since 2005 alone, this index in Russia has decreased by 4.7 percentage points, in the Vologda Oblast even more significantly – by 7.6 percentage points *(fig. 6)*.

Figure 5. Model of economic growth with investments in knowledge sector

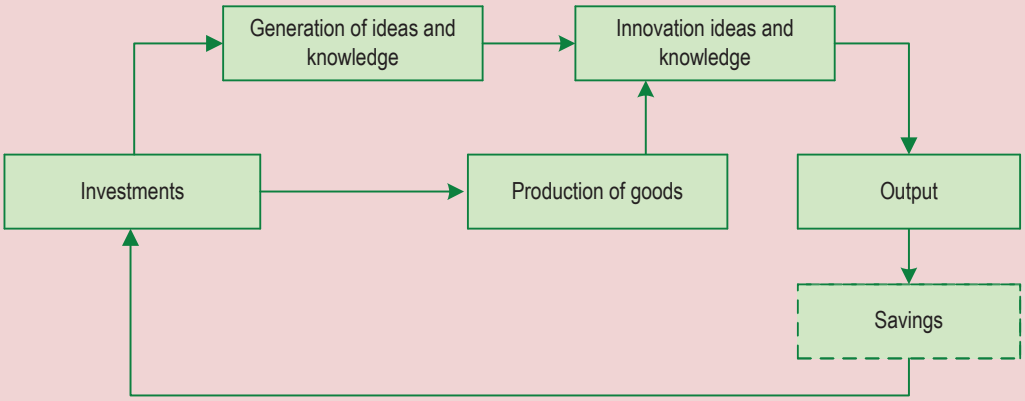
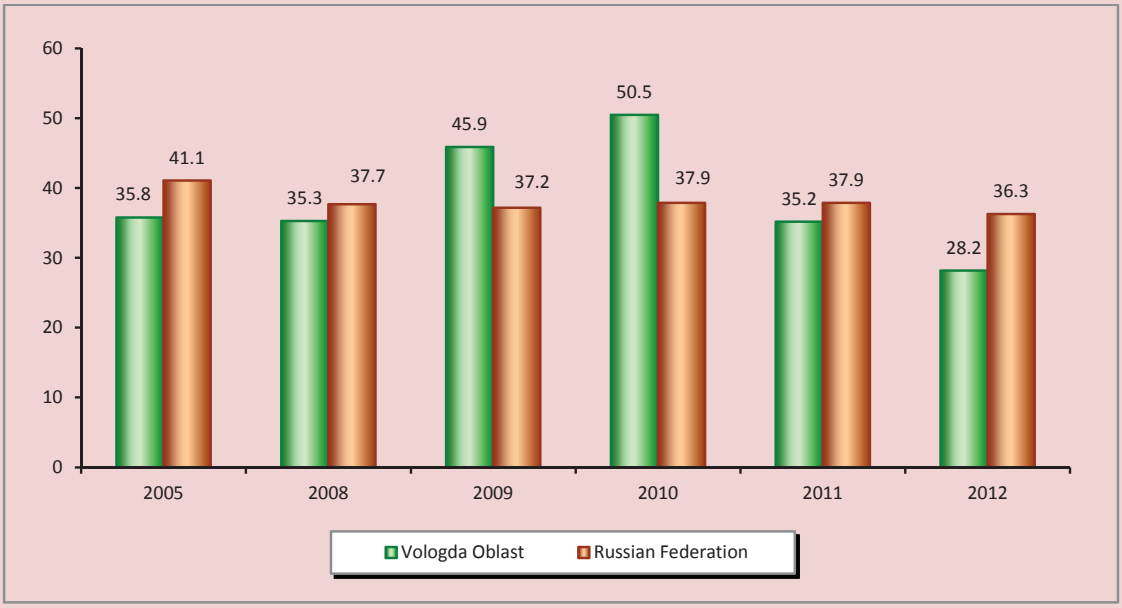


Figure 6. The share of investments in machinery, equipment and vehicles in the total amount of investments in fixed capital, percent [7, 8]



The main reason for the current situation is seen in the lack of own resources: in 2012 it was pointed out by 64% of the heads of enterprises participating in the survey[1]. At the same time, the country's financial system is mainly focused on the financing of a rather small group of the largest companies integrated in the global economy. The development of mass funding can rely at present almost exclusively on bank loans [17]. However, lending conditions remain unprofitable for manufacturers because of high interest rates and high requirements to the borrowers (+5 percentage points). More than half of the respondents think so. The managers named the following main problems they had to face when obtaining a loan: high interest rate (68%); the requirement of collateral for securing loans (32%); refusal of the bank in granting long-term loans (21%); terms of the loan (20%); long procedure of loan formalization (17%).

Thus, many large-scale enterprises and the vast majority of medium enterprises remain excluded from external financing and have no funds for upgrading their facilities and infrastructure. As a result, the main production assets have a high level of physical and moral depreciation. Depreciation of capital assets in the Vologda Oblast amounted to 54.6% at the end of 2012 [18]. This, in turn, is a crucial factor determining the low competitiveness of production, and, consequently, demand.

The structure of investments in fixed capital is inefficient as well *(fig. 7)*. Their main volume, as before, is directed to the raw materials sector of the economy. The share of investments in agriculture, manufacturing and construction is reducing. Similar situation is observed in the Russian regions. Moreover, the situation can be characterized as critical in many regions. For example, in the Vologda Oblast in 2012, 68% of all the investments in fixed capital were investments in transport and communications, out of them 61.4% – investments in pipeline transport, 1.5% – investments in communication. Therefore, about 5% was invested directly in transport *(fig. 8)*.

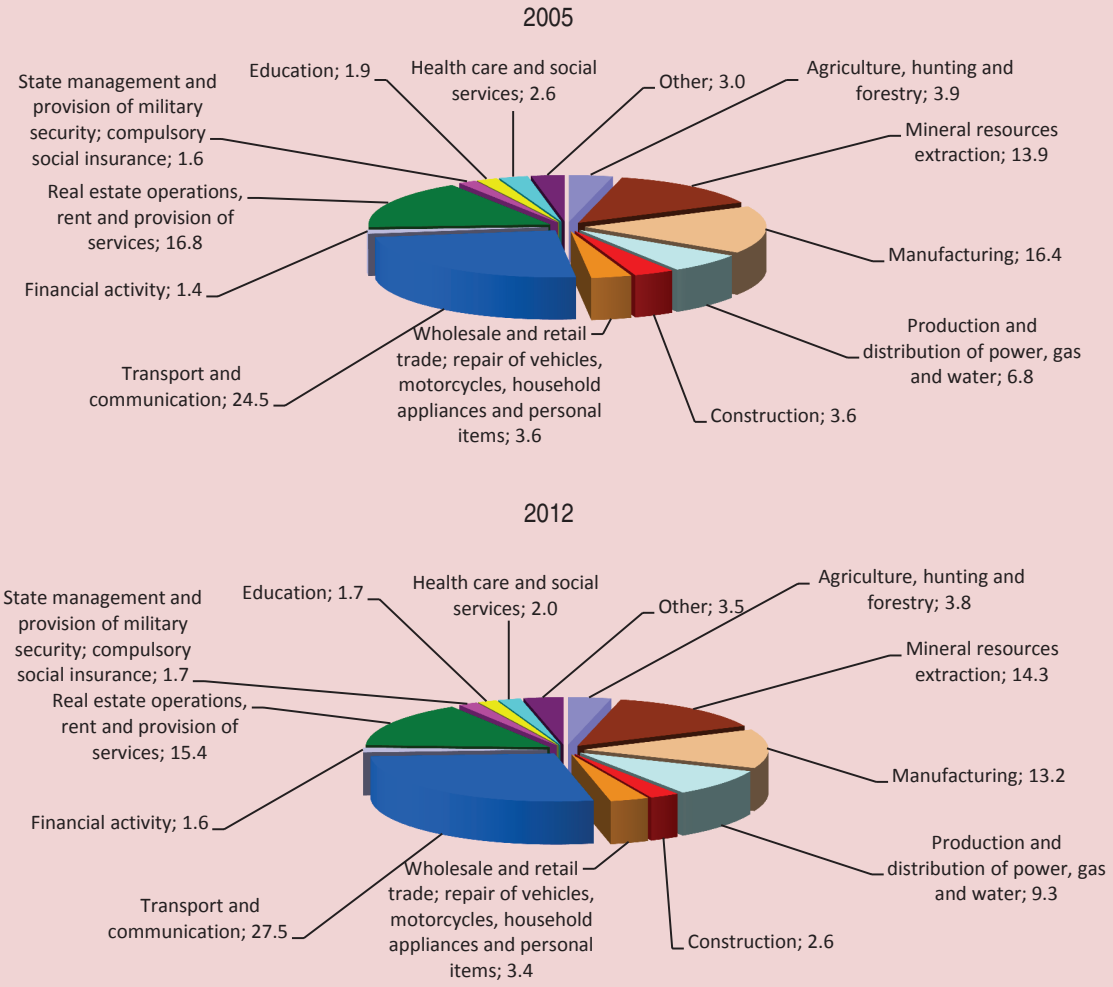
The share of finances allocated for manufacturing industries is constantly decreasing. In Russia as a whole, this figure for the period from 2005 to 2012 has decreased by 3.2 percentage points, and at the end of 2012 it was about 13%, of which only 2.6% was allocated for mechanical engineering. In the Vologda Oblast, for example, the share of investment in fixed capital of manufacturing industries for the period from 2005 to 2012 has decreased from 39.7% to 16.8%. At that, the main volume of investments was intended for metallurgical and chemical industries, i.e. for the sectors of primary processing of raw materials: in 2012 these industries received 68% (24% and 44% in metallurgy and chemistry, respectively) of all the investments in manufacturing productions. At the same time, the share of investments in mechanical engineering during this period did not exceed 1% *(fig. 9)*.

At the same time, mechanical engineering should provide equipment to key sectors of the economy and, first of all, manufacturing industries; it thereby determines the state of the country's production potential. The level of development of mechanical engineering influences material consumption, energy intensity of the gross domestic product, labour productivity, industrial safety and defense capability of the state. Shortage of investments in this sector leads to reduction in industrial, intellectual and technological potential of the country and its national security; it also reduces the competitiveness of the economy and hampers its growth.

We have already pointed out that investments in human capital ensure sustained economic growth. Note that human capital is understood as a certain stock of health, knowledge, skills, abilities, and motivations formed as a result of investments and accumulated by

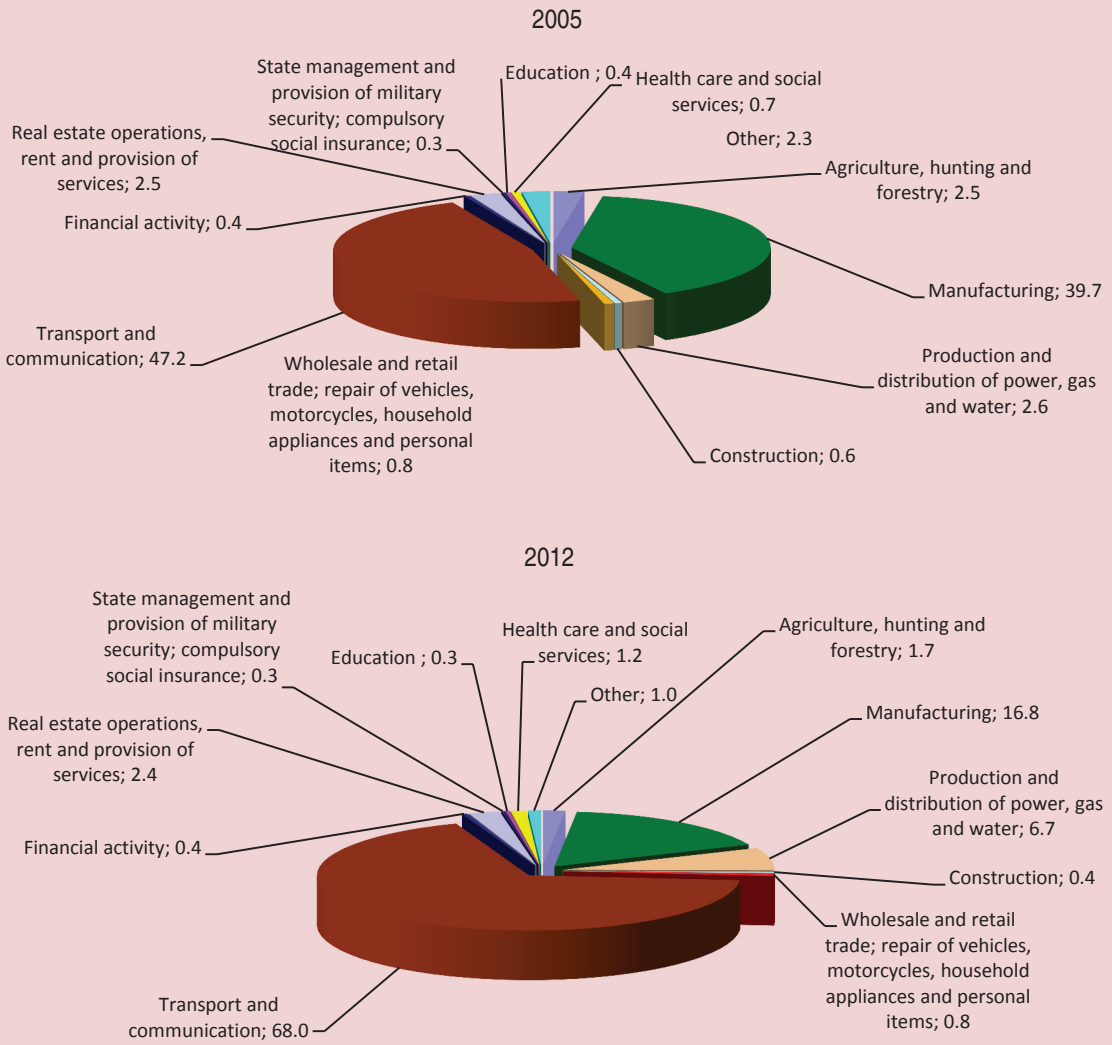
[1] The survey of enterprises' heads is carried out annually by ISEDT RAS.

Figure 7. Structure of investments in fixed capital of the Russian Federation in 2005 and 2012, %



Activity	2005	2012	Dynamics, p.p.
Agriculture, hunting and forestry	3.9	3.8	-0.1
Mineral resources extraction	13.9	14.3	+0.4
Manufacturing	16.4	13.2	-3.2
Production and distribution of power, gas and water	6.8	9.3	+2.5
Construction	3.6	2.6	-1.0
Wholesale and retail trade; repair of vehicles, motorcycles, household appliances and personal items	3.6	3.4	-0.2
Transport and communication	24.5	27.5	+3.0
Financial activity	1.4	1.6	+0.2
Real estate operations, rent and provision of services	16.8	15.4	-0.6
State management and provision of military security; compulsory social insurance	1.6	1.7	+0.1
Education	1.9	1.7	-0.2
Health care and social services	2.6	2.0	-0.6
Other	3.0	3.5	+0.5

Figure 8. Structure of investments in fixed capital of the Vologda Oblast in 2005 and 2012, %



Activity	2005	2012	Dynamics, p.p.
Agriculture, hunting and forestry	2.5	1.7	-0.8
Manufacturing	39.7	16.8	-22.9
Production and distribution of power, gas and water	2.6	6.7	+4.1
Construction	0.6	0.4	-0.2
Wholesale and retail trade; repair of vehicles, motorcycles, household appliances and personal items	0.8	0.8	-
Transport and communication	47.2	68.0	+19.8
Financial activity	0.4	0.4	-
Real estate operations, rent and provision of services	2.5	2.4	-0.1
State management and provision of military security; compulsory social insurance	0.3	0.3	-
Education	0.4	0.3	-0.1
Health care and social services	0.7	1.2	+0.5
Other	2.3	1.0	-1.3

man; this stock is used appropriately in any sphere of social reproduction, enhances labor productivity and production efficiency and thus leads to the increase in earnings of an individual [3]. Therefore, human capital – the capital represented in man by the potential to bring profit based on inherent physical and intellectual abilities and knowledge and practical skills obtained in the course of socialization, education and practical activities – has the ability to accumulate and multiply. It is formed, first of all, through investments contributing to the increase in the level and quality of life, including education, health, knowledge (science), culture, art and other components. Such spheres of economy as education and health care have the greatest influence on its development. Therefore, investment in these sectors contributes to the development of human capital. However, the situation is extremely unfavorable in this sphere as well. The increase of investments in the fixed capital of sectors that are aimed at the development of human capital, slowed down in 2011–2012. In 2010 the growth was 109.2%, in 2011 – 107.5%, and in 2012 – only 102.9%. By the beginning of 2013 the investments in this sector have not reach the pre-crisis level of 2008 (they have amounted to 97.2%). The main factor that impeded the growth in 2012 consisted in the reduction of investments in education (by 6.4% after a growth by 11.3% in 2011) mainly due to reduction of capital investments in higher professional education (by 33% after the 25.6% increase in 2011). As for the investments in the fixed capital of health care, they increased in 2012 and amounted to 111.8% of the previous year. In general, however, the share of investments allocated for the development of human capital, has not even reached 4%, and it is continuously declining *(tab. 1)*. Insufficient financing of industries that are aimed at the development of human capital, leads, in turn, to reduction in the number of economically active population and people employed in the economy and, consequently, to reduction in the production of gross domestic product.

Figure 9. Dynamics of investment in manufacturing industries of the Vologda Oblast, as a percentage of the total volume of investments in fixed capital [7, 8]

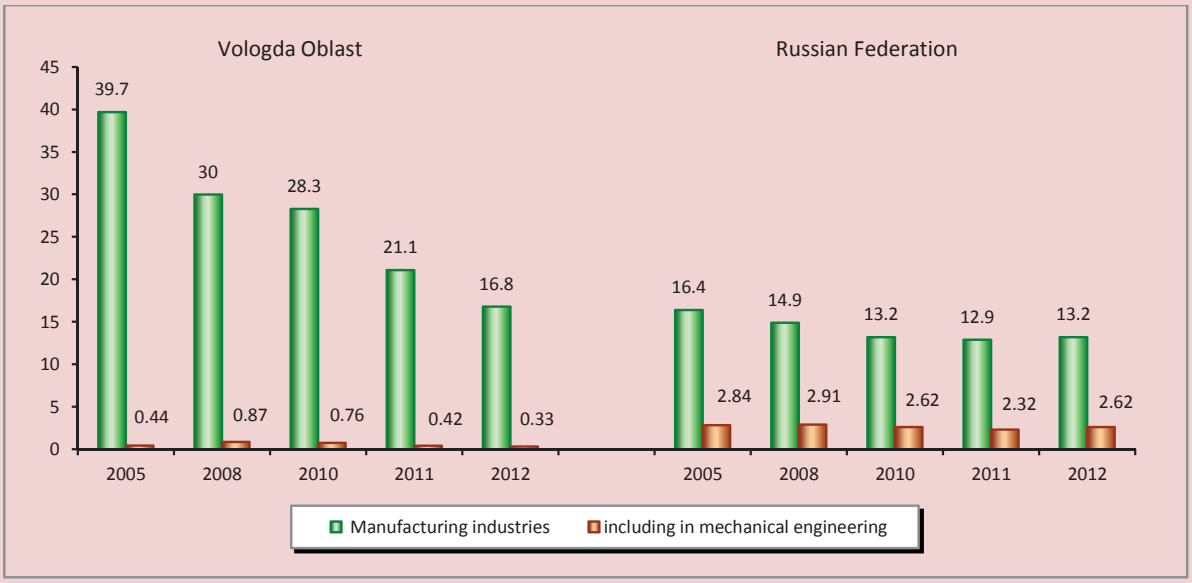


Table 1. The share of investments in the fixed capital of economic sectors aimed at the development of human potential, in the total volume of investments in fixed capital, % [7, 8]

Territory	Sector	2005	2008	2010	2011	2012	Dynamics, p.p.
Russian Federation	Education	1.9	1.9	1.8	1.8	1.7	**-0.2**
	Health care and social services	2.6	2.4	2.1	2.0	2.0	**-0.6**
	Total	**4.5**	**4.3**	**3.9**	**3.8**	**3.7**	**-0.8**
Vologda Oblast	Education	0.4	1.0	0.9	0.4	0.3	**-0.1**
	Health care and social services	0.7	1.5	1.9	0.5	1.2	**+0.5**
	Total	**1.1**	**2.5**	**2.8**	**0.9**	**1.5**	**+0.4**

In recent decades knowledge has been playing a decisive role in facilitating economic growth. Knowledge establishes the basis for innovation and creation of skilled workforce. It is no accident that science-intensive industries of manufacturing and services account for a large and increasing share of gross domestic product of the leading industrial countries. The share of industries with increased demand for knowledge (high-tech industries, telecommunications, financial and business services) in gross domestic product accounts for an average of 30–35%. In Russia this indicator is 11.5–12%. Such industries are characterized by high growth rates of output, employment, investment, foreign trade turnover. In developed countries, investments in basic research are considered as a highly efficient sphere of government spending [14, 15]. Therefore, investments in knowledge in these countries are growing faster than investments in fixed assets.

Unfortunately, the knowledge sector in the Russian Federation has been diminished significantly during the period of market transformations. For two decades (from 1992 to 2011) the number of research organizations in Russia has decreased by almost 20% (from 4555 to 3682); the number of industrial organizations that have research and design departments – by 18% (from 340 to 280). The number of design bureaus has decreased in 2.4 times (from 865 to 364), the number of design organizations – in 13 times (from 495 to 38) [20].

Our country occupies still lower positions by such key indicator as the share of researchers in the structure of labour force, which is one of the main factors in the intellectual development of society. For instance, in 2000 Russia accounted for 78 scientific researchers per 10 000 people employed in the economy, in 2011 – for only 63. During this period, the indicator has increased in South Korea from 51 to 117 in Germany – from 65 to 81, in France – from 67 to 918. At that, we are falling behind not only the leaders of the world's science and technology development, but also behind such states like Slovenia and Estonia [20]. Therefore it is premature to speak about transition of the Russian economy to the innovation development model.

At the same time, the knowledge sector in the Russian Federation is funded on leftovers. Investments in the objects of intellectual property and R&D slightly exceed 1%. In some regions the situation is even more critical. For example, in the Vologda Oblast this sector accounts for 0.35% of all the investments, despite the fact that the 2005–2012 period witnessed an increase in the share of investments *(tab. 2)*. With such level of investments, the knowledge sector cannot influence economic growth.

As a result, according to the Ministry of Economic Development, energy products account for almost 70% in the total volume of Russian export in value terms, including oil and oil products – over 53%, gas – over 12%.

Table 2. Investments in fixed capital in the knowledge sector in the total volume of investments in fixed capital, % [7, 8]

Territory	Sector	2005	2008	2010	2011	2012	Dynamics, p.p.
Russian Federation	Investments in the objects of intellectual property	0.8	0.5	0.4	0.5	0.5	**-0.3**
	Investments in R&D	0.3	0.3	0.4	0.4	0.6	**+0.3**
	Total	**1.1**	**0.8**	**0.8**	**0.9**	**1.1**	-
Vologda Oblast	Investments in the objects of intellectual property	0.03	0.05	0.04	0.0	0.3	**+0.27**
	Investments in R&D	0.0	0.0	0.04	0.0	0.05	**+0.05**
	Total	**0.03**	**0.05**	**0.08**	**0.0**	**0.35**	**+0.32**

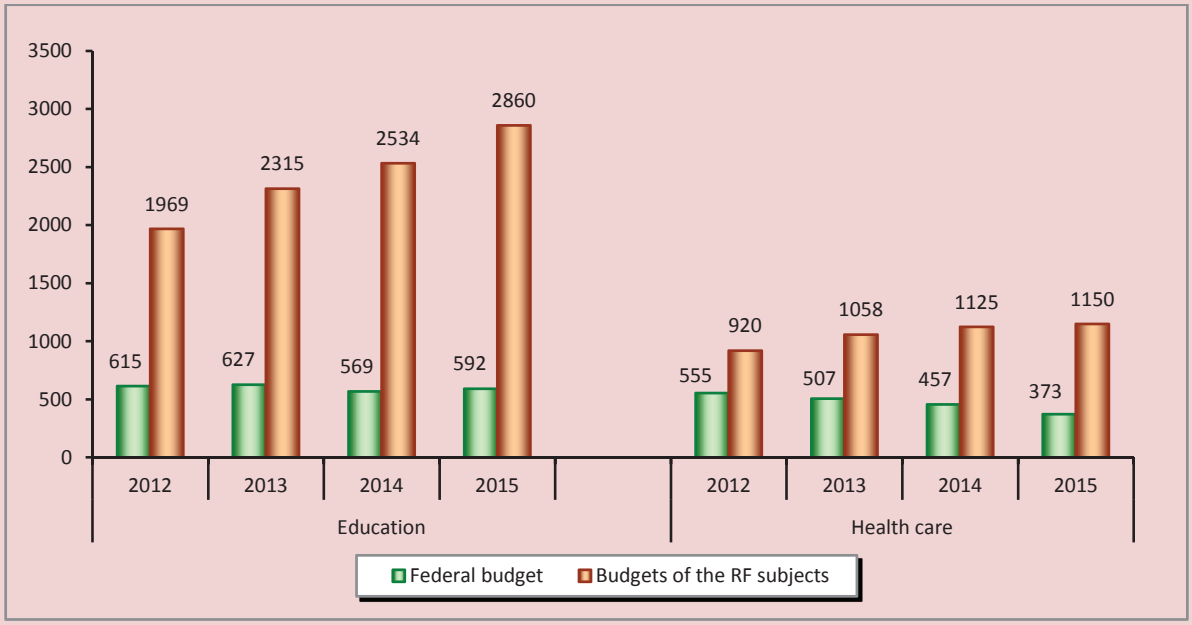
Other exports items appear less significant: machines, equipment and vehicles – 4.2%; food, mainly grain – 2.2%, wood and pulp and paper products – 2.1%; other goods – 7.1%. Similar situation is observed in the Vologda Oblast, which has commodity orientation of export: ferrous metals and products of chemistry account for about 90% in the structure of its export. High-tech products export remains low. At that, the structure of import, in contrast, is dominated by high-tech goods. Retaining the commodity-oriented export model, the accelerated growth of machine building products imports in addition to the negative impact on economic dynamics creates a serious threat to the security of the country. In addition, "the habit of living off export earnings is still impeding innovation development" [13]. For comparison, the second largest economy in the world in terms of GDP – China, for which export is crucially important, exports mainly textiles and electronics. The basis of export in the U.S. is mechanical engineering. India, being a developing country, exports mainly transport equipment, clothing and medicines, and agricultural products.

Lack of budgetary resources is the main problem. Very scarce resources are allocated for these purposes from the budgets of the federal subjects. The situation that is taking shape in the regions indicates the possibility of the budget crisis. In recent years, sub-federal budgets have been characterized by high debt burden, which from 2009 alone exceeds 20% of the amount of own revenues. The main reason for the debt burden increase in the vast majority of RF subjects was the fall of income tax resulting in the deficit of territorial budgets. The decline in their own revenue base has made the RF subjects strictly dependent on external sources of funding. For instance, in the Vologda and Lipetsk oblasts (that specialize in metallurgy) in 2009–2012 in average the 25–33% implementation of expenditure obligations was provided through bank and budget loans and also through non-repayable financial aid from the federal budget. The situation is aggravated by the fact that the financing of social obligations is being transferred to the subjects of the Russian Federation to an increasing degree. This is evidenced by the forecast data on the expenditures on education and health care in the consolidated budget of the country for 2013–2015 *(fig. 10)*.

In the following budgetary period the main share of budget funds will be directed also to the financing of the social sphere. In the Vologda Oblast it is about 70%. In the end, the volume of budget funds allocated to the development of the economy will continuously decrease: from 8.2 billion rubles in 2013 to 5.9 billion rubles in 2016 *(tab. 3)*.

Russia's fiscal policy does not contribute to the solution of the task of investing modernization of the economy. The system of state administration in this sphere requires significant revision. ISEDT RAS studies show that the increase in tax collection and a series of unpopular measures, primarily in the sphere

Figure 10. Forecast expenditures of Russia's consolidated budget* on education and health care in 2012–2015 (billion rubles, in the prices of 2011)



* Note: Excluding the expenditures of state extra-budgetary funds.

Source: Accounts Chamber of the Russian Federation.

Table 3. Structure of the oblast budget expenditures in 2011–2016*

Sections	2011, fact		2012, fact		2013, estimation		2014, forecast		2015, forecast		2016, forecast	
	million rub.	%	million rub.	%	million rub.	%	million rub.	%	million rub.	%	million rub.	%
TOTAL expenditures	**46519**	**100**	**45182**	**100**	**44756**	**100**	**44093**	**100**	**43857**	**100**	**46617**	**100**
State issues	2053	4.4	1836	4.1	1995	4.5	2150	4.9	1865	4.3	1930	4.1
National security and law enforcement activity	2449	5.3	493	1.1	445	1.0	420	1.0	326	0.7	317	0.7
National economy	**6698**	**14.4**	**8239**	**18.2**	**8202**	**18.3**	**6280**	**14.2**	**5720**	**13.0**	**5952**	**12.8**
Housing and utilities sector**	1917	4.1	1848	4.1	393	0.9	1138	2.6	605	1.4	256	0.5
Environmental protection	236	0.5	164	0.4	145	0.3	185	0.4	149	0.3	146	0.3
Social sphere	**27421**	**58.9**	**30013**	**66.4**	**27651**	**61.8**	**30869**	**70.0**	**31209**	**71.2**	**32866**	**70.5**
education	7043	15.1	8285	18.3	10180	22.7	12382	28.1	12616	28.8	13238	28.4
culture, cinematography	882	1.9	594	1.3	504	1.1	477	1.1	506	1.2	594	1.3
health care	6643	14.3	10265	22.7	6598	14.7	7750	17.6	7726	17.6	8361	17.9
social policy	10870	23.4	10331	22.9	9924	22.2	9966	22.6	10177	23.2	10486	22.5
physical culture and sport	1764	3.8	431	1.0	289	0.6	118	0.3	117	0.3	130	0.3
mass media	219	0.5	107	0.2	156	0.3	176	0.4	68	0.2	56	0.1
Debt management	789	1.7	1310	2.9	1930	4.3	1919	4.4	1739	4.0	1697	3.6

Source: Draft Law of the Vologda Oblast "On the oblast budget for 2014 and the planned period of 2015 and 2016".

* For the purposes of comparability of the data, the expenditures for 2008–2010 are not presented here, since inter-budget transfers in this period were not included in the functional sections of the budget classification.

** In 2013–2016 the expenditures do not include non-repayable receipts.

of large business add 8–13 trillion rubles per year into the country's budgetary system [5, 6]. However, no practical steps have been made in this direction so far. Besides, at present, certain significant financial assets such as the reserve fund and the national welfare fund do not virtually participate in solving the priority tasks of socio-economic development.

As for economic entities, they hesitate to invest in the domestic economy. Innovation activity of enterprises remains extremely low, about 10% (their share is over 70% in developed countries) [9]. As a result, Russia's share in the global high-tech markets is less than 0.3%; it is by more than 2 orders less than that of the U.S., by an order less than that of Mexico, three times less than that of the Philippines [12]. According to expert estimates, production of high-tech consumer electronics, instrument making and machine-tool construction have turned out in a zone of "uncompensated technological inferiority" [21]. Rapid destruction of the contemporary technological mode means the destruction of the foundations of sustainable economic growth, the maintenance of backwardness of the Russian economy.

Russia's economy remains unattractive for foreign investors. For reference: the last year's volume amounted to 51 billion US dollars, the year of 2011 brought 55 billion US dollars to the economy, and 2008 – 75 billion US dollars [10] Despite the fact that in the first half of 2013, their inflow in the Russian economy increased by 32.1% compared to the same period of last year (98.795 billion US dollars), Russia's investments abroad for the same period have increased in 1.8 times, reaching 126.4 billion US dollars. That is, the balance of investments remains negative: in the first half of 2013 – 27.6 billion US dollars. Therefore, in recent years, when Russia's regions require significant internal investments for the restructuring of the economy, substantial assets of Russian origin are being accumulated abroad [17]. In many respects it became possible after the 2006 withdrawal of restrictions on transborder movement of capital [4].

Thus, the issues of economy modernization, overcoming of technological backwardness on this basis, ensuring competitiveness and sustainability of economic growth require significant volume of investments, the level of which is currently insufficient. In this regard, it is crucial to create favorable investment climate, to reduce investment risks and thereby increase the investment attractiveness of the Russian economy.

It is possible to solve the urgent problems of the Russian Federation only when changing the principles of socio-economic policy at the federal level; when Russia abandons the destructive model of economic development based on raw materials and leading to financial bankruptcy and prolonged depression for the majority of the country's regions.

The situation that is taking shape, determines the need for significant adjustment of Russia's socio-economic policy, its focus on the priority development of the branches of the fifth and sixth technological modes, on expanding opportunities for investment in technological and engineering infrastructure, in human capital and knowledge. It concerns first and foremost the development of mass crediting of the real sector, primarily investment crediting. Only the implementation of the set of measures will make it possible to achieve sustainable economic growth and place the Russian Federation among the leading countries.

References

1. Gross regional product: Rosstat. Available at: http://www.gks.ru
2. Report of the Director of the RAS Institute for the U.S. and Canadian Studies, RAS Corresponding Member S.M. Rogov at the session of the RAS Presidium (October 1, 2013). Available at: http://academcity.org/content/doklad-direktora-instituta-ssha-i-kanady-ran-chlen-korr-ran-rogova-sm-na-zasedanii)

3. Dyatlov S.A. Fundamentals of the theory of human capital. Saint Petersburg: Publishing house of Saint Petersburg State University of Economics and Finance, 1994.
4. Ilyin V.A. national and regional security: a view from the region. Economic and social changes: facts, trends, forecast. 2013. No.3(27). P. 5-16.
5. Ilyin V.A. New agenda and state management efficiency. Economic and social changes: facts, trends, forecast. 2013. No.5(29). P.5-9.
6. Ilyin V.A., Povarova A.I. Problems of state management efficiency. Budget crisis in the regions: monograph. Vologda: ISEDT RAS, 2013.
7. Investments in non-financial assets. Available at: http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/enterprise/investment/nonfinancial/#
8. Investment processes in the Vologda Oblast: statistical digest. Vologdastat. Vologda, 2013.
9. Innovation way of development for the new Russia. Executive editor V.P. Goreglyad. Center for Socio-Economic Problems of Federalism under the RAS Institute of Economics. Moscow: Nauka, 2005.
10. Foreign investments in Russia continue to decline. Available at: http://delonovosti.ru/analitika/1759-inostrannye-investicii-v-rossiyu-prodolzhat-sokraschatsya.html
11. Kirshin I.A. Transformation of the views on the actions of the mechanism of increasing returns in the theory of economic growth. Zhurnal ekonomicheskoy teorii. 2008. No.4. P. 128-146.
12. Materials for the meeting on competitiveness. Ministry of Economic Development. Moscow, 2006.
13. Medvedev D.A. Address to the Federal Assembly of the Russian Federation, November 12, 2009. Available at: http://www.kremlin.ru/transcripts/5979
14. Milner B. Knowledge management in the modern economy. Problem teorii i praktiki upravleniya. 2006. No.9. P. 8-13.
15. Milner B.Z. Knowledge Management in the modern economy. Moscow: RAS Institute of Economics, 2008.
16. World economic situation and prospects 2012. Report of the United Nations. Available at: http://www.un.org/ru/development/surveys/docs/wesp2012.pdf
17. New economic policy. The policy of economic growth. Ed. by Academician V.V. Ivanter. Moscow: RAS Institute of Economic Forecasting, 2013.
18. The main assets of the Vologda Oblast organizations: statistical digest. Vologdastat. Vologda: Vologdastat, 2013.
19. Full text of the Address of V.V. Putin to the Federal Assembly on December 12, 2012. Available at: http://kremlin.ru/news/17118
20. Rogov S.M. New shock therapy and the reform of RAS: realities of Russian science. Moscow: RAS Institute for the U.S. and Canadian Studies, 2013.
21. Salnikov V.A., Galimov D.I. Competitiveness of Russian industries: current status and prospects. Problemy prognozirovaniya. 2006. No.2.
22. Uskova T.V. Management of the region's sustainable development: monograph. Vologda: Institute of Socio-Economic Development of Territories of RAS, 2009.
23. Uskova T.V. Reserves for economic growth: regional aspect. Sino-Russian Seminar on the Regional Innovation System and Economic Growth. August, 2013. Nanchang, 2013. P. 76-87.

THEORETICAL ISSUES

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Socio-economic differentiation of space: inconsistencies between the theory and regulation practice

The article notes the inconsistency between significant efforts aimed at resolving the differentiation issue of the social-economic development and low effectiveness of countries, regions. The article analyzes the theories relating to the subject matter of asymmetric development and current reality. The author argues that the modern economic theory leaves unanswered the question concerning the possibilities to eliminate the issue of inequalities within the existing world order, which can potentially result in social tensions and conflicts. The article notes the specifics of the Russian research experience with regard to the socio-economic differentiation: great number of scientific works, extrinsic interest of the management system, lack of theoretical development, research bias. The criticism of the basic research and regulation postulates of the differentiation in Russia allowed determining the main problem – the necessity to develop the quantitative analysis of the differentiation issue.

Socio-economic differentiation, globalization, regionalization, economic theory, research postulates.

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The formation of economically feasible model regulating the issue of uneven socio-economic development is one of the fundamental contemporary scientific problems. The specific theoretical-methodological and application tasks when resolving the given issue are aimed at minimizing the inequalities that can potentially lead to mounting conflicts, social tensions and hinder balanced economic development. However, the practical results concerning the regulation of inter-country, interregional and inter-municipal differences

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are quite insignificant[1]. As the natural result this contradiction stipulates the expediency of considering modern views on the issues of socio-economic differentiation of space. However, such consideration encounters difficulties. The problem is the following: in fact any economic event in the world, country, region ultimately affects the ratio of indices, changes socio-economic differentiation. Therefore, any research, any theoretical description of these events, concerns, to some extent, the issue of differentiation. Certainly, every economist knows that "everything depends on everything", but the full meaning of this generalization is not recognized until it comes to such structurally complex subject of research. However, it seems relevant to identify theoretical constructs, directly related to the problem of uneven development, as well as the consistency (inconsistency) between the theory and practical results concerning the development and regulation of the issue, the solution of which is addressed in the given publication.

Economic theory of developed and developing countries on socio-economic differentiation

From theoretical point of view, modern research into socio-economic development asymmetry in developed countries is still mainly based on "centre-periphery" theoretical platform. The literature on the theory is so extensive, that it is not presented itself possible or reasonable to describe the theory in the given work. Many books and textbooks on economic theory provide not only a comprehensive presentation, but also make one firmly convinced in little feasibility and certain dogmatism of prerequisites[2].

However, the contemporary postulate that "theory is to be assessed not by the feasibility of prerequisites, but by the complexity and significance of the problem definition" is widely shared. This allows "centre-periphery" models to be used as a visual display of uneven development, first of all, in the global context.

As for the regional level, despite the huge number of works, a streamlined theory describing or explaining the issues of asymmetric development within the framework of the "centre-periphery" theory has not yet emerged. However, it is possible to highlight several large construction conglomerates. For example, the first of them is based on the idea of promoting competition between the "developed", "promising", "backward" regions in order to even economic levels in the "region-center-region-periphery" system. The second involves the development of "city-centre" and "region-periphery" cooperation, with large firms acting as the cores, providing an impetus for the development. All these theoretical constructions are characterized, summarized, diversely synthesized in secondary sources, some of which even present the results of allocating the centre and the periphery of specific regions [14]. However, such allocations are of absolutely no use when searching for practical meaning: it is impossible not only to diagnose, but also to use the results obtained in prognostic elaborations[3].

[1] Lack of effectiveness in global economic context is reflected in the relevance of reproduction issues: "But what place does the equalization of the economic development of countries take in the processes of globalization itself? Why does the world market resist such leveling?" [9, p. 83]. On the dead-end nature of equalizing the budget sufficiency of the subjects of the Russian Federation, see, e.g., [10, 12]; on the absence of trends of equalizing basic social and economic statistical indicators of regions, see [1, 3]. Statistical assessments clearly show that interregional differences by the main social and economic development indicators are even sharper than interregional [2, 5].

[2] The amount of ideas that can be considered a retrospective basis for the location theory, and "centre-periphery" theory (that was, in fact, formed as the result of inactive discussion of this very location theory), is clearly presented in [4, p. 568-585]. The renunciation of the postulate of the invariability of the international division of labour, based on statically understood principle of comparative costs, can be considered a modern specificity.

[3] So it is absolutely unclear, for example, whether the existence of periphery is good or bad? And in case it is necessary to combat it, what are if not the recipes, then at least the principles on achieving overall progressiveness of space? Etc.

Therefore, management practices, in particular regional development, are traditionally based on strategic planning, which, unlike "central-peripheral" approach, includes the optimization of development parameters on the basis of developed solution algorithm, aimed at the achievement of the main goal, i.e. the spatial factor is not the most significant or strictly specified.

Economic theories of the Third World countries, directly related to the problems of asymmetric development, proceed from the criticism of modern inter-country division of labour, the existing system of wealth distribution and the theoretical concepts of developed countries, securing this order. The concepts of developing countries are of huge interest[4]: the concept of peripheral economy by Raúl Prebisch (Argentina), Theotonio dos Santos and Celso Furtado (Brazil); the concept of "Arab socialism", practically superseded by its multivariable "fundamentalist alternative" ("Islamic alternative"), etc. Each of them involves reformist programme, certain "projects of the nation", based on a heightened attention to the problem of unequal relations between developed and peripheral countries, between "centre" and "periphery" within the country.

Latin American programmes are based on different ways of changing the national product structure on the basis of certain methods of change in demand, i.e. ways of satisfying consumption. Theoretical standpoint is very strong: the advancement of the criterion of per capita income maximization, supplemented by conversion rates, providing import substitution, the substantiation of industrialization, etc. Besides, it was and is considered in Latin American variants that it is the industrialization in developing countries that will lead to structural adjustment, making it possible not only to accelerate economic growth, but also to solve the problem of domestic income differentiation and interregional differentiation by the level of economic development. The bottom line is known: the establishment of individual industrial base increased the dependence on the world market, the pressure of transnational corporations increased, international inequality consolidated. As for domestic differentiation of population by income, for example, the gap has not narrowed in Latin American countries, social stratification has been observed to strengthen, i.e. the probability of vertical movement of an individual by social strata has been reducing year after year. It is fair to say that the latter peculiarity is characteristic of developed countries, as well.

The studies devoted to the factors consolidating intercountry and interregional differentiation are extremely diverse. Archilochus said: "The fox knows many things, but the hedgehog knows one big thing". In the author's opinion, the problem is the essence of the capitalism model, which is based, as is well-known, on greed and exploitation of the weak. In case the political component (unipolarity of the world, probability of military and economic sanctions against the Third World countries, etc.) is laid aside, the perspective model of the world in economic terms is the following: the one, who owns capital, determines the global economic processes. Thus, "the big thing" is capital.

In terms of economic theory, it is possible to prove that the capital is the only production factor. The author shares this position with regard to the world perception model. Considering the external enormity of this thesis, this should be briefly explained, referring to recognized theorists. The fundamental work by Mark Blaug "Economic Theory in Retrospect" combines the theses of Fischer and Valras [4]. Fischer defined capital as any reserve that brings in service flow – land, machinery, raw materials, natural resources

[4] Secondary source of these concepts, see, e.g., in [11].

and labour skills, while income was defined as a surplus of these services over the costs of replenishing wealth reserves. Hence, the capital is the only production factor, all distributable income consists of interest, wages are the interest payments for human capital, and the national income comprises consumer spending. Certainly, at this point Fischer went far in the construction of reality, but for modern global processes the conclusion that, in fact, the capital is the only production factor, that it represents a homogenous "eternal background" of production forces, that the one major asset can be converted into another without affecting the consumption, is extremely important. That is what determines the immanent essence and logic of globalization, primarily as a financial globalization.

Financial globalization fixes and extends the capabilities of the world centres to dominate when the prospects of the "periphery" are weakening. This trend is traditionally believed to be a negative consequence of globalization. Positive results include not only the advanced technologies boost availability for the entire population and peripheral economies, but also the diffusion, but rather, the export of Western ideologies[5]. It should be also noted that modern political science and economics are formally deprived of certain "censorship mechanisms", but are essentially biased, drawing a clear line between those who "cultivates", who is already "cultivated", and those who are to be "cultivated". As a result, it is considered in a number of studies [see, for example, 19] that even the division into centre and periphery itself is not so much caused by differences in the parameters of socio-economic development, as by the degree of the infiltration of European traditions in the life of their peoples.

However, according to the author, it is hard to agree that "the world mentality crisis, fraught with the war between two major civilizations – Christian and Islamic, has become the basis risk" for the global system of capital [9, p. 93]. The community of institutional environment concerning the underlying unity of the conditions for the movement and flow of capital is important for the world capital. As for the mentality formation, especially in "Christianity-Islam" context, it is mainly an extraneous feature, hindering the consideration of the essence of things.

Indeed, the modern model of global development, consolidating the problem of inter-country and in-country differentiation, leads naturally to the ideas of alternative development of the countries that are not considered "developed". The responses to the established world order are regional Islamic projects (the alternative mechanism is most clearly reflected in the "Libyan alternative" – "Third International Theory", formulated by Muammar Gaddafi) and the projects of economic integration of the Arab countries [17]. Modern military and political results in the Arab world postponed the implementation of these ideas for many decades, and the further efforts of the democratic forces will postpone it for eternity. But the reason is not in "the crisis of mentality", but in the establishment and protection of the required unification of the global rules of conduct of the "big thing" – capital.

[5] Let us give a representative definition: " Economic gobalization is a complicated and contradictory process. On the one hand, it facilitates economic interaction between states, creates the conditions for the countries' access to the recent advances of the mankind, provides ability to save up resources, stimulates the world progress. On the other, globalization has a negative impact: it consolidates the peripheral model of the economy, causes the countries, not included in "the Golden billion", to lose their resources, ruins small business, spreads "globalization of competition across the weakest economies, decreases living standards, etc. One of the greatest challenges facing the international community is to make the benefits of globalization available to the maximum number of countries" (Economic dictionary.–http://abc.informbureau.com/). The latter suggestion and statement, being typical, as well, illustrates the metaphysical nature of the economic doctrine of globalization. The definition itself includes both the support and negation of "one of the objectives" of the world community. At the same time, it is never explained, what follows from these contradictions? What is the mechanism handling this problem?

Not only the history of relations between Libya and Venezuela, but also the absolute similarity between Hugo Chavez's "Bolivarian doctrine" and the ideology of the Socialist People's Libyan Arab Jamahiriya in the context of the commitment to the "left" values proves "non-Islamic" nature of the concepts of alternative development [6]. Integration idea is another general feature. Thus, the goal of all Latin American Countries (without any notable exceptions) to form an alternative economic system, grouping around ideas of social concentration and continent-wide consolidation, is reasonably considered by a number of researchers socially claimed and rational [15]. However, when speaking of "rationality", a substantial reservation of "unrealizable rationality" is to be made.

Thus, the modern economic theory does resolve the question, how to eliminate the issue of inequalities within the existing world order, which can potentially result in conflicts. Therefore, some ideal models are frequently made, in which the goals of development are profoundly changed without any external causes: from profit maximization, expansion ideas, etc. to the ideas of equality, free development of each state, individual; making of ideal models of sustainable development, etc.[6]

The unlikely nature of these concepts allows making the main conclusion from the consideration of the existing theoretical constructions relating to the subject matter of the differentiation of socio-economic development. **Current models, stipulating the global resolution of contradictions are extremely common, and hardly bring anything in practice management, except for the prospect that everything will somehow be all right. At the regional level, the "centre-periphery" is of little use to solving practical problems.**

Russian experience in research and regulation of socio-economic differentiation

As for domestic research, a great number of works on the given topics is to be noted. The external interest displayed by the control system is sufficiently significant, as well. A vivid example – the Federal Target Programme "Reduction of differences in the socio-economic development of the regions of the Russian Federation (2002–2010 and up to 2015)", which was not completed neither in time nor in its results. However, the extreme insignificance of the reflection of theoretical constructions on the issue of socio-economic development differentiation is brought to attention.

In most studies the issue of socio-economic differentiation of Russian space consists of several acknowledged theses.

The first widespread thesis concerns the interregional differentiation increase in Russia. The specificity of its application is often beyond the context of what exactly is growing. Let us refer to the phrases typical of University textbooks: interregional differentiation in Russia makes up 19 times and continues to grow; in another manual the figures are different – 8 times, etc.[7] The example stating "the main contemporary transformation trends in the Russian economic space: ongoing

[6] These theoretical concepts and their derivative constructs (the dominant example is the concept of sustainable development) are generated by a range of interrelated factors. Let us enumerate only a few. The first is political situation, that is a number of "inconveniences" and "contradictions" generated by modern global capitalism, that is resolved by one-stage transformation of the declared development ideas. The second is that new, "correct" declared values are in conflict with practical steps, including the ones taken by the governments of developed countries, advocates of Western universal values. This naturally gives rise to "rejection reaction" of the reality, at least at the level of economic theory. The third is that with the understanding of the globalization development as a linear progressive process, its dead-end character is revealed, resulting in legitimate attempts to "prove the inevitability of transition from traditional catching-up development to the new, more modern synergetic model. In new models all subjects of the economy – from state up to each individual–play by completely different rules, following which, they act as creative partners and competitors, both nationally and internationally. Thus, they get equal chances of success" [9, p. 95].

[7] Standard statement of the differentiation issue in university literature, see, e.g., in [16, p. 147-148].

strengthening of interregional socio-economic differentiation (space heterogeneity)…" is typical, as well [5, p. 17]. At the same time no criteria, indicators, underlying such statements, are given.

Another consideration for applying the thesis concerning differentiation increase is the frequent use of all sorts of comparisons of the smallest and largest values of an indicator in "the best" and "the worst" region in research, university textbooks, formal legal documents, including federal ones. The result of the studies, based on such comparison is revealed in the following conclusions. For example: "Interregional differentiation by the end of 2000 makes up almost 64 times by per capita volume of industrial production, more than 8 times by the ratio of per capita income and the minimum subsistence level, etc." [15, p. 9-10]; "The differentiation of regional development level will be not only far from decreasing, but, on the contrary, will almost double" [13, p. 40] (referring to the three-year period). However, the given examples register only the range of indicators and do not assess the objective tendencies of interregional differentiation development for all regions, resulting in distorted ideas about the tendency due to certain extreme values[8].

The second firm thesis that "interregional differentiation in Russia is to be reduced", is presented again out of context, what is to be reduced and why. A typical example of such attitude is the above-mentioned Federal Target Programme, the purpose of which, as denoted in its passport is "the reduction of differences in socio-economic development of regions of the Russian Federation, reduction of the gap by the main indicators of socio-economic development between the most advanced and backward regions by 1.5 times in 2010, 2 times by 2015".

[8] That is actually a differentiation between two regions of the Russian Federation, and the fact that there are yet 81 subjects of the Russian Federation (according to the modern system of the Federal structure) is ignored.

Such theses are dangerous due to their unreasonably general character. The danger, of course, is speculative when implementing research tasks, but real when making management decisions. The result is the formation of tasks, concerning the resource capabilities of the above Programme, which are no less vague. For example, the tasks such as "formation of conditions for the development of regions, socio-economic indicators of which are below the average for the country; the establishment of an environment for the development of entrepreneurship and improvement of the investment climate; the improvement of the efficiency of the state support, provided to the subjects of the Russian Federation", are not comparable with resource availability. The actual financing made up 22 183 million rubles for the real term of the 2002–2006 Programme implementation.

As for the postulate concerning the necessity of reducing interregional differences, the author takes more pragmatic position. In the context of any spatial socio-economic systems, differentiation is the inherent property of the system components, traceable by quantitative criteria. And the basic task that will allow eliminating the problem of the reliability of the interregional asymmetry study results, is the development of methodology and proper methods of information generalization.

Some conclusions and prospects concerning the research of the issue of Russia's socio-economic differentiation

Thus, the absence of any prospect of practical solution of the issue concerning the socio-economic differentiation of space is connected with at least three factors. Firstly, the vagueness of theoretical substantiation of the problem of spatial development asymmetry. Secondly, the goals, which are phantom for regulatory practices. Thirdly, insufficient use of the existing capacities of statistical methods in typical schemes of quantitative evaluation of differentiation phenomenon. The "perfect

simplicity" which underlies the world order and makes it possible to fit the pieces of the diversity of uneven development phenomenon together, is missing.

According to the author, productive efforts to reveal the problem of socio-economic development asymmetry of Russia, in particular, include gradual overcoming of the following stages. The first stage implies the development of a methodology to analyze socio-economic differentiation, including the development and formulation of key methodological guidelines, the substantiation of the use of the typical and the development of new proper comparison methods. The second stage is an integrated assessment of the specifics, trends, perhaps, the regularities of the development of the differentiation phenomenon. The third stage is the verification of the theoretical concepts of measurement results. The fourth stage includes the formulation of perspective methodological measures of Russia's spatial development regulation, which consider new proportions of socio-economic characteristics, opportunities and priorities.

It is the movement by these steps that will deepen the theoretical ideas of objective prerequisites, directions, mechanisms of the asymmetry formation of Russia's socio-economic space, determine the actual facts, reasons, possibilities and prospects for the formation of the system of balanced development of the subjects of the Russian Federation in new economic conditions.

References

1. Baranov S.V., Skufyina T.P. Dynamics of interregional differentiation 1998–2005. Federalizm. 2005. No.3. P. 47-76.
2. Baranov S.V. Comprehensive assessment of the socio-economic development of the Murmansk Oblast cities and districts. Vestnik KSC RAS. 2011. No.4.
3. Baranov S.V. Complex estimations of socio-economic development of northern regions. Modern problems of science and education. 2012. No.6.
4. Blaug M.Economic theory in retrospect. Moscow: Delo Ltd., 1994
5. Voroshilov N.V. Differentiation of socio-economic development in the Vologda Oblast municipal entities in 1991–2011. Problems of development of territories. 2013. No.3(65).
6. Gasnikova A.A., Volova Yu.A. Interregional economic differentiation in the North and ways of its resolution. National interests: priorities and safety. 2012. No.47. P. 9-13.
7. Golinger E. Venezuela: from "backyard" to multipolar world. Geopolitics: collection of articles, published in 2010–2011 in research and information journal "Geopolitics". Ed. by A.G. Dugin. Moscow: European movement, 2012. P. 323-328.
8. Granberg A.G. Economic space of Russia: perennial problems, transformation processes, search for strategies. Economic revival of Russia: scientific periodical. 2004. No.1. P. 16-22.
9. Gritsai O.V., Treivish A.I., Ioffe G.A. Centre and periphery in regional development. Moscow: Nauka. 1991.
10. Dobrynin N. Fiscal federalism in Russia: genesis, evolution, the need for changes. Federalism. 2004. No.2. P. 133-148.
11. Evstigneeva L., Evstigneev R. The mystery of catch-up development. Voprosy Economiki. 2013. No.1. P. 81-96.
12. Ilyin V.A., Povarova A.I. Budget crisis of the regions in 2013–2015: a threat to Russia's security. Economic and social changes: facts, trends, forecast. 2012. No.6 (24).
13. History of economic doctrines: (modern stage). Ed. by A.G. Khudokormova. Moscow: INFRA, 1999. P. 701-720.
14. Lavrovsky B., Postnikova Ye. Transfer mechanism: has the crisis been overcome? Voprosy Economiki. 2005. No.8. P. 84-96.
15. Leksin V.N., Shevtsov A.N. State and regions. Theory and practice of the state regulation of territorial development. Moscow: Editorial URSS, 2003.
16. Panasyuk M.V., Rudenko A.V. Analysis of the development of the region's "centre-periphery" system (case study of the Republic of Tatarstan). RAS proceedings: geographical series. 2008. No.1. P. 60-72.

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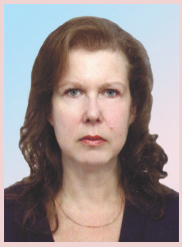
Several approaches to the determination of the southern border of the Arctic zone of the Russian Federation



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The article presents a research into the approaches to the zoning of the Russian Federation aimed at defining the southern border of the Arctic zone. The conducted analysis of legal documents and scientific literature devoted to the substantiation of the Arctic zone revealed the lack of definite criteria for determining the list of territories included in this zone. As a result of the research, several recommendations have been worked out that substantiate the inclusion of specific administrative-territorial formations of the Russian Federation in the Arctic zone.

Arctic zone of the Russian Federation, region, zoning, criteria.

Arctic territories, which possess significant natural resource potential, enjoy heightened attention on the part of international community. Several major world powers link their strategic economic development and the enhancement of their geopolitical position to the development of the unique Arctic resources. This has led to intensifying the activities aimed at the improvement of the legislative framework for regulating the development of the Arctic territories In Russia this process was accompanied by the adoption of such documents as the "Fundamental principles of state policy of the Russian Federation in the Arctic up to 2020 and for further outlook" [23] and the "Strategy for the development of the Arctic zone of the Russian Federation and provision of national security" [29]. However, the Arctic zone of the Russian Federation, being the object of state regulation, still has no clearly defined territorial boundaries. Over the last 15 years several attempts have been made to legally establish the southern border of the Arctic zone of Russia; as a result, the territorial composition of the zone was constantly changed. In our opinion, one of the key reasons for this situation lies in the absence of a scientifically grounded approach to defining a clear set of criteria that will make it possible to determine the borders of the Arctic zone of the Russian Federation. The complexity of the problems identified, and the importance of their solution for the socio-economic development of the Arctic territories prove the relevance of this study, the purpose of which is to substantiate the approach to the determination of the southern border of the Arctic zone of the Russian Federation.

Domestic and foreign research practice has several approaches to the zoning of the Northern territories and the allocation of the Arctic zone.

Scientific substantiation of the zoning of the Northern territories of the USSR was carried out by S.V. Slavin in the 1930s; he suggested a zoning scheme that takes into account two categories of characteristics: natural and climatic, and economic and geographical. According to S.V. Slavin, the North includes the sparsely populated and underdeveloped regions located to the north of economically developed regions that were settled long ago. S.V. Slavin defined the most important features of the North as follows: low population density (less than 5 people/km^2), and the severity of climatic conditions that restricts the cultivation of crops. Depending on the degree of manifestation of these characteristics, the North is divided into the Near North and the Far North [26, 27].

Attempts to zone the Northern territories were made in the works of foreign researchers. For instance, in 1955 some research work of the American Geographical Society considered that the North included not only the high-latitude territories of the USSR, but also the south of Siberia, the Leningrad Oblast, and some territories in the south of Canada. In 1950–1970 foreign researchers (K.J. Ree, R. Gaida) adhered to the territorial-administrative principle and determined the Northern territories as those located above the latitude of 60 degrees [28]. In 1964 Canadian researcher L.-E. Hamelin used quantitative scores to determine 6 natural geographical and 4 economic

geographical characteristics of zoning; on this basis he defined the Middle North, the Far North and the Extreme North [7].

T. Armstrong, G. Rogers and G. Rowley in their fundamental work point out that the North comprises the geographically determined Arctic and Sub-Arctic. In such a broad sense, the North occupies 5% of the world ocean and 15% of Earth's land [1].

According to the plans for the development of the Arctic elaborated in the United States in the mid-1980s, the Arctic territories comprise the regions located to the north of the Arctic Circle (66,33'N).

V.S. Selin and V.V. Vasilyev [28] argue that currently the most scientifically grounded foreign approaches to the zoning of the Northern territories are developed for enhancing the implementation of regional policies (for example, subsidization of territories in Sweden).

The "Regulations on isolated settlements" [17] adopted in Canada in 1991 provide for the benefits and allowances to the employees of organizations operating in the Arctic and Northern Canada. The document considers the following groups of allowances: for the quality of the environment, for the difference in the cost of living, cost of fuel and communal services, for the special location and temporary separate residence.

The analysis of several approaches to the zoning of the territory and to the allocation of the Arctic zone made it possible to define the following approaches: astronomical, climatic, physical and geographical, bioclimatic, economic, administrative, medical and biological, and integrated.

The astronomical approach uses the Arctic Circle (66,33'N) as the main criterion for allocating the Arctic zone [20].

According to the climatic approach, the recommended criteria may be as follows:

– isotherms of the warmest month +10°C [15];

– the Nordenskjold criterion (the ratio of the temperature of July to the temperature of the coldest winter month) [24];

– radiation balance 10 kcal/cm^2 [31] or 15 kcal/cm^2 per year [18, 19];

– general climatic indices that take into account wind velocity in the cold period, average air temperature and the amount of precipitation during the cold period [5];

– summer position of the arctic climatological front [2].

The physical and geographical approach defines the Arctic zone using the basic parameters of landscapes, and it determines the southern border of the Arctic along the southern border of tundra [12, 13].

The bioclimatic approach is based on the concept of stress, which occurs under the influence of the environment due to the lack of solar radiation, the prevalence of low air temperatures with harsh wind, high humidity and high probability of snow in summer, lack of woody and shrub vegetation [20]. By applying this approach, one can define the boundary of the Arctic zone by the total bioclimatic index, which includes the index of heat content, Bodman's weather severity index, the index of moist wind cooling for the monthly average characteristics of the climate in winter (January) and transitional seasons (the average between April and October). The authors of this approach distinguish the High Arctic and the Subarctic.

In the framework of the bioclimatic approach we should also consider the method of zoning proposed by O.R. Nazarevskiy. According to this method, the parameters of natural environment are considered from the point of view of assessing the natural living conditions of population. All parameters are divided into extra-climatic (length of day and night, annual amount of solar radiation, height above sea level, depth of relief dissection, seismicity, etc.) and climatic (temperature

regime in winter and summer, duration of extreme period, intensity of wind, etc.) conditions [21].

The bioclimatic approach, in our opinion, should include the zoning of the Northern territories proposed by A.N. Krenke and A.N. Zolotokrylin. The zoning is based on the zonal and azonal criteria of discomfort of climatic living conditions. As a result of the further refinement of the approach, the authors (A.N. Zolotokrylin, A.N. Krenke, V.V. Vinogradov) suggested a modern system of independent (or loose) indicators. In addition, they substantiated the threshold values of indicators for defining the southern border of the North zone and determined the zone of absolute discomfort in Russia's North [10, 11].

To determine the boundaries of the Arctic zone, some authors also recommend the bioclimatic index of severity of weather conditions (BISWC), which takes into account the set of climatic indicators: air temperature; wind speed; humidity; atmospheric pressure; the level of direct solar radiation. In this case, the Arctic zone (the Arctic North) is the area, for which the BISWC values are 4–4.99 points [28].

The economic approach to the zoning of territories takes into account the priority strategic guidelines of the socio-economic development of individual regions. Thus, I.S. Gramberg, I.A. Dodin and others, on the basis of regularities of location of mineral deposits, defined the boundaries of Russia's segment of the Arctic planetary mineragenic belt with a list of territories included in the Arctic zone [3].

The administrative approach is used to substantiate the Arctic zone in legal and regulatory documents that define the socio-economic development of the regions included in this zone. Over the decades of formation of the legislative base, there was no unity in the substantiation of the list of regions included in the Arctic zone and, in our opinion, there was no scientific criteria for their selection.

According to the Decision of the State Commission under the Council of Ministers of the USSR on Arctic Affairs dated April 22, 1989 (hereinafter – the Decision), we can assume that the access to the seas of the Arctic Ocean has become the main criterion for inclusion of territories in the Arctic zone. However, judging by the composition of administrative-territorial units of the Arctic zone, this approach has not taken into account those territories that have access to the White Sea of the Arctic basin. As a result, the territory of the Murmansk and Arkhangelsk oblasts and Karelia Republic were not included in the Arctic zone. Due to the changes in the administrative-territorial division and the creation of municipal formations within Yamalo-Nenets and Chukotka autonomous okrugs (that are now fully included in the Arctic zone in compliance with the Decision), several land-locked municipal districts turned out to be outside this zone.

The same flaws have been noticed in a number of documents based on the Decision:

– the draft Concept for sustainable development of the Arctic zone of the Russian Federation [16];

– the fundamentals of the state policy of the Russian Federation in the Arctic until 2020 and for further perspective [23];

– the strategy for the development of the Arctic zone of the Russian Federation and provision of national security [29].

The draft Federal Law "On the Arctic zone of the Russian Federation" [22] leaves the composition of the Arctic zone areas the same, and includes two cities of the Murmansk Oblast (Severomorsk and Polyarny).

The subsequent versions of the draft federal laws "On the Arctic zone of the Russian Federation", initiated by Goskomsever (State Committee of the Russian Federation for Issues Relating to the Development of the North) (1999) and by the Federation Council (1998, 1999), have not defined clearly the criteria

for including the territories in the Arctic zone. According to the draft laws, the Arctic zone of the Russian Federation, in addition to the territorial entities that were defined by the State Commission under the Council of Ministers of the USSR on Arctic Affairs on April 22, 1989, included the city of Krasnoyarsk (Krasnoyarsk Krai), Koryak Autonomous Okrug of Kamchatka Krai, Pinezhsky and Leshukonsky districts of the Arkhangelsk Oblast. These territories are located to the south of the Arctic Circle and they do not have access to the Arctic Ocean.

In our opinion, the draft Federal Law "On the Arctic zone of the Russian Federation" dated January 23, 2013, worked out by Russia's Ministry of Regional Development, tried to use two main criteria for including an area in the Arctic zone: location of the territory on the coast (basin of the Arctic Ocean), and to the north of the Arctic Circle. However, some administrative and territorial units, a significant part of which lies to the north of the Arctic Circle, like Evenkiysky District of Krasnoyarsk Krai, Ust-Tsilemsky, Usinsky and Intinsky districts of the Komi Republic, were not included in the Arctic zone of Russia.

The medico-biological (physiological) approach to the zoning of the Northern territories substantiates the criteria (factors) that have significant biological effect. The authors point out the sharply negative impact of adverse factors on physiological development, metabolism, immune system of people living in the North [8, 9, 30].

The integrated approach makes it possible, in our opinion, to consider the various aspects of discomfort that are experienced by people living in the North: natural and climatic, economic and geographic, socio-economic aspects, and the risk of living [28]. The approach takes into account the natural and climatic conditions of the North, as well as the socio-economic specifics inherent to the Northern regions.

The complexity principle strengthens the credibility of the results; however, the use of social and economic factors requires regular updating of the indicators and clarification of boundaries of the zones. In addition, it is methodologically difficult to take into account the combination of natural, social and economic indicators. The advantage of this approach consists in the fact that it defines the Arctic zone in the zone of absolute discomfort in the North.

The analysis of different approaches that define the Arctic zone and its southern border allows the authors to make a conclusion that the application of these approaches is associated with certain difficulties, when the definite list of the territories included in this zone is established by law. It is very important to apply such key criterion as the discomfort of life of the population when defining the Arctic zone. Nevertheless, the presence of the territories that are geographically remote from the Arctic and that possess severe climatic conditions restricts the application of this criterion to a certain extent and leads to an insufficiently reasonable extension of the Arctic borders (e.g. high-altitude areas in the Central and Southern part of Siberia). The set of basic criteria that combine geographic and economic characteristics, proposed by the authors, makes it possible to include a given territory in the Russian Arctic clearly and unambiguously.

The basic criteria for defining the Arctic zone of the Russian Federation include the following: the Arctic Circle, access to the waters of the Arctic basin, the connection of administrative-territorial units to the water area of the Northern sea route.

To determine the composition of the territories of Russia's Arctic zone we suggest the basic criteria, taking into account the following methodological regulations:

– compliance with the principle of integrity (indivisibility) of administrative-territorial entities when carrying out the zoning;

– compliance of the administrative-territorial unit with at least two of the basic criteria.

The use of the *Arctic Circle* as a criterion for determining the southern border of the Arctic is well-established in science and is often used by Russian and foreign researchers [20]. The Arctic zone, according to the approach that we suggest, includes the territories located to the north of the Arctic Circle (66°33′N), and also those administrative-territorial units that are crossed by the Arctic Circle.

According to this criterion, the Arctic zone of the Russian Federation includes the following administrative-territorial units:

– Murmansk Oblast (all of its administrative-territorial units);

– Yamalo-Nenets, Nenets and Chukotka autonomous okrugs (all of their administrative-territorial units);

– Komi Republic (Ust-Tsilemsky, Usinsky, Vorkutinsky, Intinsky districts);

– Krasnoyarsk Krai (Taimyrsky, Dolgano-Nenetsky, Evenkiysky and Turukhansky districts);

– Republic of Sakha (Anabarsky, Bulunsky, Ust-Yansky, Allaikhovsky, Nizhnekolymsky, Zhigansky, Abyysky, Srednekolymsky, Verkhnekolymsky districts, Olenyoksky Evenkiysky National District, Verkhoyansky, Eveno-Bytantaysky, Momsky districts).

The access of the administrative-territorial unit to the waters of the Arctic Ocean is another basic criterion for inclusion of the territory in the Arctic zone.

The disadvantage of this criterion consists in the fact that some municipalities that are actually located inside the districts with access to the waters of the Arctic Ocean, turn out to be outside the Arctic zone of Russia (for example, some of the closed administrative-territorial formations (CATF), urban districts).

According to this criterion, the Arctic zone of the Russian Federation includes the following administrative-territorial entities:

– Murmansk Oblast (Kandalakshsky, Kolsky, Lovozersky, Pechengsky, Tersky districts, CATF Alexandrovsk, CATF the settlement of Vidyayevo, CATF the town of Zaozyorsk, CATF the town of Ostrovnoy, CATF the town of Severomorsk, the city of Murmansk);

– Republic of Karelia (Loukhsky, Kemsky, Belomorsky districts);

– Arkhangelsk Oblast (Primorsky, Onezhsky, Mezensky districts, Novaya Zemlya Urban Okrug, the city of Severodvinsk, the city of Arkhangelsk);

– Nenets Autonomous Okrug (all of its administrative-territorial formations);

– Yamalo-Nenets Autonomous Okrug (Yamalsky, Tazovsky, Priuralsky, Nadymsky, Purovsky districts);

– Krasnoyarsk Krai (Taimyrsky Dolgano-Nenetsky District);

– Republic of Sakha (Anabarsky, Bulunsky, Ust-Yansky, Allaikhovsky, Nizhnekolymsky districts);

– Chukotka Autonomous Okrug (Chukotsky, Bilibinsky, Iultinsky, Chaunsky districts).

The regions and municipal formations that correspond to one, two or more criteria for their inclusion in the Arctic zone of the Russian Federation, are presented in the *table*. The municipalities that meet only one of the criteria, in our view, require additional substantiation of their inclusion in the Arctic zone.

We consider it expedient to use the following groups of criteria for additional substantiation.

I. Group of natural and climatic criteria for defining the degree of discomfort of natural-climatic conditions for living:

1. Length of day (night). Contrasting dynamics of the length of day during the year at high latitudes negatively affects people's health. The perceptible adverse impact of this indicator on the population is manifested beginning from 62°N. The length of day in early January is about four hours at this latitude [10, 11, 21].

The regions and municipal formations that correspond to one or two criteria for inclusion in the Arctic zone of the Russian Federation

The regions and municipal formations that correspond to two (and more) criteria for inclusion in the Arctic zone of the Russian Federation	Kandalakshsky, Kolsky, Lovozersky, Pechengsky, Tersky districts, CATF Alexandrovsk, CATF the settlement of Vidyayevo, CATF the town of Zaozyorsk, CATF the town of Ostrovnoy, CATF the town of Severomorsk, the city of Murmansk (Murmansk Oblast); Novaya Zemlya Urban Okrug, Onezhsky District, the city of Arkhangelsk (Arkhangelsk Oblast); Nenets Autonomous Okrug; Yamalsky, Tazovsky, Priuralsky, Nadymsky, Purovsky districts, Salekhard and Labutnangi urban okrugs (Yamalo-Nenets Autonomous Okrug); Taimyrsky Dolgano-Nenetsky, Turukhansky districts (Krasnoyarsk Krai); Anabarsky, Bulunsky, Ust-Yansky, Allaikhovsky, Nizhnekolymsky districts (Republic of Sakha (Yakutia)); Chukotka Autonomous Okrug.
The municipal formations that correspond to one criterion for inclusion in the Arctic zone of the Russian Federation	Krasnoselkupsky, Shurushkansky districts, Gubkinsky, Muravlenko, Novy Urengoy, Noyabrsk urban okrugs (Yamalo-Nenets Autonomous Okrug); Loukhsky, Kemsky, Belomorsky districts (Republic of Karelia); Evenkiysky District (Krasnoyarsk Krai); Ust-Tsilemsky, Usinsky, Vorkutinsky, Intinsky districts (Komi Republic); Towns of Apatity, Kirovsk, Monchegorsk, Olenegorsk, Polyarnye Zori, Kovdorsky District (Murmansk Oblast); Primorsky and Mezensky districts, the city of Severodvinsk (Arkhangelsk Oblast); Zhigansky, Abyysky, Srednekolymsky, Verkhnekolymsky districts, Olenyoksky Evenkiysky National District, Verkhoyansky, Eveno-Bytantaysky, Momsky districts (Republic of Sakha (Yakutia)).

2. Duration of the period with lack of solar ultra-violet radiation per year. This indicator reflects the deficit of biologically active ultraviolet radiation of the Sun, which leads to the development of pathological reactions in man, metabolic disorders, exacerbation of chronic diseases, reduction of resistance to infection; retardation of physical development. Ultraviolet deprivation of more than one month is registered to the north of 62°N [4, 10, 11, 21, 30].

3. Duration of winter period (days). Working outdoors in the cold period sharply increases the probability of frostbite of open parts of the body. The operation of some types of machinery can also stop due to their failures and breakage [10, 11, 21, 25].

4. Expansion of permafrost. The position of the border between continuous, discontinuous and insular permafrost is taken into account [10, 11].

5. Average duration of frost-free period in the year.

6. Sum of active temperatures during vegetation period with stable temperature above +10°C. It characterizes the reserves of thermal resources for the season of active vegetation period [14]. Full development of plants of each species or varieties of agricultural crops requires a certain range of the sum of active temperatures during the vegetation season, for example, for rye – 1600–1700°C, for spring wheat – 1700–1900°C. The border of the sum of the temperature of 1600°C is viewed by some researchers as the border of the North.

7. Bodman's weather severity index – an indicator of man's sensation of cold combined with the wind [6, 10, 11]. Quantitative indicators of Bodman's index are defined in relative units, which in the middle of winter vary from 6.5 on the islands of the Arctic to 2.5–3.0 in Central Russia.

II. Socio-economic criteria that characterize the discomfort of living from the viewpoint of established social and economic conditions:

1. Population density (persons/km²) – characterizes the population of the territory.

2. Transport development of the territory – characterizes the extent of economic development of the territory together with the density of population. The index of density of hard-

surface automobile roads (km of roads/1 thousand km^2) is used for evaluating this criterion

3. Increase in the cost of living – is manifested in the increase in prices for consumer goods and services due to the impact of such factors as remoteness, weak transport development, extreme natural and climatic conditions. The ratio of the cost of the fixed set of goods and services (as a percentage of the national average value) is used to assess this criterion.

Thus, taking into account the increased interest in the Arctic zone of the Russian Federation and the outlined ways of its economic development, we can emphasize the strategic importance of establishing the borders of this territory on a legal basis. Specification of the relevant criteria in the framework of the proposed approach will make it possible to determine the specific and strictly limited list of administrative-territorial units included in the zone of the Arctic.

References

1. Armstrong T., Rogers G., Rowley G. The Circumpolar North. A political and economic geography of the Arctic and Sub-Arctic. London: Methuen and co., 1978.
2. Alisov B.P. Climate of the USSR. Moscow: MSU Publishing house, 1956.
3. The Arctic on the threshold of the third millennium (resource potential and the problems of ecology). Ed. by I.S. Gramberg, N.P. Laverov. Saint Petersburg: Nauka, 2000.
4. Belinskiy V.A. Ultraviolet radiation of the Sun and the sky is an important element of geographic environment. In: Voprosy geografii. Moscow: Mysl, 1972. Vol. 89. P. 17-28.
5. Bryazgin N.N., Shver Ts.A. Meteorological indexes as quantitative indicators of the border of the Arctic. Factors in and principles of physical-geographical zoning of the polar regions of the Earth. Leningrad, 1974.
6. Vize V.Yu. Climate of the seas of Soviet Arctic. Moscow: Publishing house of Glavsevmorput, 1940.
7. Vityazeva V.A., Kotyrlo Ye.S. Socio-economic development of the Russian and foreign North: study guide. Syktyvkar: Publishing house of Syktyvkar State University, 2007.
8. Dobrodeyeva L.K. Immunological zoning. Syktyvkar: Komi SC Ural RAS Department, 2001.
9. Yefremov A. A., Tkachev A.V. On existing approaches to zoning of the Northern territories of Russia. Materials of all-Russian scientific conference "Strategy for development of the Northern regions of Russia". Arkhangelsk: Arkhangelsk branch of the Institute of Economics under the Ural RAS Department, 2003. P. 48-57.
10. Zolotokrylin A.N., Krenke A.N., Vinogradova V.V. New zoning of the territories of the North of the Russian Federation according to the criteria of natural conditions for the life of the population. Izvestiya RAN. Seriya geograficheskaya. 2012. No.1. P. 7-13.
11. Zolotokrylin A.N., Krenke A.N., Vinogradova V.V. Zoning of Russia according to natural conditions of living for the population. Moscow: Geos, 2012.
12. Isachenko A.G. Evaluation and mapping of the ecological potential of Russia's landscapes. Izvestiya VGO. 1991. No.6. P. 457-472.
13. Isachenko A.G. Ecological potential of landscape. Izvestiya VGO. 1991. No.4. P. 305-315.
14. Climatic atlas of the USSR. Moscow: Chief Directorate of Geodesy and Cartography under the Council of Ministers of the USSR, 1960.
15. Comprehensive climatic strategies for sustainable development of the Russian Arctic regions in the context of climate change (model example of the Murmansk Oblast). Moscow: RREC, UNDP, 2009.
16. The concept for sustainable development of the Arctic zone of the Russian Federation (draft): developed in accordance with the decision of the Council on the Issues of the Far North and Arctic under the Government of the Russian Federation (Protocol No.1 dated November 26, 2002). Available at: http://www.consultant.ru.
17. Indigenous peoples of Canada, oil and the law: digest. Department for the Issues of the North under the Ministry of Economic Development of Russia; Federal Economic Fund. Moscow, 2002.
18. Korotkevich Ye.S. Geographical boundaries of ecological systems in the Arctic. Ecological issues of polar regions. Moscow: GIMIZ, 1983. P. 11-16.
19. Korotkevich Ye.S. Polar deserts. Moscow: GIMIZ, 1972.

20. Luzin G.P. et al. The methodology for the zoning of territories for the management of human capital formation in the Northern areas. Apatity: Kola Scientific Centre, Institute of Economic Problems, 1996.
21. Nazarevskiy O.V. The map of assessment of natural conditions of life of the USSR population. Moscow: RAS Institute of Geography, 1984.
22. On the draft Federal Law "On the Arctic zone of the Russian Federation": Resolution of the Federation Council of the Russian Federation dated July 10, 1998 No.323-SF. Available at: http://base.consultant.ru.
23. Fundamentals of the state policy of the Russian Federation in the Arctic until 2020 and for further outlook: approved by the President of the Russian Federation on September 18, 2008. Available at: http://www.rg.ru/2009/03/30/arktika-osnovy-dok.html.
24. Petrov L.S. Border of the Arctic and the principles of its establishment. Proceedings of the Arctic and Antarctic Research Institute. Vol. 304. Problems of physical and geographical zoning of polar countries. Leningrad: GIMIZ, 1971. P. 18-35.
25. Selin V.S., Vasilyev V.V. Interaction of global, national and regional economic interests in the development of the North and Arctic. Institute of Economic Problems of Kola Scientific Centre of RAS. Apatity: IEP KSC RAS, 2010.
26. Slavin S.V. Industrial and transport development of the North of the USSR. Moscow: Ekonomizdat, 1961.
27. Slavin S.V. On the problem of the methods and forms of management of the socialist development of the North of the USSR. Problemy severa. 1958. Vol. 1. P. 29-243.
28. Improvement of the system of state economic regulation in the regions of Russia's North. Team of authors under the supervision of V.S. Selin, V.V. Vasilyev. Apatity: IEP KSC RAS, 2002.
29. Strategy for the development of the Arctic zone of the Russian Federation and provision of national security. Available at: http://www.consultant.ru.
30. Tkachev A.V., Dobrodeyeva L.K., Klyarkina I.V. et al. Physiological regularities of hormonal, metabolic, immunological changes in the human organism in the European North. Syktyvkar: Komi SC Ural RAS Department, 1997.
31. Physical and geographical atlas of the world. Moscow: Academy of Sciences of the USSR, Chief Directorate of Geodesy and Cartography, GGK USSR, 1964.

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Russian Arctic in the context of sustainable development *

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The article analyzes the socio-economic potential of Russian Arctic regions, by applying a standard statistical reporting for 1990–2011. The analysis is based on the method of critical indicators that made it possible to determine and get an objective assessment of processes taking place in the megaregion. The performed analysis has established that the situation in the Arctic regions sets the development of megaregion within resource-oriented paradigm. The preservation of current trends does not create opportunities even for simple reproduction, imposing significant restrictions on the transition to sustainable territorial development.

Sustainable development, critical limit indicators, social and economic potential, reproduction, Russian Arctic regions.

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The unique potential of the Russian Arctic, which is formed by rich natural resources and geographical location, provides the possibility of sustainable development not only for the Arctic territories, but for the country as a whole. Nevertheless, all country-specific characteristics of the current stage of economic development are inherent in the Arctic regions, as well as in other subjects of the Russian Federation. The processes of late years, in particular the strengthening of globalization and regionalization, Russia's accession to the WTO, change in the relations between the centre and regions result in the restrictions of economic, social and environmental activities, substantially narrowing the possibilities of the macro-region to move towards sustainable development. The assessment of these possibilities causes the need for a detailed analysis of the compliance of the Arctic regions development with the imperatives of sustainable development, in particular its balance, safety and efficiency in achieving stated social, ecological and economic objectives and priorities, determining the viability of a regional system [6].

The latter implies, first of all, compliance assessment of the requirements for the development of the region's basic (economic, social and environmental) subsystems on a parity basis, and secondly, the comparison of the resulting parameters of the subsystems development with certain thresholds, determining how safe it is.

When it comes to fulfilling the first requirement, the following is obvious: the unconditional priority of the development of the economic sphere of Russian regions at the expense of the social and environmental subsystems of social reproduction does not allow considering this development balanced. As for the second imperative it should be noted that critical limit (threshold) indicators[1] that have been successfully applied in various fields of science and technology can be regarded as a security threshold, within which the impact on regions does not seriously hamper their development.

Dynamics of the social potential of Russian Arctic regions in terms of safe development

The modification of prime imperative from the environmental to socio-economic one, when determining the content of sustainable development, requires analyzing the set of factors facilitating and constraining the potential of the Arctic regions, primarily in the context of social and economic components.

It needs no elaboration to state that it is the man, who is the most important object of development; it is living standards that determine the level of the region's development, the resulting parameters of which determine the efficiency of economic performance, effectiveness of the adopted management decisions, and eventually conditioning the sustainability of regional development. The increase in the quantitative parameters of economic growth is not considered as an end in itself, but, particularly, as an opportunity to implement effective socially-oriented policy.

Thus, the comparison of the reproductive parameters of the Arctic human potential with critical limit values (hereinafter, CLV) [1, p. 590] suggests that in the last 20 years all regions of the Arctic zone, as well as the whole Russia, have been far beyond critical limits by the key indicators, characterizing demographic situation in the regions (birth and death rates) (*tab. 1,2*).

The situation in the sphere of demographic reproduction is exacerbated by negative migration balance in all regions of the Arctic zone, except for the Yamalo-Nenets AO, where, on the contrary, an intensive population influx has been observed during the last decade (peak in 2011). Particularly intensive population outflow was observed in the Chukotka AO, with the peak of 70.4 people per mille of population in 2000.

[1] The extremely critical indicator is defined as such value, above which there is a threat to the operation of one or another sphere – social, economic, economic management, etc.

Table 1. Birth rate value in the Arctic regions in 1990, 2000 and 2011, per mille (CLV=22 per mille) [3, p. 48; 4, p. 56; 5, p. 74]

Region	Birth rate value			Ratio of the actual value (for 2011) to the critical limit value, times
	1990	2000	2011	
Russian Federation	**13.4**	**8.7**	**12.6**	**1.75 times less**
Arkhangelsk Oblast	13.5	8.8	12.2	1.80 times less
including Nenets AO	16.7	13.2	15.2	1.45 times less
Murmansk Oblast	11.5	8.6	11.5	**1.91 times less**
Yamalo-Nenets AO	16.3	11.7	15.6	1.41 times less
Krasnoyarsk Krai	14.3	9.3	13.5	1.63 times less
Sakha Republic (Yakutia)	19.6	13.7	17.1	**1.29 times less**
Chukotka AO	14.3	11.5	13.6	1.62 times less

Table 2. Death rate value in the Arctic regions in 1990, 2000 and 2011, per mille (CLV=12.5 per mille) [3, p. 50; 4, p. 58; 5, p. 76]

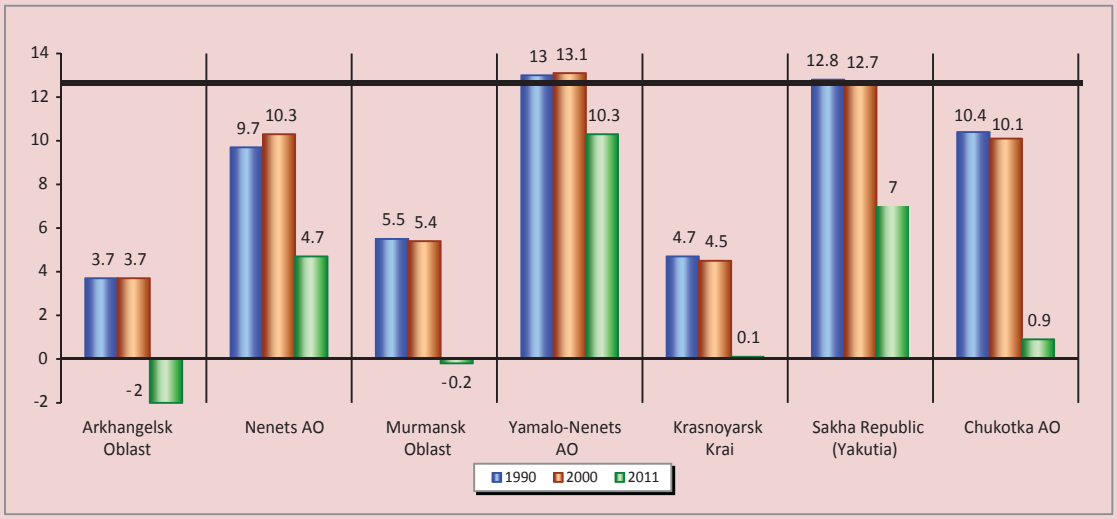
Region	Death rate value			Ratio of the actual value (for 2011) to the critical limit value, times
	1990	2000	2011	
Russian Federation	**11.2**	**15.3**	**13.5**	**1.08 times higher**
Arkhangelsk Oblast	9.8	16.3	13.9	**1.11 times higher**
Nenets AO	7.0	12.9	10.5	1.19 times less
Murmansk Oblast	6.0	11.6	11.5	1.09 times less
Yamalo-Nenets AO	3.3	5.6	5.4	**2.31 times less**
Krasnoyarsk Krai	9.6	14.8	13.0	1.04 times higher
Sakha Republic (Yakutia)	6.8	9.7	9.4	1.33 times less
Chukotka AO	3.9	9.6	11.1	1.13 times less

As a result of these trends reflecting the development of territories under the conditions of narrowed productivity, not compensated by mechanical inflow, the level of natural population increase is far below the critical value (*fig. 1*).

The analysis of the presented data indicates that in the last 20 years the negative trend of population decline has remained in the regions of the Russian Arctic, as well as in the whole Russia, characterized, though, by not so supercritical threshold exceeding. The exception is the Arkhangelsk Oblast with one of the lowest birth rates in the megaregion (13.5; 8.8 and 12.2 per mille in 1990, 2000 and 2011, respectively) and the highest mortality rate (9.8; 16.3 and 13.9 per mille, respectively).

As a consequence, the share of the mega-region's population in the country decreased considerably since the beginning of market reforms. In 2011, 6.38 million people populated its vast territory (4.46% of Russian population), which is less by 699.3 thousand people than in 2000, and by 1271 thousand than in 1990, the population density here is 10 times lower than the Russian average (0.83 people/square kilometer as against 8.36 people/square kilometer, respectively). In the period since 1990, the population number increased only in the Yamalo-Nenets AO. The most considerable in absolute terms population decline was recorded in the Murmansk Oblast and Krasnoyarsk Krai (401.0 and 325.0 thousand people, respectively).The percentage ratio of the Chukotka AO suffered most with more than 2-fold population decrease over the same period (by 67.7%).

Figure 1. Natural population increase in Russian Arctic regions in 1990, 2000, 2011, per mille [3, p. 46; 4, p. 62; 5, p. 68]



Note. Hereinafter, the solid line in the figure shows the level of critical limit value.

High living costs, unfavourable weather conditions, insufficient coverage and considerable spatial differentiation of social infrastructure determine the value of the indicator of life expectancy in the Arctic below the average Russian rate. The exception is the Yamalo-Nenets AO, where steady increase of the average Russian level is associated with high outflow of older people to the territories with more favorable weather conditions – the so-called "morbidity export", typical of the regions with the resource-based economic orientation (*fig. 2*).

The lowest life expectancy in the group of the Arctic regions for the last decade is observed in the Chukotka AO (64,72 years old in 1992). It is partly connected with the high share of low-numbered peoples of the North among the okrug's rural population, as specific and rather expensive socio-economic policy is required, in order to support them.

On the whole, the given indicator is noted to have recovered up to the 1990 level, after "the collapse" of 2000s. The change in the life expectancy trend from decrease to increase is significant for the social development of regions, yet it is too early to say whether at least, the critical limit value will be achieved.

The situation in the labour market relies heavily on the economic state and ongoing territorial demographic and migration processes. As follows from the analysis, the unemployment level in the regions of the Arctic zone is in agreement with all-Russian tendencies, in particular its significant decrease in the 2000–2011 period, approximately to the 1992 level – from the maximum (13.4%) in the Murmansk Oblast to 3.7% in the Yamalo-Nenets AO (in the Russian Federation – from 10.6% in 2000 to 6.6% in 2011). The comparison with critical limit value (5%) indicates that throughout practically the whole period under review, the unemployment rate was below critical only in the Chukotka AO and over the last years in the Yamalo-Nenets AO (*fig. 3*).

The maximum values of the unemployment rate are registered in the Murmansk Oblast, the Yamalo-Nenets AO and Krasnoyarsk Krai. The presence of these maximums is caused by the

Figure 2. Population life expectancy in Russian Arctic regions in 1990, 2000, 2011, years [3, p. 56; 4, p. 64; 5, p. 84]

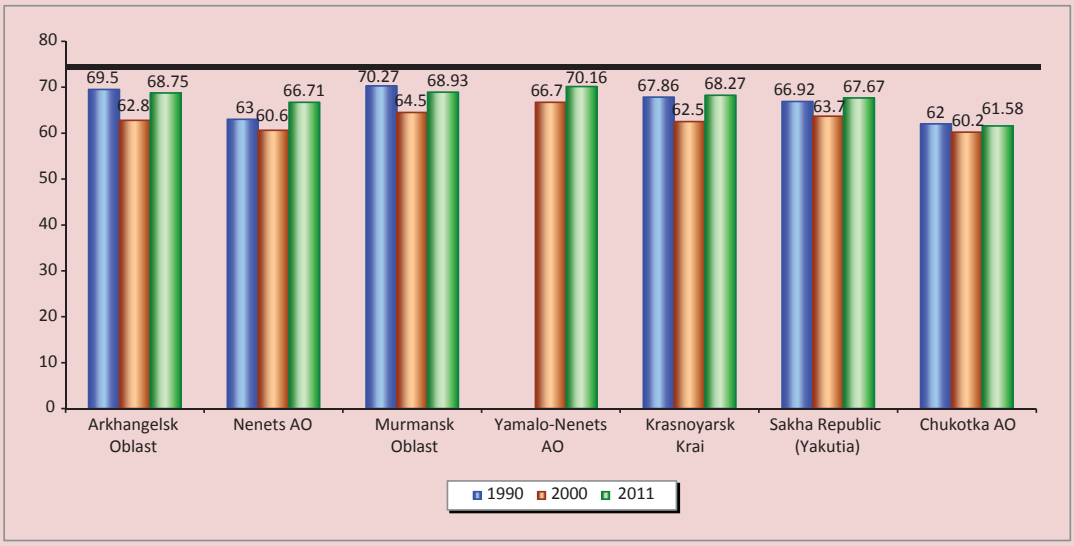
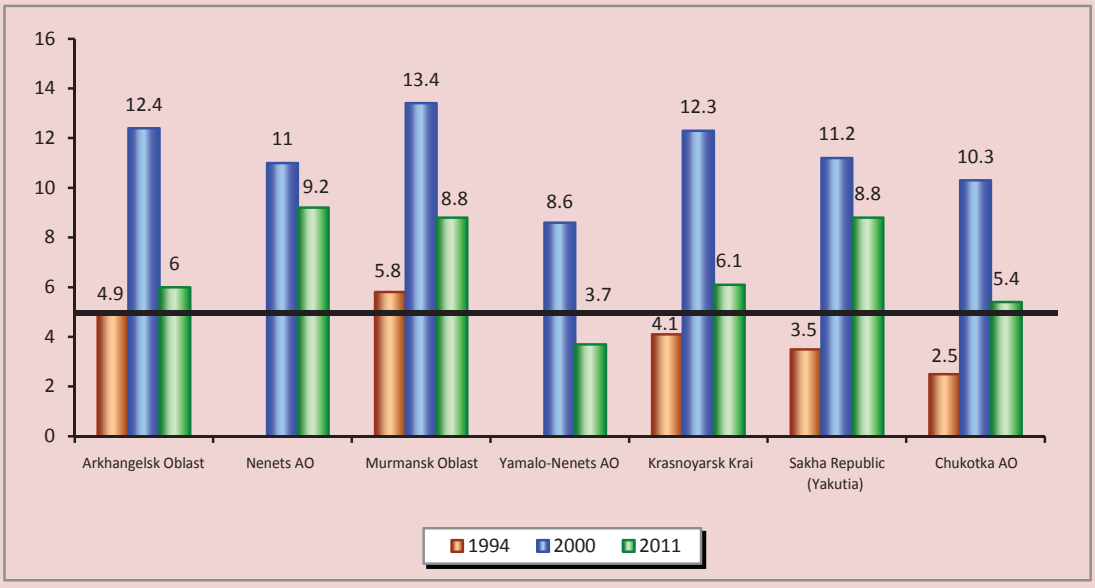


Figure 3. The unemployment level in the Russian Arctic regions, according to the ILO methodology, in 1994, 2000 and 2011, % [3, p. 89; 4, p. 115; 5, p. 120]



negative influence of both global and Russian trends of economic development, expressed in the decline in mining operations and in the volumes of manufacturing activities, change in prices for certain types of raw materials that had been previously in demand in the world market, as well as the specific character of the age and quality (professional) structure of redundant employees (high share of youth, education workers, enterprises of the military-industrial complex).

Per capita income is an important indicator of population living standards, the level of which in the Arctic regions is above the Russian

average (the regions of the Arctic group hold top positions in the Russian rating[2]). The exception is the Krasnoyarsk Krai with the population income being slightly lower than the Russian average only in 2010 and 2011 (18262 and 20145 rubles per person per month, respectively). It should be noted that the Nenets AO has been leading by this indicator since 2007, leaving Moscow behind (54632 rubles per person per month to 20755 rubles per person, respectively, in 2011). This situation is largely due to the availability of large-scale raw hydrocarbon deposits with high exploration degree of oil and gas areas, rather close-together arrangement and proximity to European markets in the okrug's territory [7]. The depletion level of developed oil reserves in the area does not exceed 10%, and of free gas is less than 1% [2].

High level of average per capita income, however, is not seen as a guarantee of social equity. The indicator "share of population with income below minimum subsistence level" in all regions, except for the Yamalo-Nenets, Nenets and Chukotka autonomous okrugs, is far beyond critical limit value (7%), despite notable reduction in the level of social inequality in the period since 1994 (*tab. 4*).

In comparison with 1994, much less 2000, the share of population with income below minimum subsistence level decreased in all Arctic regions, except for Krasnoyarsk Krai. The maximum decrease of the indicator value was registered in the Chukotka AO, from 50.1% in 2000 to 9% in 2011.

The largest social stratification across the macroregion is registered in the Nenets and Yamalo-Nenets autonomous okrugs, Krasnoyarsk Krai, where the R/P 10% ratio is invariably higher than in Russia on average.

Having reached the maximum marks in the crisis year of 2008 for the 2002–2010 period, the degree of social stratification in these regions decreased by 2011 and amounted to 19.3%; 17.1% and 17.3%, respectively, with the Russian average of 16.2%. In other regions, the ratio between the average levels of income of decile population groups and the highest and lowest income does not exceed the average Russian level. Social stratification processes, which are characterized by the Gini coefficient, steadily rising and exceeding critical limit (0.3) throughout the period reviewed, also indicate the existence of negative trends, common for both the Arctic regions and for the country as a whole (*fig. 4*).

Thus, the analysis of trends, existing in the social subsystem of the megaregion in the last 20 years, shows the degradation of the megaregion's social potential that does not meet current requirements concerning the development mainly by means of human capital and its quality. The analysis also indicates the presence of significant development restrictions, confirming the appropriateness of the conclusion made by S.Yu. Glazyev, and V.V. Lokosov that the ongoing trends deprive Russian society of the opportunity of even simple reproduction, say nothing of the possibility of the transition to sustainable development [1, p. 591].

Development of the economic potential of the Arctic megaregion

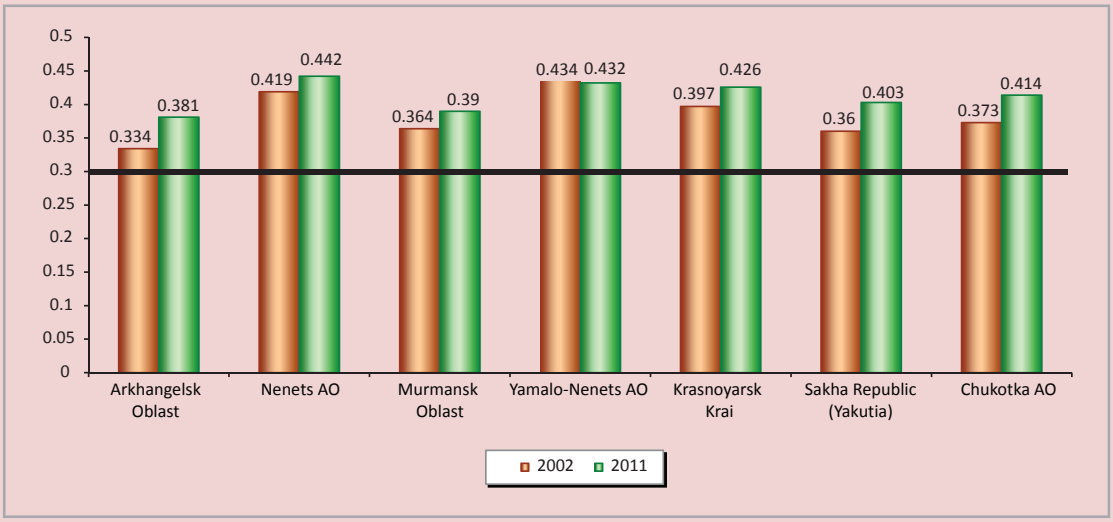
The lucrative resource potential of the Arctic is one of the factors, determining the volumetrics of its social potential. However, the development of the macro-region, carried out within the framework of resource-oriented paradigm, results in high dependence of certain types of raw materials on demand and price characteristics of the world markets. Thus, the fall in world prices for tin and tungsten in the 1990s caused the termination of its production in the Chukotka AO. This determines the

[2] In 2011 rating of Russian regions the positions were assigned as follows: 1st – the Nenets AO; 2nd – Moscow; 3rd – the Yamalo-Nenets AO; 4th – theYamalo-Nenets AO; 11th – the Sakha Republic (Yakutia); 13th – the Murmansk Oblast; 18th – the Arkhangelsk Oblast; 21st – Krasnoyarsk Krai.

Table 4. Share of population with income below minimum subsistence level in the regions of the Russian Arctic in 1994, 2000, 2011, as a percentage of the subject's total population (CLV=7.0%) [3, p. 116; 4, p. 148; 5, p. 190]

Region	Indicator			Ratio of the actual value (for 2011) to the critical limit value, times
	1994	2000	2011	
Russian Federation	**22.4**	**29.0**	**12.1**	**1.73 times higher**
Arkhangelsk Oblast	20.8	33.5	14.4	2.06 times higher
including Nenets AO	-	37.9	7.7	1.10 times higher
Murmansk Oblast	19.1	24.9	13.6	1.94 times higher
Yamalo-Nenets AO	-	11.1	7.5	**1.07 times higher**
Krasnoyarsk Krai	18.3	24.4	18.1	2.59 times higher
Sakha Republic (Yakutia)	22.7	28.3	18.6	**2.66 times higher**
Chukotka AO	18.2	50.1	9.0	1.29 times higher

Figure 4. Gini coefficient in the regions of the Russian Arctic in 2002*, 2011 [4, p. 128; 5, p. 162]



* The Gini coefficient has been published in official statistical reports since 2002.

efficiency of extracting strategic kinds of resources and their primary processing, hence, the competitive ability of the industrial sector of the Russian Arctic.

In this regard, significant demand for hydrocarbons affected, above all, the level and rates of investments in the fixed capital of the Arctic regions. The investment volumes, far exceeding critical limit, and stably high in comparison with GRP, have been observed in the Yamalo-Nenets AO during the whole period under review, in the Nenets AO up to 2008, in the Chukotka AO in the period of oil and gas industry development (2000s). In the Sakha Republic (Yakutia), the implementation of major investment projects, particularly in transportion infrastructure and fuel and energy complex in 2005–2011 allowed maintaining high level of investment activity, aimed at the significant improvement of the competitiveness of these spheres. While in 1994 the specific volume of investments in fixed capital exceeded

the average Russian values only in one Arctic region – the Sakha Republic (Yakutia), by 2011 the indices above the average national level (23.81%) were registered in three regions of the Arctic, and were above the critical limits (*tab. 5*).

Relatively high volume of the investments in fixed capital of Russian Arctic regions, however, does not provide for the diversification of the regional economy, significant progressive structural changes and adequate growth of production and technological potential. In particular, the reason for this is high degree of fixed capital depreciation that either exceeds the critical limit or is near it, though the degree of fixed capital depreciation in the megaregion as a whole, except for the Yamalo-Nenets AO (1.42 times above critical values) is not higher than the national average (*tab. 6*).

High degree of fixed capital depreciation, indicating that modern industrial technologies are not implemented, not only reduces the sustainability of production systems and increases the threat of technogenic and ecological disasters, but also decreases the industrial and technological potential and competitive ability of industrial facilities, as well as the territories, in which they are located.

The widespread degradation of the industrial structure, characterized by the decline in the share of manufacturing industries, indicates the decrease of the production and technological potential and high-tech industry stagnation (*tab. 7*).

Significant lagging of the Russian Arctic economy behind the world economy indicates the insufficient level of the applied technologies, production output with small share of added

Table 5. Volume of investments in fixed capital, as a percentage to GDP (CLV=25%) [3, p. 726; 4, p. 834; 5, p. 928]

Region	Indicator			Ratio of the actual value (for 2011) to the critical limit value, times
	1994	2000	2011	
Russian Federation	**17.82**	**20.25**	**23.81**	**1.05 times less**
Arkhangelsk Oblast	13.05	16.94	30.25	1.21 times higher
including Nenets AO	-	22.32	16.58	1.51 times less
Murmansk Oblast	15.18	13.04	23.80	1.05 times less
Yamalo-Nenets AO	-	70.24	60.47	**2.42 times higher**
Krasnoyarsk Krai	15.25	11.86	13.55	1.85 times less
Sakha Republic (Yakutia)	21.79	19.29	32.43	1.30 times higher
Chukotka AO	14.29	17.83	4.28	**5.84 times less**

Table 6. Fixed capital depreciation, % (CLV=40%) [3, p. 279; 4, p. 341; 5, p. 419]

Region	Indicator			Ratio of the actual value (for 2011) to the critical limit value, times
	1996	2000	2011	
Russian Federation	**40.5**	**43.5**	**46.3**	**1.16 times higher**
Arkhangelsk Oblast	43.4	51.1	38.4	1.04 times less
including Nenets AO	29.4	39.8	31.1	**1.29 times less**
Murmansk Oblast	40.2	41.8	42.8	1.07 times higher
Yamalo-Nenets AO	35.3	33.7	56.9	**1.42 times higher**
Krasnoyarsk Krai	35.7	37.3	38.4	1.04 times less
Sakha Republic (Yakutia)	31.0	38.9	40.1	1.003 times higher
Chukotka AO	39.3	31.7	40.8	1.02 times higher

Table 7. Share of manufacturing in the industry, % (CLV=70%) [3, p. 328-332; 4, p. 414-418; 5, p. 466, 472]

Region	Indicator			Ratio of the actual value (for 2011) to the critical limit value, times
	1997	2001	2011	
Russian Federation	**43.1**	**69.1**	**73.8**	**1.05 times higher**
Arkhangelsk Oblast	17.6	77.2	33.21	2.11 times less
including Nenets AO	0.6	3.0	0.49	**142.86 times less**
Murmansk Oblast	67.0	81.8	39.92	1.75 times less
Yamalo-Nenets AO	0.6	2.1	12.14	5.77 times less
Krasnoyarsk Krai	64.8	90.1	63.43	**1.10 times less**
Sakha Republic (Yakutia)	55.2	79.3	7.85	8.92 times less
Chukotka AO	41.8	68.1	1.66	42.17 times less

Table 8. Share of innovations, as a percentage of GRP (CLV=4.2%) [3, p. 690; 4, p. 768; 5, p. 814]

Region	Indicator			Ratio of the actual value (for 2011) to the critical limit value, times
	1995	2006	2011	
Russian Federation	**0.47**	**5.50**	**6.30**	**1.50 times less**
Arkhangelsk Oblast	0.05	0.30	0.20	**21.00 times less**
including Nenets AO	-	0.10	0.00	
Murmansk Oblast	0.10	0.30	0.20	**21.00 times less**
Yamalo-Nenets AO	-	0.004	1.50	**2.80 times less**
Krasnoyarsk Krai	0.38	2.00	1.10	3.82 times less
Sakha Republic (Yakutia)	0.02	0.20	0.40	10.50 times less
Chukotka AO	-	-	0.00	

value, due to the small share of innovation-active enterprises, as well as the low share of innovations in GRP, despite overall positive growth dynamics of indicator values (*fig. 5, tab. 8*).

The current situation, fixating export-and raw materials-oriented direction of the development of the Arctic megaregion, imposes significant restrictions on the economic and social development of the territories with no primary resources that are in high demand in the world market. Moreover, the vulnerability of the megaregion's economy to the price parameters of the world energy market has been increasing. Price fluctuations in the medium and long-term perspective are rather predictable.

Lucrative natural resources of the Arctic provide unique opportunities for the formation of policy oriented to the transition to sustainable development, hence, to promoting economic and social potential. The economic growth should be ensured not so much by extractive industries and the increase in the export deliveries of raw materials, but by improving quality of human capital and its effective use.

References

1. Glazyev S.Yu., Lokosov V.V. Estimation of the indicators at the critical limit of the Russian society and their use in the management of the socio-economic development. Herald of the Russian Academy of Sciences. 2012. V. 82. No.7. P. 587-614.
2. Official web-site of the Nenets AO administration. Available at: http://www.adm-nao.ru/?show=statics&id=39

3. Russian regions. Socio-economic indicators. 1998: statistical digest/State Statistics Committee of the Russian Federation. Moscow, 1998.
4. Russian regions. Socio-economic indicators. 2003: statistical digest/State Statistics Committee of the Russian Federation. Moscow, 2003.
5. Russian regions. Socio-economic indicators. 2011: statistical digest/Rosstat. Moscow, 2011.
6. Tsapieva O. K. Sustainable development of regions: theoretical foundations and the model. Problems of modern economics. 2010. No.2(34). P. 46-49.
7. Yushkin N.P. The Arctic region in the strategy of fuel and energy prospects implementation. Ed. by V.Ye. Fortov, Yu.G. Leonova. Moscow: Nauka, 2006.

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Specifics and current status of modernization processes in the agriculture of peripheral northern territories*

The specifics of agricultural development management in the remote northern territories should be always taken into consideration; otherwise modernization processes in the agricultural sector would be impeded. The article defines the concept of agriculture modernization and highlights its necessity. It reveals the peculiarities, opportunities and limitations of technological and socio-economic development of agriculture in the peripheral northern rural territories of the Komi Republic. The article studies agriculture modernization for the period of the 1960s–1980s, and under market reforms. It shows the impact of market reforms on the change of economic and social conditions of agriculture in the peripheral areas of the northern region. For stimulating agricultural production modernization, the authors propose a target-programme method of managing the agriculture in peripheral territories

Modernization, agriculture, peripheral areas, Republic of Komi, factors, conditions, development trends.

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Agricultural production in the peripheral (remote) areas of the North requires modernization to achieve the following goals: overcoming its technological backwardness, enhancing its role in providing people with foodstuffs, formation of competitive advantages on local and regional markets, rational nature management, efficient use of human capital, enhancement of the standard of living and quality of life of peasants, attracting and retaining youth in agriculture, elimination of considerable differentiation in the socio-economic development of remote and suburban areas.

In the course of transformation of market relations and agrarian reforms, peripheral northern territories faced the deterioration of agricultural facilities and infrastructure; the reduction of cultivated area, cattle population and the number of agricultural workers; the decline in agricultural production and standard of living of rural community. The current trends in agriculture can lead to its degradation and to the reduction of rural areas inhabited for centuries. The key direction of overcoming the crisis situation in agriculture is its modernization.

Agriculture modernization of the territories under our study requires huge financial resources. The agrarian sector lacks its own investment sources due to its low profitability. It would be wrong to consider the development of local agricultural production from the standpoint of making profit sufficient for expanded reproduction. Agriculture in the North, due to its specifics, is closely connected with social sphere and can be developed only with state support, in the absence of which the agricultural producers will not be able to implement technological modernization and innovation development.

The aim of the research is to analyse the specifics, to identify the factors and conditions, to assess the modernization of agriculture in the remote areas of the Komi Republic.

The concept of modernization

Modern science contains numerous approaches to the notion of modernization. The *Unabridged Dictionary of Foreign Words* defines modernization as the 'change of something in accordance with modern requirements, tastes' [1]. The *Modern Economic Dictionary* and the *Economic Encyclopedia* treat modernization as the perfection, improvement, upgrading of an object, bringing it in compliance with new requirements and standards, technical specifications, quality indicators. Machinery, equipment, technological processes are usually subject to modernization [9, 13]. G. Vechkanov considers modernization as a synonym for all progressive changes, as an updating, enhancement of an object in accordance with the latest achievements and standards [3, p. 39]. In the broad sense, modernization is interpreted as a set of all the progressive changes, as the key developmental factor of different spheres of society.

In the early 1990s P. Sztompka made an attempt to specify the concept of modernization and identified its three meanings: 1) it is a synonym for all the progressive social changes, when society moves forward in its development; 2) modernization = the present time; 3) 'modernization' refers to backward or underdeveloped societies (Third World countries and Soviet states) and describes their movement from the periphery to the core of the present-day society [12]. The notion of modernization as the movement from the periphery to the core of the present-day society is determined in scientific literature as the *catch-up modernization* [10, p. 3].

In a broader sense, modernization is considered as a process of positive changes in the state and society on the basis of economic, political and cultural innovation, leading ultimately to the change of its economic and social structure, political organization, to the enhancement of welfare in all social groups, to the development of culture, science and technology and nature conservation [10, p. 5].

According to V.G. Fedotova, modernization is a transition from a traditional society to a modern society, which is distinguished primarily by its orientation toward innovation [11, p. 192].

At present, 'new industrialization' [2, p. 440] and 'innovation industrialization' [6] can be considered a favourable development scenario of Russia's modernization model.

Agriculture modernization represents a type of economic development, based on continuous technological improvement, introduction of new varieties of plants, breeds and species of livestock and poultry, new forms of organization and management, social and environmental innovation. Current modernization is a process of profound changes in different spheres of life in rural areas, the process should be comprehensive and it cannot be reduced to technological and economic aspects only. Its goal is to achieve the growth in agricultural production, as well as to eliminate poverty among rural population and enhance its welfare.

Innovation modernization should be carried out both in collective and peasant (farm) enterprises and rural households that play a significant part in the conditions of cyclical economic crises. V.V. Patsiorkovskiy points out that "the formation of the modern technological order at farmsteads and households shall be considered as one of the tasks for modernization and innovation development of economy" [7, p. 504].

Specifics, factors and conditions for agricultural production modernization

According to such factors as remoteness, scarcity of population, underdeveloped infrastructure and low transport accessibility, as well as the backwardness of agricultural and social development institutions, the following districts of the republic were defined as peripheral rural territories: Ust-Tsilemsky, Izhemsky, Udorsky, Troitsko-Pechorsky, Ust-Kulomsky and Koygorodsky.

Peripheral rural areas occupy 42% of the republic's territory, they have 146.8 thousand hectares of agricultural land (35% of the republic's fund), with 21 thousand hectares of arable land (20.5%), and the prevalence of natural hayfields and pastures. In comparison to the republic, these areas have 3.1 times more farmland, 1.8 times more arable lands, 2.7 times more cattle, 3.3 times more cows, and 4 times more sheep per inhabitant in general. We also point out the abundance of forest, mineral and water resources in these areas. The peripheral areas contain 49% of the republic's rural population and 33% of its rural settlements (239 settlements). In the pre-reform period (1990), the share of these regions in agricultural production was 22%.

46 agricultural organizations, 210 farms and 39.7 thousand households were engaged in agricultural production in 2011. The major part of all types of products is produced by households.

Agricultural companies are mainly represented by limited liability companies (LLC) and agricultural production cooperatives (APC). The share of LLC among agricultural enterprises is 54%, APC – 42%.

Remote rural areas of the Komi Republic have good opportunities for the development of cattle breeding (large areas of floodplain meadows produce over 12 thousand tons of fodder units). This important and multifunctional industry guarantees all-year employment of people, providing them with fresh dairy and meat products, as well as ensuring the most efficient use of hayfields, pastures and forest areas. Cattle breeding should be considered as a strategic direction in the development of the agricultural sector. The importance of accelerated modernization of this sector is linked to the fact that in 2011 the republic produced 70 kg of milk and only 3.4 kg of beef per person per year, which is equal to 16% and 8% of the scientifically grounded consumption rates.

The areas under our study have the resources for producing organic products and creating the relevant market segment. The sales of environmentally friendly products can produce a kind of rental income. Scandinavian farmers successfully use the benefits of the northern agriculture for the production of eco-friendly foodstuffs. Finland declared its national agriculture to be the industry that produces only environmentally safe products according to the standards of the European Union (EU). The subsidies allocated to Finland by the EU Centralized Fund for the production of 'green' products are greater than those allocated for the production based on traditional technologies [8].

The main problems and difficulties concerning modernization of the agrarian sector in the peripheral areas of the North are as follows:

- reduction of population due to migration and natural losses (for 1990–2011 the number of population has decreased by almost one third);
- high unemployment rate and weak social protection of rural population (at the end of 2011 the number of the registered unemployed was 2.4 thousand, or 40% of all the registered unemployed rural residents of the Komi Republic);
- significant backwardness of remote rural territories in comparison with urban and suburban areas concerning the development of social infrastructure, quality of services (for instance, the share of dilapidated and rundown housing is 41% in Troitsko-Pechorsky District, 35% in Koygorodsky District, and 34% in Ust-Kulomsky District);
- poor transport accessibility for rural population and a lack of opportunities to receive basic social benefits: education, health, culture, public services (among the six peripheral areas only Koygorodsky and Ust-Kulomsky districts have transport communication with the city of Syktyvkar by hard-surface roads; the vast majority of the settlements are connected with the district centres through dirt roads);
- extremely poor condition of agricultural infrastructure and facilities;
- lack of specialists and qualified personnel of widespread occupations;
- low competitiveness and efficiency of the sector;
- instability of the sales of agricultural products;
- low investment attractiveness of the agricultural sector.

Economic assessment of construction of dairy farms with 100 and 200 cows in the remote areas indicates that, under the current state support of innovation-investment activity and revenues of farmers, the payback period for the projects will amount to 12.5 and 11.3 years with the loan term of 8 years [5].

According to the questionnaire survey held among agricultural managers and specialists in peripheral areas, the factors hindering modernization and innovation development include the disparity of prices for agricultural and industrial products (55% of respondents); poor facilities and infrastructural base (52% of respondents), lack of qualified personnel, poor engineering and transport infrastructure of the rural areas, including bad roads (43% of respondents), low level of state support (41% of respondents), lack of funds for investments and innovations (36% of respondents).

Modernization in the pre-reform period

In the pre-reform period, modernization processes in agriculture of peripheral areas and other regions of the Komi Republic included progressive technological, economic, social and institutional changes. The strategy for agricultural development in these years was determined by the intensification of production based on the improvement of material and technology base. In the 1980s–1990s the volume of capital investments in the industries of peripheral areas and the availability of fixed assets of agricultural enterprises (the main production assets per 100 hectares of farmland) increased, respectively, 4.7-fold and 2.1-fold *(fig. 1)*.

The industry implemented crop rotation and new varieties and technologies of crop cultivation; certain measures have been taken to improve the fertility of land; scientifically grounded farming systems, intensive fodder production systems, advanced technologies of fodder procurement, mechanized technologies of seeds and herbage production, etc. were used. Livestock breeding used new breeds of animals, intensive feeding and fattening of cattle, comprehensive mecha-nization of farms, new technologies of wholesome feed mixtures for cattle, rectovaginal method of artificial insemination.

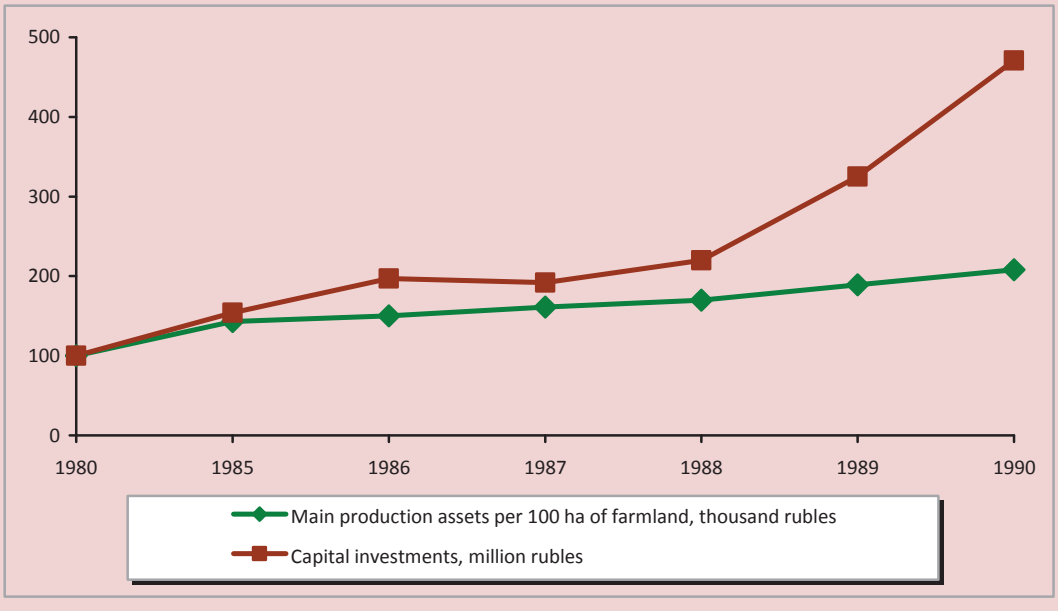
In the pre-reform period, a majority of measures were undertaken for the development of reindeer herding. Reindeer breeding teams were provided with air services; the disease control among deer was intensified, as well as anti-gadfly medical treatment; provision of cultural, domestic and commercial services for reindeer herders improved.

There were positive changes in internal economic relations, in the specialization and concentration of production, new forms of labour organization and material incentives (contract and lease relations) were applied, as well as workshop management structure and production control on the farms, training and retraining of qualified personnel was performed on a broader scale. Positive changes in price formation were based on the increase in the purchase prices for agricultural products.

The social policy in the pre-reform period was primarily focused on reducing the gap between the urban and rural population's living conditions and standard of living. Aggregate income of rural families steadily increased, its level was gradually approaching urban indicators. One could observe an actual tendency of enhancing the level of rural population's provision with various social and domestic services, a comprehensive site development of central farmsteads, as the key objects of the rural areas.

All this contributed to the improvement of the key production indicators in agriculture. Until the early 1990s, the dynamics of crop and livestock production in the peripheral areas was positive (excluding vegetable production in the

Figure 1. Volume of investment in agriculture, and the availability of fixed assets of agricultural enterprises in the peripheral areas of the Komi Republic in 1980–1990 (1980 = 100%)



1980s – 1990s). Potato production increased 1.9-fold, meat production – 3.8-fold, milk production – 2.2-fold, egg production – 4.4-fold in 1990 compared with 1965. The change in the volumes of milk and meat production (in live weight) in the pre-reform period is shown in *fig. 2*.

In the period under consideration all the state farms (sovkhozy) and major items of production were profitable. The profitability level of economic activities ranged from 24% in Koygorodsky District to 51% in Ust-Tsilemsky District. Livestock production, especially milk and dairy products, was marked by high profitability *(tab. 1)*.

Thus, modernization of agriculture in the peripheral districts of the Komi Republic in the pre-reform period promoted the increase in potato and livestock production. The share of the districts in the republic's total production of potatoes increased from 8% in 1965 to 21% in 1990, in the total meat production – from 14% to 22% and in the total milk production – from 18% to 30%. All agricultural enterprises were profitable. The profitability level of agricultural production promoted the process of extended reproduction. Positive changes took place in the reduction of the gap between the urban and rural population's living conditions and standard of living.

Figure 2. Milk and meat production in all types of farms of the peripheral districts of the Komi Republic in 1965–1990, thousand tons

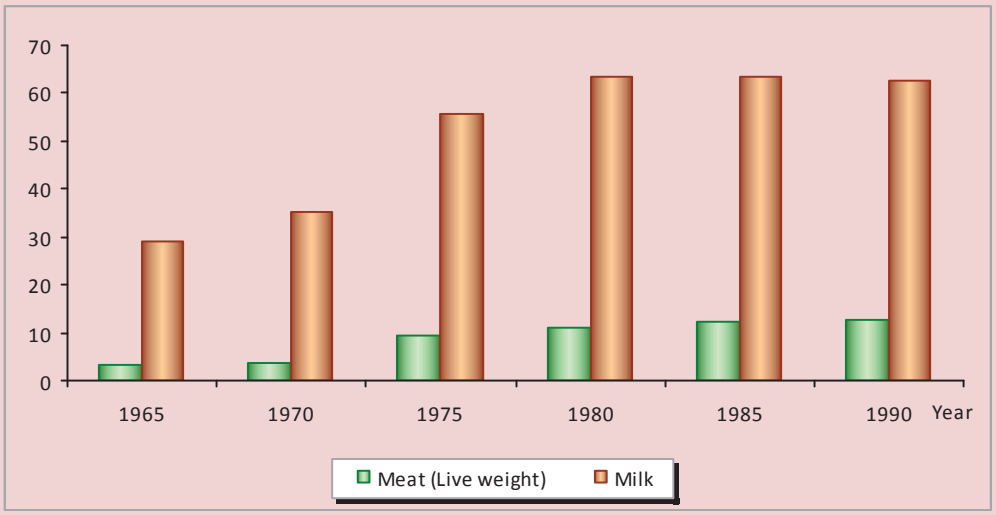


Table 1. Profit and profitability of production in agricultural organizations of the peripheral districts of the Komi Republic for 1989

Indicator	District					
	Izhemsky	Koygorodsky	Troitsko-Pechorsky	Udorsky	Ust-Kulomsky	Ust-Tsilemsky
Profit, thousand rubles	6109	543	672	2865	3594	6145
Profitability (unprofitability -) – overall activity, %	46.0	24.2	46.3	46.1	32.7	51.1
Crop production	29.8	-3.7	-9.8	-26.7	13.4	12.7
Animal husbandry	46.3	26.9	50.7	47.2	34.9	51.4
Milk and dairy products	64.3	42.7	52.0	74.0	59.9	66.0
Meat of all kinds	30.2	12.0	52.3	22.2	13.0	33.5
Beef	29.4	15.2	55.8	23.7	17.0	34.3
Source: Main indicators of economic performance of state farms for 1989. Komi Republic Statistics Department. Syktyvkar, 1990.						

However, in the pre-reform period, the remote areas didn't complete the intensification of agricultural production; the transition to industrial technologies wasn't carried out. Several poultry farms, dairy and greenhouse facilities were functioning on an industrial scale since the 1970s only in the vicinity of towns and in suburban areas.

Influence of agrarian reforms on the modernization of agriculture

In the course of market reforms, the village witnesses contradictory socio-economic processes. In recent years, legal and organizational conditions have been created for the functioning of various ownership and management forms, the foundation for market-based development mechanisms have been laid. The state's monopoly of land has been eliminated. The overwhelming majority of agricultural production and the entire sphere of agricultural products processing and marketing have been privatized. Producers obtained the right to choose the forms of management; they got a free hand with the selling of their agricultural products, with the purchase of material and technological resources and the disposal of their revenues.

Currently most of the villagers have the right of ownership to the land. Property and land shares have been transferred to the ownership of peasants; the areas of land plots allocated for personal utilization have been increased; restrictions on personal subsidiary plots, residential and homestead construction have been removed. Access to land is open for urban residents as well. Under the structural reorganization of the economy followed by the rise of unemployment and deterioration of financial welfare, the provision of urban residents with land for commercial and household usage is an important element of the social protection of population.

A new socio-economic structure of agricultural production has been created, characterized by the presence of private, collective and individual forms of ownership.

In the course of economic reforms in the agrarian sector, the role of private households and farms increased, the role of collective sector has decreased sharply. For instance, agricultural enterprises accounted for 78% of milk production in 1990 and 29% in 2011; meat production was 70% and 17%, respectively; production of potato was 29% and 1%, production of vegetables – 55% and 0.2%. The share of households in milk production increased from 23% to 61%, in meat production – from 31% to 75%, in the production of potatoes – from 70% to 98%, in the production of vegetables – from 45% to 99% *(tab. 2)*.

The share of agricultural organizations in milk production is the biggest only in Koygorodsky and Udorsky districts. The role of peasant farm enterprises in the production of agricultural products, especially crops, is insignificant. The share of milk production by peasant farm enterprises in the peripheral areas increased from 0.3% in 1995 to 10.0% in 2011, meat production – from 0.7% to 8.2%, respectively.

The reform of the agricultural sector was accompanied by a sharp reduction of the state support and the volume of investments, the accelerated liberalization of prices for equipment and facilities, which led to price disparity. This impeded technical and technological re-equipment of agricultural production, and social transformations in the village. The tractor park in agricultural organizations of the republic's peripheral districts decreased 8.5-fold in 1990–2011, the number of seeding machines reduced 13.6-fold, the number of balers reduced 4.8-fold, the number of fodder harvesters – 9.7-fold, the number of solid fertilizer applicators – 36.7-fold, the number of liquid organic fertilizer applicators – 52-fold (the data for 1991–2009, because since the mid-2000s, these machines are not used anymore), the number of milking machines – 7-fold, the amount of power capacities – 9.2-fold *(tab. 3)*.

Table 2. The share of different types of farms in agricultural production in the peripheral areas of the Komi Republic, %

Indicator	Potato		Vegetables		Milk		Meat (live weight)	
	1990	2011	1990	2011	1990	2011	1990	2011
Peripheral areas	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Agricultural organizations	29.0	1.2	55.0	0.2	77.5	28.7	69.5	16.5
Private households	70.2	97.8	45.0	99.2	22.5	61.3	30.5	75.3
Peasant farm enterprises	0.8	1.0	-	0.6	0.0	10.0	-	8.2

Calculated according to: 1. Agriculture of the Komi Republic. 2001: statistical digest. Goskomstat of the Komi Republic. Syktyvkar, 2001; 2. Agriculture of the Komi Republic. 2012: statistical digest. Komistat. Syktyvkar, 2012.

Table 3. Availability of the main types of machinery in agricultural organizations of the peripheral areas of the Komi Republic for the end of the year, units

Machinery	1991	1999	2000	2004	2008	2009	2010	2011
Tractors of all types	1752	971	879	401	231	231	212	207
Tractor trailers	905	428	379	193	85	85	79	77
Ploughs	282	110	91	57	33	33	32	32
Cultivators	169	28	26	13	7	7	10	9
Seeding machines	136	61	65	35	12	10	10	10
Mowing machines	738	352	323	178	77	84	77	78
Tractor rake	409	148	136	72	28	30	29	30
Balers	173	98	92	70	44	35	36	36
Forage harvesters	58	37	35	12	4	7	5	6
Potato harvesters	40	14	11	3	-	-	-	-
Solid fertilizer applicators	367	98	93	32	12	11	10	10
Liquid fertilizer applicators	52	14	13	1	-	-	-	-
Milking machines and units	314	150	138	54	18	18	17	17
Including those equipped with milking pipeline	…	…	…	…	-	4	4	4
Power capacities, thousand hp	351.0	182.5	157.3	50.4	35.0	34.8	32.4	38.3

Source: Rosstat data.

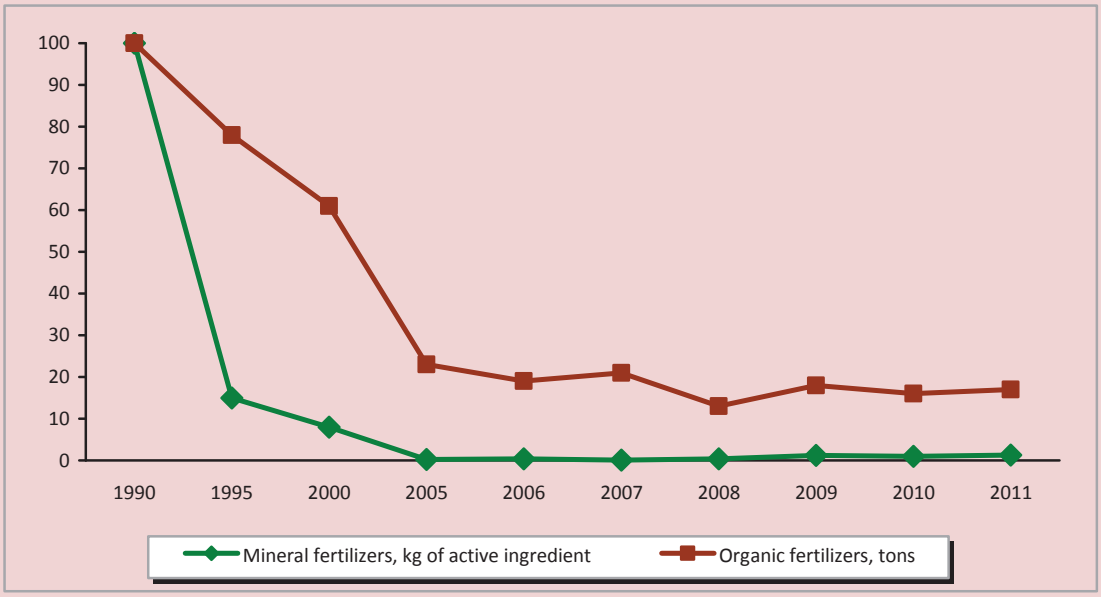
The available machinery is deteriorating rapidly. The data of the all-Russian agricultural census of 2006 shows that in agricultural enterprises of the peripheral districts under consideration there are only 3% of tractors aged up to 3 years, the share of vehicles aged 9 years and over is 84%. The depreciation of fixed assets in livestock breeding is over 70%.

Regarding the crop sector, we should point out the deterioration of agro-chemical and hydro-physical properties of soil, the increase of waterlogged land and bushland areas caused by the destruction of drainage systems and cessation of land reclamation from the early 2000s. The application of mineral and organic fertilizers reduced dramatically *(fig. 3)*.

For 1990–2011 the application of mineral fertilizers calculated per 100% of nutrients per 1 ha of crops has decreased from 199 kg to 2.6 kg, organic fertilizers – from 18 tons to 3 tons. In recent years, mineral fertilizers haven't been applied in Izhemsky, Troitsko-Pechorsky, Udorsky, and Ust-Tsilemsky districts, and organic fertilizers haven't been applied in Izhemsky, Troitsko-Pechorsky and Ust-Tsilemsky districts. As a result, the removal of nutrients from the soil by crops is not compensated by the introduction of fertilizers in these regions.

During the years of reforms, the agricultural sector experienced an increase in the outflow of qualified personnel. For example, in the

Figure 3. Application of fertilizers per 1 ha of crops in agricultural organizations of the peripheral districts of the Komi Republic (1990 = 100%)



1980s, one state farm had an average of 8 specialists with higher education and 40 specialists with secondary vocational education, but nowadays an agricultural organization accounts for only one specialist with higher education and five specialists with secondary vocational education. 27% of specialists and management personnel and 57% of middle managers don't have higher or secondary vocational education. The qualification level of workers is also low. According to a questionnaire survey, only one person was distinguished as 'First-grade master of livestock breeding' and only five – as 'Second-grade master of livestock breeding'. The number of people employed in agricultural production decreased 8-fold, over 10 thousand people were dismissed from agricultural organizations.

Market reforms were accompanied by decline in production. For 20 years, milk production in all types of farms declined by 3.2 times, meat production (in live weight) – by 4.2 times *(fig. 4)*. The decline in production output was especially significant in collective farms. During this period, milk production decreased 9.2-fold, meat production – 22.5-fold, potato production – 30.1-fold, production of vegetables – 108.3-fold.

In the period under consideration, cultivated area in all types of farms reduced 1.9-fold, including the land under forage crop – 3-fold. Currently, the ploughland is used only by 35%. The number of cattle decreased 4.7-fold, the number of swine – 5.8-fold, the number of sheep and goats – 2.6-fold.

Agriculture modernization in the remote areas is impeded by the absence of the sector's own funding sources due to its low profitability. Excluding subsidies, all kinds of products remain unprofitable. The level of profitability of agricultural organizations, even with regard to subsidies, is three times lower than the standard necessary for extended reproduction. The profitability of milk is extremely insufficient, and beef production is unprofitable. As for deer meat, it also has a low level of profitability (taking into account subsidies) *(tab. 4)*.

The analysis of financial stability of agricultural organizations in the peripheral areas in 2011 shows that 61% of them are in a crisis situation. Only four organizations are completely financially stable.

Figure 4. Dynamics of livestock production in the peripheral areas of the Komi Republic for 1990–2011 (1990 = 100%)

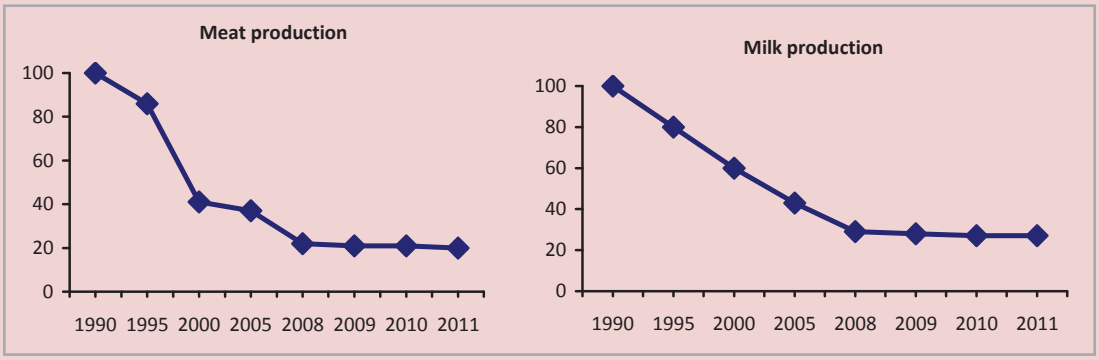


Table 4. Profitability and unprofitability (-) of production in agricultural organizations of the peripheral districts of the Komi Republic for 2011, %

Production	Excluding subsidies	Including subsidies
Total	-27.3	12.8
Milk	-33.2	6.5
Beef	-24.7	-15.7
Venison	-31.0	18.8

Agricultural producers are unable to carry out modernization, which requires huge financial resources, without state support. At present, the amount of state support provided to the agrarian sector in the peripheral rural areas is insufficient for innovation-based development; furthermore, it is not enough even to handle the decline in production. In 2011 the agrarian sector of the Komi Republic received 1253.5 million rubles as a state subsidy, out of which only 9.9% (123.5 million rubles) were allocated to the agriculture of the republic's peripheral areas, despite the fact that their share in the volume of gross agricultural output is 18.5%. In order to enhance profitability and improve investment opportunities of agricultural production in the remote areas, it is necessary to increase direct state support in 3 – 4 times. For attracting budget resources, each rural municipal entity should have a development strategy and innovation-oriented investment projects, in addition to labour and industrial potential.

It is also expedient to exempt agricultural organizations and farms from all taxes for 5 years and enhance the role of long-term credit. A concessional loan for the construction and modernization of cattle-breeding premises in the Northern territories should be provided for 20 – 25 years, and for the purchase of machinery and equipment – for 6 – 8 years.

One of the problems of the agrarian sector in the peripheral regions consists in the instability of sales of agricultural products and the exclusion of local farmers from food markets. In order to enhance the competitiveness of agricultural enterprises and peasant farms, regional and municipal authorities, along with the heads of agricultural economic entities, should stimulate internal demand. To achieve this, it is necessary to establish a contract system that ensures the priority of local products when purchasing goods for the regional and municipal funds; in addition, free meals for schoolchildren and food stamps for the poor should be introduced.

Besides, the monopoly of procurement, intermediate and processing organizations should be eliminated by transferring the product processing and realization cycle on a cooperative basis.

Recovery from the crisis, stabilization and development of the agrarian economy, taking into account innovation modernization, are connected with the target management of agriculture in the peripheral areas. It is necessary to shift from the agri-food sector development policy to the village development policy. The strategies and programmes for the development of agriculture and rural areas in the remote municipalities should be combined with strategies and programmes for the development of the entire agricultural sector and rural areas in the Komi Republic; besides, they should be integrated into the republic-wide programmes. Such management scheme is shown in *fig. 5*.

The Ministry of Agriculture and Food of the Komi Republic plays a key role in agricultural and rural development in cooperation with other concerned departments and municipal authorities. It is also necessary to involve the interested groups of rural population in this process. The complex problem of development of the rural areas and their main economic branch, i.e. the agrarian sector, requires the involvement of regional science in the study of various aspects of the spatial organization of the rural economy, production, market and social infrastructure. The science should be provided with a social order for the conceptual development of different scenarios of possible sustainable socio-economic development of the rural areas.

Thus, the analysis of specifics, factors and conditions of modernization processes in the agricultural sector of the peripheral Northern territories leads to the following conclusions.

1. Agricultural modernization in the remote areas is conditioned by the necessity to curb the decline in production, to provide people with fresh wholesome foodstuffs; by the necessity of rational nature management and the use of human resources; by the need to enhance the standard of living and quality of life of rural residents and to retain youth in the village; by the necessity to eliminate the substantial differentiation in the socio-economic development of the peripheral and suburban areas.

Figure 5. Target management scheme for the development of agricultural sector in the peripheral territories

2. There are certain prerequisites for technical re-equipment, technological and socio-economic development of the agrarian sector in the peripheral rural territories: availability of human resources, natural forage base (vast areas of floodplain meadows), the resources and means for producing organic products, demand for fresh dairy and meat products.

3. The main factors impeding modernization and innovation development of the agrarian sector include low investment attractiveness of the sector, scantiness of the economic entities' own financial resources, insufficient amount of state support to the agricultural sphere, lack of qualified personnel, low level of management, poor development of production, market and social infrastructure.

4. Modernization of agriculture in the 1960s–1980s is connected with progressive technological, economic and social changes. It promoted the positive dynamics of agricultural production. In the pre-reform period the level of profitability of agricultural organizations corresponded to the optimal standard, necessary for implementing extended reproduction. The transition to market relations curtailed technological reforms in the industry.

5. Agricultural economic entities of the peripheral rural areas have lost the ability of self-development and can't implement modernization processes without the leading role of the state. The agriculture of these areas, due to its specific features and its role in providing people with biologically wholesome products should be considered as the social sector that will not necessarily bring profit.

6. To prevent the development of a crisis scenario, it is necessary to switch from agriculture management in the republic on the whole to the address target management of the agrarian sector of each peripheral territory. The Ministry of Agriculture and Food of the Komi Republic plays the key role in agricultural and rural development in cooperation with other concerned departments and municipal authorities. It is also necessary to involve the regional science and rural population in this process.

References

1. Bulko A.N. Unabridged dictionary of foreign words. Moscow: Martin, 2004.
2. Vdovenko Z.V., Korsun A.V. Income differentiation of Russia's population as a barrier to innovation and technological development. Russia: trends and development prospects: yearbook. Vol. 7. INION RAN. Moscow, 2012. Part 2. P. 439-443.
3. Vechkanov G. Neo-industrialization and modernization. Economist. 2012. No. 9. P. 39-47.
4. Dmitriyeva T.Ye. Territorial organization of the Northern region: the scale of the periphery. The North: problems of the peripheral areas. Syktyvkar, 2007. (RAS Scientific Council on the issues of regional development. Komi Scientific Centre of the Ural RAS Department). P. 57-87.
5. Ivanov V.A., Ponomareva A.S. Assessment of innovation and investment projects of municipality's development in the northern region. Economic and social changes: facts, trends, forecast. 2012. No. 3 (21). P. 135-145.
6. Ivanter V.V., Komkov N.I. Basic provisions of Russia's innovation industrialization concept. Economic and social changes: facts, trends, forecast. 2012. No. 5 (23). P. 16-25.
7. Patsiorkovskiy V.V. Households and the reproduction of population in the innovation and technological development of the regions. Regions of Russia: strategies and mechanisms of modernization, innovation and technological development: the seventh international scientific-practical conference. INION RAN, the Department of scientific cooperation and international relations; Moscow, 2011. Part 1. P. 498-505.
8. Poshkus B.I. What's new in the system of support of agriculture in the countries of the European Union. Globalization and agrarian economy of Russia: tendencies, possible strategies and risks. Moscow: VIAPI named after A.A. Nikonov: Encyclopedia of Russian villages, 2011. P. 197-200.

9. Raizberg B.A., Lozovskiy L.Sh., Starodubtseva Ye.V. Modern economic dictionary. 2nd ed. Moscow: Infra, 1999.
10. Sokolova G.N. Modernization as a technological and social phenomenon: Belarus – Russia. Sociological studies. 2012. No. 5. P. 3-13.
11. Fedotova V.G. Globalization and modernization. Globalistics. Encyclopedia. Moscow: Centre for Scientific and Applied Programmes 'Dialog'; Raduga, 2003. P. 192.
12. Sztompka P. The sociology of social change: translated from English, ed. by V.V. Yadov. Moscow: Aspekt Press, 1996.
13. Economic encyclopedia. Cientific and editorial board of the publishing house 'Ekonomika'; RAS Institute of Economics. Moscow: OAO Ekonomika, 1999. P. 439.

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Organizational and economic mechanism of agriculture modernization

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The article substantiates the preconditions for the modernization of Russian agriculture. The effectiveness of the authorities' measures to stimulate the sector transfer to the intensive way of development is briefly described and evaluated. The article defines main disadvantages of the organizational and economic mechanism of the production modernization in the agricultural sector, consisting in different orientation of operations tools regulating the agrarian and industrial complex, absence of the accounting of climatic conditions and industry specialization. The methodological recommendations with regard to the allocation of budget support funds between different types of agricultural producers depending on their susceptibility to the use of scientific and technological progress are defined.

Agriculture, modernization, organizational and economic mechanism, susceptibility of agricultural producers to the use of scientific and technological progress.

At present, Russia has objective preconditions for transferring agriculture to intensive development. Firstly, there is a need to increase its own production of agricultural products. In order to ensure food security of the country, it is necessary to reduce the share of imported milk and meat in the total volume of consumption, which amounted in 2012 to 21.5% and 25.6%, respectively. Secondly, the competitiveness of domestic products and productivity in the agricultural sector is to be improved up to the level of the best foreign farmers in a short period of time. Otherwise, the latter can occupy a significant share of the national food market. It will suffice to note that as a result of high economic openness due to Russia's accession to the WTO, only for the last year the volume of import of butter increased by 50%, of pork – by 9.2%, of poultry meat – by 7%, of fish – by 4.5% [3]. Thirdly, it is necessary to achieve the ambitious goals, specified in a number of strategic documents, in which agriculture is considered one of the priority sectors of economy.

At the same time, it is obvious that under the conditions of annual crop areas disposal of turnover, deterioration of soil agrochemical properties and the low level of development of the material and technical base of the majority of agricultural producers, it is only possible to increase the volume of manufactured products if actively applying scientific and technological achievements and creating favorable environment for large-scale investments in the sector.

State government authorities adopted a number of measures, in order to modernize the agriculture. In particular, the authorized capital of JSC Russian Agricultural Bank increased by 160.3 billion rubles in the 2008–2012 period, so that to promote access to credit resources for agribusiness entities. In 2011 it was decided to deliver agricultural machinery from JSC Rosagroleasing warehouses with 50% discount, in order to create additional opportunities for technical modernization of production. Zero income tax rate was legislatively established for the entities of the agricultural sector. The rate of VAT for sale of breeding animals was reduced to 10%.

It should be noted that the use of available tools made it possible to "start up" modernization processes in agriculture. So, for the last five years 73 new broiler poultry facilities were launched, 200 operating broiler poultry facilities were reconstructed, 417 new dairy farms and complexes were built, 891 farm was upgraded. Russian agricultural producers acquired more than 100 thousand tractors, 35 thousand grain and 10 thousand fodder harvesters in the 2008–2012 period. Besides, qualitative changes took place in the machine and tractor fleet: the share of equipment with the lifetime of up to 3 years increased by 5–6 percentage points, as compared with 2006 [3]. However, these processes have been "local", without affecting the majority of agricultural producers.

The main problem of the slow modernization rate in the industry is that certain tools of organizational and economic mechanism do not function. As a result, the effectiveness of its other components reduces sharply. Thus, the authorities are still unable to adjust pricing in the markets of agricultural products. According to the Federal State Statistics Service, in 2012, agrarians sold carrots, cabbage and potatoes cheaper than in 2008. Selling price of poultry, cattle milk, wheat was higher only by 20–25%. At the same time, the price of insecticides grew 1.8 times, of electric power – 1.6 times. The cost of tractors increased by 44%, of fertilizers – by 32% (*tab. 1*).

Unfortunately, the use of the tools of public procurement and commodity interventions of agricultural products does not have significant adjusting effect on price, and consequently on the revenue of producers. This is caused by the fact that the annual volume of agricultural production, sold in the country's markets, is negligibly small and intervention starting date is often delayed; as a result, market prices have time to descent to an extremely low level, or on the contrary, to increase unreasonably.

In addition to commodity and purchasing interventions the authorities have been also taking other measures for the regulation of food market conditions: organization of agricultural fairs, incentives to create and promote regional brands. On the whole, however, this does not resolve the issue concerning sales of products at prices that are fair for farmworkers. Such situation is caused by the fact that the share of foreign capital in the food industry remains high. At present, foreign companies own about 60% of the milk processing market, 70% of the juice market, more than 80% of the market for frozen vegetables, fruits and brewing and about 90% of the market for canned fruits and vegetables [4]. Such multinational corporations as PepsiCo, Carlsberg, Coca-Cola, Danone have been actively buying Russian brands,

Table 1. Average sale prices of agricultural products and of industrial goods and services acquisition for agrarians throughout the Russian Federation, thousand rubles per unit

Production	2008	2009	2010	2011	2012	2012 to 2008, %
Garden carrot, ton	9.5	10.2	11.3	12.2	7.5	78.8
Cabbage, ton	8.0	6.9	11.0	10.8	6.5	81.6
Potato, ton	8.2	8.3	9.5	10.3	7.6	93.2
Tomatoes, ton	44.1	48.5	52.6	47.0	47.7	108.2
Chicken eggs, one thousand	2.5	2.4	2.3	2.5	2.7	109.4
Poultry, ton	45.1	54.2	53.0	54.5	55.2	122.4
Raw milk, ton	11.0	10.4	12.4	14.1	13.6	123.5
Wheat, ton	5.1	4.3	3.9	5.1	6.4	125.6
Pigs, ton	61.0	69.3	69.7	76.4	83.2	136.5
Nitrogen-based mineral or chemical fertilizers, ton	22.6	18.5	21.8	25.7	29.8	131.9
Agricultural universal tractors, unit	2049.5	2554.7	2054.2	2193.9	2946.1	143.7
Lubricating oils of all kinds, ton	33.4	34.9	31.9	40.0	51.0	152.9
Electric power, megawatt hour	2.2	2.8	3.4	3.8	3.5	161.9
Insecticides, kg	0.8	0.8	0.9	1.1	1.5	179.7
Source: Data of the Federal State Statistics Service. Available at: http://www.gks.ru/wps/wcm/connect/rosstat/rosstatsite/main/price/#						

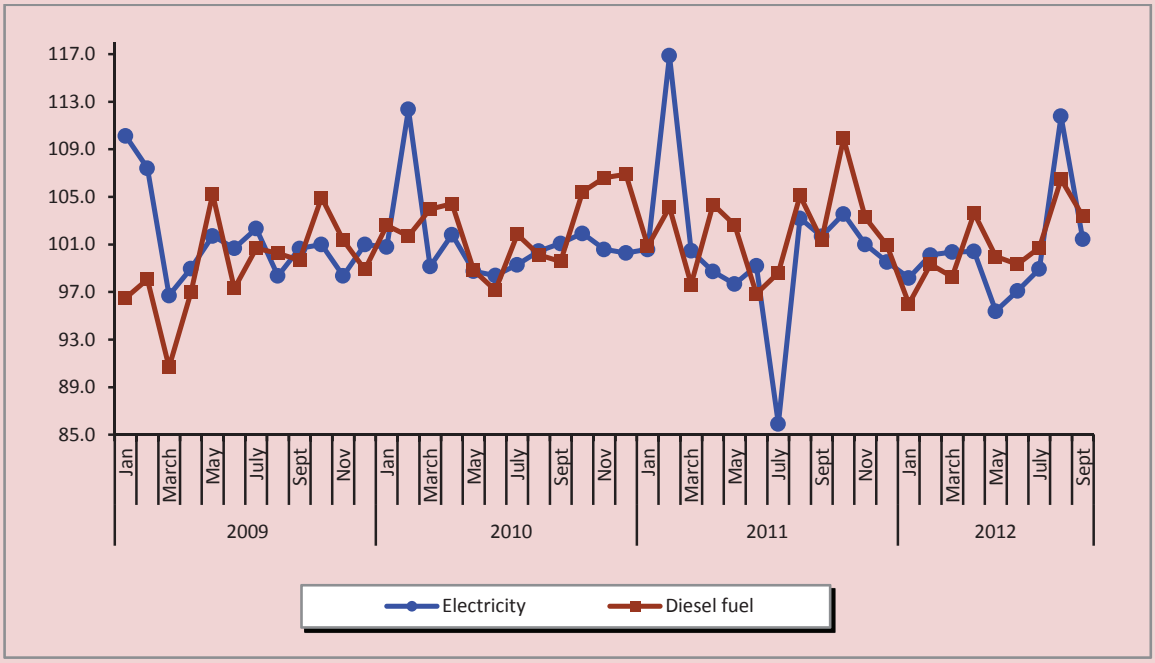
thus increasing the level of monopoly power in the food industry and getting the opportunity to influence the level of prices for agricultural raw products.

With the tools available the authorities are not able to adjust seasonal price fluctuations in the market of agricultural products either. The analysis of the data of the Federal State Statistics Service reveals that in 2009–2012 the rise in prices (tariffs) of diesel fuel and electricity, purchased by agricultural producers, as a rule coincided with the beginning of the fieldwork (*fig. 1*). Moreover, sale price of milk declines in spring and winter, and increases only in summer and autumn months (*fig. 2*). In this situation, the majority of agribusiness entities experience shortage of own funds for sowing and fodder procurement campaigns, and have to borrow funds, thus incurring additional expenses on loan servicing.

Low profitability and investment attractiveness of agricultural production is a consequence of the fact that the set of market regulation tools is not effective. Thus, according to the accounting reports of the RF Ministry of Agriculture, in 2012 the level of profitability of agricultural enterprises by overall activity, even including the subsidies, amounted to only 14.6%.

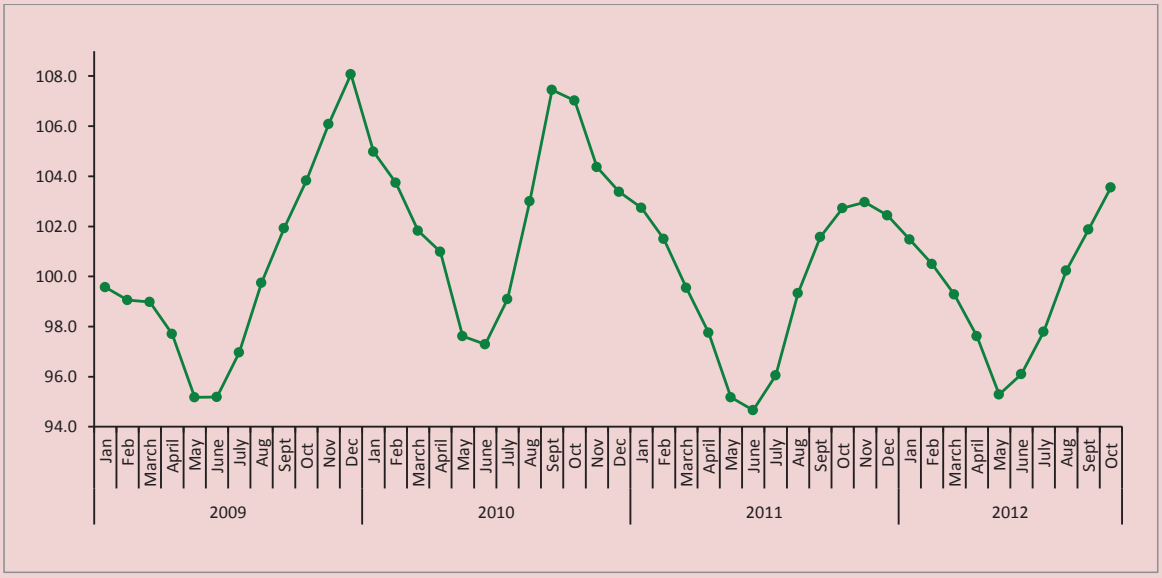
The state will compensate part of the production and investment expenses of the agrarians, in order to reduce losses from market failures. For one thing, however, the amount of budget support remains low. In particular, this is evidenced by the fact that only 0.58% of GDP is allocated to agriculture in Russia, whereas in the USA – 1.3%, in EU – 2.8%. Secondly, most of the budget funds are allocated in recent years to partially recover credit interest expenses, so, in fact, not for the production development, but for the development of market infrastructure, which is connected with financial institutions. Besides, the attractiveness of the agricultural sector for the bank remains low under the conditions of the unprofitability and debt load of the majority of economic entities, low liquidity of the existing assets. Therefore, the current tools of state support are available only for a limited number of enterprises.

Figure 1. Rates of growth (decline) in Russia-averaged prices of diesel fuel and electricity, purchased by agricultural producers, as a percentage of previous month



Source: the author's calculations. Data of the Federal State Statistics Service. Available at: http://www.fedstat.ru/indicator/data.do

Figure 2. Rates of growth (decline) in Russia-averaged prices of milk, sold by agricultural producers, as a percentage of previous month



Source: the author's calculations. Data of the Federal State Statistics Service. Available at: http://www.fedstat.ru/indicator/data.do

Consequently, the measures of economic stabilization and development of the Russian agricultural sector have little impact on its condition and do not consider the peculiarities of modernization processes to the fullest extent.

As was rightly pointed out by the academician of the Russian Academy of Agricultural Sciences I.G. Ushachev, another disadvantage of the established mechanism is that it is not differentiated with respect to each group of producers, does not take into account natural and economic differences of regions, as well as industry specialization [5].

It should be added that the existing principles of budget funds allocation also require adjustments. In most cases, in order to determine agricultural entities that can be the recipients of subsidies (grants), the authorized executive body holds a contest for the inclusion of entities in a programme, as all the funds are allocated on a programme-oriented and goal-oriented basis. The decision is made based on such criterion parameters as the number of created jobs, the availability of production assets, livestock inventory, total area of land, no outstanding tax liability, payback period of the investment project. However, the indicators of agricultural producers' susceptibility to use innovations are not sufficiently considered by the contest committee. Therefore, it is unclear, which of the applicants has more opportunities for production modernization. In this regard it is reasonable to expand the applied system of indicators and make the assessment by two criteria – resource and effective (*tab. 2*). The first criterion reflects the assets (financial) security for agricultural production, the possibility of intensification. The second criterion characterizes the effectiveness of assets (funds), i.e. their quality.

The generalization of the available scientific developments showed that the susceptibility of agrarians to the use of scientific and technological achievements is still estimated by applying range of partial indicators. As a result, it is impossible to get a comprehensive overview of processes existing in the agricultural economy and their causes. Moreover, it is difficult to typologize agricultural producers and to elaborate differentiated support measures. Due to these circumstances, the author finds it necessary to calculate the integral index value by the 4-stage methodology.

Stage I – the substantiation of the indicators structure. When selecting partial indicators, several important requirements are to be considered. Firstly, they should reflect all aspects of the study object and be compatible with the existing accounting and statics system. Secondly, the indicators should describe the region's specialization in producing agricultural products. Thirdly, it is advisable

Table 2. Assessment criteria and indicators of susceptibility to the use of scientific and technological achievements in agriculture

Resource criterion	Effective criterion
1. Value of fixed assets per 100 ha of arable land, thousand rubles 2. Amount of power capacities, hp per 100 ha of arable land 3. Electricity consumption per 100 ha of arable land, kWh 4. Volume of mineral fertilizers per 1 ha, kg application rate 5. Feed consumption for 1 metric centner of product, metric centner of fodder units 6. Share of specialists with higher education in the total number of personnel, %	1. Labour costs to produce 1 metric centner of product, man-hour 2. Cost of agricultural output per unit of financial costs for production, rubles / rubles 3. Crop yield increase per 1 ha, % 4. Productivity increase per 1 head of cattle, % 5. Loss reduction when growing and harvesting agricultural crops and livestock, % 6. Improvement of product qualitative characteristics (for example, fat, protein content of milk), % 7. Share of areas sowed with elite agricultural seeds, % 8. Share of breeding animals in the total livestock number, % 9. Number of cattle heads per 1 operator 10. Comfort level of agricultural machinery, technological operations 11. Humus average indicator, % 12. Share of acid soils, %

to use the indicators that have crucial effect on the susceptibility of agribusiness subjects to the use of scientific and technological achievements. Partial indicators have been determined, taking into account the above-mentioned requirements that can be applied to the regions, dominated by dairy breeding, and include the following:

- Amount of power capacities, hp per 100 ha of arable land;
- Volume of mineral fertilizers, kg application rate per 1 ha;
- Share of brood cows in the total livestock number, %;
- Number of cows per 1 operator, heads;
- Value of fixed assets, thousand rubles per 100 ha of arable land;
- Share of specialists with higher education in the total number of personnel, %;
- Cost of agricultural output per unit of financial costs for production, rubles / rubles.

Stage II – the calculation of partial indices in the form of normalized data by the method of multidimensional comparative analysis (by matching actual values with the best values in the sample). In case the impact of the indicator on the size of the partial index is positive (I_k), the actual value (V_{act}) is correlated with the maximum value (V_{max}) considering its main characteristics, in case it is negative –the ratio between the minimum value (V_{min}) and actual value is determined:

$$I_k = \frac{V_{act}}{V_{max}} \qquad I_k = \frac{V_{min}}{V_{act}} \qquad (1)$$

Stage III – the calculation of integral index (I_i) as a sum of partial indices*:*

$$I_i = \sum_{k=1}^{n} I_k \qquad (2)$$

Stage IV – interpretation of an integrated assessment of agricultural producers within the margins of the integral index. In accordance with the Gaussian distribution, it is possible to determine five levels of susceptibility: low ($I_i < 1.4$), below medium ($1.4 < I_i < 2.8$), medium ($2.8 < I_i < 4.2$), above medium ($4.2 < I_i < 5.6$), *high* ($I_i > 5.6$).

The approbation results of the proposed methodology on the materials of the Vologda Oblast show that the high-level group invariably comprised mainly agricultural enterprises of Vologdsky and Cherepovetsky districts, the group with above-medium level – agricultural enterprises of Sheksninsky and Gryazovetsky districts. These enterprises are also the main recipients of budget funds *(tab. 3)*.

Table 3. Allocation of subsidies provided to agricultural enterprises in 2012, in terms of the Vologda Oblast municipalities

District	District's share in:					
	Volume of subsidies		Number of agricultural enterprises		Volume of agricultural output	
	Million rubles	As a percentage of total	Units	As a percentage of total	Million rubles,*	As a percentage of total
1. Vologdsky	203.0	25.7	29	12.4	125.6	35.3
2. Cherepovetsky	74.2	9.4	24	10.3	71.2	20.0
3. Sheksninsky	63.2	8.0	16	6.9	35.0	9.8
4. Gryazovetsky	122.3	15.5	11	4.7	33.9	9.5
Altogether (1–4)	**462.6**	**58.6**	**80**	**34.3**	**265.7**	**74.6**
Other districts	327.2	41.4	153	65.7	90.6	25.4
Total	789.8	100.0	233	100.0	356.2	100.0

* in comparable prices of 1994.

The enterprises of Syamzhensky, Nyuksensky, Babushkinsky and Vytegorsky districts are constant outsiders of the rating, where, for example, the capital-labour ratio was from 10 to 27 times lower than that of the leader, and the energy supply – from 3 to 7.5 times lower.

In accordance with obtained results, the author considers it appropriate to provide the principal amount of budget support (50–60% of funds) to 15% of the organizations that upon assessment achieved the highest values of the integral index, i.e. the enterprises that are the most susceptible to the use of innovations, and are concentration points of production. The main development potential of the industry is focused in them; therefore, there is high probability that the funds invested in the modernization will have significant effect. At present, the amount of budget support to the agricultural sector is diluted between producers. In 2011, for example, 55% of the funds were accumulated in 36% of organizations (*tab. 4*). As a consequence, no significant positive changes are observed in the state of their material and technical base.

Organizations that are most susceptible to the use of innovations should have the right to receive additional subsidies for 5–7 years. At that, these enterprises will not be able to participate in the next selection in 2 years. The system of budget funds allocation, organized by the aforementioned principles, implies the possibility to annually support from 30% up to 45% of agricultural enterprises starting from the third contest.

The acceleration of the modernization of the agricultural sector requires not only changes in methodological approaches to the allocation of the funds of budget support. It is obvious that in order to accomplish the task, it is extremely important to rationalize price ratios in the inter-industry exchange, to improve the efficiency of tools regulating the market of agricultural products, raw products and food, to stimulate the development of consumer cooperation.

The standpoint of scientists [2, 6], who identify the development of innovation infrastructure as an essential prerequisite for the acceleration of the agricultural modernization, is beyond doubt, as well. The world and national experience proves that for example, in the regions with effectively operating agronomic parks, information and advise services, it is possible to unite the efforts concerning the organization of educational, research, innovation activities; to improve the quality of training specialists for the agro-industrial complex, as well as to ensure the transfer of innovations to production.

Undoubtedly, Russian agriculture cannot be transferred to the intensive way of development mainly on the basis of foreign equipment and technologies, considering that

Table 4. Allocation of subsidies in 2011, in accordance with the susceptibility level of agricultural producers to the use of scientific and technological achievements

Fact (2011)		Forecast		
Share in the number of organizations receiving subsidies, %	Share in the volume of the received budget funds, %	I_i values	Share in the number of organizations receiving subsidies, %	Share in the volume of the received budget funds, %
36.2	54.8	$I_i > 5.6$	15	50–60
27.6	22.3	$4.2 < I_i < 5.6$	20	15–20
17.7	16.5	$2.8 < I_i < 4.2$	30	10–15
11.2	5.7	$1.4 < I_i < 2.8$	20	6–9
7.3	0.8	$I_i < 1.4$	15	4–7

domestic agricultural science came up with practical solutions for producers, corresponding to the 5th–6th waves of innovation. In this connection it is necessary to create favorable conditions for commercialization and mass distribution of the developments. The state should play the main part in this process. The RAS full member S.Yu. Glazyev points out, "under the conditions of maturing "knowledge-driven economy" the state cannot but assume the functions of the intellectual and information centre on the regulation and strategic planning of economic development, of maintaining the scientific and technological environment, including the fundamental knowledge and exploratory research base, institutes of applied research and experimental development, preproduction network and mechanisms for the implementation of new technologies" [1, p. 13].

The authorities have the tools of fiscal, monetary, price, antimonopoly and foreign economic policies for creating favourable macroeconomic conditions for Russia's agricultural modernization. It is essential that each of them is appropriate for the tasks of the industry's transfer to the intensive way of development.

References

1. Glazyev S.Yu. Once again on alternative state policy of national economy modernization (suggestions for 2013–2014). Russian economic journal. 2013. No. 3. P. 3-37.
2. Kartashov Ye.F. Modernization of agricultural production on the basis of the transfer of innovative technologies. Fundamental research. 2012. No.11. P. 493-497.
3. National report on the implementation of the 2008–2012 state programme for the development of agriculture and regulation of the markets of agricultural produce, raw products and food in 2012. Moscow: Ministry of Agriculture of the Russian Federation, 2013.
4. Foreign participation in Russia's food industry. Moscow: Ministry of Agriculture of the Russian Federation. Available at: http://mcx-consult.ru
5. Ushachev I.G. Economic mechanism of technical and technological modernization of agriculture. Vladimirskiy zemledelets. 2010. No.4(54). P. 6-7.
6. Khodos D.V., Shaporova Z.Ye. Economic mechanism of the region's agricultural innovation development. Economic systems management. 2013. No.3. Available at: http://uecs.ru/uecs-51-512013/item/2011-2013-03-05-06-41-03
7. Chekavinskiy A.N., Gulyaev Ye.V., Tuvaev V.N. Modern level and problems of the introduction of scientific and technological achievements in the Vologda Oblast agriculture: monograph. Vologda–Molochnoye: PC Vologda State Dairy Academy, 2010.

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Assessment of the tourist potential of the region's hunting sector (case study of the Vologda Oblast)

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The author, using his own methodology, through the example of the Vologda Oblast, reveals the main parameters of gross turnover in the hunting sector with regard to hunting services; provides methodological tools for calculating gross turnover of tourist services in hunting, determines the degree of development and prospects of the tourism potential of the hunting sector, the role of hunting tourism in the region's economic development.

Vologda Oblast, hunting industry, tourist services, estimation of the amount of services, development prospects.

One of the distinguishing features of hunting sector is that the level of its marketability has been increasing extremely slowly and commodity-money relations will never encompass the entire industry, the considerable part of which will be always based on the principles of subsistence farming, with hunting being for hunters themselves the source of products, used for home consumption. At that, they arrange hunting independently, without resorting to services provided by special hunting organizations. Such status is consolidated by the existing traditions and legislation. In particular, the existing legal acts established that at least 20% of the hunting lands of each subject of the Russian Federation are to remain public and cannot be transferred to legal entities and private entrepreneurs for conducting hunting [1].

It should be noted that the afore-said does not apply to the particular forms of hunting organization, which existed in the Soviet era and included state commercial farm units, large specialized procurement organizations and planned commercial killing of animals. Marketability level of hunting was, of course, significantly higher, as well as the utilization rate of hunting resources, however, at present with Russia's transition to market relations, these forms faded in importance almost completely [2].

Nevertheless, the general trends of socio-economic development are also reflected in this industry, and the market relations embrace ever-increasing part of hunting. The Federal Law of 2009 "About hunting and preserving hunting resources and about modification of separate legal acts of the Russian Federation", certain articles of which are aimed at the improvement of the sector's investment opportunities and increased competition, significantly affected the growth of the merchantability of the hunting sector.

The degree of the marketability of the hunting sector is determined by the share of commercial output (the cost of game, hides, horns, by-products and derivatives of wild animals) and the share of paid services in overall production. In terms of industrial classification, services in the hunting sector are considered as tourist activities, as they are provided in certain time periods and away from the consumer's permanent residence [3], and the probable amount of these services under certain conditions is considered as tourist potential.

Unfortunately, it is difficult to evaluate the tourism potential at present, as no information about services turnover is actually presented. The only available source of information is the data submitted by legal entities and individual entrepreneurs – long-term users of hunting grounds (hereinafter, hunt users) for the state supervision in reports on the form No.2 TP (hunting) [4], in which section 4 provides for the collection of information on the proceeds from marketing products and services by types of hunting. But the given form does not differentiate, first of all, the turnover from marketing goods and services, and secondly, various types of services – for the organization of hunting, the accommodation of hunters, catering arrangements, roughing of trophies, as well as transportation and taxidermy services. In addition, official statistical data do not comprise adjustments for shadow turnover. Consequently, the state statistical materials are not a reliable source for evaluating turnover of services in hunting. Therefore, indirect methods of assessment are to be used, in order to achieve the research objectives.

The author attempted to identify the tourist potential of the industry using the example of the Vologda Oblast.

The Vologda Oblast is one of the regions of the Russian Federation with the most developed hunting. This statement is based on the data on the number of game species, the number of hunters, as well as the oblast estimates obtained in the international and trophy exhibitions, and it is shared by the majority of authors in the hunting media (visit, for example: http://vologdatourinfo.ru/hunting-fishing). However, the Vologda Oblast lags behind many other regions by the level of development of commodity-money relations in hunting industry. This lag is primarily manifested in the relatively small share of hunting lands transferred to long-term use (*tab. 1*).

It may be added that the policy of the authorities has been lately aimed at increasing the share of public lands. As noted in the public report of the dedicated government agency in this field – the Department for protection, development, and regulation of the exploitation of the Vologda Oblast fauna (hereinafter – the Department of Hunting), the work has been done in order to increase the area for more than 400 thousand hectares in the fulfillment of the Governor order on the optimization of lands, granted for long-term use, for the purpose of transferring them to public.

However, the same report notes that the assignment of lands is not completely terminated. In 2012, the Department of Hunting organized two auction activities for the right to conclude agreements concerning the hunting grounds in Mezhdurechensky District (area of 29.4 thousand hectares) and in Cherepovetsky District (area of 14.2 thousand hectares) [5].

Table 1. Assignment of hunting grounds to long term users in separate subjects of the Russian Federation*

RF subject	Total area of hunting grounds, ha	Area of assigned hunting grounds, ha	Share of assigned hunting grounds, %
Vologda Oblast	**14 2910 400**	**5 482 305**	**38.36**
Leningrad Oblast	7 439 000	6 869 000	92.34
Yaroslavl Oblast	3 293 700	2 904 700	88.19
Novgorod Oblast	4 872 914	4 046 340	83.04
Kostroma Oblast	5 677 900	3 089 600	54.41
Pskov Oblast	4 943 810	2 162 496	43.74
Republic of Karelia	17 532 600	7 555 140	43.09
Tver Oblast	8 000 000	7 398 800	92.49

* As of January 1, 2011.
Source: the report data of Ministry of Natural Resources and Ecology. Available at:http://www.mnr.gov.ru/news/detail.php?ID=127672&sphrase_id=268034

As of January 1, 2013, 56 hunting users – legal entities with 5232.6 thousand hectares of assigned hunting grounds operate on the territory of the region. The largest hunting user is the Regional public organization "the Vologda Oblast hunting and fishing society", with about 2.8 million hectares, making up 53% of the total area of hunting grounds, transferred for use. This organization is represented in 19 districts of the oblast, and has 10 incorporated regional offices. Other major hunting societies are LLC Vologda hunting (180.5 thousand hectares of hunting grounds), Vologda regional public organization "Hunting and fishing society of MVD veterans" (132.3), Vologda regional public organization "Hunting and fishing club 'Hunter'" (128.6), LLC Centre 911 (119.9) and LLC GORA (94) [5].

Hunting users have different organizational and legal forms, areas of assigned hunting grounds, material-technological and staff resources, as well as different objectives of activities. During the 11th Interregional exhibition of tourist service and technologies of hospitality "North Gate" (2012) at the round table "Issues concerning the organization of hunting and fishing tourism in the Vologda Oblast", organized by the Department of Hunting, a survey among the executives of the hunting grounds users was conducted. The respondents were offered to choose possible objectives concerning the establishment of hunting entities in order of importance without priority ranking.

As follows from the data, only 9% of the polled executives of the entities entrepreneurial activities pointed to business activities. However, 83% of users, assigned to 33.9% of the total region's hunting grounds, note that the achievement of the main goal is combined with business activities. Moreover, it is necessary to take into account that even the users, who do consider themselves engaged in business activities, give licenses and permissions for hunting such animals as duck, goose, rabbit to everyone who has applied for the license (except in cases where rated capacity may be exceeded). The provision of services to hunters arriving to the territory of the hunting entity is the economic substance of the license, the form of which is approved in accordance with the procedure established by law. According to the abovementioned public report of the Department of Hunting, 32 978 of such licenses were granted in 2012 (by the number of permissions) [5].

In compliance with the research objective, in addition to the question on the purpose of establishing the hunting entities, the questions were asked with regard to the share of hunts, conducted with the purpose of sale in the total volume of hunts for each type of game animals;

Table 2. Survey results concerning the objectives of the activities of hunting entities

Purpose of establishing the hunting entity	Number of responses, %	Area of territory, thousand hectares	Share in the oblast hunting lands
Provision of services to the founders of the entity	5	108.3	0.8
Business activities	9	311.0	2.1
Establishment of business contacts related to the organization's operating activities	3	264.8	1.9
Provision of services to the founders of the entity and business activities	29	3 262.0	22.8
Business activities and the establishment of business contacts related to the organization's operating activities	17	297.6	2.1
Provision of services to the founders of the entity, establishment of business contacts related to the organization's operating activities	6	315.1	2.2
All the answers	28	675.7	4.7
Unanswered, unable to choose an answer	3	94.1	0.7
Total:	100	5328.6*	37.3

* Area, assigned to users, as of February 1, 2012 [6].

share of hunts, the execution of which requires additional services (transfers, huntsman escort, accommodation, nutrition, roughing of trophies, taxidermy), as well as whether (and how) the trophy qualities of hunted animals are taken into account when summarizing the results of the hunt.

Due to differences in the users' approaches to methods of evaluating trophy animals when processing the results of the survey, the following tools have been used.

Since in the Vologda Oblast the trophy quality of the bear is more frequently estimated by its weight, in cases when the users present in advertising an assessment by the system of the International Council for game and wildlife conservation (CIC), its rough translation to weight was applied. Such translation is valid, as animals reach a certain trophy quality at a certain age and have rather standard weight at that age.

Due to the fact that the CIC assessment is more frequently applied, when assessing "roaring" moose and boars, the average advertising value was used by the estimate. If advertising assessments were based on the weight of moose horns or the length of boar tusks, the approximate CIC assessment was determined on the basis of the age of the hunted animal and the weight of moose horns or the length of boar tusks.

The average age of hunted animals was determined on the basis of the filled stubs of hunting licenses, handed over to the Department of Hunting in accordance with the procedures, established by the Department of Hunting. The weight, age and gender of the hunted animal is stated in the stub. The average weight of hunted bears can be determined on the basis of their average age, and a rough CIC estimate on the basis of the age of the moose and the boar.

The average weight of hunted bears in 2012 amounted to 124.5 kg and made up less than 51 points by CIC estimate, age of hunted "roaring" moose – 4.5 years and approximately 260 points, the length of boar tusks was approximately 26 cm and made up about 118 points.

Along with the survey, the author analyzed the on-line advertisements of the users of hunting grounds. 3 users have own web-sites with commercial proposals; 9 users posted proposals with detailed description of the types of services and their costs on the web-sites of travel agencies; 19 users are mentioned on various sites as organizations providing services in the hunting sphere. The share of hunting grounds, assigned to the three aforementioned

Table 3. Imputed value of services of the Vologda Oblast hunting industry, 2012

Type of animal	Share of commercial hunting* in total hunting, according to the survey, %	Official hunting, animal units	Number of hunted animals, animal units	Average cost of a trophy according to advertising, thousand rubles	Average cost of services according to advertising, thousand rubles**	Cost of the trophy with additional services	Total cost of hunting per an assigned territory, thousand rubles
Bear	54.3	372	201	45.5	9.0	54.5	10954.5
Moose	27.1	1187	321	37.2	12.3	49.5	15889.5
Boar	24.7	1427	352	16.5	9.8	26.3	9257.6
Wolf	12.2	232	28	35.1	18.0	53.1	1486.8
"Roaring" moose	64.2	94	60	38.8	9.3	48.1	2886.0
Grouse	12.1	1217	127	9.3	8.2	26.5	3365.5
Total							43839.9

* Hunting for hunters-tourists is defined traditionally in the Vologda Oblast as "commercial" hunting (unlike game hunting that implies hunting at no charge or at a nominal pay including taxes and duties). This name rather accurately reflects the essence of the phenomenon, so it will be used by the author.

** Without regarding the hunting success ratio. Not all hunts are successful. If hunting is not successful, only the cost of services is paid. In this case the cost of one trophy would account for higher cost of additional services. This coefficient varies for different species of animals, and it is higher than throughout the region on average, in case hunting is organized by the specialists of the hunting sector. If necessary, this coefficient also can be considered, however, the author does not use it, as on the whole, the error increases slightly. Other types of hunting, such as lynx hunting, beaver hunting, black grouse and wood grouse hunting in winter, fox and hare hunting, can be also neglected due to their rare occurrence.

categories of users, makes up 31% of the total area of the oblast hunting grounds. It should be also noted that there are online advertisements promoting the organization of hunting entities belonging to non-registered users.

The results of processing the survey data and estimation of service costs are summarized in *table 3*.

Thus, the cost of total commercial hunting, executed by users in the Vologda Oblast by 3 types, denoted in table 3, can be estimated at 43.8 million rubles. The cost of licenses, issued by users for the payment for the hunting of public animal species is also to be added. The cost of licenses varies according to the hunting season (spring season, autumn-winter season) and to users. The information concerning costs can be easily obtained in the course of the telephone survey prior to the beginning of each season. In 2012 the average cost of the license amounted to 1250 rubles. Therefore, users received approximately 41.2 million rubles, and their total revenue made up 85 million rubles.

Taking into account that 5232.7 thousand hectares of land are assigned to users, their income from 1 hectare can be estimated at 16.24 rubles. It should be noted that this income for one year is much higher than the payment for the execution of the hunting agreement, established by the RF Government – 10 roubles per 1 hectare of land in a lump sum, when concluding an agreement for the term from 25 to 49 years. Non-random is the increase in the auction price for the right to conclude hunting agreements and the increase in the number of proposals on concluding hunting agreements made by organizations with long-term licenses [5].

Proceeding from the amount of gross income of hunting users, the tourist potential of the hunting industry can be roughly estimated. This potential is equal to the actual income and possible increase in the foreseeable future.

It is difficult to expect that the merchantability degree of the industry and increase in the share of commercial hunting will change in a short period of time.

However, if the regional authorities switch their position with regard to the assignment of hunting grounds, the share of public lands, in accordance with the law, may be reduced to 20%. Hence, 6200.4 thousand hectares of hunting grounds can be assigned additionally. At the income of 16.24 rubles from 1 hectare, the total revenue of hunting users can make up 185.8 million rubles that will correspond to approximately 0.1% of the oblast gross regional product.

The assessments of the tourism potential of the oblast hunting sector, made by the author, can be compared with the results obtained by individual hunting entities, engaged in the business activities on the development of the hunting tourism (Among publicly available web-sites, visit, for example, http://wildlife.by/node/962). These comparisons have shown that the proposed method based on the conducted survey and the study of the advertisements of the hunting users, allows resolving the task, set in the present research – to evaluate the current level of the development and tourism potential of the oblast hunting sector with high degree of accuracy.

References

1. Federal Law No.209 of July 24, 2009 "About hunting and preserving hunting resources and about modification of separate legal acts of the Russian Federation" (edited on December 6, 2011).
2. Sukhomirov G.I. Improving the organization and management of Russia's hunting farms. Vestnik Okhotovedeniya. V. 7. No.1.
3. Birzhakov M.B. Introduction to tourism: textbook. Saint Petersburg: PH "Gerda", 2004.
4. On approval of the form No.2-TP (hunting): Rosstat order No.441 of August 9, 2012.
5. Public report of the Department for protection, development, and regulation of the exploitation of the Vologda Oblast fauna. Available at: http://okuvshinnikov.ru/files/zip/kirillov.pdf.
6. Register of legal entities, engaged in the exploitation of fauna. Available at: http://vologdaoblast.ru/ru/government/executive_power/index. php?id_16=90.

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Modernization as social becoming (ten theses on modernization)*

The paper presents thesis characteristic of modernization in keeping with the key ideas of the social establishment theory. Modernization is a specific way of social establishment that provides the population with wide-open access to the expanding capabilities of human potential implementation. The important task for the pro-modernization authorities is creating the structural and institutional grounds on which people can implement their human potential completely. The era of globalization incorporates numerous types of modernization. Mutual adaptation of that types as well as preservation of local traditions and conditions within the frames of transformation is of crucial importance for the era of globalization and modernization. The composition of innovations with social memory and traditions is the optimal course of modernization. It is important to understand that, besides creation of the new, modernization involves destruction of the old. That is why the ambivalent balance is significant.

Modernization; social establishment theory; social, cultural, human potential.

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Modernization, as a crucial type of macro-social change, is an ambiguous and contested concept. Like the idea of social change itself, modernization is treated in two opposite ways in sociological theory. One, characteristic of evolutionism or developmentalism, dominant in the classical 19th century social thought, puts emphasis on its inevitability, unilinear course and single final destination. Another, emerging from the critique of determinism, fatalism and finalism assumes contingency, multilinearity and open-endedness of modernization. It looks at modernization as a possibility rather than necessity, as an achievement rather than fate. And claims that whether this possibility is achieved depends on the actions, decisions, choices of the members of society plus the conducive circumstances for mobilizing and

* The keynote address presented at the 1st International Modernization Forum at Beijing, August 8, 2013.

facilitating such actions. The contingent character of these actions and circumstances produces various trajectories and outcomes of modernization, in other words, multiple modernities.

I take the latter perspective and in this article will attempt to apply to the analysis of modernization my general theory of social becoming as put forward in two books in the nineties: one a monograph by Polity Press, Cambridge [30] and another a textbook of the sociology of social change by Blackwell, Oxford [31], which also came out in the Chinese translation by Professor Lin Juren [33]. This very general model of social becoming has a number of implications which have been hinted or formulated here and there in the rich literature on modernization. I propose to put them together in a synthetic picture by means of ten theses on modernization. Each could be elaborated in a separate article, but within my space constraints I will only present a list, a sort of agenda for future research.

Thesis 1. Modernization is the particular implementation of social becoming. Therefore the inspiration for the theory of modernization can be found in one of the most important sentences in the history of sociology: "Men make their own history, but they do not make it as they please, only in circumstances given to them, encountered and inherited from the past generations". I guess you recognize the author – Karl Marx [18, 19]. Applied to modernization, "making history" means that the process results from the transforming potential of human agency, understood as a synthetic force ascribed to a society as a whole. Such a transforming potential emerges as a combined product of three factors:

(a) The quality of the actors, their endowment (e.g. pro-modern motivations, aspirations, beliefs, relevant knowledge). An interesting ideal type of a modern personality, as a pre-requisite for modernizing actions was proposed by Alex Inkeles and David Smith [14]. They mention such traits as: readiness for new experience, openness and tolerance for the variety of opinions and beliefs, treating time as a precious resource, planning the future, optimism and activism. Here the key to shaping such personalities is socialization and education.

(b) Structural circumstances opening the field of opportunities for modernizing actions (e.g. level of technology, economic regime, cultural values and rules). Here the key to shaping pro-modern structures are institutional reforms, and wise policies.

(c) The inherited shape of society produced by our predecessors in the earlier phases of cumulative social becoming. Here the key is the respect, cultivation and continuation of indigenous tradition.

The combination of these three types of determinants facilitates or hinders modernizing praxis: choices and decisions undertaken by human actors - individual, collective and authoritative. And it produces various routes of modernization and its multiple outcomes.

Thesis 2. Is there one modernization or many? All three components of the model - (a) personalities of the members of society, (b) economic, political and cultural institutions, and (c) inherited traditions – are contingent and variable. Therefore the idea of multiple modernities, put forward most forcefully and elaborately by Shmuel Eisenstadt [7], Bjorn Wittrock [38], Johan Arnason [2] and others, is clearly implied by the model of social becoming. It leads to the relativization of modernizing processes, where so-called Western (or Euro-American) modernity appears as just one of historical trajectories and outcomes of the process of modernization. The ethnocentrism of the early theorists of modernization: Talcott Parsons [24], Daniel Lerner [15], Marion Levy [16] is excluded by the logic of our model.

Thesis 3. Is the impact of multiple modernities equal, or some versions are dominant? The corrective factor is the process of globalization, as grasped by Roland Robertson [26], Manuel Castells [3] and many others, which has allowed the influence of Western modernity to spread to other parts of the world, due to the hegemonic, expansionist power – economic, political, military, cultural – of leading centers of modernization and the popular appeal of technological novelties, mass culture and consumerism. But the epoch of conquest and colonialism with imposed Westernization is over. Apart from its own, original civilizational area Western modernity is no longer accepted wholesale, but only selectively. In the era of globalization multiple modernizations merge.

Thesis 4. Isn't such dominance and hegemony pushing toward the uniformization, homogenization of the modernizing processes (proverbial MacDonaldization [25], refuting the claim of multiple modernities? The answer is no, because modernity is a multidimensional condition – economic, political, cultural, religious, mental – where various dimensions may appear in multiple configurations and permutations. And the globalization and imposed homogenization in line with the Western syndrome of "capitalism plus democracy plus individualism plus secularization" evokes defensive reactions to preserve unique, indigenous formats of modernization responding to local traditions and circumstances, incorporating only some elements of Western modernity. Such alternative scenarios of globalization and modernization are discussed for example by Ulf Hannerz under the labels of hybridization, creolization or mutual adaptation [12]. The mark of modernization should be an open and enriching dialogue with other modernizations.

Thesis 5. But if there are many trajectories of modernization, how do we know that in concrete cases we witness authentic, true modernization? Is there any common denominator; are there any universal criteria of modernization? This is perhaps the most difficult question, and the answer cannot be given on purely factual grounds. It must invoke valuations and ideological convictions, refer to philosophical anthropology and ethics.

For me modernization is not a value, or a goal *per se* but the means, an instrument for making more people happier, living more full and dignified life. More concretely it means the access of more and more members of society to the growing opportunities for the realization of human potential.

I accept the romantic and optimistic rather than cynical and pessimistic image of a human person. I believe there are three crucial human potentials (a) creativeness, inventiveness, innovativeness, (b) reason and reflexivity, (c) impulse of community, embeddedness in rich and satisfying moral bonds with others, such as trust, loyalty, reciprocity, solidarity and sympathy. Similar claims are phrased by a number of authors, e.g., Erich Fromm contrasting being-syndrom with having-syndrom [9], Ralf Dahrendorf focusing on life-chances, in his language the combination of "options and ligatures" [4], Norbert Elias emphasising civility, gentleness, recognizing the dignity of others in everyday interpersonal contacts [8].

Thesis 6. Must the natural human drives always be realized? The answer is no, because as implied by the model of social becoming, there must be conducive structural circumstances mobilizing the people for modernizing praxis.

There are some pre-conditions for human self-realization, three of which are for me most important: (a) some level of technological and economic development ensuring comfort and prosperity, (b) widely available education, including ethical and aesthetic formation, and providing the people with what I call

"civilizational competence" i.e. necessary skills to effectively use the technological, economic and cultural opportunities that modernization offers [32], (c) cultural institutions providing easy access to higher forms of art and culture raising sensitivity and enriching experiences. Neither of these three pre-conditions emerge spontaneously; they require political vision, political will, effective implementation. Building structural and institutional field allowing people to engage their full potentialities is the task for enlightened leadership cultivating the project of modernization. Modernization must involve both the reforms from above and the mobilization of the people. Somewhat parallel observations can be found in the work of Charles Tilly [34], Mayer Zald and John McCarthy [39], Aldon Morris [21] and others proposing the "resource mobilization theory" of social movements.

Thesis 7. Does modernization mean complete social change and absolute novelty? No, modernization must be linked with tradition of a given society, its unique social memory, cultural heritage, religious or ideological creeds. They provide intellectual and moral resources for modernizing action, both for the authorities using the wisdom of generations for rational reform, and for the people who in the rootedness and continuity with the past find existential security in the time of chaos and change. The emphasis on the importance of tradition may be found in the work of Edward Shils [27], or again Shmuel Eisenstadt [7]. Optimum course of modernization is some historically and culturally determined mix of innovation, novelty with social memory and tradition.

Thesis 8. Is modernization a synonym for progress, bringing only the beneficial changes, the betterment of societies and improvement of human condition within societies? The answer is no. Fetishization of modernity is a mistake. Our world is so constructed that every benefit has a price, entails some cost. As the famous saying has it: "There is no free lunch".

Among the indisputably progressive achievements of modernization one may list: the growing length of life, health, comforts and hygiene, technological inventions making life easier and more attractive, expanding social capital, raising level of education and awareness, etc. But already the classical theorists of modernity have been aware of side-effects, dysfunctions, and pains of modernization. Marx was raising the theme of alienation [22], Durkheim of anomie [6], Weber of the iron cage of bureaucracy [37], Toennies of the lost Gemeinschaft [36], Simmel of the hypertrophy of stimuli and impressions in the urban life [28], Ortega y Gasset of degradation of mass culture [23], Jurgen Habermas of the colonization of the life world by the bureaucratic systems [11]. Later writers, as well as leaders of social movements, were raising the theme of wars and genocide with recent scourge of terrorism, ecological destruction, depletion of natural resources, pollution, climate change. All these refer to concrete adverse consequences of historically specific modes of modernizations, and in any estimates of the success of modernization an ambivalent balance of functions and dysfunctions must always be taken into account.

But at a more general level, modernization as such means a comprehensive, rapid and often unexpected social change. The fetishization of change as good in itself is a mistake, change is often progressive but not necessarily so, and it also incurs costs. Again the ambivalent balance must be considered. To refer to negative consequences of such change, myself together with Jeffrey Alexander and others [1] have proposed the concept of trauma, and particularly cultural trauma. By this we understand the painful experiences of disruptive social change due to the breaking of continuity, routines, accustomed modes of everyday life, earlier strategies of adaptation, strongly internalized

beliefs and rules, revising cherished memories. At the cultural level such trauma may become widespread, reaching the status of shared and constraining "social fact *sui generis*" in the sense given to this concept by Emile Durkheim [5], and in effect paralyzing activism. Traumas of modernization seem to be a common phenomenon in modern society, perhaps more unstable than earlier ones, pervaded with radical mutability and accelerated change, some of the revolutionary scale. Thus a new challenge is not only to modernize but to relieve traumas of modernization and effectively cope with them.

Thesis 9. Is the course of modernization smooth and gradual? The evolutionist and developmentalist tradition of Auguste Comte and Herbert Spencer, as well as all proponents of the sequential stages of growth, would respond in the affirmative. For them societies move as if on a single escalator, with the same speed, along the same path and constantly upward, driven by a constant impulse toward structural and functional differentiation. But from the perspective of social becoming, the answer is no.

Whether influenced directly or only indirectly by dialectics and revolutionary logic of change of Hegelian and Marxian provenience, the picture of modernization incorporates antagonisms, conflicts and struggles, resulting in contingent, variable routes and outcomes. The reason for that is that human society is never homogenous, but always divided between groups of different interests, aspirations, horizons and ideologies. Hence the question "modernity for whom?" becomes relevant. It happens that benefits of modernity – economic, political or cultural goods – are never equally distributed. They fulfill the interests and aspirations of some groups, e.g. modernizing elites, middle classes, professionals, while costs of change, deprivations and traumas of all sorts, the "bads", burden other groups, e.g. unqualified working class, peasantry, dwellers of poorer rural areas. Modernization may also uproot cherished traditional ideas, creeds, customs, ways of life, and evoke clash at this level. Hence modernization often encounters conservative contestation, it becomes the focus of conflict which may lead to stagnation, blocks, backlash or even – to use the concept couched by Edward Tiryakian – prolonged de-differentiation [35]. The conflict-ridden and permanently contested nature of modernization is strongly emphasized by Shmuel Eisenstadt, who summarizes his analysis with a sentence of a Polish philosopher Leszek Kolakowski who says that modernization is on "endless trial" [7].

Thesis 10. Can the future of modernization be extrapolated from present trends, or rather we may expect some qualitative turns? In view of the complex dialectics of modernization is the prediction of the future at all feasible? The heritage of evolutionist or developmentalist approach with its inclination toward prophecies was influential in the heydays of futurology, in various theories of postindustrial society, or of systems convergence. In contrast the theory of social becoming implies the activist and dialectic image with no assured future. To foresee where the contingent and open-ended process of modernization will lead seems impossible. But with some probability and risk one may venture with Ronald Inglehart the prediction of major cultural and ideological turn from the current focus on material and survival values such as economic prosperity, abundant consumption, hedonistic experiences, toward higher, more spiritual concerns, or "postmaterialist values", such as harmony with nature, health and fitness, peace and security, aesthetic sensitiveness etc. [13].

Of course the condition of their ascendance is the continued economic growth and satisfying of fundamental survival or mundane needs of large segments of human population. We are far from that, and whether it is at all attainable is far from certain. But similar intuitions, or

perhaps dreams about new, higher level of needs and values have been expressed by numerous scholars coming from completely different disciplines or theoretical traditions: psychologist Abraham Maslow with his hierarchy of psychological needs [20], cultural anthropologist Bronislaw Malinowski with his sequence of necessary social functions [17], sociologist Pitirim Sorokin in his cyclical theory, with a prophecy of the next idealistic epoch after a long rule of hedonistic materialism [29].

Perhaps, just perhaps, this convergence of views may be a source of hope that further modernization of the human society will not necessary mean just more and more cars, bigger and bigger cities, higher and higher buildings, richer and richer shopping galleries, more and more crowded beaches, quicker and quicker computers and jets, more and more pixels in the cameras and applications in the mobile phones, louder and louder rock concerts, more and more amusing TV programs – but something more ambitious.

But the theory of social becoming assumes that hopes are not enough. To make the hopes come true, actions and struggles are necessary. As Antonio Gramsci puts it, in the social world predicting means acting for the embodiment of prediction [10]. Maybe the next phase of modernization will witness the conflicts and fights about its own deeper, humanistic meaning.

References

1. Alexander J., Eyerman R., Giesen B., Smelser N., Sztompka P. Cultural trauma and collective identity. Berkeley: California University Press, 2004.
2. Arnason J. P. Communism and modernity. Daedalus. Winter 2000. P. 61-90.
3. Castells M. The Information Age. Volumes I, II and III. Oxford: Blackwell, 1996-98.
4. Dahrendorf R. Life chances. Chicago: University of Chicago Press, 1979.
5. Durkheim E. The rules of sociological method. New York: Free Press, 1964.
6. Durkheim E. Selected writings. Ed. by A. Giddens. Cambridge: Cambridge University Press, 1972.
7. Eisenstadt Sh. N. Comparative civilizations and multiple modernities. Volumes I and II. Leiden: Brill, 2003.
8. Elias N. The civilizing process. Oxford: Blackwell, 2000 [1939].
9. Fromm E. To have or to be? London: Sphere Books, 1979.
10. Gramsci A. Antonio Gramsci: The Reader. Ed. by D Forgacs. New York: Shocken Books, 1988.
11. Habermas J. On society and politics. Ed. by S. Seidman. Boston: Beacon Press, 1989.
12. Hannerz U. Transnational connections. London: Routledge, 1996.
13. Inglehart R., Welzel C. Modernization, cultural change and democracy. Cambridge: Cambridge University Press, 2005.
14. Inkeles A. Smith D. Becoming modern. Cambridge Mass.: Harvard University Press, 1974.
15. Lerner D. The passing of traditional society. Glencoe: Free Press, 1958.
16. Levy M. Modernization and the structure of societies. Princeton: Princeton University Press, 1966.
17. Malinowski B. A scientific theory of culture and other essays. New York: Oxford University Press, 1969.
18. Marx K., Engels F. Selected works. Moscow: Progress Publishers, 1968.
19. Marx K. Selected writings. Ed. by T. Bottomore. New York: McGraw Hill, 1964.
20. Maslow A. Toward a psychology of being. New York: Van Nostrand, 1968.
21. Frontiers in Social Movement Theories. Under the general editorship of A. Morris. New Haven: Yale University Press, 1992.
22. Ollman B. Alienation: Marx's conception of man in capitalist society. Cambridge: Cambridge University Press, 1975.
23. Ortega y Gasset J. Revolt of the masses. New York: Norton, 1993.
24. Parsons T. Societies: evolutionary and comparative perspectives. Englewood Cliffs: Prentice Hall, 1966.

25. Ritzer G. The MacDonaldization of society. Thousand Oaks: Pine Forge Press, 2004.
26. Robertson R. Globalisation: social theory and global culture. London: Sage, 1992.
27. Shils E. Tradition. Chicago: University of Chicago Press, 1981.
28. Simmel G. Sociology: inquiries into the construction of social forms, Leiden: Brill, 2009.
29. Sorokin P. Social and cultural dynamics. Volumes. 1–4. New York: American Book Company, 1937.
30. Sztompka P. Society in action: the theory of social becoming. Cambridge: Polity Press, 1991.
31. Sztompka P. Sociology of social change. Oxford: Blackwell, 1993.
32. Sztompka P. Civilisational Incompetence. Zeitshrift fur Soziologie. 1993a. No.2. P. 85-95.
33. Sztompka P. the Chinese edition of The sociology of social change. Translated by Lin Juren. Beijing: Beijing University Press, 2011.
34. Tilly Ch. From mobilization to revolution. Reading: Addison-Wesley, 1978.
35. Tiryakian E. On the significance of de-differentiation. In: Macro-sociological theory. Ed. By S.N. Eisenstadt and H.J. Helle. Beverly Hills: Sage. P. 118-34
36. Toennies F. Community and civil society. Cambridge: Cambridge University Press, 2001 [1926].
37. Weber M. The theory of social and economic organization. London: Routledge, 1947.
38. Wittrock B. Modernity: one, none or many? Daedalus. Winter 2000. P. 31-60.
39. Zald M., McCarthy J. The dynamics of social movements. Lanham: University Press of America, 1988.

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Three suggestions for the improvement of demographic and family policy *

The article states the reasons for the low level of birth rate in Russia. It shows that the reduction in the intensity of births is caused by changes in the demographic behavior resulting from the sexual revolution, the significant differentiation of the population by income levels – poverty and low welfare of families with children, the decline in reproductive health and reproductive potential. Meanwhile, mortality rate in Russia is comparable with that in the developing countries; the difference between life expectancy in women and men is 12 years, but women suffer from various diseases more often, and this fact significantly increases the risk of disability by the end of employment. It is therefore proposed to improve the practice of maternity/family capital, to introduce a system of wholesome nutrition for pregnant women, preserve the retirement age for women.

Demographic policy, maternity capital, retirement age, children's health.

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In the last decade Russia has witnessed positive changes in the dynamics of demographic indicators. There has been a decline in the overall and infant mortality, and mortality of able-bodied population; crude birth rate and total fertility rate increased significantly *(tab. 1)*.

In 2012 the indicators of birth rate and mortality rate equalized; since 2008 Russia's population has ceased to decline. However, it should be noted that in the past two years migration flow increased (from 13 people per 10 thousand population in 2010 up to 21 people in 2012), and the net reproduction rate did not

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Table 1. Dynamics of the main indicators of Russia's demographic development

Indicator	Year								
	2000	2005	2006	2007	2008	2009	2010	2011	2012
Crude birth rate, per 1000 population	8.7	10.2	10.4	11.3	12.1	12.4	12.5	12.6	13.3
Total fertility rate, points	1.20	1.29	1.30	1.41	1.49	1.54	1.57	1.58	1.69
Gross reproduction rate, points	0.583	0.628	0.632	0.686	0.729	0.752	0.766	0.771	0.825
Net reproduction rate, points	0.561	0.611	0.618	0.670	0.713	0.732	0.745	0.752	n/a
Crude death rate	15.3	16.1	15.2	14.6	14.6	14.2	14.2	13.5	13.3
Infant mortality rate	15.3	11	10.2	9.4	8.5	8.1	7.5	7.4	8.7
Migration gain coefficient, per 10 thousand people	25	9	11	18	18	18	13	22	21
Population growth, as a percentage of the previous year	-	-	99.6	99.7	100.4	100.0	100.0	100.1	100.2
Sources: Demographic yearbook of the Russian Federation.									

exceed a unit, this reveals the true situation: the natural decline of Russia's population, though on a smaller scale, still continues.

The specifics of fertility decline in Russia were conditioned by the nature of socio-economic changes that took place over the past 20 years. The most significant points include the following:

1. Decline in reproductive health [6] and the spread of infertility;

2. Deterioration of the health of newborns (40% of children are ill, that leads to a "social funnel"), as a result, each subsequent generation is less healthy than the parental generation.

3. In the late 1980s – early 1990s Russia witnessed the sexual revolution that resulted in the reduction of lawful marriage rate, increase in the number of divorces and common-law marriages; reduction in the desire to have children as a social value, and the emergence of "childfree"; competition between the value of children and value of career in the conditions of modernization.

4. Financial insecurity and poverty of population, especially families with children (about 40% of children are born into families with income below the subsistence level).

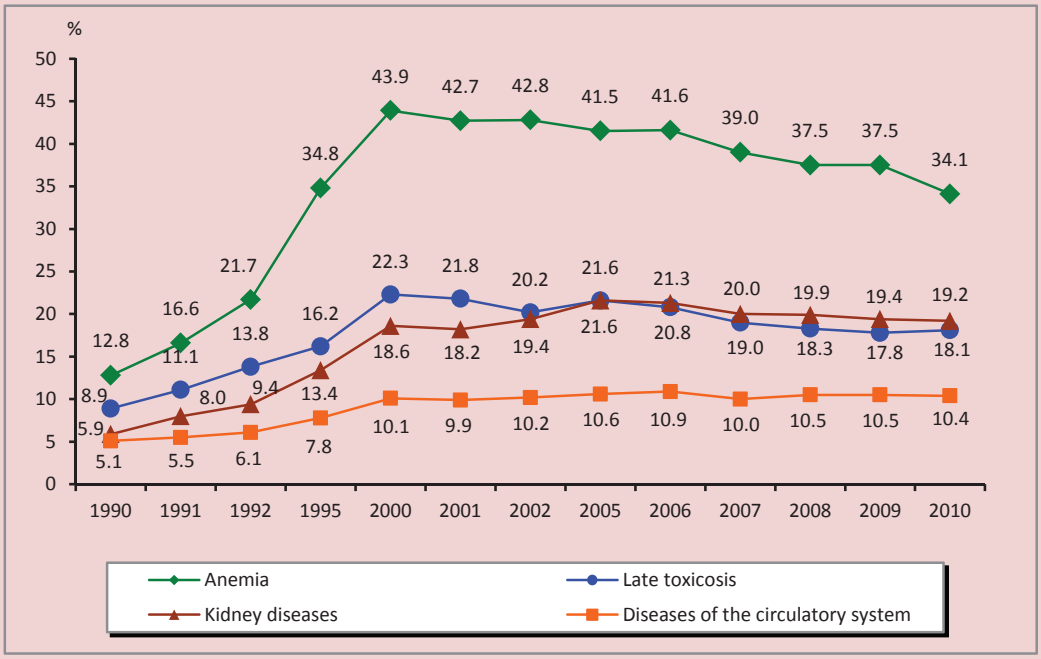
Reasons for the decline in the reproductive health of Russians are the following: increase in the number of diseases affecting the reproductive function, especially endocrine disorders, the incidence of which increased twice from 1992 to 2012, and in adolescents – in 3.5 times; increase in the incidence of teen pregnancies; increase in HIV infections in women; low level of pregnant women's health: approximately 40% suffer from anemia; less than 30% have easy delivery *(figure)*.

The health of pregnant women depends on the complex of socio-economic factors. Research shows that they are based on the material security of population, scale of poverty and social polarization:

- 10% of working population have wages below the subsistence level;
- more than 40% of working population have very low incomes, and they cannot provide for themselves and their child even at the subsistence level;
- contrary to the official statistics, the share of families living below the poverty line is more than 30%;
- social polarization continues to increase, the ratio of the average income of the richest 10% to the poorest 10% in Russia was 1:17 in 2012;
- the minimum wage is 5–7 times lower than in Europe, and 10 times lower than in the USA.

Profound social differences have led to the virtual formation of two Russias: the small one (3–5% of the population) that seized the major part of the country's wealth at their disposal, and the big one (35–40% of the population)

Health of pregnant women (as a percentage of those who completed their pregnancy)



suffering in need [5]. The special importance of the current situation consists in the fact that the tension caused by this problem is not reduced; on the contrary, it has a tendency to increase.

These facts result from distortions in distribution; thus, the main measures should be aimed at the modernization of distributive relations.

It is necessary to point out significant changes in matrimonial behaviour such as the decline in marriage rate and increase in divorce rate, the substitution of wedlock by free partnership; decisions to postpone the birth of children or intentions to have no children at all. These changes increase the amount of incomplete, mainly single mother households, which leads to the instability of family structures and significantly undermines the processes of socialization of the younger generation, promotes the formation of intentions to have only one child or few children [1].

Forecast estimates show that the reproductive potential in Russia will have decreased by the middle of the 21st century. Approximately by the year 2025, the number of women of reproductive age will have been reduced by 5 million. At that it is necessary to distinguish between the number (!) of births and the quality of newborns (!). We cannot focus only on the statement that what we need is more and more births. Each generation in Russia turns out to be less healthy than the previous one. In addition, the analysis shows that mortality dynamics and health dynamics do not always correlate with each other (reduction in mortality rate does not mean improvement in the health of newborns).

Demographic policy in the sphere of fertility intensified in the middle of the first decade of the 21st century (2006–2007). A set of measures to improve the demographic situation was adopted, for instance: increasing maternity allowances and childcare allowances (for the children up to 18 months old). The introduction of maternity social capital – MSC (250 thousand rubles in 2007; 367 thousand rubles in 2011) was the most important measure. The goal of introducing MSC was to

create conditions for ensuring decent life for families with children, and this should enhance birth rate.

To what extent has the maternity social capital fulfilled this goal? It should be acknowledged that the share of women who gave birth to two children has slightly increased; and there has been a decrease in the number of women who gave birth to none. It should be noted that the main direction of using MSC concerned the improvement of housing conditions (about 90%). The research conducted at the Institute of Social and Economic Studies of Population at the Russian Academy of Sciences (ISESP RAS) [2, 4] shows that the income of these families should not be below the subsistence level per person; that is why its twofold increase is necessary. Speaking about the assessment of the targets achievement, we should note that certain changes, of course, have been made; but, from our point of view, these changes are very insignificant. And they do not solve the tasks set out in the law on MSC and do not raise hopes for a significant improvement in the demographic situation.

In addition, the number of persons who obtained the certificates has started to decline since 2010 due to the fact that any set of measures, aimed at improving the population's living conditions, works for a certain period. Then the population gets used to it, and these measures lose their meaning.

The above leads to the necessity of continuing the intensive activity of the government with regard to fertility and health. Summarizing the main problems of demographic development and health makes it possible to formulate *three major suggestions* for enhancing the efficiency of the social and demographic policy, the implementation of which is nowadays urgently required from the demographic, economic and political points of view. This concerns the practice of maternity capital, the improvement of the health of pregnant women, and the change of the retirement age for women.

Our first suggestion is to improve the practice of providing and using maternity capital considered as the main economic tool of increasing birth rate.

The suggestion includes the following points:

1. To prolong the validity of the law until 2025, i.e. for the period of implementation of the Concept for demographic development of Russia.
2. To provide for the payment of MSC when the child is 12 months old to ensure the birth of the third and fourth child.
3. To change the specifics of using MSC: to provide nutrition for pregnant women and nursing mothers that will influence the health of newborns, instead of providing the pension for mother.
4. To increase by an order the construction of social housing with the possibility to buy it using MSC.
5. To introduce the opportunity to use the maternity capital not only once, but also at the birth of children of subsequent orders.
6. To pay interest on the use of maternity (family) capital.
7. To improve statistical records with regard to the processes of reproduction of the population.

The second suggestion concerns the creation of the system of special nutrition for pregnant and nursing women similar to what has been done with respect to children under the age of 2 years, since:

– the health of pregnant women is deteriorating and anemia is spreading (a marker of pregnancy);

– there is an increase in the share of ill newborns or newborns who fall ill immediately after birth.

This problem can be handled with the help of international experience that should have been long used in Russia. For instance, the United States of America, using such a system, have reduced infant mortality by one third.

The next suggestion concerns the age of retirement. A draft law has been worked out, and it has been many times proposed to increase this age. At the same time, Russia has the lowest indicator of life expectancy among European countries *(tab. 2)*. According to Rosstat (Federal State Statistics Service), average life expectancy among the total population of the Russian Federation was 68.8 years in 2010, in 2011 – 69.0 years.

Russia has high death rate – 13.2 people per 1000 population in 2012. This indicator in developed countries is 8 people per 1000 population; in developing countries – 12 people per 1000 population. The Russian Federation ranks 100th among 180 countries by the indicator of mortality rate.

Therefore, the third suggestion is that Russia should not increase the retirement age for women, because this will increase the disability rate and the Pension Fund's expenses.

These findings are conditioned by gender specifics of health and longevity. Life expectancy in women is by 10–12 years longer than in men, but in spite of the longer life, the current health of women during the life cycle is worse than that of men *(tab. 3)*.

The gender paradox of health and longevity has social causes. Men take up jobs with more risk, injuries, and harmful conditions; 37% work for more than 40 hours a week. This is evidenced by the fact that TB incidence in men is 2–3 times higher, and their mortality is 6–8 times higher than in women.

Bad habits are also most common among men: 53.6% of men and 27.2% of women smoke tobacco; high alcohol consumption is registered among 61.3% of men and 21.6% of women. Men commit suicide 6–8 times more often than women [3, p. 60-62]. Self-preserving behaviour in men is less developed [7], they earn money at the cost of their health. But we should not

Table 2. Life expectancy, years

Country	Year							
	2000	2005	2006	2007	2008	2009	2010	2011
Austria	78.03	79.33	79.83	79.98	80.23	80.08	80.38	81.03
Belgium	77.72	78.98	79.38	79.78	79.68	79.98	80.23	80.49
Germany	77.93	78.93	79.13	79.53	79.74	79.84	79.99	80.74
Spain	78.97	80.17	80.82	80.87	81.18	81.48	81.63	82.33
Italy	79.43	80.58	81.13	81.29	81.39	81.39	81.74	82.09
Great Britain	77.74	79.05	79.25	79.45	79.60	80.05	80.40	80.75
Finland	77.47	78.82	79.21	79.26	79.57	79.72	79.87	80.47
Norway	78.63	80.04	80.34	80.40	80.59	80.80	81.00	81.30
Russia	65.34	65.47	66.64	67.50	67.85	68.60	68.80	69.00
EU countries	77.10	78.33	78.67	78.89	79.10	79.34	79.63	80.18
Source: World Bank database. Available at: http://data.worldbank.org/indicator/SP.DYN.LE00.IN								

Table 3. The difference between the health of men and women in the dynamics

Year	Average estimate, points		Share of the chronically ill, %	
	Men	Women	Men	Women
1981	3.81	3.49	22.9	34.6
1989	3.53	3.27	39.2	43.3
1994	3.46	3.15	43.5	55.4
1998	3.3	3.09	55.1	65
Source: Data of the "Taganrog" research, ISESP RAS.				

forget that women, having poorer health, bear two burdens: work and household chores.

Summarizing all of the above, let us point out once again the three suggestions for enhancing the efficiency of Russia's demographic and social policy: improvement of the practice of using MSC to increase its efficiency; special nutrition for pregnant and nursing women; abandonment of intentions to raise the retirement age for women.

References

1. Children of reforms. Compiled and edited by N.M. Rimashevskaya. Moscow: Institute for Economic Strategies, 2011.
2. Kiruta A.Ya., Shevyakov A.Yu. Inequality, economic growth and demography: unexplored interrelations; RAS Institute of Social and Economic Studies of Population. Moscow: M-Studio, 2009.
3. Morev M.V., Shabunova A.A., Gulin K.A. Socio-economic and demographic aspects of suicidal behavior: monograph. Ed. by V.A. Ilyin. Vologda: ISEDT RAS, 2010.
4. Rimashevskaya N.M. Risks of poverty in modern Russia. Narodonaseleniye. 2010. No.2(48). P. 4-9.
5. Rimashevskaya N.M. People and reforms: the secrets of survival. Moscow, 2003.
6. Shabunova A.A., Kalachikova O.N. Reproductive health as a factor promoting the quality of reproduction of the population. Economic and social changes: facts, trends, forecast. 2009. No.3(7). P. 73-81.
7. Shabunova A.A., Shukhatovich V.R., Korchagina P.S. Health saving activity as a health-promoting factor: the gender aspect. Economic and social changes: facts, trends, forecast. 2013. No.3(27). P. 107-115.

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Education opportunities for the population in the changing socio-economic context *

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Opportunities for the people in the field of education are not just an indicator of achieved social progress, but also a factor that determines the path of future development. That is why the information about the accessibility of quality education for residents of Russia, which is on the difficult way from socialism to capitalism, is so important. Reforms in education were implemented during the whole post-Soviet period, but the most fundamental changes have occurred in recent years. The paper is based on the analysis of evolution of educational legislation in relation to each of the stages of education system, and it also uses the results of sociological research. The article shows the process of further exacerbating and institutionalization of inequality of educational opportunities for families with different incomes and places of residence. It proves that in the emerging socio-economic and institutional context the access to the full value education for a significant share of households is being increasingly restricted. It excludes the system of education from the list of effective tools for social mobility and aggravates the degradation of human capital of territories. As a result, socio-economic stagnation is conserved. Negative tendencies can be overcome, if the federal government reconsiders its point of view on social overhead costs. Nowadays such costs are considered as nonproductive and, because of that, they are

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"optimized" as much as possible. Also serious changes are needed in the inter-budgetary relations. Primarily, the government should put an end to the practice of shifting the burden of unbearable expenditure commitments to the regions, because this leads to the situation, when regional authorities in implementing even good ideas – like raising the salaries of teachers – are often forced to use measures, that result in a reduction in the quality of education and the increase of budget debt. The state can find the funds, necessary to carry out more efficient social and regional policies, if it abandons the practice of accumulating unreasonably high volumes of proceeds from the sales of Russian energy resources in the so-called reserve funds.

Education, regional development, human potential, availability, quality, social progress, education reform, education system.

The opportunities of the population in the sphere of education are, on the one hand, a relevant indicator of achieved social progress, and on the other – a predictor of the course of further development. It is not by accident that education issues are always in the focus of the research into the level and quality of life of the population in a given region. That is why it would be very interesting to study this issue more comprehensively in the framework of longitudinal research into the life of the population of a typical Russian city for more than forty-year period, one half of which Russia had spent in the socialist stage, and the second half – in the period of formation of capitalism.

So, as a result of implementation of the famous "Taganrog" project[1], since 1968, the data were obtained about the availability of educational institutions of different stages for the population of this city, about the educational strategies of different social groups, for instance, in the field of preschool educational establishments, population's concern about obtaining a university degree and so on[2].

The data obtained in the Soviet period, indicated gradual expansion of education accessibility. The number of children attending pre-school establishments was growing, which, by the way, indicated not only the increasing number of kindergartens, but also, indirectly, the improvement of the quality of life, as it was explained, in addition, by reduction in the number of multigenerational families under the conditions of intensive housing construction. The decision about enrolling in a university depended not on financial opportunities but rather on family attitudes, in particular, there was a tendency to value higher education more in the families of the Soviet intelligentsia [9].

Radical changes of the 1990s had a substantial impact on educational opportunities of population. The data collected during the implementation of the project in these years revealed the sharp reduction in the availability of pre-school institutions due to their large-scale closing down. The availability of additional education for children was limited as well, due to the fact that more and more extracurricular activities were provided on a paid basis. In addition, the data proved that the free-of-charge secondary education was becoming a mere formality, because people had to pay for school repairs, security and other school needs, they also had to buy textbooks; there was a sharp increase in the number of paid services provided by the system of higher education as well. Such changes in education sphere lead to a sharp differentiation of educational institutions, to

[1] One of the founders and the longstanding project supervisor – RAS Corresponding Member N.M. Rimashevskaya.

[2] For example, in the framework of "Taganrog-II" (1986), the chapter on free-of-charge and preferential services dwelled upon the services related to the education of preschool-age children, extracurricular activities, education of the youth and adults; the chapter also analyzed the trends observed over the period since the previous calculation; in the framework of "Taganrog-IV" (1996) a special section was devoted to the quality of human potential, an important component of which is knowledge; in the framework of "Taganrog-IV", (1998) the students' families were discussed, among other things.

the reduction in the quality of higher education, to the increase in the number of young people with deviant behavior [5].

The decade that passed since the implementation of the last stage of the project is characterized by increasing intensity and scope of reforms in education sphere. The legislation on education has been slightly amended throughout the 2000s, but the most fundamental changes have been made in the past few years. Several laws entered into force: the Law "On education in the Russian Federation" (2012), the Law No.83-FL "On the introduction of amendments to certain legislative acts of the Russian Federation in connection with the improvement of the legal status of state (municipal) institutions" (2010) that radically changes the order of financing of educational institutions; the federal state educational standards (FSES) were adopted; Unified State Exams (USE) were finally introduced in schools (2009), and the stage-wise Bologna model in universities. At that, educational policies in recent years can be briefly characterized as follows: during the entire post-Soviet period, education was steadily moving in the direction opposite to equalizing educational opportunities for families with different incomes and places of residence; as for the 2000s, they witnessed a further aggravation of this process and its consistent institutionalization. Let us illustrate this using the example of each of the steps of education system, and we will start with pre-school education.

In recent years, certain attempts have been undertaken to handle the problem of shortage of places in pre-school establishments, aggravated in the 2000s due to a certain increase in birth rate and inflow of migrant workers and shortage of kindergartens due to the sharp reduction in their number in the 1990s; these attempts, however, can in no way be assessed as social progress. The ways to solve the problem included the following: firstly, the legalized relaxation in the sanitary, hygienic and other requirements to the maintenance of children in pre-school institutions (abandonment of separate places for having meals etc.), increase in the number of pupils per kindergarten teacher and other similar measures, and secondly, promotion of the development of private, "economy class" kindergartens [6]. However, the latter provides only baby sitting (with less strict requirements for child care), and the most important educational function is not implemented, which negatively affects the following, school stage of education.

Another step toward the restriction of availability of full-fledged pre-school education is made in the new law on education (2012). In particular, at the federal level the standard that determined the maximum payment for child's maintenance in the kindergarten has been abolished under the pretext of splitting the two functions of pre-school institutions: education (which is still proclaimed to be free) and care (which is paid by parents) in the conditions of sharp increase in the payment for this social service. At present, such decisions have been left to the discretion of regions with their scarce budget capacities.

The situation in the sphere of general education is as follows: the 1990s–2000s witnessed the deterioration of its quality mainly due to lingering shortage of financial support to schools; in the recent years, however, provision of education services on a paid basis has been expanding and, what is more, it is becoming legalized. At present, we are talking not only about the known fact that parents provide financial contributions to different school needs and hire tutors for their indolent children, or, on the contrary, for the children who intend to enter the best universities. We are also talking about the fact that families have to replenish out of their own resources the scarcity of state-guaranteed free-of-charge segment of general education, in other words, the number

of classes that are determined by educational standards for the study of certain subjects. It happened when the Federal Education Agency, after almost two decades of struggling, obtained the authority to develop and approve educational standards.

There have been numerous attempts to transfer school education partly on a fee-paying basis. In 1997–1998 in the framework of an education concept developed by the government, it was proposed to introduce school tuition fees in the amount of 20% of the cost of education – under the guise of providing additional educational services. The response of the public did not allow this idea to be implemented then. Therefore, the idea of introducing partial tuition fees in schools was voiced again in 2004, when the Minister of Education A. Fursenko suggested the basic curriculum be reduced at a quarter, this time under the slogan of reducing educational load (solvent families were offered to pay for "additional" classes from their own resources, low-income families were promised to be provided with a subsidy). The protests of educational community forced the Minister to refuse that he had anything to do with these ideas. But in 2006 such proposals were revived along with the idea of the so-called education "before school", which disguised an attempt of actual elimination of the right to the free pre-school education. This attack was repelled once again, but the transition of educational institutions to normative per capita financing was imposed as a compromise [11].

Not to mention the apparent controversy of the very idea of per capita financing, the practice indicates that standards are calculated not in accordance with the real needs of educational institutions, but on the basis of the limit of funds, which are to be allocated for education. Moreover, since schools have been transferred to per capita financing, even these scanty standards are being reduced [3]. In these conditions, schools are forced, on the one hand, to increase the number of pupils per class beyond limits; to agree to merge with other educational institutions, often significantly different in the level of teaching and composition of pupils (including those requiring the correction of behavior or treatment of health); to reduce the teaching staff and support staff (speech therapists, psychologists, etc.). And on the other hand, schools have to try to provide as many paid services as possible, which is additionally stimulated by the already mentioned Law No.83-FL and educational standards that significantly reduce the number of classes required for teaching the subjects necessary for university admission.

Today this situation is further aggravated by the fact that the regions are to implement the tasks set out in the inaugural presidential decrees that provide for the increase of schoolteachers' salaries to the average salary for the region. Note that the previous law "On education" (1992) already set out the requirement to pay salaries to teachers at the level not lower than average wages in industry, however, the government simply ignored it, and in 2005 the notorious law No.122-FL dated August 22, 2004[3] abolished this requirement at all [7]. At present, due to acute shortage and aging of teaching staff, the task of raising teachers' salaries was firstly stated in the decrees of the President, and then set out in the new law on education. However, the research that we have conducted in four regions, the goal set by the federal centre is achieved in the regions mainly through the following means: increasing the per-class workload and extra-curricular workload of teachers, and the number of students in a class; freezing financial allocations for repair and technical equipment

[3] This law became widely known as the "law on monetization of benefits". However, it also introduced significant changes in the legislation that regulates other spheres, including education system.

of schools; teacher training and through other "internal reserves". And the reason for it lies in inadequately low value of per capita standard in general and teachers' salary[4] (rate) as its component.

Today, the school is placed in such conditions that cannot but affect the quality of education, as well as accessibility of higher education for those population groups that are unable to pay for extracurricular classes. For instance, according to the school principals that took part in our survey, about one third of the students in the places of their residence have no opportunity to take up paid lessons[5]; the population expresses even more pessimistic views: only half of city residents are ready to pay for education under the dramatic increase in paid services in education sphere. All this is happening in the conditions when the vast majority of school principals argue that after the transition to the new FSES, one will not be able to enter the university without taking additional paid classes [4]. Besides, according to FSES, those students, who have not chosen Mathematics or Natural Sciences as their specialization, are to take up the so-called "natural science", an integrated course that gives the most superficial knowledge of fundamental sciences instead of individual subjects like Physics, Chemistry, Biology. In such conditions, untimely specialization that is also stipulated in educational standards interferes with students in the future, when they have more precisely determined their vocation, and demands of economy for entering the university.

Financial and economic situation, which schools and supplementary education establishments for children have to face in recent years, forces them to reduce significantly the number of free-of-charge study groups and courses, thereby discriminating children from low-income families with regard to the opportunities of out-of-school activities and development.

Now let us briefly review the state of affairs in primary and secondary vocational education. It is known that given a relative accessibility of higher education, entering a university has become the dominant strategy of the population. The more so since the absolute majority of employers demand that their employee have a university degree; although under the current structure of the economy, in most cases such diploma is required by employers only as evidence of the employee's minimum level of skills and culture, rather than the set of specialized knowledge. University students are provided with draft deferment, it also contributes to the intention to obtain higher education. The factor determining the absence of interest in initial and secondary vocational education lies in the lack of demand for working professions and low wages in this sphere. This resulted in further deterioration of the contingent of students in vocational training institution that prepare specialists for industry and agriculture, which also made them unattractive for households. Other factors in the low popularity of such institutions of initial and secondary vocational education are as follows: obsolescence of their facilities and infrastructure due to the situation in the real sector of the economy; deterioration of teaching staff, etc.

With the onset of the crisis in 2008–2009, the speakers from the high rostrums talked about the turn of the economy toward the real sector and, consequently, about the redundancy of graduates of legal-economic and management specializations and about the demand for qualified workers.

[4] Field studies were conducted in the summer of 2013 under the auspices of the Russian Presidential Academy of National Economy and Public Administration. 1149 teachers and 37 school principals took part in the survey in 4 regions that differ in economic prosperity. The detailed research results are to be published in the next issue of the journal "Narodonaseleniye".

[5] School principals argue that the similar number of students will limit themselves to free-of-charge classes, as they consider it sufficient, despite the fact that the population is poorly informed about the changes in the volume and content of the free-of-charge segment of the general education.

At the regional level, the attempts were made to transform the structure of vocational education with the aim of equipping institutions with modern equipment, etc. However, economic policy, which had been making the non-primary sector of the industry unprofitable during the whole post-Soviet period, remained essentially unchanged. Accordingly, there were no changes in the opportunities of enterprises of this sector to offer a salary, capable of competing with remuneration in trade, services and other non-production sectors and, especially, taking into account differences in working conditions in the office and enterprises [2]. Moreover, the recent accession of Russia to the WTO has led to significant decline in many branches of industry and agriculture, which cannot but affect their staffing needs and possibilities of labour incentives.

Let us now take a look at the changes that took place in higher education. Since the beginning of the 1990s, the issue of accessibility of quality higher education for the population has become increasingly important due to the underfunding of universities, forcing them to shift to the path of commercialization, and a simultaneous growth of social differentiation. As a result, a big part of the population had to choose the "availability" of higher education to the detriment of its "quality".

The standards that established the number of state-funded places at the university in the total number of population (170 students per 10 000 population)[6], and the ban on the reduction of the number of budget places that were available at the time of adoption of the law[7] have to some extent curbed the intentions to place the whole education on a fee-paying basis. In 2004, however, the already mentioned law No.122-FL eliminated the ban on the reduction of state-funded places at high schools.

As a result, approximately 750 thousand state-funded places have been reduced over the three of the most "fertile" years (2005–2008). Simultaneously, certain regulations leading to the increase of tuition fees were introduced in the legislation (cancellation of tax benefits for educational institutions beginning from 2006).

Another attempt to reduce the availability of full-fledged higher education to the public, was the compulsory (contrary to the autonomy of universities that was stated in the Declaration) introduction of a multistage system at universities after Russia's joining the Bologna Declaration (2003). In the 1990s the State Committee of the Russian Federation for Higher Education put forward the proposal, according to which bachelors should account for about 80% of all university graduates; at that time the proposal was not supported by the Parliament. However, it was enshrined in law in 2007, and now the share of state-funded places in master's degree courses is only 20%. At that, in contrast to European countries where bachelor's programme does not provide the necessary deep specialization as well, but they have an extensive system of further vocational education; in Russia the opportunities for getting further vocational education are significantly limited, which cannot but affect the quality of education for those who can only afford bachelor's courses. It may be no accident that in Russia employers prefer not to hire graduates with bachelor's degree; and parents, particularly those who have obtained good education and know a lot about it, do whatever they can to provide their children with an opportunity to receive master's degree [1].

In the 2000s the Ministry of Defense also influenced the accessibility of higher education. In 2006 draft deferments connected with higher education were reduced, and deferment was cancelled if a person re-entered the university, it was often done by students with low incomes (first they entered the university

[6] Regulation of the Federal Law "On education" dated July 10, 1992 No.3266-1.

[7] Regulation of the Federal Law "On higher and post-graduate professional education" dated August 22, 1996 No.125.

on a fee-paying basis and then tried to transfer to state-funded places). In addition, military deferment for students of initial and secondary vocational education was cancelled, which reduced the likelihood of their graduation from these educational institutions, let alone their transition to higher education level.

In 2012 the Ministry of Education and Science launched the campaign for the elimination of the so-called "inefficient" universities. It is obvious that the previous unrestrained increase in the number of non-state universities, as well as the branch network of universities of different forms of property, etc. has led to disastrous consequences – profanation of higher education and devaluation of the university degree. At the same time, the criteria of "efficiency", used by the Education Ministry, are inadequate in many respects. It makes the situation with universities, and especially those located in the provinces, rather uncertain. Thus, the very accessibility of higher education for the residents of the periphery is being questioned.

The introduction of the Unified State Exam compulsory for all school graduates is another important innovation implemented in the sphere of education in recent years; it is aimed at equalizing the chances of admission into universities for all children regardless of income qualification and place of residence. However, due to serious flaws in control and measuring materials and substantial influence of corruption on the final result, the achievement of the goals declared with the introduction of the exam remains doubtful. In addition, the most famous higher schools have gained the right to conduct an intramural additional examination, which reduces the possibility of entering the university for those who arrive from remote areas and do not have enough financial resources because of the costs of travel and accommodation.

Finally, the Unified State Exam does not remove those limits for the availability of universities in big cities that are associated with the excessive cost of living for many people who come from the provinces. Of course, students that are not well off can make some money on the side, but it inevitably affects the quality of education. At that, state financial support to young students even in the 2000s has not returned to the adequate level (recall that in the 1990s the scholarship of a university student in relation to the subsistence level decreased in four times in comparison with the Soviet period, the scholarship of a technical school student – in eight times, that of a vocational school student – in 11 times). While the regulations of basic education laws linked the amount of scholarship to the minimum monthly wage (according to the law on education, a scholarship of vocational school students should be at least one half of the minimum wage; and according to the law on higher and postgraduate education, a scholarship of university students should be not less than two minimum wages), the government did not follow those regulations. And in 2000 a law was passed that established the amount of scholarships in absolute terms (i.e. without reference to the minimum wage).

At the same time, a law was adopted that set a fixed (and not connected with the minimum wage, as was previously stipulated by the law), amount of compensation payments for meals, privileged travel, etc. for students of initial and secondary vocational education institutions.

Moreover, in 2004, the already mentioned law No.122-FL abolished the legal acts stipulating the payments for meals to children from families with low incomes in schools, vocational schools and technical schools, as well as privileged commuting for needy students. All the responsibility for financial support to needy students of non-federal educational institutions was shifted to regions and local government. Simultaneously, all the regulations ensuring the right of students to

travel free-of-charge to the place of study and back, as well as additional payments for meals were completely withdrawn from the law on education [8].

Social scholarships that were established later and that exist currently are very small, and they do not correspond to the actual cost of living; that is why, young people have to work alongside studies, especially those who arrived from elsewhere.

Thus, the analysis of the trends at all levels of education system proves that a significant part of urban households, due to low level of income, has less and less access to quality education. This excludes the system of education from the number of efficient means of social mobility; this fact, firstly, leads to a decrease in the legitimacy of existing social order in the eyes of significant part of the population, and, secondly, it exacerbates the degradation of human potential of territories, conserving socio-economic stagnation.

The emerging negative trends may be overcome, if the federal centre ceases to regard social expenditures as non-productive (as it has been doing for two decades already) and stops "optimizing" them to the lower limit. Moreover, the high level of credit debt of the majority of regional budgets, to a great extent – to foreign and international lenders, requires comprehensive revision of inter-budgetary relations and, first of all, abandonment of shifting unbearable expenditure obligations to the regions. The state possesses the resources for dealing with these problems: suffice it to say that the aggregate indebtedness of regional budgets by the end of 2012 was equal to 1.3 trillion rubles, that almost matches the amount of proceeds from the sale of Russia's energy resources that go to the Reserve Fund [10].

References

1. Alexandrova O.A. Motives for choosing educational strategies on the new stage of reform of higher school. Vysshee obrazovanie v Rossii. 2008. No.9.
2. Aleksandrova O.A. Sectoral discrimination as an obstacle to the equality of education. Social function of the state in the economy of the 21st century: reports and speeches: proceedings of the conference at the Economics Department of Moscow State University. Ed. by G.A. Akhinov, V.V. Yelizarov and others. Moscow: MAKS Press, 2007.
3. Aleksandrova O.A., Nenakhova Yu.S. Reform of state-financed institutions and the Russian school: expectations and forecasts. Materials of the International research-to-practice conference "Demographic issues of Russia: a view from the past to the future" (for the 300th anniversary of M.V. Lomonosov). Saint Petersburg: Institute of Sociology, 2011.
4. Aleksandrova O.A., Nenakhova Yu.S. Human potential of Russia and the reform of social sphere. Narodonaseleniye. 2012. No.4.
5. Woman, man, family in Russia: the last third of the 20th century. "Taganrog" Project. Ed. by N.M. Rimashevskaya. Moscow: ISESP, 2001.
6. The plan of activities "Changes in social sphere, aimed at improving the efficiency of education and science". Approved by the RF Government Resolution dated December 30, 2012 No.2620-R. Available at: http://government.ru/docs/22263/.
7. Smolin O.N. The new situation in the educational legislation: federal and regional competence. Voprosy obrazovaniya. 2005. No.2.
8. Smolin O.N. Education. Policy. Law: the federal legislation as a factor in education policy in modern Russia. Moscow: Kulturnaya revolutsiya, 2010.
9. Socio-economic problems of national wellbeing (main results of implementation of the "Taganrog-II" Project. Ed. by L.A. Onikov, N.M. Rimashevskaya. Moscow: CEMI USSR Academy of Sciences, 1986.
10. Transcript of the session of the State Duma dated September 18, 2013. The report of the RF Government on execution of the federal budget for 2012. Available at: http://transcript.duma.gov.ru/node/3918/.
11. Evolution of the regulatory framework for social reforms. Ed. by Ye.M. Avraamova. Moscow: M-Studio, 2011.

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Preconditions for the transformation of population attitudes from political discontent to protest behaviour
(as exemplified in the materials of ISEDT RAS, Vologda)

The article considers the issue concerning the transformation of political discontent to protest behaviour, which is insufficiently examined in the domestic scientific literature; the processes and factors facilitating this process are analyzed. The authors apply the empirical data of the monitoring of the public opinion of the Vologda Oblast residents, conducted by the Institute of Socio-Economic Development of Territories of the Russian Academy of Sciences. A new integrated model of protest is presented.

Political discontent, trust, protest potential, protest repertoire, protest participation model.

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The study of protest behaviour is an established and well-developed field of political sociology. However, a number of theoretical aspects have not been universally acknowledged yet. Our understanding of why people participate in protests is still far from complete.

Why does this very discontent result in mobilization, and not other? Or why does the same problem in one region of the country lead to mobilization, while other regions are still quiet? These questions are related to an acute issue, which is poorly presented in

literature: the processes, by means of which a social urge to protest involves factors that turn the willingness of an individual to participate in a protest into the actual participation. The presented article, based on empirical data obtained in the course of ISEDT RAS (Vologda) long-term monitoring studies in the Vologda Oblast, is the authors' attempt to illustrate the existing problems and to propose a combination of several theoretical concepts for their solution.

Classic definitions of a political protest describe it as a form or way of the individual's political participation. On the societal level, when referring to a political protest, we point out the collective action that tries to modify a separate political decision, state policy or general relationship between the citizens and the state (political regime). Thus, we proceed from the interpretation of a political protest as a combination of political practices, carried out individually or collectively in institutionalized or non-institutionalized forms of expressing disagreement in relation to the functioning political subjects and systems. When studying the participation of citizens in political protest we try to answer the question "What are the origins and purpose of the protest?", and consider the following major problems. Why do people protest? Is the purpose to transform the system, to change the rules of the political game or to change a particular political course? What are the forms of protest behaviour manifestation?

A. Hirschman's concept is traditionally accepted as the general framework for analyzing the protest. It describes three possible ways of the behavioural reaction of the individual to a situation, in which he finds himself, – loyalty, if the individual is mostly or completely satisfied with the situation, and "voice" (protest) or "exit" (for example, emigration), if the situation is intolerable [7]. French sociologist Guy Bajoit added the fourth type of possible behavioural reactions –apathy, when the individual, dissatisfied with the current situation, takes no action to change the current situation, or to proceed to a different situation [9].

And while the protest ("voice") refers to the real behaviour or active formulation and expression of dissent and criticism, the discontent is broader, since it comprises the individual's attitude related to the level of his (dis)satisfaction within the existing political system. In this sense, the typology of protest forms, proposed by G.I. Weinstein as far back as 1990 [2, p. 25], a protest action (that is or has been implemented as action) and protest mood (something that is probably implemented as action), summarizing the heterogeneous phenomena (attitude and behaviour) under one concept of protest, complicates the understanding of the transformation process of the attitude into behaviour.

Obviously, such automatic correlation of the two concepts is not accidental, as it leads to postulating that the attitude of discontent leads to the actual expression of disagreement and therefore to protest. However, large empirical material relating to the description of the discontent level does not allow making such statement without significant reservations that call such firm and linear coupling in question.

Discontent, willingness to protest and real protest

The social sentiment index (SSI)[1] is a popular tool for the integral evaluation of the social well-being of Russian citizens. This composite indicator is constructed as a single vector of interrelated political, economic, social assessments and opinions of people. The SSI can be interpreted as an integral indicator of the level of the population satisfaction/dissatisfaction with various aspects of economic

[1] The SSI study in the Vologda Oblast territory has been carried out within the framework of the monitoring of public sentiments since 1998. Surveys are conducted 6 times a year, the sample is 1500 respondents in Vologda and Cherepovets and 8 districts of the oblast. The sample is representative, quota. The survey method is questionnaire at the place of residence of the respondents. Sampling error does not exceed 3%.

and socio-political reality, which in certain manner affects the real political and economic behaviour of the population.

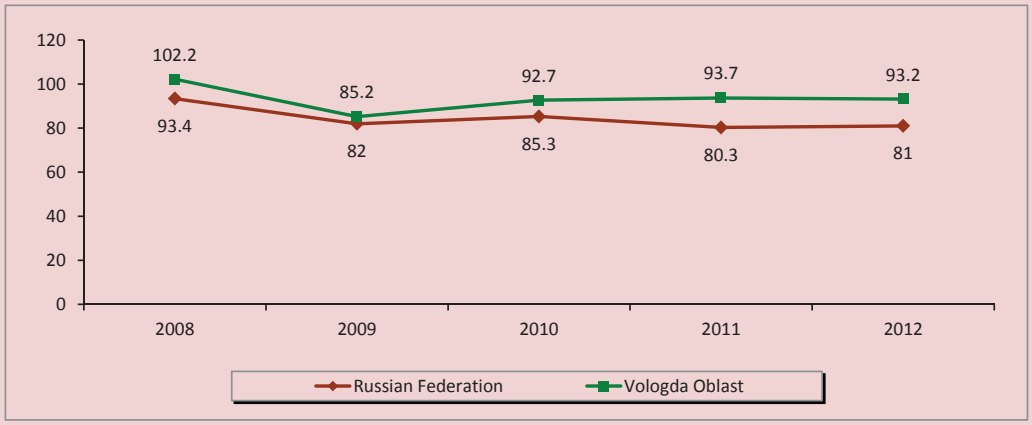
When comparing the available VCIOM data, as well as the results of the regional monitoring, held by ISEDT RAS under comparable methods, we obtain similar trends. The available data show significant SSI decline during the 2008–2013 period (*fig. 1*).

The effects of the crisis, which has affected practically all Russian citizens, are evident. The Vologda Oblast suffered from the crisis more than many other regions and Russia as a whole. This is related to the fact that the the crucial part of tax revenues was provided to the region's budget by the enterprises of the metallurgical industry that experienced a significant setback in production and has not yet returned to the pre-crisis level [4].

At the same time, the obvious deterioration of social feeling, expressed discontent does not automatically result in the growth of the population protest potential –willingness to participate in political actions.

The protests of the late 1990s were more radical and more focused on violent forms. For the last years the tendency to such actions as manning the barricades, participating in strikes and other similar actions decreased 3–5 times (*tab. 1*).

Figure 1. Dynamics of the of social sentiment index in the Russian Federation and in the Vologda Oblast*, points



* VCIOM data; Vologdadata – ISEDT RAS under VCIOM methodology.

Table 1. Dynamics of the protest potential*, as a percentage of the number of respondents

Answer	1998–1999	2007	2011	2012	2013, June
Protest potential	**37.3**	**20.6**	**19.9**	**20.2**	**16.5**
Go on a rally, demonstration	**9.4**	**9.6**	**10.9**	**10.3**	**9.3**
Will participate in strikes, protest movements	**12.7**	**5.7**	**4.7**	**5.7**	**3.9**
Take arms, man the barricades, if needed	**15.3**	**5.3**	**4.3**	**4.2**	**3.3**

* The authors of the article "Main tendencies of protest moods in the Vologda Oblast" K.A. Gulin and I.N. Dementieva determine *protest potential* (protest group) as the share of respondents answering the question "What are you willing to do, in order to protect your interests?" as follows: "I will go on a rally, demonstration"; "I will participate in strikes, protest movements"; "Take arms, man the barricades, if needed", i.e. "the protest group" comprises people with various certain emotional moods, not necessarily identical to the active social behaviour, but admitting the possibility of their participation in protests in such way. See: Sociological surveys. 2008. No.11. November. P. 64-71.

Source: ISEDT RAS monitoring data.

The oblast residents clearly demonstrate the propensity for non-violent forms of expressing their disagreement with the policy of the authorities. In general, the protest potential in 2013 in the region is more than twice lower, as compared to the 1998–1999 period.

It is reasonable to highlight the gap between the marked increase of discontent, expressed in the SSI decline after the crisis, and the practical absence of the protest potential dynamics in the pre- and post-crisis period. The dynamics of the actual protests of the oblast population does not correlated neither with the dynamics of discontent, nor with the dynamics of protest moods. Rather, it points to loyal and apathetic political behaviour. This confronts us with the obvious research problem: how are political discontent, verbally claimed willingness to participate in protest movements and the level of real protest connected?

The available theoretical model, associated with the concept of discontent, differs from protest models, also exampled in literature. While protest as behaviour may be considered within the framework of works on the political participation, discontent as an attitude, can be equally well linked with the concept of political alienation [13]. A. Miller defines discontent as the feeling of powerlessness and lack of norms (two components of alienation), which is fastened by the attitude of the lack of confidence in the authorities, the hostility towards the leaders, institutions and authorities in the broad sense or feeling that the authorities are not working for the citizens [12, p. 951]. In this line of research two aspects of discontent are traditionally revealed, and the measurements are performed by means of the concepts of *political effectiveness* (powerlessness) and political (dis)trust or cynicism (lack of norms).

The explanations of discontent are also suggested in literature. On the one hand, some studies highlight the link between the basic characteristics (which act as the individual's resource), such as age, income, education, group identification, and the level of political (in)efficiency, at that, higher level of resources is associated with the higher level of political effectiveness.

The data of the Vologda Oblast population monitoring allow confirming the presence of such connection (*tab. 2*).

In addition, these data allows identifying the main characteristics of that part of the population, which is the bearer of protest moods. This group comprises, in particular, people with low purchasing capacity ("there is enough money only for food"), assessing the family's financial position as poor, and what is obvious, negatively assessing their moods ("I feel stressed, angry, scared, depressed").

However, most of the academic literature focuses on the impact of political discontent on participation, on the basis of W. Gamson's assumption ("Gamson's hypothesis") that participation is best explained by the combination of **trust** and **efficacy** (feeling that active action is both possible and effective). The author claims that among people with strong sense of political efficacy, the suspicious are most likely to participate than the people, who trust: "More specifically, the combination of high political efficacy and low political trust is the optimum combination for mobilization – a belief that influence is both possible and necessary" [12, p. 48]. The main idea is that citizens with low degree of political efficacy will not participate in the protest, regardless of their level of trust, because they think that their participation will have no effect. Among people with high degree of internal political efficacy, the most trustful will participate less frequently because they are already satisfied with the system without any political involvement. Thus, people with low level of trust and high sense of political efficacy are more likely to participate in protest.

Table 2. The share of individuals with negative estimations in the groups of protest potential and among the rest of the population, %

Protest potential	Rest	Protest potential	Rest	Protest potential	Rest	Protest potential	Rest	Protest potential	Rest	Protest potential	Rest	Protest potential	Rest
2007	2007	2008	2008	2009	2009	2010	2010	2011	2011	2012	2012	10 month 13	10 month 13
Share of the population negatively estimating the country's economic situation													
24.4	12.6	29.2	15.4	50.6	38.5	52.4	26.7	52.8	22.5	45.8	20.4	49.8	24.7
Share of the population negatively estimating the oblast economic state													
24.3	11.6	27.4	15.2	52.3	40.3	55.7	28.7	54.9	24.1	50.8	24.0	59.0	31.2
Share of the population negatively assessing the family's financial position													
35.5	18.8	39.7	20.1	47.4	28.6	50.5	28.5	51.0	24.5	48.9	21.9	53.1	22.7
Share of the population with low purchasing capacity (enough money for food at best)													
40.1	35.1	36.6	29.0	45.0	38.9	48.0	32.7	50.4	29.8	45.7	29.1	52.5	27.6
Share of the population not approving the activities of RF President													
21.5	8.9	19.3	8.2	33.1	12.9	43.2	12.8	67.5	15.2	63.2	24.9	67.5	21.5
Share of the population not approving the activities of Governor													
34.5	19.0	35.2	17.6	41.0	20.9	53.6	20.8	72.8	20.1	63.6	25.7	69.7	25.0
Share of the population with negative assessment of moods													
42.8	24.6	39.6	23.7	48.3	24.7	53.8	27.7	52.2	23.2	47.6	21.9	50.7	21.4

Source: ISEDT RAS monitoring data for 2007–2013.

The concept of political efficacy caused much debate in literature. It was first proposed by A. Campbell et al. in the book "the Voter decides" [14] and has been used to explain a wide variety of the methods or modes of political participation. Four points of the survey, developed by A. Campbell, G. Almond and S. Verba in Survey Research Centre (USA) in 1964–1965, are mainly used to measure political efficacy. However, the reliability of the indicator turned out to be rather disputable. After several empirical tests the concept has been made more accurate by highlighting two separate aspects: subjective competence (internal efficacy), on the one hand, and the authorities' ability to respond to the expectations and demands of people ("governmental responsiveness") or external efficiency, on the other hand. Internal efficacy refers to a person's sense that he is able to understand the policy and, therefore, enough competent to take part in political activities, while external efficiency is defined as the belief in the responsiveness of the authorities and institutions to the citizens' demands. This concept was operationalized in various foreign studies, however, Russian researchers, in the authors' opinion, are yet to separate various aspects of the efficiency and trust, to develop and test the items, which can be used to measure the internal and external efficacy, as well as diffuse and specific support. The authors believe that the Russian empirical studies, aimed at the description and explanation of political protest, so far ignore the key components, required for estimating the probability of the growth of the attitudes of discontent into protest behaviour, in particular the components of external and internal efficacy.

The operationalization of the political trust concept is also far from perfect.

According to A. Miller, political trust is "the basic evaluative or affective orientation toward the government" [12, p. 952]. W. Gamson defines trust as the diffuse support of the

system in accordance with the widely-known David Easton's classification of the types of support [10, p. 437]. Diffuse support (political trust) implies support, provided to institutions, in contrast to the specific support, which correlates with the support of particular persons. Specific support implies the utilitarian relationship between citizens and the authorities, while diffuse support will remain more stable over time.

The monitoring data allow analyzing this component of the protest syndrome among the Vologda Oblast residents.

It is obvious that the structures of both federal and regional level, in whose hands the real power and material resources are concentrated, receive the greatest support. The oblast population has the lowest level of trust in public organizations and political parties (*tab. 3*).

The level of social trust in both state and public structures is observed to decrease, indicating the existence of deformation processes, which have affected the sphere of political life. The Vologda Oblast residents do not believe they can influence the government activities and thereby change their life for the better.

The society demonstrates high level of trust only in the President, however, even this mainstay of political trust has been diluted. This is the biggest risk for the regional authorities, which in such case lose support mechanisms necessary for pursuing economic and social policies, ensuring social stability in the region.

Economic well-being is an important factor, underlying trust. Economically prosperous social groups have trust in the institutions that secure such their position. The results of the analysis of the members of "the trustful" group show that it includes wealthy people, who are confident in the future, self-identifying themselves as rich and wealthy people, mainly middle-aged, mostly men, primarily executives and specialists. In fact, these features characterize the social group, which is called the middle class. It is the middle class that is considered to be the social force that forms the civil society [1].

As for other social groups, that have lost trust in the government agencies, first of all, it is "the new poor" [8], i.e. economically active people with higher or secondary education, identifying themselves as poor and needy, insecure about the future.

Table 3. Please, indicate your attitude to the social structures and government institutions, existing in the country (answer: "I trust"), as a percentage of the number of respondents*

Answer	Vologda Oblast			Russian Federation		
	2008	2012	2012 to 2008 +/-	2008	2012	2012 to 2008 +/-
President	65.2	45.7	-19	62.3	49.0	-13
Church	51.9	41.4	-11	47.0	53.5	+7
RF government	60.2	39.6	-20	41.0	36.0	-5
Court	41.3	36.1	-5	11.7	15.5	+4
Oblast administration	48.6	34.6	-14	-	-	-
Prosecutor's Office	40.9	33.9	-7	11.7	15.5	+4
Federal Security Service (FSB)	43.8	33.2	-11	-	-	-
Federation Council of the Russian Federation	47.6	32.3	-16	22.7	25.5	+3
Army	37.8	31.3	-7	43.7	47.5	+4
State Duma	42.0	30.5	-11	17.0	20.0	+3

* In descending order according to 2012 results.
Source: ISPR RAS data (across the Russian Federation), see: How are you doing, Russia? [Electronic resource]: XXXVII stage of sociological monitoring, December 2013. Levashov V.K., Afanasyev V.A., Novozhenina O.P., Shushpanova I.S.; data of ISEDT RAS public opinion monitoring (across the Vologda Oblast).

In addition to institutional (political) trust, the researchers bring forward the integrated interpersonal trust as an important factor for the transformation of discontent and protest moods to the real protest. Because the confidence in abstract systems cannot replace the significance of personalized trust, based on solidarity, sympathy, friendship, for the man. This type of trust becomes for the individual an alternative solution, in case he/she has to face "the distrust syndrome" (the term of the well-known Polish sociologist P. Sztompka) to the political regime, economic and social system in general, and guides him/her to traditional communities.

As follows from the survey results, about one third of respondents firmly believe that no one can be trusted (*tab. 4*). And half of the respondents are willing to trust only close friends and family. The obtained data indicates that the majority of the oblast population is strongly oriented at the inner circle community, above all, family. These data are to be fully correlated with the results of the answers to the question about people's willingness to unite with each other, in order to protect their common interests (*tab. 5 and 6*).

The unwillingness to unite, self-isolation in the closed world of family and friends is a sort of indicator of the public distrust climate that exists in the regional community. The further destruction of social capital (different understanding of trust), which is an informal social attitude, based on choice and voluntariness, can lead to the weakening or loss of social identity.

Within the field of the protest research, the trust networks are the most likely channels for the mobilization of individuals for protest activities.

Table 4. Who can you trust?*, as a percentage of the number of respondents

Answer	December 2011	February 2013
Nowadays no one can be trusted	24.7	27.9
Only my most intimate friends and relatives can be trusted	56.7	52.5
Most people I know can be trusted	16.1	15.2
I trust each and everyone	2.5	1.6

* The question was asked in December 2011 and February 2013.
Source: ISEDT RAS monitoring data.

Table 5. Are you willing to unite with other people for joint actions, in order to protect your common interests?*, as a percentage of the number of respondents

Answer	2011	2013
I'm willing or rather willing	25.2	19.9
I'm not willing or rather not willing	25.2	37.1
Don't know	27.7	37.1

* The question was asked in December 2011 and February 2013.
Source: ISEDT RAS monitoring data.

Table 6. How would you assess your involvement in public and political life?, as a percentage of the number of respondents

Answer	2011	February 2013
Active or rather active	27.1	23.0
Passive or rather passive	48.3	49.8
Don't know	24.6	27.2

Source: ISEDT RAS monitoring data.

The apparent fragmentation of the elements of these networks is one of the reasons, for the impossibility of the attitudes of discontent to result in collective action.

However, it should be specified that the new types of communication and subsequent institutional networks have been emerging in the region. They are not widely-distributed, but they have already started playing the role of new channels mobilizing collective action. These include social networks, based on Internet technologies, first of all, Facebook, Twitter and Vkontakte, which, as demonstrated by international and Russian experience, can act quite effectively as the channels drawing into protest activities and broadcasting protest organizational innovations, thereby, expanding protest repertoire, used by different civil and political actors. American sociologist Charles Tilly defined protest repertoire as a set of various tools, used by the party for making demands to the other party [15; p. 18]. Repertoire, as a rule, inscribes social interaction in stable framework, acting both as a set of strategies and a cultural phenomenon. C. Tilly considered the repertoires of collective action in the long term, indicating that their changes occur very slowly. He made such statement shortly before the social network has become global and popular, and obviously, underestimated the diffusion rate of protest innovations that makes them possible.

In the period from December 2011 to 2012 autumn, in the course of the "new" protest wave, innovation alternative formats of the protest movement, previously uncharacteristic of Russia, proved to be quite in demand. First of all, these are flash-mobs, calling public attention due to their uniqueness and suddenness, motor races, "folk festivals", "strolls of writers and artists". As noted by Russian sociologist A. Zaytseva, "many activists indicate the ineffectiveness of such routine (traditional) forms, the need to constantly invent new attention-getting mechanisms.

At present, the protest does not exist, unless it is filmed, photographed and immediately posted on the Internet" [3]. This is the purpose of such popular international forms of political protest as encampment. Another Russian example is the action of the Russian non-systemic opposition camp Occupy Abay. Online protests have become a very specific protest form, including DDOS and other hacker attacks against the web-sites of political and public organizations, the Russian Government [6]. The infiltration of new protest technologies in the regions is at an early stage, however, the diffusion rate of innovation is high, and this tool of political confrontation and the channel of political mobilization is expected to be more widely used at the new stage of political development.

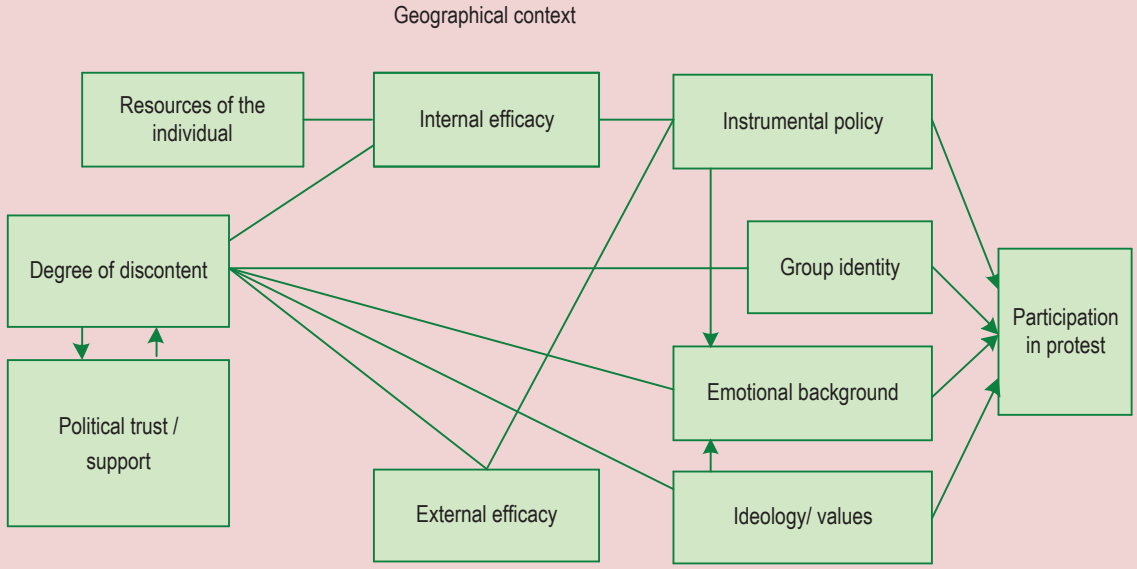
New trust networks give partial hope for the possibility to end the deadlock with regard to trust destruction and the collapse of traditional forms of collectivity. According to the authors, the expansion of the protest repertoire creates certain opportunities for "soft authoritarianism", characteristic of modern Russia, to focus on gradual democratization.

However, new technologies have the destructive potential, as a result of the possibility of their use for the distribution of extremist anti-constitutional views, incendiary rumors, involvement to violent actions "in real", etc.

Let us draw up some cautious results. Despite considerable empirical data with regard to the description and explanation of protest behaviour of the Vologda Oblast (as well as all Russian) population, the authors suggest an integrated theoretical model coordinating different factors that create protest preconditions and transform these preconditions in protest (*fig. 2*).

In this regard, the following issues remain relevant in theoretical and practical terms: firstly, what are the reasons for the formation of the attitudes of discontent, and secondly, what are the processes and factors leading to

Figure 2. Model of political discontent transformation in protest behavior



the fact that the socio-psychological attitude of discontent is transformed into a real protest behaviour (or other behavioural response).

Logically we can assume that these factors include socio-psychological factors and the factors in social and political context.

The factors of subjective socio-psychological nature include *instrumental* calculations and considerations, based on the individual's ability and capability to achieve goals, participating in protest movements (that is described in the concept of *internal and external efficacy* and *resource model of participation*), the group identification factor, emotional factor (such as anger, solidarity, fear, pride), and finally, the ideological factor.

A number of researchers add *political and cultural factors* to this group, in particular, the existing specific system of the region's population values. The role of this factor in the formation of protest behaviour is yet to be assessed.

External context is set by closed or open nature, "softness" or repressiveness of the regime (described by the *theory of political opportunity structure*), and the presence and efficiency of networks (channels) mobilizing for protest political participation.

The *geographical context is important*: social tension spills out faster and more graphically in large cities, such as Moscow, Saint Petersburg with the concentration of population several times higher[2] than in some Russian regions, with higher living standards[3], where the headquarters of the public organizations, the country's government and parliament are located.

The political context is the result of four factors: the degree of access to the formal political structure, stability/instability of the political groups, the availability of the ideological position of potential alliance partners and political conflicts between elite.

[2] According to the Federal State Statistics Service, the Vologda Oblast population makes up 1198 thousand people. Available at: http://vologdastat.ru (Retrieved on November 1, 2013).

[3] Average wages make up 24 104 rubles in the Vologda Oblast, 53 953 rubles in Moscow, 34 104 rubles in Saint Petersburg. Available at: http://www.mojazarplata.ru/main/zarabotok/srednjaja-zarplata/2013 (Retrieved on December 2, 2013).

The political opportunity is, obviously, a complex construct with several aspects, many of which are specific to certain types of the regime. On the whole, the political opportunities are also the factor restraining the consistent development of protest potential into the actual protest.

The practical task is to operationalise all conceptual model elements that will allow developing adequate tools for political and sociological survey and to implement the empirical verification of hypotheses on the relationship and the impact of protest behaviour factors for different social groups.

References

1. Balabanova Ye.G. Middle class as the survey target of Russian sociologists. Obschestvennyye nauki i sovremennost'. 2008. No.1. P. 50-55.
2. Weinstein G.I. Mass consciousness and social protest in the conditions of contemporary capitalism. Moscow: Nauka, 1990.
3. Zaytseva A. Spectacular protest forms in the modern Russia: between art and social therapy. NZ. 2010. No. 4(72). Available at: http://magazines.russ.ru/nz/2010/4/ (Retrieved on November 25, 2013).
4. Morev M.V., Kaminskiy V.S. Methodological peculiarities of studying social sentiment at the regional level. Problems of development of territory. 2013. No. 5 (67). P. 96-103.
5. Our constitution: the history of interpretations and the perspective for modernization. Available at: http://www.politeia.ru/politeia_seminar/10/124 (Retrieved on November 21, 2013).
6. Official web-site. Grani.ru. DDoS attacks. Available at: http://grani.ru (Retrieved on May 26, 2013).
7. Hirschman A.O. Exit, voice, and loyalty: responses to decline in firms, organizations, and states. Moscow: Novoye izdatelstvo, 2009.
8. Yaroshenko S.. New "poverty" in Russia after socialism. Laboratorium. 2010. No. 2. Available at: http://www.soclabo.org (Retrieved on May 27, 2010).
9. Bajoit, G. Exit, voice, loyalty... and apathy. Les réactions individuelles au mécontentement – 1988. No. 2. Vol. 29. P. 325-345.
10. Easton D. A re-assessment of the concept of political support. British journal of political science, 1975. 5(04). P. 435-457.
11. Gamson W A. Power and discontent. Homewood, IL: Dorsey Press, 1968.
12. Miller A. Political issues and trust in government: 1964–1970. American political science review. 1974. Vol. 68 (September). P. 951-972.
13. Olsen M. Two categories of political alienation. Social forces. Vol. 47. No. 3 (Mar., 1969). P. 288-299.
14. Campbell A., Gurin G., Miller W.E. The voter decides. Evanston, Ill.: Row, Peterson and Co. 1954.
15. Tilly C. Regimes and repertorires. The Univ. of Chicago Press, 2006.

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Impact of the geographical differentiation of the quality and security of population employment on the territorial shrinkage in Perm Krai rural areas

The article presents the analysis and indicates the extent of the problem concerning territorial differentiation of the quality and security of the rural population employment, as compared with the city residents of Perm Krai by indicators of wages and unemployment level. The impact of territorial differentiation of the quality and security of employment on the shrinkage in Perm Krai rural areas is revealed. Territorial shrinkage is characterized by rural population decrease, higher employee attrition rate, as compared to cities, reduction in the number of workers per one pensioner, deterioration of agricultural material and technical base; crop areas reduction.

Keywords: territorial differentiation, quality of employment, security of employment, unemployment, territorial shrinkage, population decline, reduction in cultivated areas.

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At present, a significant part of the population (about 26%) lives in rural areas. In Perm Krai this indicator amounted to 25.1% at the end of 2011, which corresponds to average values. Because of the presence of huge rural territories, major role of the rural population in ensuring food security of the country and the specificity of rural society functioning, the problems of the Russian village have been repeatedly discussed in the works of Russian economists and sociologists.

The issues of the inequality of rural population in comparison with urban residents according to the quality and security of employment are particularly relevant for the study. It is the differentiation of rural and urban population by these parameters that is associated with the fact that the rural areas fall behind by living standards, have higher employee attrition rate at agricultural enterprises, as compared to the cities; with the reduction in the number of employed population per one pensioner;

deterioration of agricultural material-technical base; the reduction of sown areas of agricultural crops.

The enumerated processes characterize the shrinkage in rural areas – a phenomenon that has been most widely distributed in the regions of the forest and, partially, of the forest-steppe zone of the country.

The quality of employment is characterized by different factors such as working conditions, the presence of formal employment, social guarantees, etc. But the most important factor, which allows making objective conclusions on the scope of the territorial differentiation of the employment quality, is the average monthly wages of the rural population as against urban employees.

M.F. Sychev points out unfairly low wages of village workers and social consequences related hereto on the example of the Vologda Oblast. He also notes mass shutdown of village schools, feldsher's stations, sharp reduction in the construction volume of modern housing, roads, engineering infrastructure of rural territories. Consequently, according to M.F. Sychev, the demographic situation in the village gets worse, youth outflow is observed, the quantitative and qualitative indicators of the labour potential decline [6, p. 56].

L.V. Kostyleva for analyzing the data characterizing population inequality, applied stratification scale that divides population into have-nots, poor, needy, wealthy and rich [5]. In compliance with the classification of L.V. Kostyleva, the group of "have-nots" comprises people, who are on the verge of physical survival and do not have enough money even for food.

According to the results of the sociological poll conducted in the Vologda Oblast, it was revealed that the self-evaluation of socio-economic status of the population living in different territorial settlements is significantly differentiated. Most of the rich and wealthy citizens live in big cities. 22.3% of the population of Vologda and Cherepovets assigned themselves to these two groups. In rural areas only 10.4% of the population considered themselves rich and wealthy. And vice versa, 21.5% of the urban respondents qualified themselves as needy and poor, while in rural areas the percentage is much higher – 44.4% [5, p. 121].

The RAAS academician I.N. Buzdalov generally characterizes Russian agricultural people as diminished class. I.N. Buzdalov notes that despite numerous government documents, laws and regulations, proclaiming the state's commitment to the development of agriculture, no significant shifts in the agricultural sector have occurred. The living standards of the rural population considerably decreased in the result of the agricultural policy during the years of market reforms. At present, social conditions of the rural way of life in all of its aspects lag behind urban conditions [1].

Population employment security in the labour market of the municipality is determined by the unemployment level, indicators of labour market tightness and the efficiency of employment centres for citizens' employment in a specific territory.

The analysis of statistical data, describing the situation in the labour sphere of Perm Krai, allowed revealing patterns characterized by the fact that unemployment rates and the indicators of labour market tightness are always higher, and the effectiveness of employment is lower in rural areas. Labour market tightness in rural areas may reach tens, and in some cases hundreds of people per one vacancy. As a rule, it takes more time for the rural unemployed to find a job than for the urban ones, except for one-company towns and depressive territories, where the security of population employment, especially during crisis periods, is also low [8, p. 116-145].

The existence of villages with no employer is one of the reasons for high unemployment rate in the country's rural areas.

Thus, according to Z.I. Kalugina and O.P. Fadeeva, as early as at the beginning of last decade in the Novosibirsk Oblast the real employer was absent in 200–300 settlements, or 10–20% of all rural settlements of the oblast. Even if some companies existed legally, in fact, their activities were ceased. Some agricultural enterprices curtailed production activities of their branches in remote settlements. Therefore, the residents of these settlements also ended up with no work. Having no permanent income sources, they have to supply themselves by hunting, fishing, gathering mushrooms, berries, cedar cones [4, p. 79].

With regard to the term "territorial shrinkage", it should be specified for clear understanding of the material that two interpretations of this concept are applied in the scientific use. Firstly, territorial shrinkage is understood as the increase in its penetrability, coherence, accessibility, due to the increase in travel speed of people and cargo in space. In this case, the process of territorial shrinkage is used in the positive context. Secondly, the term "territorial shrinkage" is used to characterize the process of reducing lived-in, developed, economically active lands – the process, perceived as negative [7, p. 16].

This negative process is studied in the works of the majority of the authors on the changes of the village in the process of society transformation. For example, ten years ago G.V. Ioffe and T.G. Nefedova predicted gradual transformation of Russia's forest and partly forest-steppe zones into agglomeration of islands of small, reclaimed areas around cities, surrounded by the sea of forests. According to their forecast, the marginal areas with collective agricultural enterprises that had lost their marketability and worked only to support local population households were expected to emerge. They literally predicted the following: in the part of the territories the depopulation will lead to the elderly, who stayed in such settlements, living out their remaining days. In the end, finally "archipelagizing" Russia will turn into a compact European country, without changing its external contours and not giving an inch of ancient Russian lands to foreigners" [3, p. 91]

It must be acknowledged that in many respects, these predictions came true. This is evidenced by partially or completely abandoned villages along the roads, especially in the territories peripheral in relation to the industrial centres.

The author believes that it is necessary to analyze relevant statistical data, characterizing the studied processes, in order to estimate accurately the impact of territorial differentiation of the quality and security of population employment on the territorial shrinkage in Perm Krai rural territories, to determine the extent of shrinkage in rural areas and the social consequences of this phenomenon.

According to the municipal and territorial division, as of January 1, 2012 Perm Krai comprised 354 municipalities, including 42 municipal districts, 6 urban districts, 32 urban settlements and 274 rural settlements. The population resided in 25 cities, 27 urban-type-settlements (UTS) and 3578 rural settlements. It should be noted that medium-sized cities with 50 to 100 thousand inhabitants, towns and urban-type settlements are the centres of many municipal districts of Perm Krai. However, there are 15 municipal districts, the centers of which are villages with exclusively rural residents. In the given research, these very areas will be compared to 5 urban districts including only the urban residents[1].

The data characterizing differences in the level of quality and security of employment in Perm Krai rural areas, as compared to urban areas, are presented in *table 1.*

[1] The sixth urban district UTS Zvyozdny is closed administrative-territorial formation, so data on the unit is not available.

As follows from tab. 1, 2 large cities (regional city of Perm with the population over 1 million people and the second largest city of Berezniki with the population of 154.6 thousand people) occupy the 1st and 2nd positions, respectively, in terms of wages and the registered unemployment level.

Medium-sized cities of Solikamsk and Kungur with the population of 96.8 thousand and 82.9 thousand people, respectively, are also located at the top of the table. Kudymkar with the population of 16.2 thousand people is included in the category of towns, but it has higher wages and much lower unemployment rate than in most rural areas. The exception is rural municipal areas adjacent to large industrial centers – Permsky District, occupying the 4th place by wages and 5th place by unemployment level, Kungur and Solikamsk districts, taking the 3rd and 7th places by unemployment level. It can be explained by the fact that the population of the enumerated territories can daily "shuttle from home to work and back home" (according to the terminology of T.V. Zayniyeva [2, p. 17]) to the enterprises of the nearby cities.

In all other rural areas that are far away from the enterprises of Perm, Berezniki, Solikamsk and Kungur, the wages are lower and the unemployment level is higher than in the rural areas under review.

High 7th and 10th places of Berezovsky and Bardymsky municipal districts in the wage rating are conditioned by the deployment of JSC Gazprom structural subdivisions in these territories, with the local population being engaged in the maintenance of the main gas pipeline. Due to the fact that the wages of workers servicing JSC Gazprom pipeline transport are above Krai-average level, the indicators characterizing the level of wages in the municipal districts under review are in the top third of the rating.

The analysis of the data, presented in table 1, shows that in the territory of Perm Krai the substantial differentiation in the amount of nominal accrued wages of the population of large and medium-sized cities, as compared to the wages of rural residents, is observed. The wage gap between large industrial centres (Perm, Berezniki, Solikamsk, Kungur) and rural territories, which are peripheral in relation to these cities, is particularly noticeable.

It should be noted that in 12 out of the 15 municipalities under review, the level of average monthly wages in 2011 did not exceed 16.5 thousand rubles per person, i.e. it lagged behind the indicators of the regional centre by more than one third. In 10 of them the wages were lower than 13 thousand rubles per month, that is less than half of the level of the regional centre. 10 thousand rubles of accrued wages per 1 employee in Kudymkarsky Municipal District makes up only 39% of 25.5 thousand rubles of average monthly wages of the employed at Perm enterprises.

The comparison of the level of registered unemployment rate in cities and rural municipalities revealed, that the minimum unemployment level was observed in large cities of Perm and Berezniki – 0.61% and 0.74%, respectively. In all rural municipalities, except for suburban Permsky and Kungursky districts, the unemployment level was above Krai average.

The differentiation scale of the population employment security by the unemployment indicator is characterized by almost 6.7 times excess of this indicator in Yusvinsky Municipal District (4.07%), as compared to the corresponding value in Perm (0.61%).

Differentiation of the quality and security of population employment affected the differences in the intensity of the processes of population decline in Perm Krai municipalities.

Official data shows that for the 2000–2011 period the population in Perm region decreased by 247 830 people, or by 8.6% in relative terms. The number of population increased only in 1 out of 25 analyzed municipalities during

Table 1. Adjustment table of the rating values of the indicators of wages and unemployment level in urban and rural territories of Perm Krai

Territories	Imputed average monthly per employee wage in 2011*	Registered unemployment level at the end of 2012**	Rating position by the indicators of imputed average monthly per employee wage	Rating position by the indicators of unemployment level at the end of 2012
In Krai on average	18773.3	1.46		
Urban districts				
Perm	25503.9	0.61	1	1
Berezniki	22454.2	0.74	2	2
Kungur	17609.2	1.12	5	4
Solikamsk	20060.9	1.63	3	6
Rural municipal districts				
Bardymsky	15507.3	2.90	10	16
Beryozovsky	16377.1	3.24	7	17
Bolshesosnovsky	12975.2	5.21	16	25
Yelovsky	12163.0	3.26	20	18
Karagaysky	13876.2	2.56	13	11
Kishertsky	11466.6	2.85	23	15
Kuyedinsky	12664.2	2.23	18	8
Kungursky	12514.3	1.10	19	3
Ordinsky	13637.2	3.74	14	19
Permsky	19004.9	1.28	4	5
Sivinsky	11310.5	2.73	24	12
Solikamsky	13226.3	1.88	15	7
Uinsky	12881.7	2.74	17	13
Chastinsky	14992.6	2.74	12	14
Komi-Permyak Okrug				
Kudymkar	16261.9	2.27	8	9
Gaynsky	15937.2	4.89	9	24
Kosinsky	15012.6	4.38	11	23
Kochyovsky	16948.2	4.33	6	22
Kudymkarsky	10038.5	2.34	25	10
Yurlinsky	11942.8	3.88	21	20
Yusvinsky	11762.7	4.07	22	21

Note. Information is collected and calculated independently with the involvement of the following sources: *Perm Krai. Statistical yearbook: 2012: statistical digest. Local agency of the Federal State Statistics Service in Perm Krai (Permstat). Perm, 2012. P.85 ; **The unemployment in PermKrai. Results of 2012: information note of Perm Krai employment committee. 2013. No.1; Department for the organization of the employment service activities on the registration of public services recipients and labour market monitoring. Perm, 2013. Available at: http://www.szn.permkrai.ru. (retrieved August 2, 2013).

the studied period, i.e. Permsky Municipal District. This can be simply explained by the following: having acquired homes outside the city, more affluent population of Permsky District moved from the regional centre to suburban rural settlements. It should be noted that the actual number of Perm population is much higher than the official one million people. It is in Perm that service, construction, etc. workers, who temporarily or permanently left their native villages, urban-type settlements and little towns in search for well-paid jobs and more high-profile and action-packed lifestyle, live in rental apartments.

Perm Krai is characterized by population heterogeneity in rural areas. It makes itself evident in the fact that the population decline in the peripheral rural areas of Perm Krai has been observed during the whole transformation period and at present.

This resulted in the existence of areally huge, but deserted municipal districts, inferior in population number to the villages located in immediate vicinity to large and medium-sized cities, at the distance from industrial centres. For example, as of January 1, 2012 the population of Yurlinsky Municipal District, a constituent of Komi-Permyak Autonomous Okrug, amounted to 9318 people, 7249 of them lived in Yurlinskoye rural settlement. The population of Uinsky Municipal District made up 10 996 people, 4566 of them resided in the district centre – Uinskoye rural settlement. Yelovskoye rural settlement numbered 6526 people, while the whole Yelovsky Municipal District – 10 392 residents. The rural settlements, comprising several villages with the total population of only several hundred people can be discovered within the territories of these and other municipal districts.

The process is reverse in rural municipal districts in immediate vicinity to large and medium-sized cities: the population there is concentrated in suburban rural settlements. Thus, at the time of the research 103 212 people resided in Permsky Municipal District, that is 10 times higher than the total population of all peripheral municipalities listed above.

Permsky Municipal District comprises rural settlements with the population of over 10 000 people, that is higher than the total number of population living in peripheral municipalities. 10 525 people reside in Kultayevskoye rural settlement of Permsky Municipal District, 10 331 people in Sylvenskoye rural settlement, and 10 243 residents in Kondratovskoye rural settlement. All this is the consequence of heterogenous socio-economic development of Perm Krai territories, a factor in which is the differentiation of the quality and security of population employment in urban and rural areas.

The problem of population decrease in peripheral rural areas, of course, should be alarming to heads of Perm Krai and its municipalities, regional and municipal legislative and executive authorities. But this is only one of the problems, caused by territorial differences in the quality and security of employment. Even more significant shifts were made in reducing the number of workers in rural enterprises and organizations of Perm Krai (*tab. 2*).

As follows from the data of tab. 2, the number of employees at the enterprises and organizations in Perm Krai and its municipalities significantly reduced in the 2000–2011 period. This reduction was extremely uneven. In large and medium-sized cities, the number of employees decreased from 20.1% in Perm to 32% in Kungur, and in the rural municipalities in the range from 42.4% in Kosinsky District to 60.7% in Yelovsky District.

A group of territorial units, characterized by the maximum workforce attrition rate, comprises rural peripheral areas of Perm Krai north-western territories, where farming is hampered by harsh climatic conditions and complex terrain (swampiness, uneven territories, dissected by ravines, etc.).

Transport accessibility to industrial centres that are located on the main roads and railways resulted in the mechanical outflow of working age population from other deserted municipal districts. In a number of cases the population of whole villages of Kuyedinsky Municipal District left for Yekaterinburg, while a part of the population of Yelovsky District moved to Perm and Chaikovsky. Mountainous and wooded area resulting in shallow elevation pattern of agricultural lands hampers agriculture in Kishertsky and Uinsky districts that are also characterized by high employee attrition rate.

Only "lucky hit" can save the rural territories from the outflow of the working population. For example, as already have been mentioned above, the structural subdivisions of JSC Gazprom, located in Beryozovsky and Bardymsky municipal districts, provide jobs, stable wages, which means the effective

Table 2. Dynamics of the average number of the employees of Perm Krai municipalities in the 2000– 2011 period

Territories	Number of employees		Absolute attrition, people	Comparative attrition, %	Rating position by the comparative attrition
	2000	2011	2011/2000	2011/2000	
Total	1020579	908076	112503	11.0	
Urban districts					
Perm	381783	304938	76845	20.1	1
Berezniki	78540	57332	21208	27.0	3
Kungur	25997	17672	8325	32.0	4
Solikamsk	42306	33738	8568	20.3	2
Rural municipal districts					
Bardymsky	6673	3839	2834	42.5	6
Beryozovsky	6545	3375	3170	48.4	11
Bolshesosnovsky	4828	2334	2494	51.7	18
Yelovsky	4501	1767	2734	60.7	25
Karagaysky	5033	2234	2799	55.6	21
Kishertsky	7204	3661	3543	49.2	14
Kuyedinsky	10469	5865	4604	44.0	8
Kungursky	13575	6567	7008	51.6	17
Ordinsky	5679	3013	2666	46.9	9
Permsky	29699	15782	13917	46.9	10
Sivinsky	6639	3247	3392	51.1	16
Solikamsky	6211	3206	3005	48.4	12
Uinsky	3791	1682	2109	55.6	22
Chastinsky	5169	2953	2216	42.9	7
Komi-Permyak Okrug					
Kudymkar	13555	6960	6595	48.7	13
Gaynsky	4826	2321	2505	51.9	19
Kosinsky	2247	1295	952	42.4	5
Kochyovsky	4068	1717	2351	57.8	24
Kudymkarsky	7358	3144	4214	57.3	23
Yurlinsky	3144	1423	1721	54.7	20
Yusvinsky	6970	3472	3498	50.2	15

Note. Information is collected and calculated independently supported by the following sources: Perm Krai. Statistical yearbook: 2012: statistical digest. Local agency of the Federal State Statistics Service in Perm Krai (Permstat). Perm, 2012. P. 52-53 .

demand of a part of the population for food and services, hence, the development of trade and services sphere, and consequently, top positions of these territories in the ratings on the wages, the registered unemployment level, employee attrition dynamics. This suggests that the timely launching of production in the backs, not to mention the state support of agricultural producers, could stop the processes of territorial shrinkage in rural areas and use their employment potential more effectively.

In order to determine the regularities of the employee attrition, the background study of the dynamics of the average staffing number in Perm Krai municipalities for the shorter period from 2005 to 2011 was carried out (*tab. 3*).

As follows from the data of tab. 3, the number of employees at the enterprises and organizations in Perm Krai and its municipalities continued to decrease in the 2005–2011 period. But the employee attrition rate differs in various municipalities.

Table 3. Dynamics of average staffing number in Perm Krai municipalities from 2005 to 2011

Territories	Number of employees		Absolute attrition, people	Comparative attrition, %	Rating position by the comparative attrition
	2005	2011			
Total	848808	685344	163464	19,3	
Urban districts					
Perm	326596	304938	21658	6,6	1
Berezniki	66418	57332	9086	13,7	4
Kungur	19923	17672	2251	11,3	3
Solikamsk	40859	33738	7121	17,4	5
Rural municipal districts					
Bardymsky	5512	3839	1673	30,4	7
Beryozovsky	5427	3375	2052	37,8	17
Bolshesosnovsky	3895	2334	1561	40,1	18
Yelovsky	3126	1767	1359	43,5	20
Karagaysky	5364	3661	1703	31,7	9
Kishertsky	4032	2234	1798	44,6	22
Kuyedinsky	9174	5865	3309	36,1	14
Kungursky	9855	6567	3288	33,4	13
Ordinsky	4401	3013	1388	31,5	8
Permsky	25327	15782	9545	37,7	16
Sivinsky	5086	3247	1839	36,2	15
Solikamsky	4186	3206	980	23,4	6
Uinsky	3060	1682	1378	45,0	24
Chastinsky	4359	2953	1406	32,3	12
Komi-Permyak Okrug					
Kudymkar	12315	6960	5355	43,5	21
Gaynsky	4210	2321	1889	44,9	23
Kosinsky	1902	1295	607	31,9	11
Kochyovsky	3141	1717	1424	45,3	25
Kudymkarsky	3431	3144	287	8,4	2
Yurlinsky	2082	1423	659	31,7	10
Yusvinsky	5963	3472	2491	41,8	19

Note. Information is collected and calculated independently supported by the following sources: Perm Krai. Statistical yearbook: 2012: statistical digest. Local agency of the Federal State Statistics Service in Perm Krai (Permstat). Perm, 2012. P. 52-53.

It slowed down in large and medium-sized cities, while in the little town of Kudymkar and in rural municipalities with no industrial component it, on the contrary, increased. For example, Perm lost 20.1% of the workforce during the 2000–2011 period, and 6.6% for the latter half of the reporting period from 2005 to 2011. The exception is a company town Solikamsk; the tendency for the employee attrition deceleration is typical of other large and medium-sized cities. And on the contrary, in the most problem rural areas (Kochyovsky, Uinsky, Yelovsky and Kishertsky municipal districts), the employee attrition rate at enterprises and organizations accelerated in the 2005–2011 period, that in time will likely result in the fact, that these areas stop being suppliers of agricultural products.

Decrease in the average staffing number at enterprises and organizations in Perm Krai municipalities led to the reduction in the number of working population per one pensioner (*tab. 4*).

As follows from the data of tab. 4, higher indicators of the number of working population per one pensioner were recorded in 2011 in large and medium-sized cities of Perm Krai with low unemployment rate, high wages and

Table 4. Dynamics of reduction in the number of working population per one pensioner for 2005–2011, people

Territories	Number of working population per one pensioner, people		Rating position in 2011	Reduction in the number of working population per one pensioner for 2005–2011, people		Rating position by the indicators of comparative reduction in the number of working population per one pensioner for 2005–2011
	2005	2011		Absolute, people	Comparative, %	
Urban districts						
Perm	1.26	1.09	2	-0.17	-13.5	1
Berezniki	1.38	1.16	1	-0.22	-15.9	2
Kungur	n/a	n/a	-	-	-	-
Solikamsk	1.55	1.09	3	-0.46	-29.7	5
Rural municipal districts						
Bardymsky	0.67	0.48	19	-0.19	-28.4	4
Beryozovsky	1.14	0.68	7	-0.46	-40.4	14
Bolshesosnovsky	1.04	0.59	11	-0.45	-43.3	18
Yelovsky	0.90	0.50	15	-0.4	-44.4	19
Karagaysky	0.87	0.57	12	-0.3	-34.5	9
Kishertsky	0.90	0.50	16	-0.4	-44.4	20
Kuyedinsky	1.15	0.75	6	-0.4	-34.8	10
Kungursky	0.83	n/a	-	-	-	-
Ordinsky	0.95	0.63	10	-0.32	-33.7	8
Permsky	1.17	0.67	9	-0.5	-42.7	15
Sivinsky	1.25	0.79	5	-0.46	-36.8	13
Solikamsky	1.11	n/a	-	-	-	-
Uinsky	0.81	0.46	21	-0.35	-43.2	17
Chastinsky	1.29	0.84	4	-0.45	-34.9	11
Komi-Permyak Okrug						
Kudymkar with Kudymkarsky Municipal District	0.98	0.67	8	-0.31	-31.6	6
Gaynsky	0.86	0.49	17	-0.37	-43.0	16
Kosinsky	0.69	0.47	20	-0.22	-31.9	7
Kochyovsky	0.90	0.49	18	-0.41	-45.6	21
Yurlinsky	0.69	0.51	14	-0.18	-26.1	3
Yusvinsky	0.83	0.54	13	-0.29	-34.9	12

Note. Information is collected and calculated independently supported by the following sources: Perm Krai. Statistical yearbook: 2012: statistical digest. Local agency of the Federal State Statistics Service in Perm Krai (Permstat). Perm, 2012. P. 97.

low employee attrition rate at enterprises, as compared with krai rural municipal districts. These cities are Berezniki with the index of 1.16, Perm and Solikamsk with 1.09 of working people per one pensioner by the end of 2011.

As expected, the worst indicators were recorded in Uinsky, Kosinsky, Bardymsky rural municipal districts (0.46, 0.47, and 0.48 per one pensioner, respectively). In three other regions, this indicator does not exceed 0.5 of working people, i.e. more than 2 times below the corresponding indicators of Perm Krai cities. The author focuses his attention on a number of alarming trends, characterizing the situation with the reduction in the number of working age population per one pensioner in Perm Krai municipalities:

1. This process covers every single city and municipal district.

2. The process of reducing the share of the employed per one pensioner, proceeds dangerously fast – from 13.5% in Perm to more than

40% in eight rural municipalities for the 2005–2011period, that is for the total of 6 years.

3. As of the end of 2011, the range of absolute values between the most successful city of Berezniki (1.16) and Uinsky Municipal District (0.46) at the bottom of the rating makes up 252%.

Such rapid deterioration of the situation, the acceleration of shrinkage in Perm Krai rural territories points to the loss of manageability control over some rural areas and, in perspective, their disappearance as territories suitable for living.

The compression of Perm Krai rural territories is characterized not only by population decline, employee attrition and reducing share of the working age population per one pensioner, but also the degradation of the material base of agricultural producers (*tab. 5*), as well as the reduction of land under agricultural crops in Perm Krai rural municipalities (*tab. 6*).

As follows from the data of tab. 5, the number of all types of machinery used in krai agriculture has been steadily decreasing throughout the studied period.

In 2011, as compared to 1990, only 28.9% of milking machines and installations were left at livestock farms of agricultural enterprises.

With regard to crop production, while 2719 roll reapers were used at agricultural enterprises in 1990, only 86 units were left by 2011, that is 3.2% of the standard figure. The situation is not much better with other machines designed for harvesting. By the end of 2011 the harvester fleet comprised from 7.7% (flax harvesters) to 30.7% (balers), as compared to the end of 2011.

The tractor fleet decreased more than 5-fold to 18.5%, as compared to the reference period. The same thing happened with tillers and seeding machines.

The processes of the agricultural material base deterioration were accompanied by the reduction of sown areas (tab. 6).

As follows from the data of tab. 6, except for technical crops, the share of which in the total volume of sown areas is extremely small, the areas under grain, vegetable, forage crops and potato decreased in all categories of households. The decrease that continues up to the present moment has been significant. The areas designated for sowing grain crops, have

Table 5. Dynamics of the deterioration of the material and technical base of agriculture

Fleet of the main types of machinery in agricultural organizations	Pieces of equipment (at the year-end, units)				Ratio of the number of equipment units to the reference period, %		
	1990	2000	2005	2011	2000/ 1990	2005/ 1990	2011/ 1900
Tractors	26610	13695	8424	4910	51.5	31.7	18.5
Ploughs	9398	4047	2410	1496	43.1	25.6	15.9
Cultivators	9164	3513	2280	1509	38.3	24.9	16.5
Seeding machines	8939	3845	2625	1517	43.0	29.4	17.0
Combines:							
grain harvesters	6812	2616	1748	945	38.4	25.7	13.9
forage harvesters	2080	991	617	414	47.6	29.7	19.9
potato harvesters	352	106	50	34	30.1	14.2	9.7
flax harvesters	13	17	5	1	130.8	38.5	7.7
Mowers	6332	2292	1658	1021	36.2	26.2	16.1
Balers	1764	999	816	542	56.6	46.3	30.7
Swathers	2719	402	149	86	14.8	5.5	3.2
Milking machines and installations	2159	1193	844	623	55.3	39.1	28.9

Note. Information is collected and calculated independently supported by the following sources: Perm Krai. Statistical yearbook: 2012: statistical digest. Local agency of the Federal State Statistics Service in Perm Krai (Permstat). Perm, 2012. P. 241.

Table 6. Dynamics of the reduction of land under agricultural crops in all types of households, thousand hectares

Categories of sown areas	Periods				
	2000	2005	2011	2005/2000	2011/2000
Households of all types					
Total crop area	1265.0	999.5	793.2	79.0	62.7
Including:					
grain crops	581.7	427.1	282.0	73.4	48.5
industrial crops	2.1	0.9	4.4	42.9	209.5
potato	55.7	46.6	42.0	83.7	75.4
field vegetables	11.1	7.9	7.7	71.2	69.4
forage crops	614.4	517.0	457.1	84.1	74.4
Agricultural organizations					
Total crop area	1137.6	908.4	704.2	79.9	61.9
Including:					
grain crops	556.3	409.3	268.1	73.6	48.2
industrial crops	2.1	0.8	4.3	38.1	204.8
potato	3.6	2.3	4.3	63.9	119.4
field vegetables	1.5	0.7	0.9	46.7	60.0
forage crops	574.1	495.3	426.6	86.3	74.3
Population households					
Total crop area	76.4	56.4	48.2	73.8	63.1
Including:					
grain crops	1.0	0.8	1.2	80.0	120.0
potato	51.3	43.6	36.9	85.0	71.9
field vegetables	9.4	7.1	6.6	75.5	70.2
forage crops	14.8	4.9	3.5	33.1	23.6
Peasant (farm) enterprises and sole proprietors					
Total crop area	50.9	34.7	40.8	68.2	80.2
Including:					
grain crops	24.4	17.1	12.7	70.1	52.0
potato	0.8	0.7	0.8	87.5	100.0
field vegetables	0.1	0.1	0.2	100.0	200.0
forage crops	25.6	16.9	27.0	66.0	105.5

Note. Information is collected and calculated independently supported by the following sources: Perm Krai. Statistical yearbook: 2012: statistical digest. Local agency of the Federal State Statistics Service in Perm Krai (Permstat). Perm, 2012. P. 243.

been decreased at a particularly quick rate, more than 2-fold. This is partly explained by the market laws. The area under grain crops decreased due to the fact that low-fertility sod-podzolic soils, prevailing in the structure of Perm Krai agricultural lands, make it difficult to get high yields without applying chemical fertilizers, the use of which also dropped sharply. It is more profitable to import grain from traditional grain-growing areas. Modern territorial shrinkage, defined in this case as "the increase in travel speed of cargo in space", allows considerable amounts of grain to be transported from more southern regions. That is why most of the remaining poultry farms in Perm Krai increase manufacture, and the settlements close to them are the small islands of relative prosperity.

Based on the above it is possible to make a number of conclusions. The unemployment level is one of the indicators of the security of population employment in the territory. The amount of wages affects the employment quality. According to these indicators the rural areas in Perm Krai fall significantly behind the large and medium-sized cities.

The lack of prospects for the socio-economic development of the territory leads to the outflow of population, first of all, of the working age population, which, in turn, is accompanied by negative social consequences, one of which is the reduction in the number of the employed per one pensioner. All that results in the production cutback, irrevocable loss of production capacities and launches the next phases of the deterioration cycle in the peripheral rural areas [9].

Territorial shrinkage processes, characterized by the reduction in the populated, developed, economically active lands, are widespread in Perm Krai. This requires the improvement of the methods managing the rural municipalities development equalization at the regional and municipal levels, in order to work out measures to conserve the processes of territorial shrinkage in Perm Krai rural territories and to eliminate negative consequences of these processes.

References

1. Buzdalov I. Humble class: on social status and economic situation of russian peasantry. Voprosy Economiki. 2011. No.4. P. 137-148.
2. Zayniyeva T.V. The influence of the local labour market on the stratification processes of the population of a medium-sized city under the conditions of transformational society: Ph.D. in Social Sciences abstract of the thesis.Yekaterinburg, 2011.
3. Ioffe G.V., Nefyodova T.G. Fragmentation of rural space in Russia. Acta Eurasica. 2003. No.4. P. 70-92.
4. Kalugina Z.I., Fadeeva O.P. "Hard luck story" of abandoned villages (sociological study). Region: Economics and Sociology. 2006. No.3. P. 79-80.
5. Kostyleva L.V. Socio-economic differentiation (residential aspect). Sociological Studies. 2010. No.9. P. 120-124.
6. Sychev M.F. Problems of development in the regional agrarian sector Economic and social changes: facts, trends, forecast. 2009. No.3. P. 55-65.
7. Treivish A.I. Territorial shrinkage: interpretation and patterns. Compression of social-economic extent: new in the theory of regional development and in practice of its governmental control. Ed. by S.S. Artobolevsky and L.M. Sintserov. Moscow: Eslan, 2010. P. 16-31.
8. Fokin V.Ya. Territorial differentiation of the security of population employment: problem statement: monograph. Perm: Publishing House of Perm National Research Polytechnic University, 2012.
9. Fokin V.Ya. Differentiation of population employment as a factor of social risk and its consequences. Discussion. 2012. No.12. P. 123-126.

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Acute problems of Russia's socio-cultural modernization *

The need of socio-economic modernization is one of the main challenges of the 21st century facing the government, business and population of many countries. The solution to modernization tasks is unique for each country and is stipulated by a particular situation. Of special importance for Russia is the issue concerning the gap between population living standards in different, sometimes neighbouring, regions and, an overall significant lag in the living conditions of Russians compared with the inhabitants of developed countries. A necessary condition for successful modernization policy is the elaboration of specific national modernization strategies, considering the specifics of socio-cultural development of not only the whole Russia, but of each region.

Regional modernization, socio-economic development, levels of modernization and innovation.

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The 9th all-Russian research-to-practice conference "Evolution of Russian regions and the strategies for socio-cultural modernization" under the programme "Sociocultural evolution of Russia and its regions" (the programme initiated by the Institute of Philosophy of RAS) was held at the Institute of Socio-Economic Development of Territories of RAS (ISEDT RAS) on October 23–26, 2013. A record number of participants took part in it, as compared to eight previous conferences: 130 participants from 32 Russian regions and also from Ukraine and Belarus. The plenary meetings were attended by:

– representatives of the academic and institutional science;
– Vologda Oblast Government;
– Vologda Administration;
– officials of several main oblast departments;
– mass media.

The new issues that are relevant for the development of Russia and its regions, as well as for the scientific study of the socio-economic

* The conference was held with the support of RFBR grant No.13-02-14033.

and socio-cultural development of territories, have been reviewed during the course of the work. The presentations and discussions focused on two sets of problems: 1) problems regarding the formation of the strategy for the sociocultural modernization of Russia and its regions; 2) factors in the sociocultural balance of the regions modernization. Two plenary meetings, two breakout sessions and three round tables were held during the conference; 13 plenary reports and more than 60 expert speeches were presented and discussed at workshops and round tables. The conference concluded with the Coordinating Scientific Council "Problems of socio-cultural evolution of Russia and its regions", during which the results were summed up and the resolution was developed. The visitors learnt about the work of the industrial enterprise OAO Optimeh, welfare institutions – cultural and leisure centre Zabota, visited architectural complexes (Kirillo-Belozersky Monastery, Museum of Architecture and Ethnography "Semenkovo", Lace museum).

The conference information package had been published by the start of the conference that became possible due to the financial support of the Russian Humanitarian Scientific Fund (RHSF). The conference was held under scientific supervision of RAS corresponding member, Head of the Centre for the Study of Social and Cultural Change (CSSCC) at the Institute of Philosophy of the Russian Academy of Sciences (IPhRAS) Nikolay Ivanovich Lapin. The conference was organized as a part of the programme "Socio-cultural evolution of Russia and its regions", initiated by CSSCC IPhRAS in 2005. The overall goal and the main idea of this project is to present the regions as socio-cultural territorial communities in their integrity, originality and in the context of Russian socio-cultural space as a differentiated aggregate. The number of participants has been constantly increasing, with new researchers from Russian regions joining the conference.

At present (2013), 25 regions of the Russian Federation take part in the project (the Republic of Bashkortostan, the Buryat Republic, the republics of Kalmykia, Karelia, Tatarstan, the Chechen Republic, the Chuvash Republic, Krasnodar and Krasnoyarsk krais, the Astrakhan, Bryansk, Vladimir, Volgograd, Vologda, Kursk, Novosibirsk, Omsk oblasts, Perm Krai, the Samara, Sverdlovsk, Smolensk, Tyumen, Tula, Ulyanovsk, Chelyabinsk oblasts, Moscow). The conferences are held annually with the constant support of RHSF for the last nine years.

During the first five years of the programme the participants focused on the development of the socio-cultural portraits of their regions. About 25 regional portraits of various Russian federal districts were created in the 2006–2010 period. Their content is published in two dozens of monographs and hundreds of articles, eight conference information packages, the omnibus multi-author edition "Russian regions: socio-cultural portraits of regions in the all-Russian context" [Authors and general editors: N.I. Lapin, L.A. Belyayeva. Moscow: Academia, 2009].

In the onset of the second five-year period, the programme participants focused on studying the processes of socio-cultural modernization in the regions. The indices, characterizing the state of modernization in all 83 subjects and 8 federal districts of the Russian Federation (in the information and analytical system "Modernization", specially established by ISEDT RAS) were calculated in 2011–2013, using the tools of the Centre for Modernization Research, Chinese Academy of Sciences (CIM CAEN) and data of the Federal State Statistics Service. In 2013 turned comprehensive analysis of the processes of modernization using the results of the socio-cultural portraits of the regions.

The set task was rather ambitious: not only to present the critical analysis of the modernization state, including its assessment by popu-

lation, but also to develop approaches to the modernization strategy formation in the short- and mid-term. The first results were published in the multi-author monograph "Problems of socio-cultural modernization of Russian regions" [Authors and general editors: N.I. Lapin, L.A. Belyayeva. Moscow, Academia, 2013], and were included in the information package of the 9th all-Russian research-to-practice conference "Evolution of Russian regions and the strategies for socio-cultural modernization".

The conversance with the content of the presented reports confirms the high actuality of the conference topic. Many of them make an enormous contribution to the understanding of the real state of the reviewed issues and processes, indicating deep and sharpening contradiction: on the one hand, the modernization statistical indices have been slowly increasing in the country and in the majority of regions, and, on the other hand, low sociocultural, human effectiveness of the modernization processes is observed at the same time. Modernization assumed world-wide proportions and implies global competitive challenge to each country. Russia has a need for the scientific study of the practical parameters of this challenge, the application of mathematical forecasting methods and action strategy formation that will ensure the safety and stability of the country's development, increase in human potential and population living standards. The conference attendees consider it necessary to form and publicly discuss the concept of Russian modernization.

The research results, obtained in almost 30 subjects of the Russian Federation by the specialists of research institutes and leading universities, convince that the basic principles of the competitive modernization of most Russian regions in the coming years are to be the following: the accelerated neoindustrialization and socioculturally balanced transition from primary industrial stage of modernization to the secondary information stage. **N.I. Lapin** noted that an active state policy, ensuring the growth of investments in the creation of new knowledge and its transfer to younger generations (i.e. in science and education), was explicitly required. And, just as important, significant funds are to be directed to the realization of the existing, still considerable human, overall socio-cultural potential of the country and regions, its transformation into efficient human, socio-cultural capital. This policy should be recognized in consistent law-making practice, stimulating business (corporations, companies, enterprises, banks) to a wide use of scientific and technological achievements for increasing the share of innovation products in the total volume of shipped products, to ensuring due business contribution to the federal and regional budgets.

ISEDT RAS Director, Doctor of Economics, Professor V**.A. Ilyin** made a report "Global challenges and Russia's modernization: priorities of the new decade", noting that the priority development of the new technological mode would be of paramount importance in the process of modernization. It is necessary to increase the rate of innovation extension and, most importantly, to increase investments in human capital for Russia's successful modernization in the next decade. It is important to include main indicators of modernization in the assessment of the activities of the regional and federal authorities and to consider them as the criteria of national security. Socio-economic changes in society are successful, when they comprise conscious and responsible participation of the most significant forces: the authorities, business and society.

The Leading Scientific Associate of the Centre for the Study of Social and Cultural Change at the Institute of Philosophy of RAS, Doctor of Social Sciences L.A. Belyayeva delivered a report devoted to the issues concerning the correlation between modernization and social capital in Russian regions.

At that, social capital was considered as a factor determining the specifics and pace of modernization. Lyudmila Aleksandrovna demonstrated the social capital measurability and the need to provide indicators, appropriate to the conditions of Russia, for creating socio-cultural portraits of regions. It was noted that societies with the developed social capital, including high level of trust, strong civic identity, positive social ties and relations, have more favorable opportunities for modernization, especially for the modern – secondary modernization.

According to the Kursk State University Professor, Doctor of Philosophy Ye.A. Kogai, Russia's social-cultural space is a multi-dimensional space of social processes, relations, practices, attitudes and agents that are interrelated and interact with each other. It is a self-organizing phenomenon with various social processes, closely connected with the transformations in the economic, political and cultural spheres, unfolding during the last decades. The implementation of the modernization transformations presses for the transformation of social institutions, appropriate law-making practice, and the activation of human resources. Only realizing these conditions, one may consider the transformation of rather significant socio-cultural potential in the real socio-cultural capital.

Doctor of Philosophy, Professor of the Philosophy Department of the Astrakhan State University S.A. Khrapov brought up a paramount issue concerning the crisis of public consciousness as a socio-cultural factor limiting modernization in modern Russia. He indicated that the collapse of the USSR and modernization problems objectively acted for Russia as more significant historical conditions than the processes of the world social development. Despite the fact that the rates of Russia's economic development have increased in recent years, it is fair to say that until now the social dynamics of our country is still of a "catch-up nature" in relation to the United States, the European Union and Japan. The issues of differentiation, polarization, economic and socio-cultural development of Russian regions are particularly important. According to the authors, when considering the issue concerning the balance between Russian society and the transformation of public consciousness, it is necessary to identify the potential for such changes. The transformation of public consciousness under the conditions of the post-Soviet Russian society formation manifests itself in the paradoxical combination of universal (structural-functional, systemic, global) and domestic (modern, historic and cultural) mechanisms and characteristics of modernization.

Professor of the Tyumen State University, Doctor of Social Sciences V.A. Davydenko dwelled on the economic mechanisms of the social structure formation (modernization or archaicism). He noted that the fundamental structural problems still remain in force, i.e. extremely low level of innovation, investment and social activities; prevalence of state employees and officials of all levels in the middle strata; weak achievement motivation and lack of self-confidence. The archaicism of social life is expressed in the decreasing assessments of civic activism level, steady growth of religious sentiment, the contradiction between the declared values and activities of citizens.

A number of joint decisions have been elaborated during the final session of the Coordinating Scientific Council:

1. It is necessary to develop regional and interregional cooperation between universities and research institutes in studying the processes and problems of modernization.

2. It is advisable to supplement the used tools with the parameters and indicators of modernization that are actual for Russia.

3. It is reasonable to develop in Russian regions a long-term strategy, comprising a set

of regional programmes and municipal projects reducing the factors of inertia and resistance to modernization, and most importantly, enhancing the factors supporting neoindustrialization of regions and their transfer to the information stage of modernization.

4. The modernization, using both the opportunities, provided by domestic innovation potential and foreign advances, is more effective. Different time-frames may be needed for the transition to the information stage of modernization, due to considerable differences in the conditions of even neighboring territories.

The conference attendees expressed their gratitude and sincere appreciation to N.I. Lapin, who, as the Chairman of the Coordinating Scientific Council "Problems of socio-cultural evolution of Russia and its regions", contributed to its effective work for many years, directing efforts to strengthen the interregional relations and scientific cooperation between the institutes, to resolve urgent problems of socio-cultural changes and modernization development of territories. The participants supported the initiative of the Perm State University to hold the next 10th conference in October, 2014 at its base.

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The issues of tax burden distribution in Russia's economy

Tax burden has a direct influence on socio-economic processes and is one of the main criteria for evaluating the current tax system. But there still exist certain simplified views on the level of tax burden, which is identified with the actual transfer of payments to the budget.

The article highlights the results of a research into the tax burden of Russia's economy. The main goal was to identify the trends in the distribution of tax burden and its actual level.

The main conclusion of the study consists in the following: the ongoing tax reforms have not led to the establishment of an efficient fiscal mechanism, which will facilitate the implementation of taxation equality principle and take into consideration the opportunities of tax-payers to pay compulsory payments and develop the production. Meanwhile, there is the potential for tax maneuver with regard to a number of industries.

Tax burden, oil and gas revenues, oil and gas companies, manufacturing, tax benefits.

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Tax burden is the share of economic entities' revenues that is transferred to the budget and extra-budgetary funds in the form of taxes and levies.

The world economy uses the ratio of tax revenues to GDP as the key parameter for estimating tax burden.

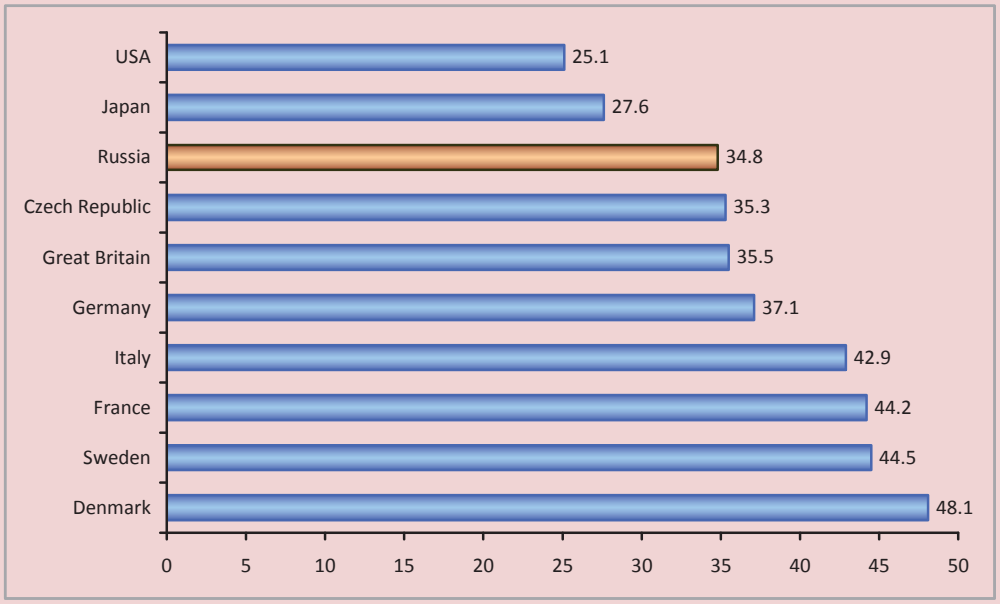
In 2011 the level of average tax burden in Russia was lower than in many European countries *(fig. 1)*.

In 2000–2004 tax burden on Russia's economy did not exceed 30% of GDP. The increase in the level of taxation began in 2005 after the rise in mineral extraction tax (MET) rates and introduction of a new scale of export duties. An average of 34.3% of GDP was distributed through the tax system in 2005–2012 *(fig. 2)*.

At the same time, the dynamics of tax burden and GDP growth rates was counter-directional, which indicates that the effected tax reforms did not stimulate economic growth.

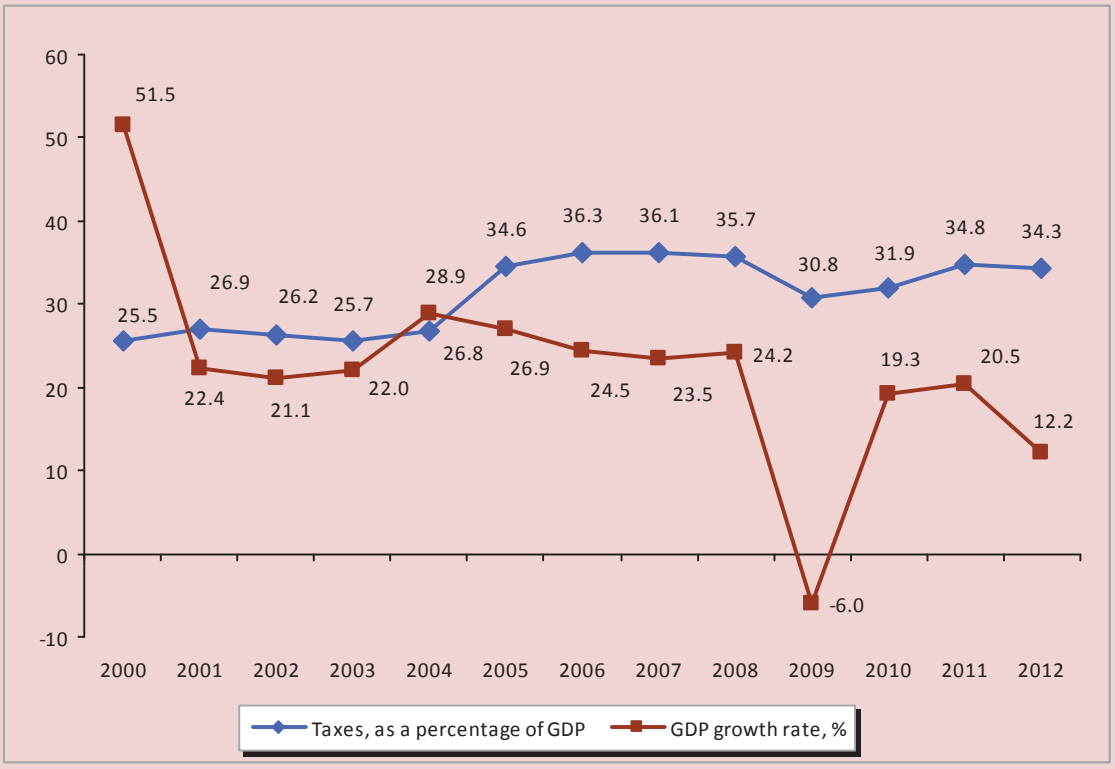
What is the reason for such a low efficiency of Russia's tax system?

Figure 1. Tax burden in the OECD countries and in Russia in 2011, as a percentage of GDP



Source: OECD official website; Rosstat; author's calculations.

Figure 2. Dynamics of tax burden and GDP growth rates in Russia in 2000–2012



Source: Federal Treasury; Rosstat; author's calculations.

The first reason consists in structural disproportions of budget revenues, the major part of which is represented by indirect taxes (VAT, excises) and foreign economic activity revenues *(fig. 3)*.

Indirect taxes and revenues from foreign economic activity, established in the form of a premium to the price artificially increase the volume of GDP. The desire of taxpayers to compensate for tax expenditures by raising prices of goods triggers inflation processes, constrains the demand and inevitably leads to a reduction in production. For example, the VAT rate decreased from 28% in 1992 to 18% in 2004–2012, however, this did not cause the decline in prices.

The second reason lies in the low level of sectoral diversification of the tax base, almost one third of tax revenues of the Russian budget is provided by the oil and gas industry *(tab. 1)*.

The third reason can be found in the high sectoral differentiation of tax burden – from 2% for air carriers to 39% for oil and gas producing enterprises *(tab. 2)*.

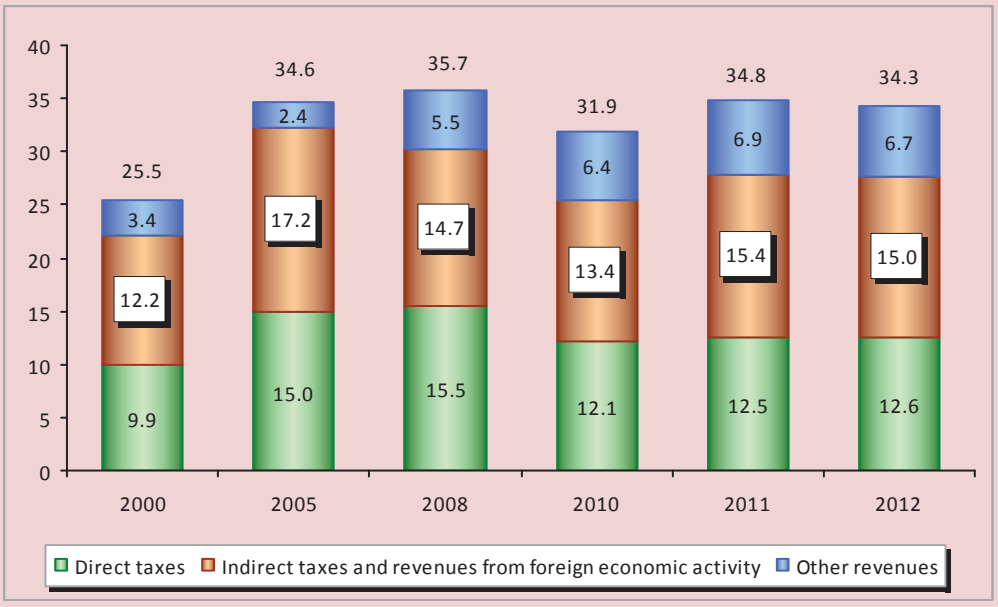
The fact that the oil and gas complex is the main source of budget revenues does not mean that it bears an increased tax burden in comparison with other industries. The point is that the share of production costs in the manufacturing industry is higher than in mining. Consequently, economic sectors differ significantly in the level of their profitability.

In 2010–2012 the highest level of profitability was observed in the oil and gas industry, which had the highest level of tax burden as well.

At the same time, the mechanical engineering enterprises, construction organizations, in which the share of tax deductions was smaller in comparison to oil and gas companies, but greater than the average in the economy, showed the profitability below the average level. In general, the financial position of all the above-mentioned manufacturing industries and construction was worse than that of the oil and gas industry with a high level of tax burden.

Trade stood out against the general background of tax burden distribution due to the

Figure 3. Aggregated structure of the RF consolidated budget revenues, as a percentage of GDP



Sources: author's calculations based on the data of the Federal Treasury and Rosstat.

Table 1. Sectoral structure of tax revenues* in the RF budget system in 2008–2012

Type of economic activity	2008		2009		2010		2011		2012	
	billion rub.	%	billion rub.	%	billion rub.	%	billion rub.	%	billion rub.	%
Total	7968	100.0	6307	100.0	7688	100.0	9734	100.0	10953	100.0
Production of crude oil and natural gas	2114.5	26.5	1319.5	20.9	1754.6	22.8	2532.2	26.0	2966	27.1
Manufacturing	1280	16.1	988.6	15.7	1342	17.5	1696	17.4	1971	18.0
Trade	751.4	9.4	627.5	9.9	787	10.2	1003	10.3	1296	11.8
Real estate operations, rent	891.4	11.2	682	10.8	868	11.3	1101	11.3	1025	9.4
Transport and communication	564	7.1	587	9.3	649.5	8.4	739.4	7.6	796	7.3
Construction	431.5	5.4	393.4	6.3	412.5	5.4	516.4	5.3	606	5.5
Other	1800	24.3	1620	25.7	1735	22.6	1930	19.9	2121	20.9

* Including taxes and levies, administrated by the Federal Tax Service.
Sources: FTS data, author's calculations.

Table 2. Profitability and tax burden by the types of economic activities in 2010–2012

Type of economic activity	Profitability of sales, %			Tax burden, as a percentage of proceeds*		
	2010	2011	2012	2010	2011	2012
Total	11.4	11.5	9.7	9.4	9.7	9.8
Oil and gas production	33.1	32.1	28.8	33.2	36.3	39.0
Real estate operations	11.8	10.4	10.0	19.7	22.2	18.6
Construction	5.7	6.8	6.7	11.3	12.2	13.0
Transport and communication	13.8	12.8	12.2	9.8	9.7	9.1
air transport activities	n.a.	n.a.	n.a.	1.4	2.3	2.0
communication	27.9	24.6	26.7	15.0	14.2	14.2
Processing production, total	14.3	13.2	11.0	7.2	7.1	7.5
Including the production of						
foodstuffs	12.2	8.1	11.1	15.4	14.9	16.6
machinery and equipment	7.3	7.0	7.7	11.1	11.1	11.3
electric and electronic equipment	10.1	10.0	8.1	10.2	9.8	10.3
construction materials	7.9	11.8	12.4	7.3	7.5	7.9
textile and sewing	5.4	7.1	12.3	7.9	6.9	7.6
Production of power, gas and water	7.2	6.6	4.7	5.3	4.8	4.2
Trade	9.2	10.5	8.2	2.4	2.4	2.8

*It should be noted that for determining the level of tax burden on economic sectors we used the ratio of the amount of paid taxes, according to the reports of tax authorities, to the turnover (proceeds) of the organizations, according to the Rosstat data. This indicator was chosen on the basid of the order of FTS of Russia dated 30 May 2007 N MM-3-06/333@ "On the approval of the Concept of the system for planning field tax audits".
Sources: FTS data; author's calculations.

fact that it had a minimum level of deductions under higher profitability in comparison with a number of other industries.

The existing unevenness of tax burden is indicated by structural imbalances in tax revenues. A large part of federal and territorial payments is formed by manufacturing, and the increased tax burden of the oil and gas industry is conditioned by the payment of mineral extraction tax alone *(tab. 3)*.

It is obvious that from 1 up to 13% of taxes is concentrated in the oil and gas industry besides mineral extraction tax. Even the share of income tax accounted for only 2.4%, while this economic sector is distinguished by impressive wages and dividends.

Table 3. Tax proceeds from oil and gas and manufacturing industries in 2011–2012

Taxes	Oil-and-gas producing industry				Manufacturing industry			
	2011		2012		2011		2012	
	billion rub.	share, %*	billion rub.	share, %*	billion rub.	share, %*	billion rub.	share, %*
Profit tax	298.0	13.1	273.4	11.6	371.7	16.4	354.2	15.1
Individual income tax	47.1	2.4	53.6	2.4	284.5	14.3	317.1	14.0
Excises	5.7	0.9	25.7	3.3	590.8	97.8	752.0	95.7
VAT	157.2	8.5	215.9	10.9	320.6	17.4	400.9	20.2
Mineral extraction tax	1916	93.8	2316.5	94.2	5.5	0.3	9.3	0.4
Regional taxes	70.4	12.8	61.6	9.8	80.1	14.5	90.9	14.5
Local taxes	1.4	1.1	1.5	0.9	25.1	19.7	26.8	16.9

* The share in the total amount of tax revenues in the RF budget system.
Sources: FTS data; author's calculations.

Undoubtedly, the tax burden indicator, defined in the economy as a whole and in the industry in particular, does not take into account the specifics that influence the formation of the tax base of a specific taxpayer. Therefore, to gain a deeper understanding of the causes of fiscal burden discord in Russia's economy, let us consider the consolidated annual accounts of the largest companies, compiled according to international and Russian standards.

The comparison of production costs with the average selling prices of the products shows that the gap between the cost of hydrocarbons production and their selling prices in the oil and gas producing companies is dozens of times. As for metallurgical and chemical holdings, the average selling price exceeds production costs only 1.1–1.4-fold *(tab. 4)*.

A considerable excess of selling prices over the costs of oil and gas companies forms the rent that the state, being the owner of natural resources, withdraws to the budget in the form of mineral extraction tax and export-import operations payments (customs duties). Rental payments constitute almost 90% in the structure of receipts from the oil and gas industry taxes and levies *(fig. 4)*.

Without oil and gas revenues, the budget deficit in Russia would significantly exceed the optimum level (5%). For instance, in 2008–2012 the non-oil and gas deficit of the RF consolidated budget increased twice and reached 7.7 trillion rubles or 12.4% of GDP *(fig. 5)*, which once again proves that the fuel and energy complex (FEC) plays the key role as a revenue source.

When assessing the amount of tax burden of the oil and gas sector, the issue concerning the financial and legal essence of rent payments is considered a rather debating point. For example, the Ministry of Finance, when determining the level of tax deductions, sums up primary goods' payments and other taxes. The Federal Tax Service of Russia calculates tax burden excluding customs duties, because their enforcement is regulated by the Customs Code and administered by the Federal Customs Service.

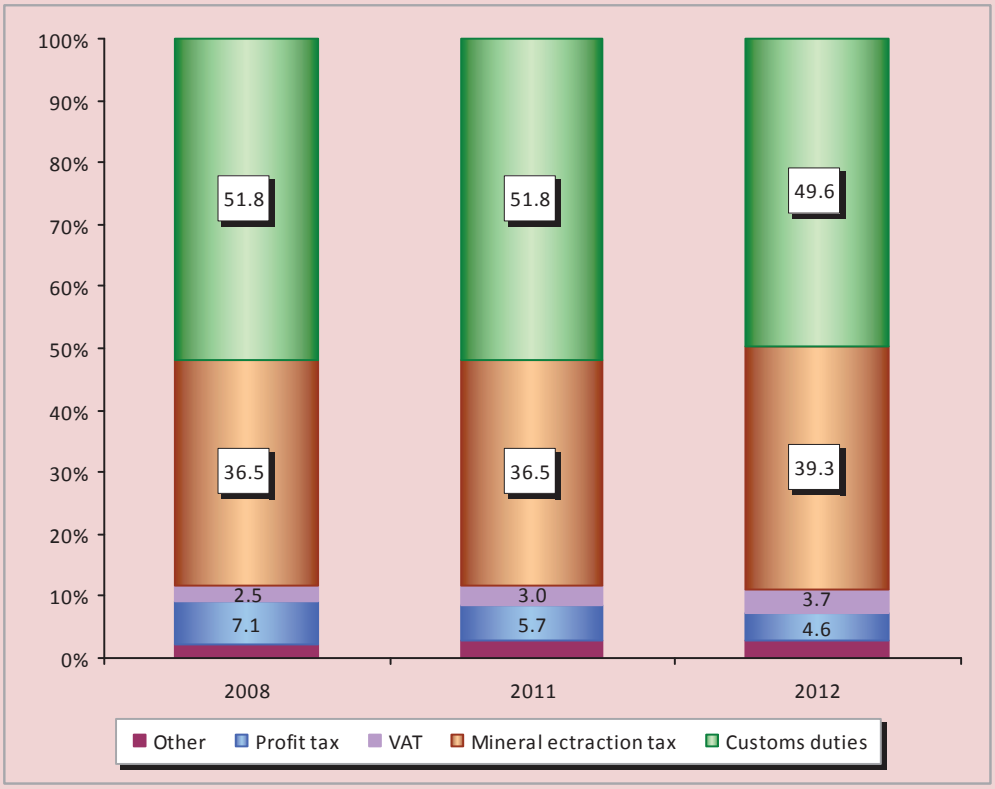
The author considers that the viewpoint of Doctor of Economics M.M Sokolov is more convincing; he argues that the extracted oil is the property of Russian state, with its permission, in compliance with the existing licensing mechanism, a subsurface user carries out extraction works on a site of the state subsoil fund. Hence the rent that is created mainly regardless of the efforts of oil and gas enterprises should not be considered as part of tax burden, especially since its withdrawal does not decrease their profitability in relation to other sectors [7], which is evidenced by the profitability of the oil and gas industry, three times exceeding the economic average level.

Table 4. Production costs* and average selling prices in Russia's largest companies in 2011–2012

Company	Cost per unit, US dollars** Unit costs, dollars		Average selling price for products, US dollars***		Excess of the average selling price over the costs, fold		Profitability of sales, %	
	2011	2012	2011	2012	2011	2012	2011	2012
Oil-and-gas producing companies								
Gazprom	13.3	14.3	185	215	13.9	15.0	35.7	27.1
LUKOIL	4.96	5.0	109.8	110.8	22.1	22.2	10.1	11.6
Rosneft	2.8	2.96	108.6	109.9	38.8	37.1	16.5	12.4
Gazprom Neft	5.9	5.5	110	110.8	18.6	20.1	20.3	16.2
Surgutneftegas	2.6	2.8	110	110.8	42.3	39.6	32.0	27.1
Metallurgical and chemical companies								
Severstal	682	636	867	751	1.3	1.2	13.8	11.5
MMK	660	665	836	732	1.3	1.1	9.4	9.2
PhosAgro	451	479	637	654	1.4	1.4	29.2	26.8

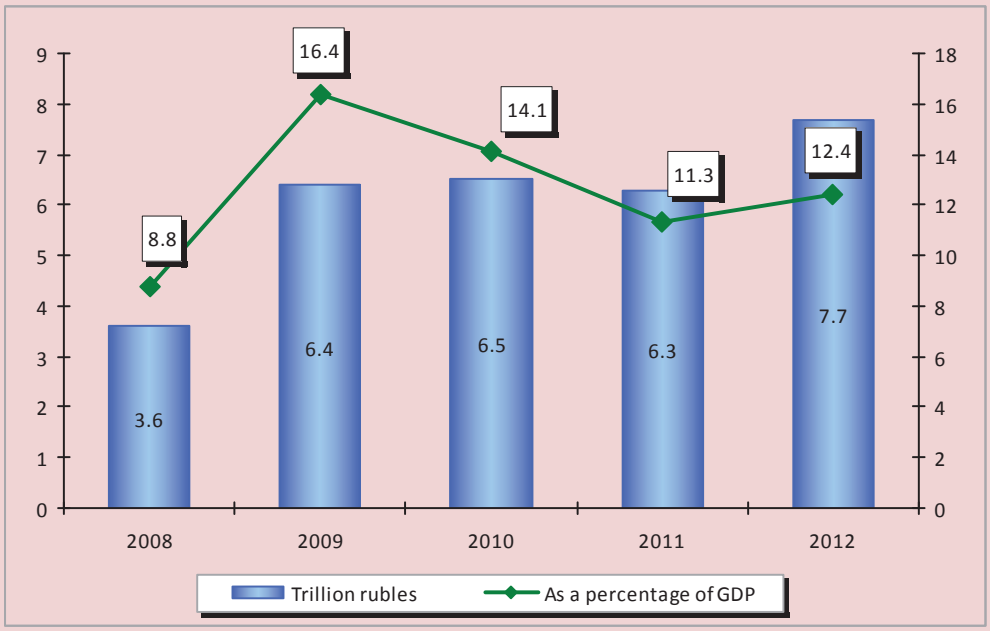
* The coefficients contained in the annual statements of oil and gas companies were used for translating cubic meters of gas into tons of oil equivalent, and tons into barrels.
** Oil-and-gas producing companies – dollars/barrel; metallurgical and chemical companies – dollars/ton.
*** Gazprom – dollars/thousand cubic meters; other oil-and-gas producing companies – dollars/barrel; metallurgical and chemical companies – dollars/ton.
Sources: author's calculations based on companies' annual and financial statements (IFRS).

Figure 4. Structure of revenues from the oil and gas industry taxes and levies, %



Sources: author's calculations based on the data of the Federal Tax Service and Rosstat.

Figure 5. Dynamics of the RF non-oil budget deficit in 2008–2012



Sources: author's calculations based on the data of the Federal Treasury.

Sharing the view point of M.M. Sokolov, we may add that, in accordance with the Tax Code, customs duties are not included in the list of federal taxes and they are considered as revenues from foreign economic activity, which once again indicates their non-tax nature.

As for mineral extraction tax, its introduction in 2002 was the result of an agreement between oligarchic clans and the state. A complete systemic collapse after the August default of 1998 created a threat to the very foundations of oligarchic ownership, prompting the oligarchs, who were appropriating almost all of the natural rent over the 1990s, to share the revenues with the state [1]. The introduction of mineral extraction tax has allowed for increasing federal budget revenues by 45%.

By the end of 2012 the revenues of OJSC Gazprom, LUKOIL, Rosneft, Gazprom Neft were significantly higher than the revenues of other major Russian joint-stock companies, and the aggregate revenues of oil and gas holdings were about 15 trillion rubles, which 1.2-fold exceeded the aggregate revenues of the federal budget and it proves that the oil and gas industry possess significant fiscal capabilities. After all operating expenses and tax payments, 8–25% of revenue in the form of net profit remained at the disposal of oil companies, while other companies had less than 6% *(tab. 5)*.

How much is the share of revenues that the oil and gas companies directed to the payment of taxes and levies? *Table 6* provides the information, characterizing the relationship between these companies and the budgetary system.

As we can see, the share of taxes and customs payments in the money turnover of the companies ranged from 27% in LUKOIL up to 52% in Rosneft, this fact should be linked with a different structure of extracted and processed hydrocarbons, as well as with the unequal share of supplies in the domestic and foreign market.

If we exclude the rent component out of taxation, then the fiscal burden of Gazprom, Surgutneftegas, Gazprom Neft will decrease in

Table 5. Revenues and net profit of the largest Russian companies for 2012, billion rubles

Company	Type of activity	Proceeds	Net profit	In % to proceeds
Gazprom	Oil and gas	4764	1211	25.4
LUKOIL	Oil and gas	4227	334	7.9
Rosneft	Oil and gas	3078	342	11.1
Gazprom Neft	Oil and gas	1230	176	14.3
Surgutneftegas	Oil and gas	850	180	21.2
Sistema JSFC	Telecommunications	850	27	3.2
Transneft	Oil and gas	732	184	25.1
MRSK Holding	Electrical power engineering	622	32	5.1
Magnit	Trade	449	25	5.6
Severstal	Ferrous metallurgy	438	25	5.7

Sources: consolidated annual financial statements of the companies; author's calculations.

Table 6. Tax payments and customs duties of the oil and gas companies in the RF budgetary system in 2011–2012

Indicators	Gazprom		LUKOIL		Rosneft		Gazprom Neft		Surgutneftegas	
	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Taxes and duties, total, billion rub.*	1683	1903	1212	1107	1390	1622	490	450	295	314
As a percentage of proceeds	36.3	39.9	28.2	26.2	51.1	52.7	47.6	36.6	37.1	36.9
Rent payments, as a percentage of the total amount of taxes	55.5	57.1	89.8	92.0	86.6	88.0	75.9	73.2	77.3	80.9
Taxes without rent payments, billion rub.	750	817	124	89	186	194	118	120	67	60
As a percentage of proceeds	*16.2*	*17.1*	*2.9*	*2.1*	*6.8*	*6.3*	*11.4*	*9.8*	*8.4*	*7.1*

* Taxes, paid to the RF consolidated budget, including state extra-budgetary funds.
Sources: financial statements of the companies; author's calculations.

2–5 times, and that of LUKOIL and Rosneft – in 8–12 times, given the higher share of primary goods' payments. Without duties and mineral extraction tax, the level of tax threshold of Gazprom Neft will be comparable to the average for Russia's economy, and the level of tax threshold of Surgutneftegas and Rosneft will be 1.5 times lower. The tax burden of LUKOIL, which is the second largest company by the amount of revenues, will be less than 3% (for comparison: in 2012 the enterprises producing vehicles and equipment, the profitability of which was the lowest in the economy, had the tax burden equal to 6.2%).

It should be noted that the share of tax payments in the revenues has been calculated by the author based on the taxes actually paid to the budget. Taking into account the obligations to the budget system, the collection of tax payments from the leading oil and gas companies can be increased by 9–18%. However, a subsequent increase in tax burden will be leveled by tax refund *(tab. 7)*.

Thus, the results of the analysis imply that the tax burden of the oil and gas companies is not as great as it is often considered to be[1]. Moreover, these companies shift part of tax burden to domestic consumers, as evidenced by the continuous increase in the gas and petrol prices. While oil prices are rising, a significant growth in the welfare of Russia's citizens is out of the question. In 2008–2012 the number of people with incomes below the subsistence level decreased only by 18%, while the average salary of the fuel and energy complex employees increased by 46.5%, and its amount exceeded the national average salary in 2.1 times *(tab. 8)*.

[1] For example, the RF Ministry of Finance estimates the tax burden of oil and gas complex at more than 60%. The President of Rosneft I. Sechin claims the burden is 55%.

Table 7. Arrears of the oil and gas companies in the payments to the budget, and the taxes presented for reimbursement from the budget in 2011–2012

Indicators	Gazprom		LUKOIL		Rosneft		Gazprom Neft		Surgutneftegas	
	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Arrears in the payments to the budget, billion rubles*	94	115	73	85	66	77	30	36	33	30
As a percentage of the volume of taxes*	9.3	9.5	14.7	18.3	11.0	10.7	12.0	13.0	10.4	9.3
VAT and other taxes subject to refund, billion rub.	304	395	43	57	62	87	28	39	8	12
As a percentage of the volume of taxes excluding rent payments	40.5	48.4	34.7	63.5	33.3	44.8	23.7	32.5	9.0	17.3

* Excluding customs duties.
Sources: financial statements of the companies; author's calculations.

Suffice it to say that in 2012 the volume of industrial production in the Russian Federation was below the level of 1990 by 23%, and the difference between the incomes of the richest 10% and the poorest 10% of the Russians was 16.3-fold compared to 4.4-fold in 1990.

Why is it that Russia, with its immence oil revenues[2], is falling behind in socio-economic development for more than 20 years? This is largely due to the fiscal policy, one aspect of which is the accumulation of oil revenues in stabilization funds instead of using them directly for economic development. For example, out of 7.4 trillion rubles of commodity payments received in 2012, 1.8 trillion rubles or 24.3% was directed to stabilization funds. On August 1, 2013 5.7 trillion rubles was concentrated in the Reserve Fund and the National Welfare Fund *(tab. 9)*, which corresponds to 8.5% of GDP, or nearly half of the tax revenue planned in the federal budget for 2013.

The existing fiscal potential of FEC may also be assessed judging by the directions of the monetary resources utilization.

For example, Gazprom's net profit in 2011–2012 exceeded one trillion rubles, and selling and administrative expenses, which consumed almost one third of the revenues, approached this figure *(fig. 6)*.

For 2008–2011 the dividends of Gazprom shareholders have increased 25-fold. Other companies also increased their dividend payments, spending an average of 20% of net profit for this purposes, and Gazprom Neft – 38% *(tab. 10)*.

Oil and gas companies were extremely generous in the amount of financial rewards provided to the members of their Boards of Directors and Executive Boards *(fig. 7)*.

Over 30% of the payroll fund was spent on the salaries of OJSC Surgutneftegas managers in 2011–2012, and the average amount of top managers' remuneration four times exceeded the average remuneration in the company as a whole *(tab. 11)*.

Not only oilmen, but also some officials[3] point out that tax pressure does not allow enough money to be invested in the development of the oil and gas industry. So is this really true?

At the end of 2012 the oil and gas companies' own financial resources in the form of retained earnings, net profit and cash ranged from 1.1 trillion rubles in Gazprom Neft to

[2] Doctor of Economics O.G. Dmitriyeva provides the following estimations: "Over the past 13 years... oil price has grown 10-fold. This means that its self-cost of 12 dollars per barrel is only 0.1 of the total amount of revenues received from its sales. And if the rest 0.9 were subject to distribution among the citizens, the country could make a fantastic breakthrough in its development" (Argumenty nedeli. 2013. No. 5).

[3] From the speech of the Minister of Energy of the Russian Federation A. Novak at the meeting of the RF Government on 24 September 2012: "Taxes and levies are imposed on... the indicator of proceeds. This ignores the economy of the industry and hampers the flow of investments into it".

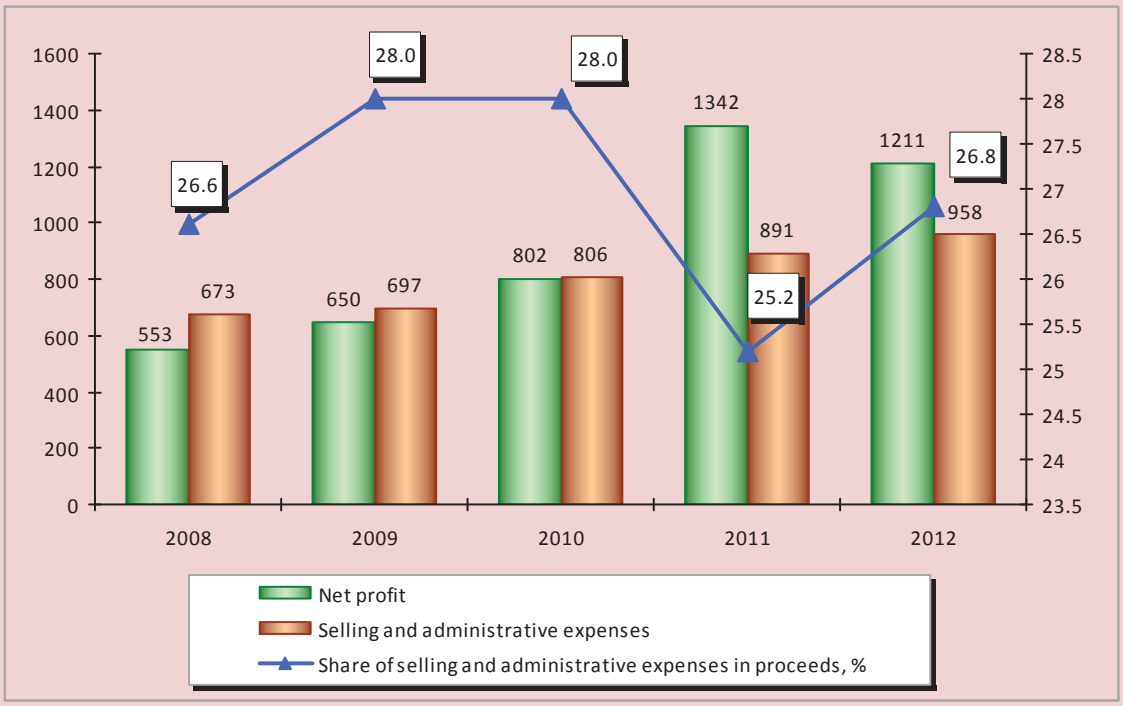
Table 8. Average consumer prices for gas and petrol, the population of the Russian Federation with incomes below the subsistence level, the average monthly nominal wage of FEC employees in 2008–2012

Indicators	2008	2009	2010	2011	2012	2012 to 2008, %
World oil price, dollars/barrel	93.9	60.8	78.2	109.6	110.8	118.0
Automobile gasoline price, rubles/liter	17.41	19.16	20.09	24.65	26.56	152.6
Pipeline gas, rubles per person per month	30.20	37.04	43.81	48.32	55.36	183.3
Number of people with incomes below the subsistence level, million people	19.0	18.4	17.7	17.9	15.6	82.1
Average monthly nominal accrued wages of the fuel and energy complex employees, thousand rubles	39.1	41.6	46.3	51.6	57.3	146.5
In % to the national average wages in Russia	226.0	223.7	220.5	220.5	213.8	x
Sources: Rosstat; author's calculations.						

Table 9. The volume of resources concentrated in Russia's stabilization funds in 2008–2013, billion rubles

Indicators	2008	2009	2010	2011	2012	2013	01.08.2013
Reserve Fund	3057.9	4027.6	1830.5	775.2	811.5	1885.7	2807.0
National Welfare Fund	783.3	2584.5	2769.0	2695.5	2794.4	2690.6	2858.0
Total	3841.2	6612.1	4599.5	3470.7	3605.9	4576.3	5665.0
As a percentage of GDP	11.6	16.0	11.9	7.5	6.5	7.3	8.5
As a percentage of the tax revenues of the federal budget	54.8	75.3	70.3	45.9	34.1	39.1	47.6
Sources: data of the RF Finance Ministry; Federal Treasury; author's calculations.							

Figure 6. Net profit, selling and administrative expenses of OJSC Gazprom in 2008–2012, billion rubles



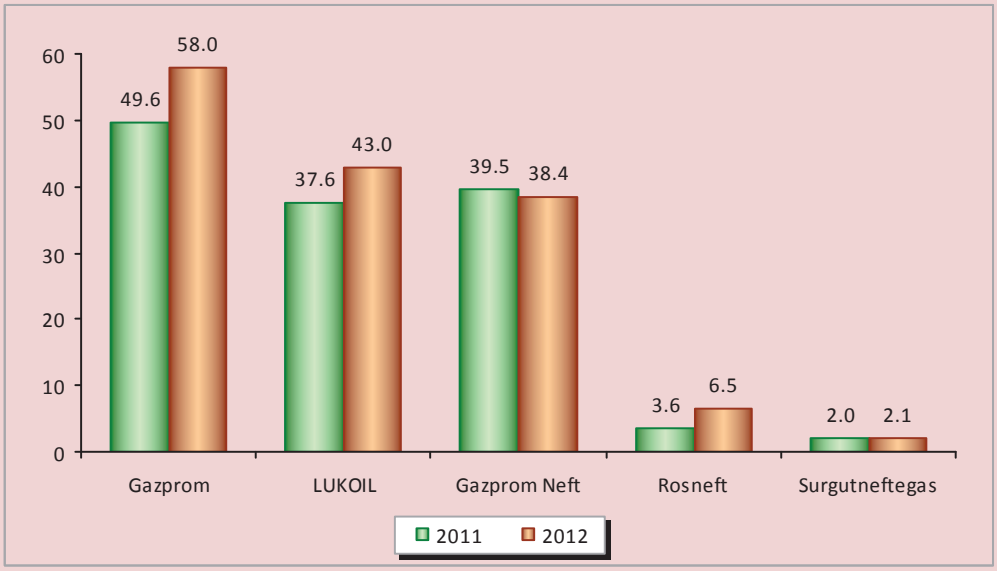
Sources: OJSC Gazprom's financial statements, author's calculations.

Table 10. Dividends of oil and gas companies accrued in 2008–2011

Company	2008		2009		2010		2011		2011 to 2008, times
	Billion rub.	%*	Billion rub.	%*	Billion rub.	%*	Billion rub.	%*	
Gazprom	8.5	4.9	56.6	9.1	91.1	25.0	212.4	24.1	25.0
Rosneft	20.3	14.4	24.4	11.7	29.3	15.3	78.5	33.2	3.9
LUKOIL	42.5	15.8	44.2	20.9	55.2	19.9	85.0	25.5	2.0
Gazprom Neft	25.6	36.3	16.9	30.5	21.6	39.6	34.6	45.2	1.4
Surgutneftegas	31.6	22.0	24.2	21.2	27.0	20.9	38.0	16.3	1.2

* Dividends in % to net profit.
Sources: the companies' annual and accounting (by Russian Accounting Standards) statements; author's calculations.

Figure 7. Annual remuneration of the main managing bodies of the oil and gas companies in 2011–2012, million rubles per person



Sources: companies' annual statements, author's calculations.

Table 11. Average remuneration of managers at OJSC Surgutneftegas in 2009–2012

Indicators	2009	2010	2011	2012
Average number of employees, people	106197	108995	111497	113700
Including key management personnel, people	8325	8640	8927	9181
Payroll, billion rubles	52.6	57.3	64.8	76.8
Remuneration of managers, % to the payroll	21.1	20.2	30.1	34.1
Average salary, rubles per one employee	41280	43835	48333	56282
Average salary of managers, rubles per one employee	110987	111672	181863	237492
In % to the average salary of all employees	268.9	254.8	376.3	422.0

Sources: annual statements of OJSC Surgutneftegas (Russian Accounting Standards); author's calculations.

9.8 trillion rubles in Gazprom *(tab. 12)*, that is hundreds times higher than the paid taxes and duties.

At the same time, such a huge concentration of money did not stimulate investment activity sufficiently. The companies spent 7–17% of available financial resources on capital investments.

These examples indicate that there exists a substantial gap between the capabilities of the oil and gas complex in increasing budget revenues and funding, and the actual level of contribution to the budget and investments.

Pointing out a hard taxation regime, the heads of commodity companies do not mention that the Russian authorities have taken actual measures aimed at its mitigation. In 2011 the procedure of levying export duties on oil and oil products was changed, targeted tax incentives were introduced for shelf activities and for the development of hard-to-reach oil reserves; these measures should facilitate the emergence of new investment projects.

Speaking about tax burden on Russia's economy, one should not forget about the significant number of tax benefits, regardless of the amount of profit received.

Unfortunately, official statistics lack the data on tax benefits by the types of taxpayers. Partly, these gaps can be bridged by some information contained in the statements of the Federal Tax Service.

In 2011–2012 the volume of granted tax preferences was 80% of the taxes assessed for payment; this fact is indicative of the enormous tax potential of Russia's economy *(tab. 13)*.

Table 12. Own funds and capital expenditures of the oil and gas companies in 2011–2012, billion rubles

Indicators	Gazprom		LUKOIL		Rosneft		Gazprom Neft		Surgutneftegas	
	2011	2012	2011	2012	2011	2012	2011	2012	2011	2012
Own funds	9086	9801	2610	2737	2362	2785	866	1071	1753	1822
As a percentage of taxes and duties	540.0	515.0	215.3	247.2	170.0	171.7	176.7	238.0	239.5	233.6
Capital expenditures	1553	1340	273	360	391	466	131	158	126	140
As a percentage of own funds	17.1	13.7	10.5	13.2	16.6	16.7	15.1	14.8	7.2	7.7
Sources: consolidated financial statements of the companies; author's calculations.										

Table 13. Tax privileges granted to economic entities of the Russian Federation in 2011–2012

Indicators	2011		2012	
	Billion rub.	As a percentage of assessed sum	Billion rub.	As a percentage of assessed sum
Privileges, total	24043.8	78.9	28490.0	81.8
Profit tax	162.1	7.7	201.2	9.6
including the reduction in the tax base by the sum of losses for the previous years	95.3	4.5	134.4	6.4
VAT	23155.9	92.7	27424.0	93.8
exemption from payment, total	3335.7	13.6	5056.9	17.3
including the subjects of financial activity	2965.3	11.9	4642.4	15.9
Excises	85.3	12.7	103.7	12.3
including on spirit, alcohol products, beer and tobacco goods	26.2	3.9	16.0	1.9
Mineral extraction tax	262.9	12.6	323.9	13.1
Water tax	1.4	44.2	1.3	50.9
Transport tax	1.5	6.8	1.4	6.1
Land tax	50.0	40.6	68.8	53.6
Corporate property tax	324.6	66.9	365.6	66.3
including the subjects of natural monopolies	168.2	34.7	199.4	36.1
Sources: Federal Tax Service; author's calculations.				

Table 14. VAT incomes by the types of economic activities for 2012

Type of economic activity	Billion rub.	Share in the total amount of paid taxes, %
Total	1988.7	18.2
Manufacturing industries, total	453.8	33.1
Including production of		
automobiles	62.7	58.1
electric, electronic and optical equipment	66.1	48.4
machinery and equipment	75.1	46.8
rubber and plastic goods	16.2	45.5
other non-metallic mineral products	40.4	43.5
textile and sewing	7.5	38.8
foodstuffs	105.6	24.7
Construction	293.0	48.4
Financial activity	41.4	8.4
Mining operations	218.0	7.2
Sources: Federal Tax Service; author's calculations.		

VAT accounts for the lion's share of benefits. According to FTS, the sum of assessed VAT was 29.2 trillion rubles in 2012 (for comparison: in 2012 the consolidated budget of the Russian Federation received 23.1 trillion rubles of revenues). 27.4 trillion rubles of deductions and refunds, and 5.1 trillion rubles of exemptions were granted out of this sum. In fact, the total amount of tax preferences exceeded the volume of assessed VAT by 3.3 trillion rubles. At the same time, over 90% of exemptions were provided to the subjects of financial activity that occupy the fourth place in the economy in terms of profit.

The main burden of VAT payment is carried by the enterprises producing automobiles, machinery, electronic equipment, rubber and plastic products, as well as construction organizations *(tab. 14)*. The VAT paid by these organizations accounts for an average of 50% of all their taxes; as for the VAT paid by the mining industry and financial sector enterprises, it is only 7–8% of their overall taxes.

According to our estimates, the introduction of differentiated rates of VAT refund at the export of finished products, the full abolition of VAT refunds to natural resources exporters, the cancellation of exemptions provided to the subjects of financial activity will increase the revenues of the federal budget by 4–5 trillion rubles annually [6].

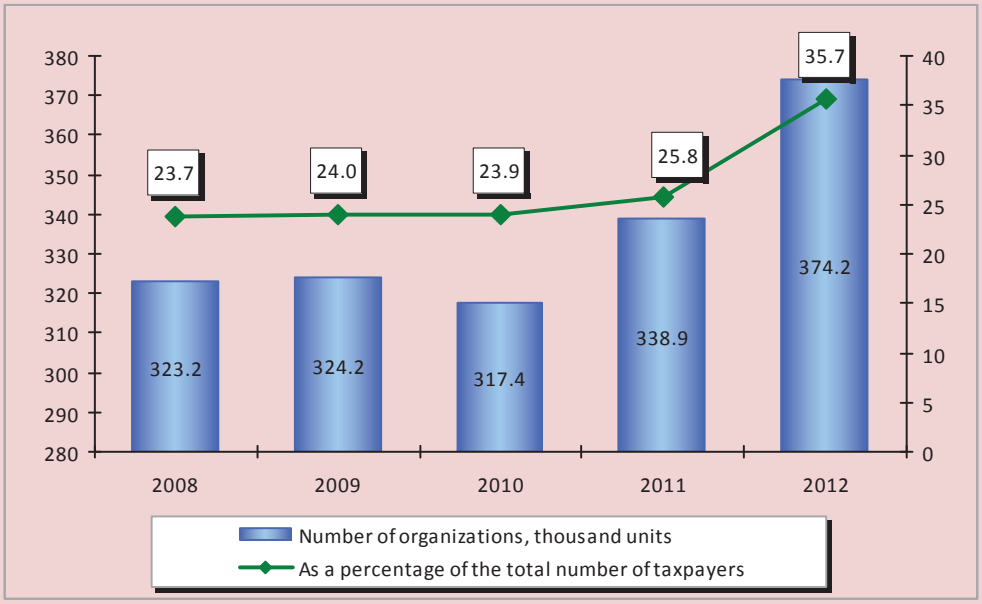
Tax legislation provides an opportunity of charging the amount of losses for the previous years to the expenses[4]; as a result, the tax base for corporate income tax was reduced by 134 billion rubles or by 6.4% in 2012. The share of organizations that submitted a zero accounting by income tax, increased from 24% in 2008 to 35.7% in 2012 *(fig. 8)*.

Almost 90% of federal benefits on corporate property tax are granted to highly profitable subjects of natural monopolies: railway lines, main pipelines and power transmission lines. Full abolition of these preferences could increase the annual revenues from corporate property tax in the regions' budgets by approximately 200 billion rubles, or 30%.

In our opinion, it is necessary to reconsider the tax incentives for producers of alcohol and tobacco products, who enjoy benefits in the field of excise taxation. The abolition of these benefits will increase the revenues from excises by an average of 20 billion rubles per year.

[4] Until 2005, only 30% of the amount of losses for the past years were allowed to allocate to deductible expenses.

Figure 8. The number of organizations that submitted zero accounting by income tax in 2006–2012



Sources: FTS data; author's calculations.

In view of the above, we can conclude that Russia's system of tax privileges, exemptions and refunds that are often provided to highly profitable economic entities, shifts part of tax burden to taxpayers with much smaller profits, thus increasing disparity in the distribution of tax burden and distorting its average value.

Along with the extensive system of tax preferences, a large-scale shadow sector of the economy also exerts negative influence on tax collection and the formation of the average tax burden indicator. The total volume of shadow economy in Russia is estimated at 46% of GDP, which is 3.5 times the size of shadow economies in such countries as the USA, France and Canada [8].

According to the Bank of Russia, in 2008–2012 the country lost an average of 1.1 trillion rubles annually as a result of shady export transactions, sham contracts and transactions with securities and loans. In view of the fact that these resources had not been subject to profit tax assessment, the RF consolidated budget lost at least 230 billion rubles, or more than 11% of the profit tax revenues annually *(tab. 15)*.

Russia's business entities illegally withdraw money from the country mainly by establishing subsidiaries in offshores, through which the money is transferred under the guise of export-import operations.

For example, in 2008–2011 Russia's leading metallurgical enterprises Magnitogorsk Iron and Steel Works (MMK), Novolipetsk Steel (NLMK) and Cherepovets Steel Mill (CherMK), using trader offshore schemes, withdrew approximately 308.4 billion rubles of export revenue, which could replenish the budget by 65 billion rubles provided that the revenue had been subject to profit tax [3]. In addition, these enterprises were refunded the lion's share of VAT paid at the export of products. As a result, the tax burden of the largest holding companies of ferrous metallurgy, the proceeds of which are measured in hundreds of billions of rubles, was almost twice lower than the national average *(tab. 16)*.

Table 15. Money and profit tax losses as a result of dubious international trade operations in 2008–2012, billion rubles

Indicators	2008	2009	2010	2011	2012	On average for 2008–2012
Finances	1487	744	789	1072	1178	1054
Provisional tax on profit	357	179	158	214	236	230
As a percentage of the profit tax received by Russia's budget	14.2	14.2	8.9	9.4	10.0	11.3
Sources: Bank of Russia; Federal Treasury; author's calculations.						

Table 16. Shortfall in revenue from export sales and the tax burden of metallurgical plants in 2008–2011, billion rubles

Indicators	MMK	NLMK	CherMK	Total
Short received profit	126.8	116.0	65.6	308.4
Profit tax that was not paid to the RF budget	27.0	24.2	13.6	64.8
Taxes paid to the budget	48.7	53.9	52.0	154.6
Sales proceeds	812.0	732.0	852.0	2396
Average tax burden, % to proceeds	6.0	7.4	6.1	6.5
For reference: average tax burden in RF, %	11.3			

The level of taxation is, to some extent, influenced by the improper condition of tax discipline, which is reflected in the arrears in payments to the budget system. Non-payments reduce tax collection by 9–16% *(tab. 17)*.

It would seem that the existing tax arrears should be considered as a factor in the potential increase of tax burden. However, table 17 shows that more than half of the total volume of liabilities to the budget is represented by the debts that have been settled and are impossible to recover; therefore the amount of debts accumulated for the previous years can hardly result in a noticeable increase in the level of tax burden in the future.

Judging by the results of the survey, we can conclude that a highly uneven distribution of tax burden contrary to the fundamental principle of fair taxation is one of the key problems of the Russian tax system. Such measures as burdening manufacturing enterprises with taxation on the one hand, and providing the wide range of tax preferences to highly profitable industries on the other do not allow the economy to step onto the path of modernization growth; they restrict the opportunities for making long-term investments in the development and creation of new technologies, and reduce the competitiveness of domestic products[5].

It seems that the problem of limiting tax pressure in the processing industries can be largely solved by expanding the tax base at the expense of the following unrealized reserves.

First, some tax concessions and exemptions should be cancelled, above all with regard to the financial sector of the economy, the largest exporters of raw materials and semi-finished products, subjects of natural monopolies, producers of alcohol and tobacco products. According to our calculations, this will increase the incomes of the RF consolidated budget by an average of 4.3–5.3 trillion rubles per year.

Second, shadow business should be involved in the sphere of taxation. According to official statistics alone, the annual illegal export of capital from the country is about 1.1 trillion rubles, and budget's losses from the so-called fly-by-night companies are estimated at 0.5 to 1 trillion rubles.

[5] According to Rosstat, the share of machines, equipment and vehicles in the commodity structure of Russian exports accounts for 4.5%, and the share of mineral products – 70.3%.

Table 17. Arrears in payments to the RF budget system, billion rubles

Indicators	01.01.2012	01.01.2013	01.07.2013
Level of fiscal performance, %	90.6	91.3	83.6
Arrears, total	1004.7	1047.6	1067.9
Including settled* and non-recoverable	547.8	583.4	576.9
In % to the total sum of arrears	54.5	55.7	54.0

* Restructured, deferred, spread arrears; arrears, the recovery of which has been suspended due to the initiation of bankruptcy proceedings.
Sources: FTS; author's calculations.

Third, the existing arrears in payments to the budget should be settled, first of all, by the highly profitable sectors of the economy, which account for over 40% of accumulated debts[6].

The results of the above analysis allow us to formulate conceptual directions of tax policy in the context of the efficient distribution of tax burden:

1. Concentration of tax incentives in the points of economic growth, preferential tax regimes for export products of processing and high-tech sectors, as well as investment activities.

2. Differentiation of tax rates, primarily by VAT, in accordance with the specifics of production, depending on the level of profitability and the status of material and technological base.

3. Introduction of taxation with regard to exported profits and revenues.

4. Reorientation of the mechanism of oil revenues distribution: they should be directed to the funding of Russia's economy modernization rather than be concentrated in stabilization funds.

5. Simplification of methodologies for calculating the tax base, reducing the number of statements on taxes and levies for taxpayers, increasing the transparency and accessibility of statistical information of tax authorities.

Undoubtedly, the issue of additional revenues becomes crucial in the conditions of crisis of the federal budget, and, especially, regional budgets. Its solution requires a system analysis of available reserves in the economy and a constant adjustment of the level of tax burden with regard to specific taxpayers.

References

1. Gubanov S. Russia's system choice and quality of life. Ekonomist. 2011. No. 11. P. 3.
2. Dmitriyeva O.G. Extra money of Motherland. Argumenty nedeli. 2013. No. 5.
3. Ilyin V.A., Povarova A.I. Budget crisis of the regions. Vologda: ISEDT RAS, 2013.
4. Tax Code of the Russian Federation. Available at: http://www.consultant.ru/.
5. Main directions of the tax policy for 2014 and for the planned period of 2015 and 2016. Official website of the Ministry of Finance of the Russian Federation. Available at: http://www1.minfin.ru/ru/
6. Povarova A. I. Inefficient VAT administration as a threat to Russia's economic security. Economic and social changes: facts, trends, forecast. 2013. No. 2. P. 111-124.
7. Sokolov M. Measure of tax burden in the oil and gas sector. Ekonomist. 2013. No. 6. P. 50.
8. The shadow economy in Russia is estimated at 46% of GDP. Official website of Forbes magazine. Available at: http://www.forbes.ru/news/234247

[6] According to the Federal Tax Service, the arrears to the budget on the part of mining, trade organizations, organizations engaged in financial activity and real estate operations amounted to 471.4 billion rubles as of 1 January 2013, or 42.7% in the total amount of debt.

ORGANIZATION OF RESEARCH ACTIVITY

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Opportunities for and prospects of using citation indices in evaluating the performance of research institution

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The growing social importance of scientific knowledge leads to the gradual penetration of scientometric indicators in the sphere that regulates the activities of researchers. At present, publishing and citation indicators are declared in government documents as target indicators of the state of science.

The article presents general approaches to the scientometric analysis of activity of research institution; an attempt is made to estimate the publication activity of the institutions included in the Economics Section of the Social Sciences Department of RAS, as well as research and education organizations of the Vologda Oblast. The statistical data of the Russian Science Citation Index (RSCI) were used as a tool for evaluating the research work. Organizations have been ranked according to several criteria: the total number of publications in RSCI, the number of citations and the value of the Hirsch index.

The results of the research indicate that at present, efficient administrative decisions in the sphere of science require establishment of the system for objective evaluation of research results. The Russian Science Citation Index is viewed as part of such a system. Together with highly qualified expert

assessments that make it possible to consider the specifics of research activity, the scientometric indicators presented in RSCI as well, in the long term can be used for objective and comprehensive evaluation of scientific potential of the regions and the country as a whole.

Scientometrics, citation index, RSCI, abstract database, assessment of the efficiency of research activities, publication activity.

In recent years, the data on the number of publications and citations have been actively used as the performance ratios of scientists, research organizations, overall national science. Publication and citation indicators are regarded as the target indicators of the science status in the approved Resolution of the Russian Government "Innovation Development Strategy for the Russian Federation until 2020"[1] and the RF Presidential Decree "On Measures to Implement State Policy in Science and Education"[2] as of May 7, 2012.

According to specialists, engaged in bibliometric studies, the analysis of citations allows revealing the patterns and determining the probabilistic rate for the scientific development and is an effective method of studying communication in the professional community, the disciplinary structure of science, the mechanism for producing new knowledge[3]. Foreign scientists, who were among the originators of the real tools of the scientific information analysis, considered the results of the citation analysis as "rather objective measure of the labour productivity of a scientist" [Garfield, 1982]. International and national citation indexes, created in the second half of the 20th century, became popular as the tool in decision-making with regard to the effectiveness and importance of various scientific developments in the given research field.

Global citation indexes data, the leading among which are the international databases of Web of Science maintained by Thomson Reuters (USA)[4] and Scopus owned by Elsevier publishing company (Netherlands)[5], at present are purported to present the target parameters for evaluating the quality and productivity of the scientific activities of certain scientists, organizations and the country as a whole.

Web of Science (WoS) traces its history to the science citation index, developed in the mid-twentieth century by the American scientist Eugene Garfield. For several decades the data, collected in this index, expanded and were published by the Institute for Scientific Information (Philadelphia). In 1992 the Institute was included in the Thomson Corporation.

At present, the Web of Science includes seven databases, covering almost all fields of knowledge, three of which process about 12 thousand journals (Social Science Citation Index[6], Science Citation Index Expanded[7] and Arts and Humanity Science Citation Index[8]). WoS classifier contains about 250 thematic sections on the fundamental and engineering sciences, medicine, agriculture, social sciences and humanities [Kirillova O.V., p. 7-8].

[1] On approving the Innovation Development Strategy for the Russian Federation until 2020: resolution of the Russian Government as of December 8, 2011 No.2227-p. Available at: http://base.consultant.ru/cons/cgi/online.cgi?req=doc;base=LAW;n=123444

[2] On Measures to Implement State Policy in Science and Education: RF Presidential Decree as of May 7, 2012. No.599. Rossiyskaya Gazeta. May 7, 2012. Available at: http://www.rg.ru/2012/05/09/nauka-dok.html

[3] See, e.g.: Bredikhin S.V., Kuznetsov A.Yu., Scherbakova N.G. Citation analysis in bibliometry. Novosibirsk: Institute of Computational Mathematics and Mathematical Geophysics SB RAS, NEICON, 2013; Pislyakov V.V. Evaluation of scientific knowledge based on citation indexes. Sociological Journal. 2007. No. 01. P. 128-140.

[4] Web of Science. Available at: http://thomsonreuters.com/web-of-science/

[5] Scopus. Available at: http://www.scopus.com/

[6] SocialSciencesCitationIndex. Available at: http://thomsonreuters.com/social-sciences-citation-index/

[7] ScienceCitationIndexExpanded. Available at: http://thomsonreuters.com/science-citation-index-expanded/

[8] Arts&HumanitiesCitationIndex. Available at: http://thomsonreuters.com/arts-humanities-citation-index/

These data are the basis for the evaluation module of scientific journals citation – Journal Citation Reports[9] that includes a number of citation indicators, the most famous among which is the impact factor.

SCOPUS database owned by Elsevier publishing company is the world's largest abstract and analytical database by the volume of the submitted documents (more than 36 million records) and the number of periodicals reproduced in it (more than 17 thousand). Annually Elsevier reviews about 2 thousand scientific journals issued in different countries and in different languages for inclusion in its database.

However, the use of the indicators of foreign bases for evaluating the scientific activities of Russian scientists does not provide an objective picture, due to the fact that national publications are poorly represented in these databases: as of August 2013, Russian scientists account for 1.9% in the total number of Scopus publications and 1.2% in the Web of Science publications [Kirillova O.V., p. 13].

However, the issue concerning the creation of the national citation index that could be an alternative to foreign databases, becomes more relevant.

In Russia such leading information and library centers as VINITI, the Library of the Russian Academy of Sciences, SPSTL SB RAS, the State University – Higher school of Economics, and a number of other organizations currently deal with scientometric issues, in particular, with determining the science citation index. The bibliometric analysis gradually becomes the generally accepted tool for measuring the publication activities of the country's research institutions and higher education institutes. It enables the scientists to recognise the propriety and the expediency of their research, to identify the demand for scientific papers in certain areas.

The creation of the Russian science citation index[10] in the Scientific electronic library in 2005 and its subsequent development was of great importance for scientometric studies (SEL, eLibrary.ru).

Poor representation of the Russian periodicals in foreign publications, the difficulty in using foreign databases for statistical analysis, as well as their price affordability primarily caused the necessity of introducing the national system for evaluating and analyzing the publication activity and citation of national researchers, organizations, and editions was caused [15].

The bibliographic abstract database that accumulates more than 4.7 million publications of Russian authors and information on the citations of these publications in more than 4 thousand Russian journals forms the basis of the national system. Recently, other types of scientific publications have been also included in RSCI: conference reports, monographs, textbooks, patents, theses. The base contains information about the imprint, subject area, the author of the publication, his/her workplace, as well as keywords, abstracts and itemized reference lists [15].

The creation of systematically expanding common electronic abstract database of scientific articles published in Russian journals, and monographs was supported by the scientific community. However, when it comes to using this database for evaluating the publication activity of a particular academic or scientific organization, the objectivity of RSCI data is disputed[11].

[9] JournalCitationReports. Available at: http://thomsonreuters.com/journal-citation-reports/

[10] Russian Science Citation Index. Scientific electronic library. Available at: http://elibrary.ru/projects/citation/cit_index.asp

[11] See, e.g.: Kalenov N.Ye., Selyutskaya O.V. Certain evaluations of the quality of the Russian Science Citation Index on the example of the journal "Russia's information resources". Russia's information resources. 2010. No. 6. P. 2-13; Mikhailov O.V. Criteria and parameters for the objective evaluation of the quality of scientific activities. Herald of the Russian Academy of Sciences. 2011. V. 81. No.7. P. 622-625; Tikhonov V.V. Historical science through the prism of the Russian Science Citation Index (RSCI). Available at: http://mkonf.iriran.ru/papers.php?id=42.

In particular, the experts point out that some RSCI indexable publications cannot be unambiguously considered scientific and indicate the presence of algorithmic errors leading to the inconsistency of numeric parameters, incorrect reference of publications to the authors and organizations, loss of publications and references. Self-citation record is another issue of concern. It is noted that the indicators generated in RSCI, are highly dependent on the organizational activities of the directors of research institutions and publishers, timely inclusion of materials in the database. These complaints are justified. But one cannot but see that resources are actively accumulated in RSCI, the experience of similar foreign bases is adopted, and a search for ways to cooperate with foreign institutions of scientometric measurements has been conducted.

According to the authors, the indicators of Russian science citation index can be used for the evaluation characteristics of the activities of certain scientists and institutions as a whole. However, caution must be exercised not to overlook the specifics of scientific activities, and to use these data as a supplement to the qualified expert evaluation.

Taking this fact into account, the authors applied RSCI indicators for evaluating the publication activity of the Institute of Socio-Economic Development of Territories of the Russian Academy of Sciences in comparison with the research institutes included in the Economic Section of the Social Sciences Department of RAS, registered in RSCI, as well as the Vologda Oblast scientific organizations. This approach provides an opportunity to assess the effectiveness of the organization's research activities in the relevant scientific field and to denote its contribution to the development of the region's scientific potential.

However, the authors note that the results, presented in the study, do not claim to be exhaustive. They deal with the issues that can be attributed to the problem of the formation of common approaches to the given analysis.

The primary analysis is based on the premise that if science is regarded as a process of acquiring knowledge, it is necessary, first of all, to trace the growth of the number of scientific publications, considering them to be new knowledge bearers. In this aspect, the publication represents a key element in the production of scientific knowledge: it forms research results, makes them public, ensuring their transfer and confirmation.

It was decided to use for our analysis the retrospective indicators since 2008, when RSCI reached proportions sufficient for the analysis and received de facto recognition in the scientific community and official sources.

As follows from *table 1*, the total number of the publications of the institutes of the Economic Section of SSD RAS, registered in RSCI for the 2008–2012 period, made up 9958, more than half of them (61.68%) falls on the share of five institutes: RAS Institute of Economics – 19.87%, the Institute of Economics and Industrial Engineering of the Siberian Branch of the RAS – 13.60%, the Institute of Economics, the Ural Branch of RAS – 13.18%, the Central Economics and Mathematics Institute of RAS – 7.84% and the Institute of Socio-Economic Development of Territories (ISEDT) of RAS – 7.19%.

For the period under review the staff of the Institute of Socio-Economic Development of Territories of RAS provided a significant increase in the absolute number of articles – from 108 in 2008 to 207 in 2012, i.e. almost twice. The share of ISEDT RAS in the total number of publications of the institutions of RAS Economic Section, presented in RSCI, grew up to 7% for this period.

It is obvious that the number of publications can only be the primary criteria for evaluating the scientific and publication activity of the

Table 1. Total number of publications of the scientific institutions of the Economic Section of SSD RAS, registered in RSCI (as of October 25, 2013)

Institution	Total number of publications in 2008–2012	Share in the number of the publications of the Economic Section of SSD RAS, %	Number of publications			Total number of publications for 2013 as of October 25, 2013
			2008	2012	Growth rate, %	
RAS Institute of Economics	1979	19.87	406	409	101	224
Institute of Economics and Industrial Engineering, the Siberian Branch of RAS	1354	13.60	267	305	114	166
Institute of Economics, the Ural Branch of RAS	1312	13.18	244	308	126	158
Central Economics and Mathematics Institute of RAS	781	7.84	179	177	99	142
Institute of Socio-Economic Development of Territories of RAS	716	7.19	108	207	192	147
Institute of Economic Forecasting, RAS	646	6.49	123	125	102	20
G.P. Luzin Institute of Economic Problems of Kola Scientific Centre of RAS	644	6.47	107	139	130	53
Institute of Socio-Economic Studies of Dagestan Scientific Centre of RAS	480	4.82	108	55	51	18
Institute of Agrarian Problems RAS	365	3.67	63	72	114	21
Institute of Social and Economic Studies of Population at the Russian Academy of Sciences	352	3.53	69	72	104	48
Institute of Problems of Regional Economy of RAS	287	2.88	52	64	123	26
Economic Research Institute FEB RAS	257	2.58	41	64	156	29
Market Economy Institute of RAS	188	1.89	23	50	217	31
Institute of Economic Studies of Karelian Research Centre of RAS	128	1.29	11	51	464	21
Institute of Socio-Economic and Energy Problems of the North, Komi Scientific Centre of the Ural Branch of RAS	126	1.27	17	25	147	16
Institute of Socio-Economic and Humanities Research of the Southern Scientific Centre of RAS	116	1.16	2	51	25.5 times	27
Institute of Social and Economic Research, Ufa Scientific Centre of RAS	85	0.85	2	28	14 times	25
Saint Petersburg Institute for Economics and Mathematics of RAS	73	0.73	15	9	60	3
Sochi Scientific Research Centre of RAS	69	0.69	17	15	88	7
Total	9958	100	1854	2226	12.2	1182

institution. This indicator does not carry information about the quality of the scientific output and its relevance. Therefore, the citation index is used in modern scientometrics as the most objective indicator, when evaluating the scientific activities. It is understood as the number of references to the works of a particular researcher or organization, carried out in the relevant field of scientific activities, distributed by the years. Citation shows that these works had an impact on other scientists. *Table 2* shows rank distribution of the institutions of the Economic Section of SSD RAS according to the citation frequency of papers, done by the research workers over the specified period.

As follows from the table data, in 2008 the total number of citations of ISEDT RAS lagged significantly behind the leading institutes. In subsequent years, this index increased (12 times in 2012, as compared to 2008) that ultimately enabled ISEDT RAS to take the 7th place in the rating of the institutions of the Economic Section of SSD RAS according to the total number of citations for the 2008–2012 period. At the same time, for some obvious reasons, institutes, located in Moscow, have the highest rank. However, the possibility of "non-capital" institutes to rise their rank increases, as it is these institutes that are to participate in the elaboration of measures to modernize the country's economic space. The trend that took shape in the last two or three years demonstrates the significant potential for the accelerated advancement of the "non-capital" academic institutions along the path.

According to the authors, RSCI solves positively another important task that is connected with the introduction of the indicator of the researcher's scientific productivity, based on the distribution of citations received by the researcher. This calculation is based on the idea of the American physicist Jorge Hirsch, who in 2005 suggested counting the ratio of the number of the researcher's publications and the number of citations of these articles[12]. This ratio is commonly referred to as Hirsch index or h-index.

J. Hirsch preferred the introduction of the given metrics to the number of publications divided by the total number of citations, or the number of citations per one paper [Hirsch, 2005]. Western colleagues of J. Hirsch, noting the advantages of the h-index over other such indicators, emphasize the fact that this index considers not only the number of publications, but their state of being relevant, thus being the result of a balance between the number of publications and the number of citations received by each publication [Glänzel, 2006].

Despite the fact that some scientists expressed doubts about the correctness of the h-index application for calculating the scientific productivity [Lehnmann S., Jackson A.D., Lautrup B.E., 2005; Sidiropuolos, 2007; etc.], noting primarily the inability of this indicator to identify important works made in the past and papers, which continue significantly influencing the scientific thinking. However, one cannot deny that the h-index is useful as the accepted standard of academic achievements.

The original definition of the Hirsch-index is focused on the comparison of the authors' productivity; nevertheless, it is used for evaluating academic communities.

For research institutions the Hirsch index is calculated in RSCI on the basis of the distribution of citations received by the researcher's publications. H-index h is obtained, when n of the total number (Np) of the articles of the institution's research workers has at least h citations each, and the other papers (Np – h) have no more than h citations each. It is possible to say that the Hirsch index characterizes the scale and efficiency of the organization's research and publication activities and reflects the average publication activity of researchers.

[12] Hirsch J.E. An index to quantify an individual's scientific research output. Proc. Of the National Acad. Sci. USA. 2005. V. 102. No.46. P.16569-16572.

Table 2. Total number of citations of the scientific institutions of the Economic Section of SSD RAS, registered in RSCI (as of October 25, 2013)

Institution	Total number of citations for 2008–2012	Rank	Total number of citations of authors			
			2008	2012	Growth rate, %	For 2013 as of October 25, 2013
RAS Institute of Economics	2 655	1	381	702	184	455
Central Economics and Mathematics Institute of RAS	2 389	2	275	721	262	679
Institute of Economics and Industrial Engineering, the Siberian Branch of RAS	2 138	3	213	655	308	363
Institute of Economic Forecasting, RAS	2 032	4	326	495	152	206
Institute of Economics, the Ural Branch of RAS	1448	5	93	646	7 times	483
Institute of Social and Economic Studies of Population at the Russian Academy of Sciences	806	6	93	202	217	84
Institute of Socio-Economic Development of Territories of RAS	677	7	29	333	12 times	327
Economic Research Institute FEB RAS	399	8	27	148	5.5 times	52
Market Economy Institute of RAS	300	9	26	91	350	35
G.P. Luzin Institute of Economic Problems of Kola Scientific Centre of RAS	197	10	16	83	5 times	56
Institute of Problems of Regional Economy of RAS	149	11	8	65	8 times	29
Institute of Agrarian Problems RAS	135	12	8	50	6 times	12
Saint Petersburg Institute for Economics and Mathematics of RAS	119	13	15	26	173	12
Institute of Socio-Economic Studies of Dagestan Scientific Centre of RAS	108	14	11	44	4 times	22
Institute of Socio-Economic and Energy Problems of the North, Komi Scientific Centre of the Ural Branch of RAS	100	15	9	41	4.6 times	17
Sochi Scientific Research Centre of RAS	70	16	4	8	200	12
Institute of Economic Studies of Karelian Research Centre of RAS	62	17	1	37	37 times	18
Institute of Social and Economic Research, Ufa Scientific Centre of RAS	42	18	4	24	6 times	14
Institute of Socio-Economic and Humanities Research of the Southern Scientific Centre of RAS	15	19	0	7	-	13

Table 3 presents the calculated RSCI ranking position of the institutes of the Economic Section of SSD RAS according to the Hirsch index.

Three of the Institutes of the Economic Section of SSD RAS have high values of the Hirsch index in RSCI (from 20 and above): RAS Institute of Economics (23), Institute of Economic Forecasting, RAS (22), Central Economics and Mathematics Institute of RAS (21).

Five institutions demonstrate the average value of the Hirsch index (10 to 20); eleven – less than 10.

The Hirsch index of the Institute of Socio-Economic Development of Territories of RAS makes up 12. The given indicator implies that RSCI database contains not less than 12 research papers of the Institute, each of which has been cited 12 times or more. Such value of the Hirsch-index (12) is accepted in scientometric national practice as the stability indicator of the quality of the scientific output of the research team.

As has been noted above, the citation indexes can be used for evaluating the organization's contribution to the development of the region's scientific potential. In this case data on the publication activity is presented as the information about the need for the researcher's activities and the significance of the results of their activities.

The study of the data presented in RSCI enabled the authors to determine the ISEDT RAS position with regard to the publication

Table 3. Hirsch index by the institutions of the Economic Section of SSD RAS (as of October 25, 2013)

Institution	h-index	Rank position
RAS Institute of Economics	23	1
Institute of Economic Forecasting, RAS	22	2
Central Economics and Mathematics Institute of RAS	21	3
Institute of Social and Economic Studies of Population at the Russian Academy of Sciences	16	4
Institute of Economics and Industrial Engineering, the Siberian Branch of RAS	15	5
Institute of Economics, the Ural Branch of RAS	14	6
Institute of Socio-Economic Development of Territories of RAS	12	7
Market Economy Institute of RAS	10	8
Economic Research Institute FEB RAS	9	9
G.P. Luzin Institute of Economic Problems of Kola Scientific Centre of RAS	7	10
Institute of Problems of Regional Economy of RAS	6	11-13
Saint Petersburg Institute for Economics and Mathematics of RAS	6	11-13
Institute of Socio-Economic and Energy Problems of the North, Komi Scientific Centre of the Ural Branch of RAS	6	11-13
Institute of Agrarian Problems RAS	5	14
Institute of Economic Studies of Karelian Research Centre of RAS	4	15-18
Institute of Socio-Economic Studies of Dagestan Scientific Centre of RAS	4	15-18
Institute of Social and Economic Research, Ufa Scientific Centre of RAS	4	15-18
Sochi Scientific Research Centre of RAS	4	15-18
Institute of Socio-Economic and Humanities Research of the Southern Scientific Centre of RAS	3	19

Table 4. Main scientometric indicators of the Vologda Oblast state research organizations and higher education institutes in RSCI

Institution	Publications for 2008–2013		Citation indicator for 2008–2013		Average number of publications per 1 author		Average number of citations per 1 author		Hirsch index	
	Number	Rank position	Number	Rank position	Number	Rank position	Number	Rank position	Value	Rank position
Cherepovets State University	1203	1	398	3	5.76	6	1.40	3	8	3-4
Institute of Socio-Economic Development of Territories of RAS	863	2	1004	1	6.12	5	2.59	2	12	1
Vologda State Teachers' Training University	650	3	356	4	4.42	7	0.90	6	10	2
Vologda State Technical University	643	4	453	2	3.74	8	0.97	5	8	3-4
Vologda Institute of Law and Economics	399	5	73	5	11.10	2	1.10	4	4	5
Vologda State Dairy Farming Academy named after N.V. Vereshchagin	317	6	70	6	8.71	4	0.63	7	3	6
North-West Research Institute of Milk and Grass Farming of RAAS	58	7	25	8	3.05	9	0.50	8-9	2	7-9
Vologda branch of the Saint Petersburg State University of Economics	57	8	0	12-14	9.00	3	0.00	11-12	0	12-13
Vologda Institute of Business	41	9	1	11	11.50	1	0.50	8-9	1	10-11
Cherepovets Military Engineering Institute of Radioelectronics	20	10	11	9	1.83	12	0.42	10	2	7-9
Vologda Institute of Education Development	19	11	2	10	-	-	-	-	1	10-11
Vologda Oblast Universal Scientific Library named after V.I. Babushkin	11	12	0	12-14	2.50	10-11	0.00	11-12	0	12-13
Vologda Oblast Hygiene and Epidemiology Centre	2	13	33	7	2.50	10-11	10.00	1	2	7-9
Vologda Branch of State Research Institute of Lake and River Fisheries	0	14	0	12-14	-	-	-	-	-	-

activity, as compared with other research institutions and institutions of higher professional education, located on the territory of the Vologda Oblast. It should be noted that by the number of the research organizations the Vologda Oblast is exceeded by the Arkhangelsk and Murmansk oblasts, the republics of Karelia and Komi, Leningrad Oblast, let alone Saint Petersburg, included in the Northwestern Federal District.

Yet the data, reflected in RSCI resources, makes it possible to state that ISEDT RAS has reached the leading position among the Vologda Oblast institutions of science and higher education by the main scientometric parameters (*tab. 4*).

Thus, the results of the conducted analysis enable the authors to make the following conclusions.

First of all, the study of the RSCI accumulated resource confirms the importance of scientometric indicators for the contemporary scientist individually or for scientific organizations as a whole. This is also dictated by the system of science management, evolving in Russia.

Secondly, the emergence and development of the Russian-speaking resource that is RSCI, stimulates the interest of the Russian scientists, supervisors and specialists to use it in order to increase the efficiency of research activities.

Thirdly, the effectiveness and the efficiency of the activities of individual research organizations can be evaluated with applying the data of the national citation index. Thus, these data suggest that the Institute of Socio-Economic Development of Territories of RAS has been increasing its publication activity, improving the quality of publications, their scientific and practical significance.

Fourthly, RSCI resources have been used inactively yet. In this regard, additional organizational and economic measures are required. This applies, in particular, to enhancing the professionalism of specialists, involved in the formation of the Russian Science Citation Index, the level of database storage, the frequency analysis of the published knowledge results.

The development and comparison of scientometric measurements open new dimensions in scientific activities, provide an opportunity to adjust the direction and content of the activities, compare their results with the results of other studies.

However, it should be taken into account that the information presented both in RSCI and foreign citation indexes cannot be used for the absolute evaluation of the scientific activities of individual scientists and institutions as a whole.

These indicators, considering the specifics of scientific activities not always objectively, can be applied along with qualified expert assessment. Being dynamic, the indicators change quite rapidly, making the estimate, based on these data, objective only for a specific time period.

Nevertheless, the results of the analysis, conducted by the authors, with regard to the publication activity of scientific institutions indicate that the work associated with the registration of the publications in RSCI information and analysis system, is extremely important. At present, it is obviously required to present the results of the institutions' research activities in RSCI more widely, in order to describe and assess objectively and fully the scientific potential of the regions and the country as a whole.

References

1. Bredikhin S.V., Kuznetsov A.Yu., Scherbakova N.G. Citation analysis in bibliometry. Novosibirsk: Institute of Computational Mathematics and Mathematical Geophysics SB RAS, NEICON, 2013
2. Dyachenko Ye.L. Science internationalization: disciplinary differences. Sociological research. 2013. No. 8. P. 101-110.

3. Garfield E. Is it possible to reveal and evaluate scientific achievements and scientific productivity? Herald of the Academy of Sciences of the USSR. 1982. No.7. P. 42-50.
4. Zhukova I.A. Science citation index – the transformation of application practices (from the tool of reference retrieval to the assessment tool). Sociology: methodology, methods, mathematic simulation. 2012. No.34. P. 054-080.
5. Zaichenko S.A. The application of statistical methods and indicators in the scientific activities of the higher education institute. Voprosy statistiki. 2008. No.1. P. 31-42.
6. Kalenov N.Ye., Selyutskaya O.V. Certain evaluations of the quality of the Russian Science Citation Index on the example of the journal "Russia's information resources". Russia's information resources. 2010. No. 6. P. 2-13.
7. Kasimova R.G. Scientometric indicators as one of the indicators of the quality if the scientific production. Naukovedenie. 2002. No.1. P. 132-143.
8. Kvelidze-Kuznetsova N.N., Morozova S.A. Bibliometric resources as a tool for analyzing and evaluating the scientific activities. Enhanced training and certification of top-qualification academic personnel: collected works. Education and Methodics Association of Russian higher education establishments on teacher education trends; Scientific-methodological council on top-qualification personnel training. Herzen State Pedagogical University of Russia. Saint Petersburg, 2009. Issue 2. P. 182-207.
9. Kirillova O.V. Scientific journals editing according to international standards. Scopus database expert recommendations. Moscow, 2013. Part 1.
10. Markusova V.A., Ivanov V.V., Varshavskiy A.Ye. Bibliometric indicators of Russian Science and the Russian Academy of Sciences (1997–2007). Herald of the Russian Academy of Sciences. 2009. V. 79. No.7. P. 483-491.
11. Mikhailov O.V. Criteria and parameters for the objective evaluation of the quality of scientific activities. Herald of the Russian Academy of Sciences. 2011. V. 81. No.7. P. 622-625.
12. On approving the Innovation Development Strategy for the Russian Federation until 2020: Resolution of the Russian Government as of December 8, 2011 No.2227-p. Available at: http://base.consultant.ru/cons/cgi/online.cgi?req=doc;base=LAW;n=123444
13. On Measures to Implement State Policy in Science and Education: RF Presidential Decree as of May 7, 2012. No.599. Rossiyskaya Gazeta. May 7, 2012. Available at: http://www.rg.ru/2012/05/09/nauka-dok.html
14. Pislyakov V.V. Evaluation of scientific knowledge based on citation indexes. Sociological Journal. 2007. No. 01. P. 128-140.
15. Russian Science Citation Index. Scientific electronic library. Available at: http://elibrary.ru/projects/citation/cit_index.asp
16. Tikhonov V.V. Historical science through the prism of the Russian Science Citation Index (RSCI). Available at: http://mkonf.iriran.ru/papers.php?id=42
17. Glänzel W. On the opportunities and limitations of the H-index. Sci. Focus. 2006. V. 67. No. 1. P. 10-11.
18. Hirsch J.E. An index to quantify an individual's scientific research output. Proc. of the National Acad. Sci. USA. 2005. V. 102. No. 46. P. 16569-16572.
19. Lehnmann S., Jackson A.D., Lautrup B.E. Measures and mismeasures of scientific quality. Available at: http://arxiv.org/abs/physics/0512238.
20. Sidiropuolos A., Katsaros D., Manolopoulos Y. Generalized Hirsch h-index for disclosing latent facts in citation networks. Scientometrics. 2007. V. 72. Iss. 2. P. 253-280.

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On the compliance of a modern scientific journal with international quality standards

The article considers the issue concerning the degree of compliance of a modern scientific publication with international quality standards using the example of the scientific journal "Economic and social changes: facts, trends, forecast". The authors have introduced the concept "international quality standard of a scientific journal", and have given its definition. They have analysed the journal's issues for 2013, revealed the degree of its compliance with international quality standards, and identified certain goals and objectives for the "development" of the journal in 2014.

International quality standard of a scientific journal, "development" of a journal, questionnaire survey, Scopus, RSCI, impact factor.

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Some key decisions on reforming the system for training the specialists of higher academic qualifications have been adopted and are being implemented in the current year. The website of the Higher Attestation Commission under the Ministry of Education and Science of the Russian Federation contains the draft order on the approval of the Regulations for forming the list of peer-reviewed scientific titles that publish the main research findings of dissertations for a candiate's or doctor's degree. If this document is approved, the existing requirements for serial

research titles proposed for inclusion in the Higher Attestation Commission list (VAK list) will be revised considerably.

In the light of the above, the issue concerning the degree of compliance of modern domestic scientific journals with international quality standards becomes especially relevant. This article considers this issue on the example of the journal "Economic and social changes: facts, trends, forecast".

It should be noted that the concept of "international quality standard of the scientific journal" does not exist as such. There are several more or less homogenous requirements that the largest foreign databases set out for scientific periodicals. In accordance with the current criteria for inclusion of scientific publications in the VAK list, a journal is automatically included in this list provided that the journal meets the following minimum requirement: it has been registered with an authoritative foreign database. Taking into account this fact, we consider it possible to introduce the notion "international quality standard of the scientific journal". Under this term we understand the compliance of the journal with the requirements of foreign and national databases set out for scientific periodicals.

In this article we take as a basis the requirements to the titles that are suggested for inclusion in the Scopus database.

In order to structure the analysis of the degree of compliance of the scientific journal "Economic and social changes: facts, trends, forecast" with international quality standards, the specified requirements have been grouped according to the principle of thematic community in three major blocks:

Block 1. Compliance with the requirements of scientific nature of publications.

1.1. Existence of peer review.

1.2. Relevance of published articles to the remit of the journal.

1.3. Rigorous system of selection of submitted manuscripts.

1.4. Membership of prominent researchers from different countries and Russia's regions in the journal's editorial council and editorial board.

1.5. "Geographic diversity of authors".

Block 2. Compliance with execution requirements.

2.1. Compliance with bibliographic criteria.

2.1.1. Assigning of the UDC and LBC indices to each published article.

2.1.2. List of references in the Roman alphabet in each article.

2.2. Compliance with the adopted requirements for the structuring of articles.

2.2.1. A structured abstract translated into the English language in the volume of about 1800 printed characters for each article.

2.2.2.Keywords translated into English.

2.2.3.Information about the authors translated into English.

Block 3. Compliance with the requirements of openness of the title.

3.1. English-language site of the journal.

3.2. Free Internet access to the journal's full-text articles.

3.3. Placement of the journal's issues in domestic and foreign databases and network journal indices.

3.4. Feedback from the readers.

The analysis of the degree of compliance of the scientific journal "Economic and social changes: facts, trends, forecast" with interna-tional quality standards showed the following.

All the manuscripts submitted to the editorial office undergo obligatory preliminary examination. An authoritative scientist, who is the member of the Journal's Editorial Board, is chosen as an expert. Academic novelty of the article, the originality of the author's research findings, and their relevance to the remit of the journal are assessed at this stage.

If the conclusion is positive, the manuscript is sent for review. In accordance with the Peer Review Regulations of the journal "Economic and social changes: facts, trends, forecast" dated May 17, 2011, approved by ISEDT RAS Director, all the submitted manuscripts are subject to mandatory double peer review.

As of December 2013, the Journal's Editorial Board consists of 23 established Russian and foreign researchers, including RAS Academicians and Corresponding Members, Doctors of Sciences, Directors of RAS Institutes, prominent representatives of foreign science. The geographic distribution of the Editorial Board members is quite extensive. For instance, among 23 scientists comprising the Editorial Board of the Journal, 15 are the Russians and 8 – foreigners. The "Russian part" of the Editorial Board is represented by the scientists from three Federal Districts and two Federal Cities; the "foreign part" – by researchers from four foreign countries.

The Editorial Board includes such prominent Russian and foreign scientists as RAS Academicians V.L. Makarov, V.V. Ivanter, V.V. Okrepilov, A.I. Tatarkin, Academicians of the NAS of Belarus P.A. Vityaz, P.G. Nikitenko, Professors J. Sapir, M. Kivinen, Zhang Shuhua, Wu Enyuan.

The geographic distribution of the authors publishing in the Journal is also quite diverse. For example, 87 articles were published in 2013, among which 73 articles by the Russian authors and 14 – by foreign scientists *(tab. 1)*. The geographic distribution of the Russian authors is rather extensive and includes five Federal Districts and two Federal Cities. Foreign scientists, whose articles have been

Table 1. Geographic distribution of the authors, who published their articles in the journal "Economic and social changes: facts, trends, forecast" in 2013

Total number of publications	Country of residence of the author	City/region/okrug	Settlements	Number of published articles	Total number of published articles
87	Russia	Northwestern Federal District	Apatity	10	49
			Arkhangelsk	1	
			Vologda	25	
			Murmansk	1	
			Petrozavodsk	2	
			Syktyvkar	10	
		Central FD	Kostroma	1	1
		Volga FD	Izhevsk	1	8
			Perm	3	
			Saransk	1	
			Ufa	3	
		Siberian FD	Kemerovo	2	3
			Krasnoyarsk	1	
		Ural FD	Yekaterinburg	2	2
		Federal City	Moscow	5	5
		Federal City	Saint Petersburg	5	5
	Foreign countries	Azerbaijan	Baku	1	1
		Belarus	Minsk	7	7
		Kazakhstan	Almaty	1	1
		China	Nanchang	3	3
		Poland	Kraków	1	1
		Ukraine	Kyiv	1	1

published in the journal "Economic and social changes: facts, trends, forecast" in 2013, are citizens of Azerbaijan, Belarus, Kazakhstan, China, Poland, and Ukraine.

A significant amount of all the "domestic publications" in the Journal belongs to the scientists living in the cities of the Northwestern Federal District (67.1%). Half of all the "foreign publications" belongs to the colleagues from Belarus (50%).

Thus, the Journal meets all the necessary academic criteria, which is indirectly confirmed by its inclusion in the RF VAK List.

The next criterion of compliance with international quality standards is the title's compliance with the adopted execution requirements.

Currently each article published in the Journal is assigned the UDC and LBC bibliographic description indices, and starting from the first issue of 2014 each article will be provided with references in the Roman alphabet, and with a structured abstract in Russian and English up to one page of text, keywords, and information about the author; each article will be assigned a DOI. Besides, since 2009, according to the decision of the Journal's co-founder institutes, the printed English version of the Journal has been issued. All of the above will soon bring the title into conformity with international execution requirements.

As of December 2013, the journal "Economic and social changes: facts, trends, forecast" meets most of the criteria of openness of the title. Full-text electronic versions of articles and all other published materials are available through free access on the official website of the Journal in the Internet (http://esc.vscc.ac.ru) and in the Scientific Electronic Library eLIBRARY.ru, which is the basis for the information-analytical system RSCI (Russian Science Citation Index). The process of creating the English version of the Journal's website is currently at its final stage.

Information about the articles published in the Journal regularly goes into the VINITI RAS database, international information systems Ulrich's periodicals directory, Index Copernicus, Google Scholar. In 2014 it is planned to register the title with the Directory of Open Access Journals (DOAJ).

The criterion of the availability of feedback from the readers is not included in the list of official requirements of international databases to scientific periodicals. However, we find it expedient to include this criterion in the list, as it appears to be a vital tool for monitoring the Journal's quality.

Feedback from the readers, the members of the Editorial Council and the Editorial Board of the journal "Economic and social changes: facts, trends, forecast" is provided by annual questionnaire survey.

93 respondents took part in the latest survey of April 2013, among them: 11 members of the Editorial Council and 82 scientific associates (including ISEDT RAS researchers).

The responses were systematized and analyzed. Some of the results of the survey are given below.

For instance, 78.5% of the respondents evaluated the changes in the Journal as positive, 14% found it difficult to answer, 7.5% did not notice any significant changes.

The level of materials published in the Journal was assessed as high and sufficiently high by 92.5% of the respondents, and as average – by 7.5% of the respondents.

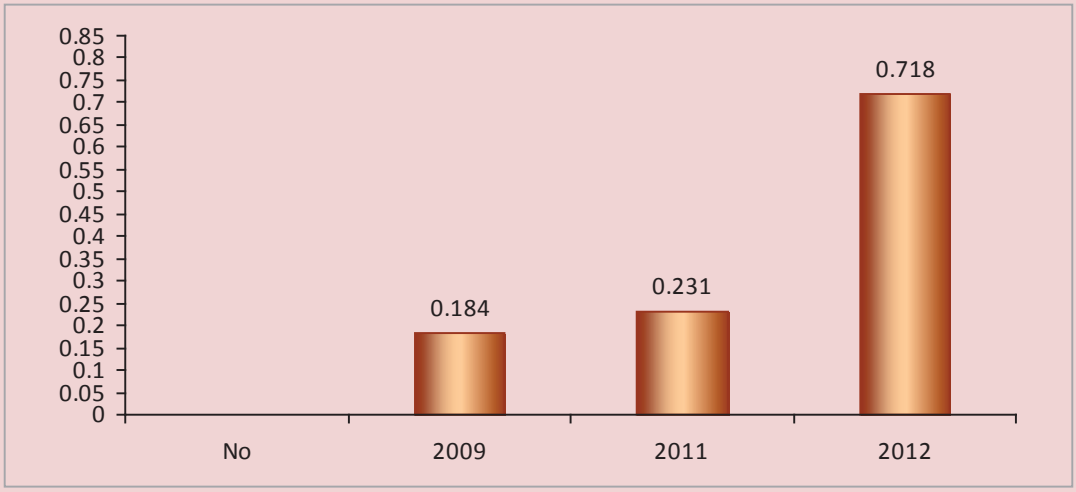
The survey shows that the articles published in the sections "Branch-wise and regional economy", "Social development", and "From the chief editor" arouse the greatest interest among readers (8.7 points, 8.5 points and 8.4 points, respectively).

Currently the journal "Economic and social changes: facts, trends, forecast" is published in four versions: Russian-language printed, Russian-language electronic, English-language printed, and English-language electronic.

Table 2. Respondents' answers to the question: "In your opinion, how much in demand are the various versions of the Journal?", as a percentage of the total number of respondents

Answer option	Version of the Journal			
	Russian-language printed	Russian-language electronic	English-language printed	English-language electronic
Very much in demand	34.4	46.2	5.4	10.8
In demand	55.9	44.1	25.8	43.0
Not much in demand	5.4	4.3	44.1	28.0
Not in demand at all	0.0	1.1	18.3	10.8

Data on the impact factor of the journal "Economic and social changes: facts, trends, forecast" in the Russian Science Citation Index in 2008–2012



The Russian-language printed and electronic versions remain the most popular *(tab. 2)*.

Filling in the questionnaire, the respondents made a number of suggestions on the improvement of the Journal's quality.

According to the respondents, it would be expedient to add such sections as "Economic and social forecasts", "Articles of economists from developing countries", "Institutional environment of regional development", "Civil society", "Personality capital", "Energy efficiency issues".

Speaking about the prospects of bringing the Journal to a higher level, the respondents proposed to use Internet resources more extensively, to carry out information and advertising activities with other economic scientific journals in Russia and the CIS, to expand the range of authors and attract the leading domestic and foreign specialists in the field of social sciences as authors of the articles.

Taking into account the opinions of the Journal's readers makes it possible to promptly adjust the Journal's "development" policy implemented by its Editorial Council. This practice has a most positive effect on improving the qualitative characteristics of the Journal. For example, the improvements include the increase in the number of references to the articles published in the Journal and, consequently, the increase in the Journal's impact factor *(figure)*. The figure below shows the change in the Journal's impact factor for the period from 2008 to 2012. The impact factor for 2013 is not given due to the lack of appropriate data in RSCI.

The data about the impact factor of the Journal and its place in the general list of economic publications registered with RSCI are not fixed and can be recalculated annually if the number of citations increases, and new titles are added.

The analysis of opinions expressed by the survey participants made it possible to set out new tasks for the Journal's "development". The solution of these tasks in the short term will bring the title in full compliance with international quality standards.

We can conclude that as of December 2013 the scientific journal "Economic and social changes: facts, trends, forecast" fully meets the requirements for scientific publications, in the greater degree the requirements of execution and openness. In the coming 2014 the Journal's Editorial Council is planning to implement the headline goal of the Journal's "development" – to bring it to full compliance with international quality standards, to prepare and submit an application to suggest the title for inclusion in Scopus.

To achieve this goal it is important to solve the following tasks.

- Provide references in the article in the Roman alphabet.
- Publish a structured abstract of the article in Russian and English up to one page of text, keywords, and information about the author.
- Assign DOI to the Journal. Assign DOI to each published article beginning from 2014.
- Complete the development of the English version of the Journal's website.
- Register the publication with the Directory of Open Access Journals (DOAJ).

YOUNG RESEARCHERS

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Issues of state-society relations

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The issues of state-society relations that have become especially acute in the conditions of the world financial and economic crisis cannot be neglected, because it can trigger the growth of protest moods. This calls for the necessity to provide public authorities with a constructive, science-based programme. In 2013 the Institute of Socio-Economic Development of Territories of RAS (ISEDT RAS) carried out a research aimed at analyzing whether the state policy corresponds to the main requirements of the modern Russian society.

In order to achieve this goal, the following tasks were set out: to review the state of the civil society in Russia and in the Vologda Oblast, in particular after the 2008 global financial crisis; to identify the socio-economic and socio-political problems, which arouse main concern among the population of the Russian Federation and the Vologda Oblast in the post-crisis period; to describe the measures undertaken by the government to address these issues.

The authors came to the following conclusions:

1. Civil society both at the federal and at the regional levels is at the stage of formation; nevertheless, it possesses significant potential. This has been proved by the protest actions (December 2011) that made it clear to the authorities that it was necessary to respond to the demands of the growing civil society.

2. The citizens of Russia and the region express their concern at similar issues. At the same time, the Vologda Oblast residents compared with the Russians in general express more concern about the condition of the housing sector, and less concern – about socio-political (corruption), ecological and ethical issues.

3. After V.V. Putin was elected President in March 2012, the social policy was focused on handling those issues that have long become vital in the society. However, the reforms are characterized by the discrepancy between the declared and the actual objectives, by the declarative nature in many aspects, by shifting the responsibility to the regional authorities.

Therefore, the authors suggest the implementation of the following measures: to revise the approach to many issues at which the people express their concern; to abandon imitation in the execution of reforms; to promote further development of civil society.

Civil society, authority, public opinion monitoring, protest potential, the level of trust.

The large-scale character of civil processes has become a characteristic feature of the global world of the 20th and early 21st century. The multitudes of people, that had not previously possessed full rights, entered the sphere of civil relations and became involved in economic, social, and political life in their countries. The democracy of the minority started to transform into the democracy of the majority [11, p. 16].

Population is beginning to play an increasingly important role in the socio-political life. This process has two consequences: first, the government cannot ignore the citizens' opinion on the most acute socio-economic and political issues any longer. Second, it became necessary to provide public authorities with a constructive, science-based programme that would stipulate that the authorities address sociology on a regular and planned basis [2, p. 26].

The global financial crisis that started in 2008 has had a significant impact on the Russian society; moreover, its negative consequences were not only of economic nature. The crisis has questioned the adequacy of the ideological and political doctrine of liberalism, according to which wealth should defeat poverty through economic growth based on free and open market. It is this open market that has brought the world economy to the brink of disaster.

Therefore, in 2008 it became clear that the "invisible hand" of the market should be backed by the "visible hand" of the state [3, p. 12].

In other words, the global financial crisis has aggravated the problems of state-society relations. Ignoring them today creates the actual danger of the rapid increase of protest moods, which may lead to a further split-up of interests of the population and authorities.

As for scientific community, it does not stand aloof from the problems of state-society relations. In 2013 the Institute of Socio-Economic Development of Territories of RAS conducted a study for analyzing the conformity of the state policy with the main requirements of the modern Russian society.

To achieve this goal the following tasks were set:

1. To analyze the condition of the civil society in Russia and the Vologda Oblast after the 2008 global financial crisis.

2. To identify the socio-economic and socio-political problems, which are of primary concern among the population of the Russian Federation and the Vologda Oblast in the post-crisis period.

3. To analyze the nature of the activities undertaken by the government to handle the most acute issues of modern civil society.

The issues concerning the essence, functioning and development of civil society have

been developed profoundly by foreign scientists. The systemic approach to civil society dates back to the works of T. Parsons, D. Easton, G. Almond, K. Popper, H. Anheir, M. Glasius and M. Kaldor, who developed the concept of global civil society that is a space of ideas, values, institutions, organizations, networks and individuals, that are between the family, state and market and that operate across the borders of societies, countries and economies [24].

The latest works of foreign researchers (J. Bartelson [22], A. Benessaieh [23], J. Ruggie, [25]) are devoted to the conceptual foundations and prospects of civil society in the context of sustainable development. Such scientists as J.L. Cohen, C. Schmitt, R. Schmitter, J. Schumpeter, J. Keane explore the major institutions of civil society, the forms of their interaction with the state [10].

The research into the civil society in the post-Soviet Russia is characterized by a variety of disciplinary and methodological approaches. The works of the Russian social scientists emphasize that this category has not been comprehended with the necessary theoretical clarity, conceptual description or a thorough assessment of its condition. The most comprehensive studies of civil society in Russia are as follows:

1. "Civil Society Index – CIVICUS" that is measured by the National Research University "Higher School of Economics". This index, according to the methodology of the project, takes into account 5 key indicators: quantitative and qualitative characteristics of nonprofit organizations (NPOs), the degree of involvement of the population in their activities, opinions of citizens, experts and representatives of public organizations concerning the impact of such associations on handling different social issues, the values inherent in civil society, as well as the state of socio-economic, cultural and external conditions affecting the life of civil society [21].

2. A study of the state of civil society, carried out by the Institute of Socio-Political Research [8]. Here, the main parameters are the opinions of people concerning the degree of development of public organizations, political parties, self-government, legal state, democracy, etc.

3. Extensive information on this subject is contained in the reports of the Public Chamber "On the state of civil society in the Russian Federation". The authors of the reports regard nonprofit organizations, the system of local self-government, and the media in as the components of civil society [5].

Thus, for all the diversity of theoretical and methodological approaches to the study of civil society, it is generally acknowledged that nonprofit organizations constitute its institutional framework; and the most important condition for its development is found in the level of social activity of people, their readiness to consolidation, their attitude to NPOs.

The main conclusion that is made by researchers consists in the following: civil society in Russia cannot be estimated unambiguously as "good" or "bad", it is in the stage of formation, it has its own disadvantages, as well as some positive qualities. In particular, its weaknesses include the following:

1. People tend to trust only their community, and they rarely agree to social interaction. At the same time, there has been a tendency toward a slow recovery of solidarity consciousness and practices.

2. The authority of nonprofit organizations in the eyes of the population and the readiness of citizens to participate in their activities remain low. Civil participation is largely informal in its nature (informal volunteering, informal donations).

3. Civil society is poorly integrated into the relations with the state; it does not act as a guide that communicates the population's values to the elites; consequently, political decisions rarely take into account the opinion of ordinary citizens.

The strong points of civil society are as follows:

1. A relatively high level of organization (51.4%) that is the evidence of institutional sustainability. It should be noted that positive trends are observed in this component. Thus, according to Rosstat, a significant growth in the number of NPOs has been registered: in 2008 their total number was 73.2 thousand [14, p. 57], in January 2013 – 85.2 thousand [15, p. 66].

2. Considerable potential. Thus, the social base of civil society in Russia (people involved in the social practices of civil society or focused on such participation) is not less than 90% of its adult population.

What is the state of civil society in the region? According to the public opinion monitoring carried out by ISEDT RAS[1], only one in four residents of the Vologda Oblast takes active part in the public and political life (27–23%; *tab. 1*). On the other hand, the potential for civil participation more than twice exceeds the degree of actual participation: half of the oblast's residents refer themselves to those who are ready and rather ready to unite with others for any common activities for protecting their own interests (43%). Based on these data, we can argue that there is certain potential for the development of civil society, but it remains unrealized.

909 public associations were registered in the Vologda Oblast in 2012, 908 – in 2011, 907 – in 2010. Number of NPOs for the period from 2010 to 2012 has increased from 762 to 801, or by 5%. At the same time, the number of positive decisions on the state registration of NPOs in 2012 decreased by 10%, and the number of denials of state registration increased by 47% in comparison with 2011 [4, p. 23].

[1] The public opinion monitoring is held by ISEDT RAS once in every two months with the participation of 1500 respondents aged 18 and older in Vologda, Cherepovets and 8 districts of the Vologda Oblast. The method of the survey is a questionnaire poll by place of residence of respondents.

The situation concerning the attitude of population toward nonprofit organizations is less optimistic: in 2013, the vast majority of respondents were neither members nor volunteers of any NPO (88%), one in three knows nothing about the activities of NPOs (34%), and one in four believes that NPOs have no influence on the oblast's life (26; *tab. 2*).

Therefore, the condition of civil society in the region is contradictory. On the one hand, according to the official statistics, the situation with NPOs is quite stable. On the other hand, the degree of people's participation in the activities of NPOs is low; in addition, there is skepticism in people's assessments of the impact that nonprofit organizations exert on the life of the society. Despite the fact that quite a few citizens are potentially ready to unite with others for protecting certain common interests, this potential remains unrealized [4, p. 19].

Further development of civil society requires the following:

1. Enhancement of people's motivation to take an active part in the public life.

2. Creation of conditions for the consolidation of various population groups and the society in defending the main political, humanitarian and civil values.

3. Search for mechanisms of interaction between the society and the state.

4. Expansion of the scope of activities of NPOs.

Given the new circumstances, the Russian state has to take into consideration the public opinion on handling the issues that are of primary concern among the citizens. According to the Institute of Socio-Political Research under the Russian Academy of Sciences (ISPR RAS), the range of these problems in 2008–2012 included the following:

– socio-economic: high cost of living (51%), increase in tariffs on housing and utilities services (43 %), increase in food prices (29%), unemployment (24%), division of the society into the rich and the poor (24%; *tab. 3*);

Table 1. Indicators reflecting the activity of the Vologda Oblast population's participation in the public life, as a percentage of the number of respondents*

Answer option	2011	2013	Dynamics, 2013 to 2011 (+ –)
How would you assess the degree of your participation in the public and political life?			
Active and sooner active	27.1	23.0	-4
Passive and sooner passive	48.3	49.8	+2
Would you unite with other people for certain joint activities to protect your common interests?			
I am willing or sooner willing	47.1	43.0	-4
I am not willing or sooner not willing	25.2	19.9	-5

* The question was included in the survey only in 2011 and in 2013.
Source: data of the public opinion monitoring carried out by ISEDT RAS.

Table 2. Questions concerning the attitude of the Vologda Oblast population to nonprofit organizations, as a percentage of the number of respondents

Answer option	2008	2009	2011	2013	Dynamics, 2013 to 2008 (+ –)
Do you know anything about the activities of nonprofit (public) organizations?					
Yes, I do, from personal experience	8.9	12.3	8.1	12.7	+4
I hear something	40.7	40.3	39.7	34.7	-6
No, I know nothing	38.7	24.5	34.0	33.6	-5
Do you participate in the activities of nonprofit organizations (regional offices of political parties, trade unions, religious organizations, human rights organizations, charitable organizations, etc.) or are you a member of any of them?					
I am a member of an organization	8.2	7.0	5.4	4.5	-4
I participate in it as a volunteer	11.3	9.9	10.4	6.2	-5
I do not participate in any of them and I am not a member of any of them	80.5	83.5	84.2	88.2	+8
*In your opinion, to what extend do nonprofit (public) organizations influence the life in the oblast?***					
The influence is great	n/a	5.8	6.5	4.7	-1
The influence is insignificant	n/a	18.4	29.7	22.4	+4
They do not have any influence	n/a	22.3	26.5	26.0	+4

* The question was not included in the survey in 2010 and 2012.
** The question was not included in the survey in 2008.
Source: data of the public opinion monitoring carried out by ISEDT RAS.

Table. 3. Problems of modern life that are of concern to Russia's residents, as a percentage of the number of respondents

Answer option	November 2008	December 2012	Dynamics, 2012 to 2008 (+ –)
High cost of living	58	51	-7
Arbitrariness of officials	28	44	+16
Increase in tariffs on housing and utilities services	35	43	+8
Crime rate	32	31	-1
Increase in food prices	36	29	-7
Moral and cultural decadence	29	26	-3
Ecological situation	32	24	-8
Unemployment	23	24	+1
Division of the society into the rich and the poor	22	24	+2
Your security and security of your relatives	24	24	0

Source: data of the Centre for Strategic Social and Socio-Political Research under ISPR RAS.

– socio-political: arbitrariness of officials (44%);

– social: crime rate (31%), personal security (24%);

– problems of morality: moral and cultural decadence (26%);

– ecological situation (24%).

So, the most relevant problems for the Russians are connected mainly with their financial situation. The public opinion monitoring carried out in the Vologda Oblast shows the similar data *(tab. 4)*. Inflation, low standards of living, poverty, division of the society into the rich and the poor – these very problems are most frequently pointed out by local residents as the most acute ones. In 2008, their relevance would be logical to explain by the influence of the global financial crisis that led to the loss of jobs, deterioration of people's financial situation. However, financial problems remain the most relevant for the population in 2012 as well. Moreover, compared with 2008, there has been an increase in the share of the region's inhabitants (from 31% up to 38%), who think that social differentiation is the most acute problem of modern life. In other words, people's expectations do not change; public demands have long-term character, which may be a factor in the growth of social tensions and protest moods.

Consequently, the citizens of Russia and the region are concerned with similar issues (inflation, division of society into the rich and the poor, unsatisfactory condition of the housing and utilities sector, crime rate). At that, as the surveys' results prove, the Vologda Oblast residents, compared with the Russians in general, are concerned a bit more about the condition of the housing sector, and less about socio-political problems (corruption), ecological and ethical problems.

Let us have a closer look at the most important problems according to the estimates of the region's population. More than half of its residents are concerned about inflation rate (55%). According to the official statistics, the consumer price index has increased by 41.4% during the 2008–2011 period *(tab. 5)* [16, p. 334]. Real disposable money incomes of the population have decreased by 3% for the same period [16, p. 85].

This, in turn, highlights the issue of poverty and low standard of living. Thus, the share of people with incomes below the subsistence level

Table 4. What problems of modern life do you consider the most acute for Russia in general?, as a percentage of the number of respondents*

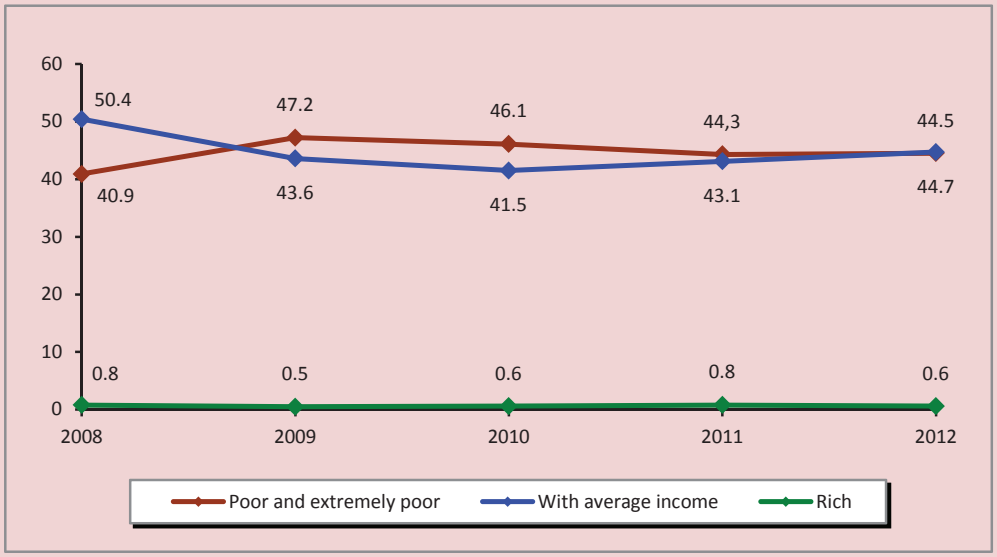
Answer option	2008	2012	Dynamics, 2012 to 2008 (+ –)
Inflation	56.3	55.3	-1
Low standard of living, poverty	41.4	43.2	+2
Division of society into the rich and the poor	31.4	37.5	+7
Problem of provision of housing, low availability of housing	36.3	28.6	-7
Growth of alcoholism	26.5	27.3	0
High crime rate, insecurity from organized crime	28.4	25.5	-2
Poor quality of engineering infrastructure (public utilities, roads, transport, etc.)**	-	25.3	-
Social insecurity of citizens	24.8	22.3	-3
Corruption, bribery	17.5	19.8	+2
Economic instability, shutdown of enterprises	16.9	16.5	0

* The problems are presented in decreasing order, according to the results of the 2012 survey.
** The question has been included in the survey since 2010.
Source: data of the public opinion monitoring (for the Vologda Oblast) carried out by ISEDT RAS.

Table 5. Dynamics of inflation and of the real disposable incomes of the Vologda Oblast population in 2008–2011

Indicator	2008	2009	2010	2011	Dynamics, 2012 to 2008 (+ –)
Consumer price index (in December as a percentage of that in December of the previous year)	114.3	107.2	109.2	105.7	+41
Real disposable incomes of population (as a percentage of those in the previous year)	98.7	90.4	108.6	100.1	-3
Source: Federal State Statistics Service.					

Figure 1. Which category do you identify yourself with?, as a percentage of the number of respondents



Source: data of the public opinion monitoring carried out by ISEDT RAS.

Table 6. Dynamics of indicators of the Vologda Oblast population's differentiation by to their incomes in 2008–2011

Indicator	2008	2009	2010	2011
Ratio of the average income of the richest 10% to the poorest 10%, times	12.5	11.4	11.7	11.3
Gini coefficient (incomes concentration incex)	0.381	0.369	0.372	0.368
Source: Federal State Statistics Service.				

in the total population of the region increased by 2% in 2008–2011 (from 15.8% to 17.8%) [16, p. 85]. The sociological surveys also indicate an increase in the share of people who consider themselves "rich" and "poor" (from 41% to 45%; *fig. 1*).

One of the major problems for the region's population is the stratification into the rich and the poor (see tab. 4). Statistical data confirm the presence of significant gap between the rich and the poor. The average level of monetary incomes of 10% of the population with the highest incomes in 2011, like in 2008, is significantly higher than the average income of 10% of the population with the lowest incomes (in 11.3 and 12.5 times respectively, *tab. 6*) [16, p. 86].

The situation in the sphere of housing construction continues deteriorating. According to the estimates of the oblast inhabitants, less than half of them were provided with housing in 2012 (46%). At that, 389.1 thousand square metres of housing were commissioned in 2012, which is 28.7% less than in 2008 *(tab. 7)*. During the same period, the prices for housing in the primary market have gone up by 9%. The prices in the secondary market were growing even more rapidly: the average price for an apartment increased by 18.7%.

The major part of the oblast's housing stock does not comply with the requirements of the population in terms of its qualitative characteristics; it lacks some or other amenities. In 2012 the share of housing with the complete set of amenities (that has hot and cold running water, sewerage, heating, gas or electric cookers) was only 57.6%. The rundown and dilapidated housing fund is growing (by 13.9% compared to 2008) [6, p. 7].

One in four residents of the Vologda Oblast in 2012 expressed his/her concern at the increase in the rate of alcoholism (27%; see tab. 4). The number of people taken under observation with the diagnosis confirmed for the first time was 1.2 thousand in 2011 [19, p. 123]. The Vologda Oblast ranks 54th among other RF regions and 6th among the regions of the North-West by the incidence of alcoholic psychosis; the oblast ranks 38th in Russia and 7th in the Northwestern Federal District by the rate of mortality from alcoholic intoxication (in 1990 it ranked 42nd and 4th, respectively).

The residents of the Vologda Oblast and of Russia as a whole express their concern at a high crime rate, insecurity against criminals. In particular, for the period from 2008 to 2012 the share of inhabitants who feel safe at home and outdoors in the daytime has decreased (from 82% to 77%, and from 75% to 66%, respectively); less than half of the population feel safe in the streets in the evening (39–40%; *fig. 2*).

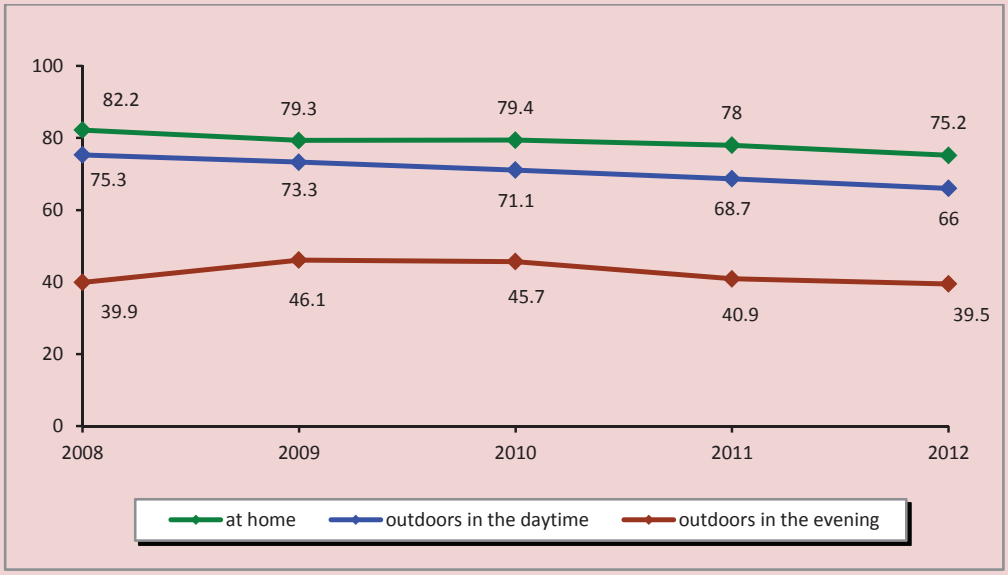
The problem of insecurity of people from organized crime is directly connected with the negative attitude to the activity of law enforcement bodies. The share of people, who are not satisfied with the performance of the police, increased twofold in 2010–2012 (from 14% to 27%; *fig. 3*). Although the share of negative opinions concerning the ability of law enforcement agencies to cope with crime decreased (by 12 percentage points), but it still considerably exceeds the share of positive judgements (44% and 19% respectively; *fig. 4*).

One of the main issues that arouse concern among the Russian population is the poor quality of engineering infrastructure (public utilities, roads, transport). The housing and utilities sector evokes the greatest anxiety. Almost half (49%) of all the appeals of citizens to the Public Chamber of the Russian Federation were connected with this sphere in 2012 [5, p. 29]. After two planned increases in the tariffs on public utilities as of July 1 and September 1, 2012 the overall utility payments increased by more than 15% in 20 subjects of the Russian Federation [5, p. 30].

Table 7. Housing stock of the Vologda Oblast in 2008–2011, as a percentage of the previous year

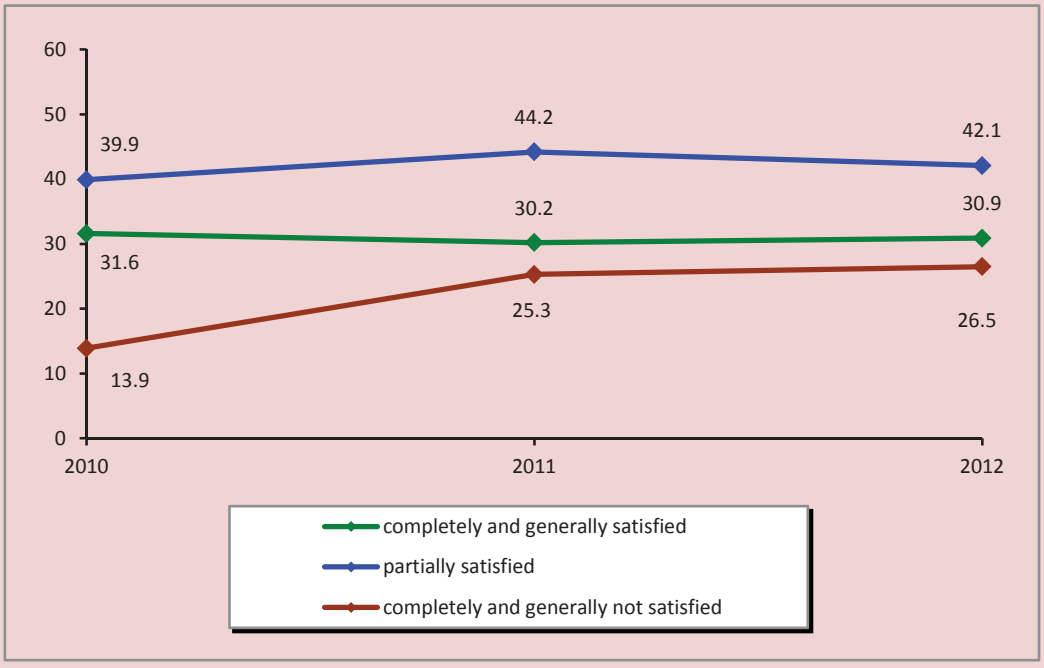
Indicator	2008	2009	2010	2011	2012	Dynamics, 2012 to 2008 (+ –)
Total amount of housing built	111.6	89.8	83.7	106.0	89.6	-29
Overall dilapidated and rundown housing stock	95.3	108.2	102.4	100.0	102.8	+14
Average prices by the types of apartments in the primary housing market	101.2	85.8	100.6	115.3	109.5	+9
Average prices by the types of apartments in the secondary housing market	101.7	94.0	98.3	110.1	116.7	+19
Source: Federal State Statistics Service.						

Figure 2. Do you feel safe at present? (answer options: "yes and sooner yes than no"), as a percentage of the number of respondents



Source: data of the public opinion monitoring (for the Vologda Oblast) carried out by ISEDT RAS.

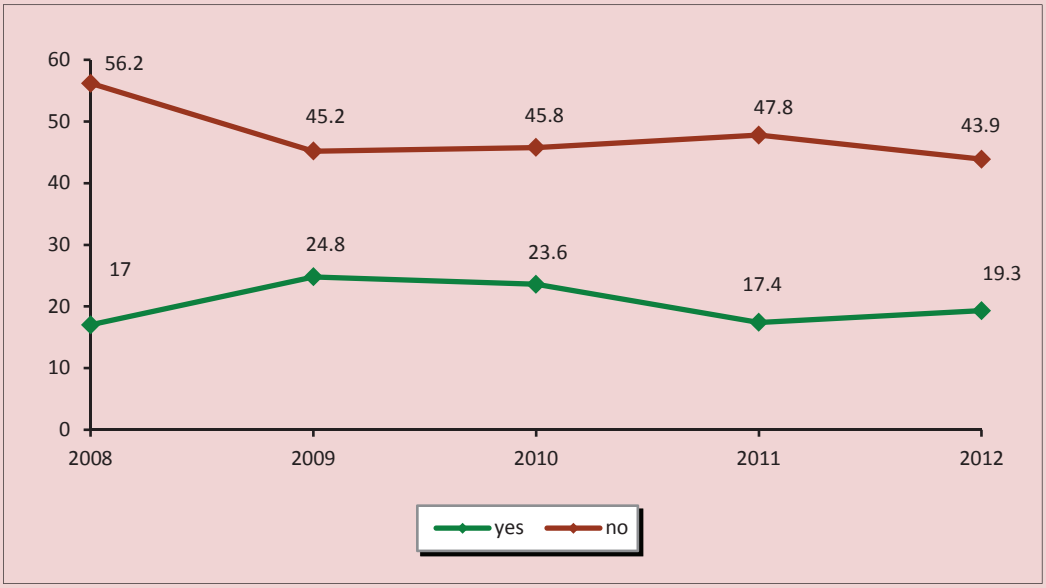
Figure 3. How satisfied are you with the performance of the police?*, as a percentage of the number of respondents



* The question has been included in the survey since 2010.

Source: data of the public opinion monitoring (for the Vologda Oblast) carried out by ISEDT RAS.

Figure 4. Do you think that the police is currently able to cope with crime?, as a percentage of the number of respondents



Source: data of the public opinion monitoring (for the Vologda Oblast) carried out by ISEDT RAS

The Vologda Oblast population is also concerned about the state of housing and utilities sector. Utility tariffs in the region grew by 72% in the period from 2008 to 2011 [19, p. 338]. Most people do not approve of this situation. Moreover, in 2013, 74% of the Vologda city residents considered that utility tariffs did not correspond to the quality of services rendered *(tab. 8)*.

Thus, in the post-crisis period, the acuteness of the most important issues, that worried the population, did not weaken; it has become lingering. That resulted in a decrease in the level of trust in the activities of bureaucracy, which, in turn, leads to non-participation of the population in the political life of the country [12, p. 5]. The main reasons for this situation are as follows:

1. Corruption that has afflicted the entire system of social relations: economy, politics, social sphere. Mechanisms of protection against corruption have proved inefficient, exposed to intrusion of crime. Dysfunction of state institutions, having reached critical levels, is taking the form of a national disaster.

2. Exclusion of the majority of population from public policy and decision-making. For example, from December 2011 to February 2013 there has been a reduction in the share of the Vologda Oblast residents that agree with

Table 8. In your opinion, do the housing and utility tariffs correspond to the quality of the services provided?, as a percentage of the number of respondents*

Answer option	2009	2010	2011	2012	2013	Dynamics, 2013 to 2009 (+ –)
Yes	5.1	5.1	9.9	3.9	6.2	+1
No	59.9	69.9	74.6	76.0	74.0	+14
It is difficult to answer	35.0	25	15.5	20.1	19.9	–15

* The question was not included in the survey in 2008.
Source: data of the public opinion monitoring (for the city of Vologda) carried out by ISEDT RAS.

the statement that they can influence the events in the city (from 12% to 7%), in the oblast (from 8% to 3%) and in the country (from 7% to 3%).

It is significant that for 2008–2012 the level of trust in all public authorities and public structures in the Vologda Oblast has decreased, while the national average situation is more optimistic *(tab. 9)*. An equally important conclusion from our analysis points out that it is the state structures that primarily lost the trust of the population in the post-crisis period.

In 2012, as in the previous years, the majority of the population in Russia and the Vologda Oblast were convinced that the political system had many flaws, which needed to be eliminated (73% and 68%, respectively; *tab. 10*).

Despite the fact that the attitude to the political system in general is negative, and the trust in the institutions of authority is low, the residents of Russia and the Vologda Oblast preserve the high level of trust in the RF President (49% and 46%, respectively). It is necessary

Table 9. Would you please express your attitude to the existing public structures and institutions of power in Russia (answer option is "I trust"), as a percentage of the number of respondents

Institution	Vologda Oblast			Russian Federation		
	2008	2012	Dynamics, 2012 to 2008 (+ –)*	2008	2012	Dynamics, 2012 to 2008 (+ –)
President	65.2	45.7	-19	62.3	49.0	-13
Church	51.9	41.4	-11	47.0	53.5	+7
RF Government	60.2	39.6	-20	41.0	36.0	-5
Court	41.3	36.1	-5	11.7	15.5	+4
Vologda Oblast Leadership	48.6	34.6	-14	-	-	-
Procuracy	40.9	33.9	-7	11.7	15.5	+4
Federal Security Service	43.8	33.2	-11	-	-	-
Federation Council of Russia	47.6	32.3	-16	22.7	25.5	+3
Army	37.8	31.3	-7	43.7	47.5	+4
State Duma	42.0	30.5	-11	17.0	20.0	+3

* In decreasing order, according to the results of the 2012 survey.
Sources: ISPR RAS data (for the Russian Federation); data of the public opinion monitoring (for the Vologda Oblast) carried out by ISEDT RAS.

Table 10. With which of the following statements about the political system of our society you agree to a greater extent?, as a percentage of the number of respondents

Answer option	2008	2012	Dynamics, 2012 to 2008 (+ –)
Russian Federation			
I am completely satisfied with the political system of our society	14.0	14.5	+1
The political system of our society has a lot of flaws, but they can be eliminated by means of gradual reforms	50.5	44.5	-6
I am not satisfied with the political system of our society, it must be changed radically	20.0	28.5	+9
Vologda Oblast			
I am completely satisfied with the political system of our society	8.8	11.1	+2
The political system of our society has a lot of flaws, but they can be eliminated by means of gradual reforms	47.7	44.8	-3
I am not satisfied with the political system of our society, it must be changed radically	20.3	23.4	+3

Sources: ISPR RAS data (for the Russian Federation); data of the ISEDT RAS public opinion monitoring (for the Vologda Oblast).

to eliminate this and other socio-political contradictions in the near future; otherwise, the present-day trust of the society in the authorities may be lost permanently [11, p. 21].

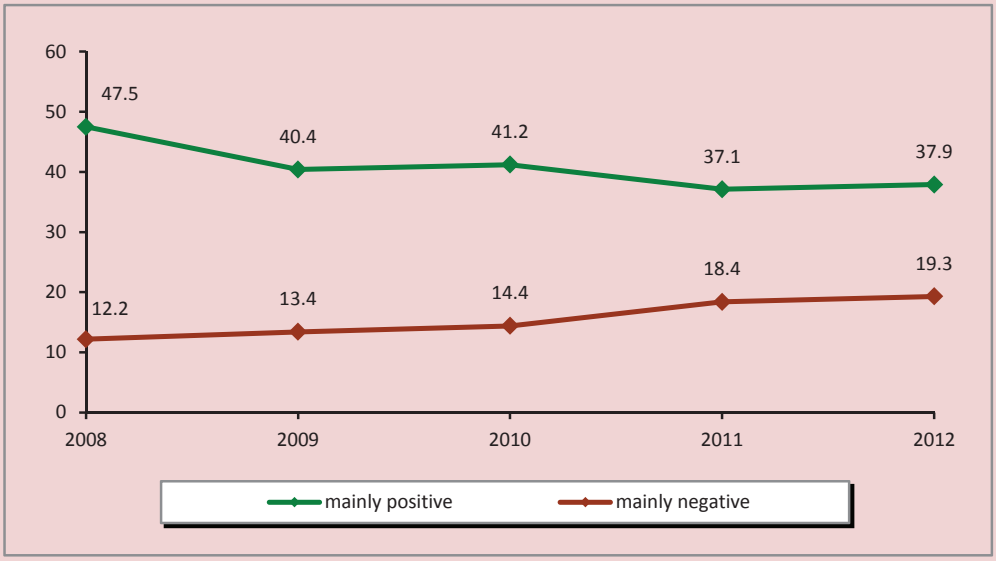
The level of civic culture in the society, the efforts of citizens and politicians were sufficient to avoid social protests and strikes after the crisis of 2008 [11, p. 17]. However, the population's tolerant reaction to the consequences of the crisis did not mean that there were no critical moods in the society. In November 2008, immediately after the onset of the crisis, according to the opinion of more than half of the Russians, economic reforms carried out by the state authorities were not in keeping with the interests of the majority of population (52%). By December 2012, the share of respondents who supported this point of view, has not changed virtually (53%) [8, p. 9]. The share of negative opinions about the course of economic reforms carried out by Russia's President has increased among the region's residents for 2008–2012 (from 12% to 19%; *fig. 5*).

The economic crisis has aggravated the people's anxious expectations regarding their financial situation. According to WCIOM (Russian Public Opinion Research Center), the share of Russians who believe, that in a year the wellbeing of their families will deteriorate or deteriorate significantly, has increased by 4% from August 2008 to August 2012 (from 11% to 15%) [1]. Over the same period, the share of the Vologda Oblast residents, who expect the deterioration of their financial situation in the coming year, has increased by 10% (from 11% to 21%).

Consequently, socio-political contradiction between the results of state policy and the fundamental interests of society remains the main driving force of the conflict that decreases or escalates depending on a situation [11, p. 18].

The escalation of this conflict occurred during the elections to the State Duma of the 5th convocation (December 2011) and presidential elections (March 2012). One in ten citizens of Russia was ready to take up arms, and one in three was ready for active civil

Figure 5. What is your attitude to economic reforms carried out by the President of Russia?, as a percentage of the number of respondents



Source: data of the public opinion monitoring (for the Vologda Oblast) carried out by ISEDT RAS.

actions to protect his/her own interests [11, p. 19]. The period of August 2011 – December 2011 witnessed an increase in the number of those who would do the following to protect their interests: sign the appeal to the authorities (from 19% to 22%); participate in a rally, demonstration (from 11% to 13%); take part in strikes (from 4% to 6%). It should be noted that the region's residents choose legal means for protecting their interests: over the period specified above, the share of those who, if necessary, would take up arms and come out to the barricades, has decreased from 4% to 2%.

In December 2011, all the major cities of Russia held mass meetings and demonstrations. For instance, on December 10 in Moscow, a rally that became the largest in the recent decade was held in Bolotnaya square, attended, according to various estimates, by 85 thousand to 150 thousand people. In Vologda, a protest action, held that very day, was attended by about a thousand people.

This could not but affect the general level of optimism among citizens. For example, only one third of the citizens believe that the President of the Russian Federation will be able to change the situation in the country for the better, 37% hold the opposite opinion, and 30% of citizens find it difficult to answer this question [11, p. 21].

Contradictions in the society began to fall after the presidential elections. In April 2012 compared with November 2011, there was a reduction in the share of citizens, who consider that there is great controversy and enmity between the rich and the poor (from 79% to 77%), inferior and superior classes (from 75% to 73%), employers and employees (from 56% to 52%), the younger and the older generations (from 40% to 36%), entrepreneurs and officials (from 38% to 34%; *tab. 11*).

Similar trends were observed in the Vologda Oblast. For instance, according to the survey, for the period from December 2011 to February 2013, there has been a reduction in the share of statements concerning the prevalence of disagreement in the society, disunity in the country, oblast and immediate environment *(tab. 12)*.

The results of the parliamentary and presidential elections showed that amid the global financial crisis the Russian society has formed a new socio-political reality, an important feature of which lies in the dissatisfaction of citizens with the social results of conducted policy. The society is discontented with its position and the vast majority of people stands for changes and is waiting for them.

The protest actions of the population showed an increase in the potential of civil activity, making it clear for the authorities that they need to respond to the demands of the growing civil society.

It stands to reason that in the first decrees of V.V. Putin after his inauguration as President in May 2012, the social policy was aimed precisely at those problems that have long become especially acute in the society. In particular, it was proposed to do the following:

– to increase the real incomes of citizens;

– to solve the problem of social vulnerability;

– to improve living conditions, increase the availability of housing and the quality of housing and utilities services;

– to improve the health sphere [17].

Fight against corruption was carried out on extensive scale. By V. Putin's initiative, the officials and deputies became responsible for declaring their deposits in foreign banks and real estate abroad [7, p. 10].

Besides, the President has introduced certain measures to reform the political system:

1. Liberalization of the legislation on political parties. The minimum number of members of a political party has been reduced from 40 thousand to 500 people [19].

2. Re-establishment of gubernatorial elections [20].

Table 11. Assessment of the level of contradictions and enmity in the modern Russian society, as a percentage of the number of respondents

Existence of significant contradictions between population groups	July 2008	Dec. 2010	June 2011	Nov. 2011	April 2012	Dynamics, November 2011 to July 2008 (+ –)	Dynamics, April 2012 to November 2011 (+ –)
The rich and the poor	77	69	71	79	77	+2	-2
The lowest and the highest classes	69	65	67	75	73	+6	-2
Employers and employees	40	49	49	56	52	+16	-4
The younger and the older generations	35	35	33	40	36	+5	-4
Entrepreneurs and officials	31	34	33	38	34	+7	-4
Source: ISPR RAS data (for the Russian Federation).							

Table 12. What prevails at present: agreement and unity, or disagreement and disunity?, as a percentage of the number of respondents*

Answer option	In Russia			In the Vologda Oblast			In your immediate environment		
	Dec. 2011	Feb. 2013	Dynamics, February 2013 to December 2011 (+ –)	Dec. 2011	Feb. 2013	Dynamics, February 2013 to December 2011 (+ –)	Dec. 2011	Feb. 2013	Dynamics, February 2013 to December 2011 (+ –)
Agreement and unity	14.2	14.1	0	19.3	15.9	-3	46.9	52.1	+5
Disagreement and disunity	61.1	59.5	-1	55.6	54.4	-2	29.3	23.2	-6
* The question was included in the survey only in 2011 and in 2013. Source: data of the public opinion monitoring carried out by ISEDT RAS (for the Vologda Oblast).									

3. Expansion of the scope of activity of public councils, which play a crucial part in enhancing the efficiency of interaction between the authorities and society. Thus, the Public Council under the Vologda Oblast Directorate of the Ministry of the Interior (MVD), includes the Commission on Public Control over the activities of internal affairs authorities (OVD). A working group on reforming the housing and communal services sector was created under the Public Council of Cherepovets city [7, p. 62].

Both the federal and regional authorities make attempts to establish feedback with the society. For example, the idea of open assessment of the performance of certain power institutions is embodied in such projects of the Vologda Oblast Governor O.A. Kuvshynnykov as "Governor's team: Your choice!" (the main goal of the project is to identify the leaders that have the highest level of trust of the Vologda Oblast population), "Governor's team: Your assessment" (aimed at the public assessment of performance efficiency of the bodies of executive power, and at the formation of a new quality of authorities, new quality of life of the population) [9, p. 102].

The Decrees as of May and the first steps for their implementation (for example, the adoption of the state programme "Social protection of citizens" by the Government of the Russian Federation on December 27, 2012 [13]) led to the reduction of discontent in the society. As a result, the protest potential on average in the Vologda Oblast has decreased by 2% (from 20% to 18%) over the 8 months of 2013 compared with the same period of 2012.

In June 2013 compared with the previous year, there was a reduction in the share of people who consider the most acute problems of Russia to be as follows: inflation (from 56% to 51%), high crime rate, lack of protection from criminals (from 26% to 23%), poor quality of engineering infrastructure (from 25% to 21%), corruption (from 20% to 17%).

At the same time we can point out several weaknesses of the measures taken by the state. They include:

1. Inconsistency between the declared and the real objectives of the reforms. For example, the liberalization of the legislation on political parties, was, probably, aimed at distracting people by the appearance of freedom of expression in the absence of chances of actual participation in legislative and representative authorities. Manipulations with political parties are nothing but an attempt to promise what is desired, but in fact they only imitate the care about democracy [18, p. 25].

2. Shifting the responsibility for the implementation of the May decrees to the regional authorities that often lack the necessary resources.

3. Most of the goals set out in the May decrees, are to be achieved only by 2018. However, according to opinion polls, the population is expecting that positive changes in the housing and health issues, in the issues concerning the improvement of material situation, etc. will happen at present already. That is why the issues, which worried the citizens before the 2011–2012 elections, are still relevant.

Inconsistency between the declared objectives and the actual state of affairs can once again lead to the growth of protest moods. More active and consistent actions are necessary in order to meet the key requirements of the society, because this determines the strategic line of Russia's development.

In this regard, it is necessary to carry out the following activities:

1. Revise the approach to many issues that arouse concern among the population; in particular, to improve the methodology for calculating inflation.

2. Abandon the abstract and non-binding phrases like "enhancing the quality of life and the standard of living", the use of imitation in the implementation of reforms; to strive for the actual and most effective solution to the problems of the population.

3. Establish a better cooperation and open dialogue with the society, contribute to the further development of civil society.

The local authorities also need to carry out comprehensive measures for the improvement of the legislation at all levels and the provision of strong institutional support to education, health care, and the development of regional infrastructure.

In summary, the following conclusions can be made:

1. Civil society both in Russia and in the Vologda Oblast is developing dynamically, therefore, at present, one cannot give it a definite assessment. At the same time, it is obvious that the level of development of civil society in Russia has reached the point at which the authorities cannot ignore its requests any longer.

2. In the federal and regional levels the population is concerned about similar problems (inflation, stratification to the rich and the poor, unsatisfactory condition of housing and communal services, crime). At that, the Vologda Oblast residents, in comparison with the Russians in general, are to a greater extent dissatisfied with the condition of the housing sector.

3. The state tries to respond to the demands of the society, largely due to the protest actions held in late 2011. The main directions for

handling the key problems of the population were set out in the decrees of the RF President as of May 7, 2012. However, measures taken by the federal authorities, are characterized by a significant degree of simulation and declarative character. The final decision on almost all the issues is planned for the long term. That is why the citizens do not feel the immediate, current positive results of the state policy. In order to avoid a new wave of protest, the authorities should take more active and consistent steps to solve the problems that are of the greatest concern of the society. The key measures in this regard should include the expansion of civil political awareness, training and direct participation.

References

1. WCIOM research database. Available at: http://wciom.ru/data-base/
2. Gorshkov M.K. Society – sociology – power: on the issue of interaction. Sociological studies. 2012. No.7. P. 23-28.
3. Grinberg R.S. Russia in a turbulent world: challenges and imperatives: Materials to the assembly lecture at the International University in Moscow, September 25, 2012. Moscow, 2012.
4. Report on the state of civil society in the Vologda Oblast for 2012. Public Chamber of the Vologda Oblast. Vologda, 2013.
5. Report on the state of civil society in the Russian Federation for 2012. Public Chamber of the Russian Federation. Moscow, 2012.
6. Housing stock of the Vologda Oblast: Information note. Vologdastat. Vologda, 2013.
7. Ilyin V.A. Anxious expectations remain. Economic and social changes: facts, trends, forecast. 2013. No.2. P. 5-13.
8. Levashov V.K., Afanasyev V.A., Novozhenina O.P., Shushpanova I.S. How are you, Russia? 37th stage of sociological monitoring, December 2013. Moscow: ISPR RAS, 2012.
9. Kozhina T.P. People's confidence in governmental and public institutions: regional aspect. Problems of development of territories. 2013. No.3. P. 100-115.
10. Keane J. Democracy and civil society. Moscow, 2001.
11. Cohen J.L., Arato A. Civil society and political theory. Moscow, 2003.
12. Levashov V.K New reality: economic crisis and the choice of the society. Sociological studies. 2012. No.12. P. 12-22.
13. Molodov O.B. Trust as a factor in the consolidation of society (case study of the Vologda Oblast). Available at: http://vtr.isertran.ru/file.php?module=Articles&action=view&file=article&aid=2989
14. Resolution of the Government of the Russian Federation No.2553-r dated November 27, 2012 on approval of the state programme "Provision of social support to citizens". Available at: http://www.rg.ru/2012/12/31/socpodderjka-site-dok.html
15. Russian statistical yearbook 2009: statistical digest. Rosstat. Moscow, 2009.
16. Russia in figures 2012: concise statistical digest. Rosstat. Moscow, 2012.
17. Statistical yearbook of the Vologda Oblast 2011: statistical digest. Vologdastat. Vologda, 2012.
18. Toshchenko Zh.T. New images of activity: imitation. Sociological studies. 2012. No.12. P. 23-36.
19. Decrees of the President of the Russian Federation dated May 7, 2012 No.596 "On the long-term national economic policy"; No.597 "On the activities for the implementation of the state social policy"; No.598 "On the improvement of state policy in the health care sphere"; No.600 "On the measures for providing the citizens of the Russian Federation with affordable and comfortable housing and enhancing the quality of housing and communal services"; No.601 "On the main guidelines of improving the state management system". Rossiyskaya gazeta. 2012. No.5775.
20. Federal Law dated April 2, 2012 No.28-FL "On the introduction of amendments to the Federal Law "On political parties". Rossiyskaya gazeta. No. 5746.

21. Federal Law dated May 2, 2012 No.40-FL "On the introduction of amendments to the Federal Law "On the general principles of organization of legislative (representative) and executive authorities of constituent entities of the Russian Federation" and the Federal Law "On the main guarantees of electoral rights and the right to participate in the referendum of the citizens of the Russian Federation". Rossiyskaya gazeta. No. 5772.
22. Schumpeter J. Capitalism, socialism and democracy. Moscow, 1995.
23. Jacobson L.I., Mersiyanova I.V., Kononykhina O.N. Civil society in modernizing Russia: analytical report on the results of the research "Civil Society Index in Russia – CIVICUS". Moscow: NRU HSE, 2012.
24. Bartelson J. Making sense of global civil society. European journal of international relations. 2006. Vol.12. P. 371-395.
25. Benessaieh A. Seven theses on global society: a review essay. Cultural dynamics. 2003. Vol.15. P. 103-126.
26. Glasius M., Kaldor M., Anheir H. Global civil society. Oxford University Press, 2002.
27. Ruggie J.C. Reconstitution of the global public domain – issue, actors and practices. European journal of international relations. 2004. Vol.10. P. 499-531.

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Complex assessment of housing and communal sector in the region's municipalities

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At present, the functioning of housing and communal sector in most regions of the country is characterized by mounting crisis. The key problems in this sphere include poor quality of provided services, high depreciation of fixed assets, large non-productive resource losses, etc. These are the issues that the authorities should address to at all levels. At the same time it should be noted that municipal entities may considerably differ in the level of housing improvement, state of engineering infrastructure, and the possibilities of introducing market mechanisms of economic management. Therefore, the state policy in the housing and communal sector should be based on the use of economic instruments and incentives, taking the fullest account of the current state, sectorial and regional peculiarities. The article analyses the state of housing and utilities infrastructure in the Vologda Oblast municipalities on the basis of the integral estimation methodology; it distinguishes the territories with similar characteristics and problems concerning the functioning of this sphere, presents group characteristics. The key directions and instruments of state policy, the implementation of which will make it possible to use limited financial resources more efficiently, to optimize the territorial-production structure and to enhance the overall functioning efficiency of housing and communal services in different types of the region's municipalities, are offered.

Housing and communal sector, municipalities, typologization, investment processes, public and private partnership, Vologda Oblast.

Housing and communal services (HCS) is one of the key spheres of the national economy, providing vital services to population, and necessary resources for manufacturing activities (electricity, heat, water, etc.) to the industrial, agricultural and other sectors.

At present, however, housing and communal services of Russia are in crisis, being one of the main sources of social tensions. Thus, in 2013, 60% of the population identified this problem as one of the most important in the country (only 40% of the Russians adhered to such opinion in 2010) [5].

High level of fixed assets depreciation, breakdown rate, annual tariffs increase without significant improvement in the quality of provided services, considerable waste of utility resources – it is by far not the complete list of the problems of the Russian housing and communal sector.

The cause of the crisis in the housing and communal services is not only its persistent underfunding over the past decades, but inefficient management system, as well. It is obvious that under modern conditions the administrative principles of management have outrun themselves, however, the vector of further reforming, purely focused on the use of market mechanisms and the reduction in the volume of state support, does not contribute to the successful resolution of the accumulated problems.

This fact is especially relevant for rural areas with small service zone and low solvency of the final consumer. In turn, most of the enterprises for housing and communal services are unprofitable and unfavourable for private investments. The engineering infrastructure is in a critical condition, costs of providing services several times exceed similar figures for urban areas, but still, it is impossible to cover the need for financial resources for its proper modernization by the final consumer and local budgets.

The afore-mentioned problems are typical of the majority of the subjects of the Russian Federation, including the Vologda Oblast. Thus, an increase in the share of failing housing stock has been observed over the last few years, amounting to 6% of the total area of the region's housing in 2012, that is higher than the Russian average (3%) and the average across the Northwestern Federal District (3.2%) (*tab. 1*).

Moreover, significant territorial differences are hidden under this average figure. Thus, in 2012, the extremely high share of failing housing stock was registered in Mezhdurechensky (31.1%), Vytegorsky (22%) and Belozersky (20.8%) districts. The best condition of housing is observed in Cherepovets (0.1%) and Kaduysky District (1.6%) [1, p. 22].

Low quality of public services and amenities is another major problem of the Vologda Oblast housing and communal infrastructure. In 2012, only 58.7% of the region's housing stock was provided with hot water supply, 59.6% – with baths (showers), 63.3% – with drainage (sewage). For comparison, 65.5% of the housing stock is supplied with hot water on average in Russia, 73.9% in the NWFD.

Particularly low quality of public services and amenities is typical for the rural areas. Thus, only 5.5% of housing is supplied with water in Kichmengsko-Gorodetsky District, 14.4% in Nikolsky District. The similar situation is observed with regard to central heating

Table 1. Failing housing stock, as a percentage of total housing

Territory	Year							2012 to 2000, p.p.
	2000	2005	2008	2009	2010	2011	2012	
Vologda Oblast	2.1	5.5	5.6	6.0	6.0	5.9	6.0	+3.9
NWFD	2.2	3.3	3.3	3.2	3.3	3.2	3.2	+1.0
Russian Federation	2.4	3.2	3.2	3.1	3.1	3.0	3.0	+0.6

Sources: Russian regions. Socio-economic indicators. 2012:statistical digest. Rosstat. Moscow, 2012; Unified interdepartmental information and statistical system. Available at: http://www.fedstat.ru/indicator/data.do

services: 0.4% in Babushkinsky District, 0.6% in Kichmengsko-Gorodetsky District, 3.4% in Verkhovazhsky District [1, p. 24-25].

Thus, it is obvious that sustainable development of housing is impossible without its stable functioning throughout the region. In this context, the issue of conducting comprehensive and objective assessment of its current status and identifying the main problems in municipal housing and communal sector becomes relevant.

In order to solve this problem, it is necessary to develop the appropriate methodological tools. The system of indicators, comprehensively characterizing the current state of housing and communal services in the region's municipalities, has been formed, based on the generalization of research results with regard to the issue under consideration [9, 10, 13]. At that, all indicators are recognized equivalent (*tab. 2*).

The indicators are aggregated in the integral index in the following sequence.

1 stage. Determination of the special index value for each block of indicators (R_j):

$$R_j = \frac{\sum_{i=1}^{n} k_i}{n}; \quad (1)$$

where k_i – standardized rate;

n – number of indicators in the block.

The standardized rate is calculated by the formula 2 for direct indicators, and in accordance with the formula 3 for reverse indicators[1]:

$$k_i = \frac{x_i}{x_э}; \quad (2)$$

$$k_i = \frac{x_э}{x_i}; \quad (3)$$

where x_i – the value of the *i-th* indicator in a municipal entity;

x_r – reference value of the *i-th* indicator.

2 stage. Computation of the integral index, characterizing the state of the housing and municipal sector in the municipality (R):

$$R = \frac{R_1 + R_2 + R_3 + R_4}{4};$$

where R_1 – section-based index, characterizing the state of municipal housing;

R_2 – section-based index, characterizing the condition of housing and communal sector (resources supplying industries);

R_3 – section-based index, reflecting the situation in the sphere of territorial improvement and municipal communal services;

R_4 – section-based index, characterizing the financial state of the housing and communal sector of the municipality.

3 stage. The groups of territories characterized by common problems in the housing and communal sector are selected. The range of possible values of the integral index ranges from 0 to 1, on the basis of which 4 types of municipalities have been determined[2]. At that, the fourth group has wider interval boundaries, since it characterizes the municipalities, where the housing and municipal sector is in a critical condition, in the severe and systemic crisis. Moreover, the worse the situation in the sphere, the closer to zero values the integral index is. However, it should be noted that zero value in reality is basically unattainable (*fig. 1)*.

Let us test the proposed tools, on the materials of the Vologda Oblast municipalities. The calculation results allow identifying 3 types of territories according to the state of housing and communal sector. At that, in 2012 none of the municipalities was included in the I group, characterized by the good working order of the given sphere (*tab. 3*).

[1] Direct indicator is the indicator, the increase in the values of which indicates the presence of positive tendencies, improvement of the situation in the housing and communal sector. The reverse indicator – an indicator, the increase in the values of which indicates the worsening of the situation in the given sphere of municipal services.

[2] Considering that the municipality has a reference value by each indicator of all four sections, the maximum value of the integral index can be potentially equal to 1.

Table 2. Indicators, characterizing the state of municipal housing and communal sector

Indicator	Characteristic
Block 1. Housing	
1.1. Share of housing outside the failing housing category, *as a percentage of the total municipal housing area*	Disrepair of housing results in the resource waste increase (heat, electricity, etc.), and on the whole reduces dwelling comfortability. Furthermore, the presence of failing housing stock indicates not only insufficient rates of housing construction, but also ineffectiveness of the organizations engaged in its maintenance and management.
1.2.Amount of housing, provided with all amenities (water supply, sewerage, heating, gas or electric cookers), *as a percentage of housing total area*	One of the strategic goals of the state policy in the housing and communal sector is full supply of the population with all kinds of public utilities of standard quality. In this regard, the landscaping is one of the key indicators characterizing the overall development level of the territory's housing and communal services.
1.3. Apartment buildings managed by private management companies, homeowners associations (HOA), housing cooperatives (HC), *as a percentage of the total*	Under modern conditions of market transformations the liquidation of the state monopoly is one of the priorities of the sector reforms. In turn, the introduction of progressive forms of housing management, promotion of competition between organizations, engaged in house maintenance, will not only increase the quality of provided services, but is also the factor contributing to the development of the homeowners initiative.
Block 2. Communal services (resources supplying industries)	
2.1. Share of public utilities, not needing changing, *as a percentage of total length*	The indicator characterizes the technological condition of the municipal communal infrastructure. The presence of overage systems results in high breakdown rate, decreasing quality of provided services.
2.2.Main resource losses, *%*	Large resource waste is the consequence of the wear-out of engineering infrastructure, technological backwardness, unauthorized main connections. In turn, the losses do not exceed 3-4% in developed countries that apply modern technologies for the production and transportation of communal resources [4; 7].
2.3. Amount of communal resources distributed on the basis of the values of metering devices, *as a percentage of total consumption*	Requirements of the current legislation imply complete transition to the calculations for the consumed communal resources in accordance with the metering values, installation of which allows, on the one hand, reducing the customer's utility fees, and, on the other hand, is an incentive for companies to improve their production efficiency.
Block 3. Improvement of the territory	
3.1. Share of lighted streets, roads, embankments, *as a percentage of their total length*	This indicator allows assessing the level of the provision of the consumers of the municipality with street lighting services.
3.2. Share of dumps of solid domestic waste (SDW), where recoverable waste is kept in record, *as a percentage of the total*	Allows estimating the quality of works, related to waste management. The presence of unauthorized dumps, absence of the record keeping system does not make it possible to dispose of solid domestic waste in accordance with the approved public health regulations.
Block 4. Financial processes in the housing and communal sector	
4.1. Rate of payment for housing and communal services, %	Full collection of payments for services is a necessary condition for the stable functioning of housing and utilities enterprises, successful implementation of production and investment programmes, which is especially important in connection with the liquidation of the budget allocations and cross-subsidization.
4.2. Share of profitable housing and utilities enterprises, *as a percentage of their total number*	Summative indicator, characterizing the production efficiency of housing and utilities organizations of the municipality.
4.3. Ratio of the enterprises' receivables to the cost of rendered housing and communal services, %	High amount of receivables of housing and utilities enterprises limits their abilities to attract loans and other debt financing, generates high risks associated with the investment. In this case the optimal recognized level of receivables does not exceed 5% of the accrued fees*.
* Natural rate of receivables, which, as a rule, is classified as hopeless. See, for example: Kovalev V.V. Introduction to financial management. Moscow: Finances and statistics, 2004.	

Figure 1. Interpretation of the threshold values of the integral index (I) of the state of the municipality housing and communal sector

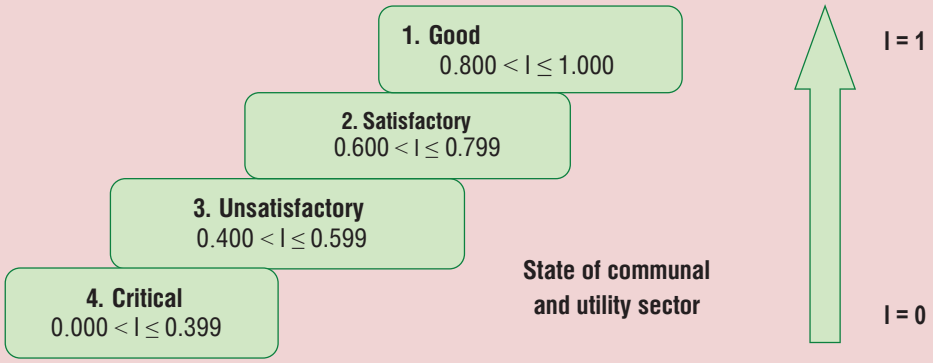

Table 3. Typologisation of the Vologda Oblast municipalities according to the condition of the housing and communal sector in 2012

Group	HCS sate	Territories
II	Satisfactory 0.600 < I ≤ 0.799	Vologda (0.781), Cherepovets (0.758), Kaduysky (0.664), Sheksninsky (0.623)
III	Unsatisfactory 0.400 < I ≤ 0.599	Cherepovetsky (0.570), Sokolsky (0.556), Chagodoshchensky (0.542), Verkhovazhsky (0.540), Tarnogsky (0.536), Vologodsky (0.535), Ust-Kubinsky (0.506), Nyuksensky (0.491), Babushkinsky (0.490), Velikoustyugsky (0.470), Ustyuzhensky (0.470), Vozhegodsky (0.469), Mezhdurechensky (0.468), Gryazovetsky (0.445), Kirillovsky (0.437), Totemsky (0.418), Nikolsky (0.418), Belozersky (0.416), Syamzhensky (0.409)
IV	Critical 0.000 < I ≤ 0.399	Vytegorsky (0.391), Vashkinsky (0.385), Kharovsky (0.383), Babayevsky (0.367), Kichmengsko-Gorodetsky (0.367)

General characteristics of housing and communal services in various types of the region's municipal entities are presented in *table 4*.

The condition of housing and communal services in the territories of the II group is satisfactory. Share of failing housing stock (group average amounted to 2.3% of the total area of the housing stock) is lower than the average oblast value (6.0%). In addition, the level of improvement is rather high. On group average almost 92% of housing is provided with all kinds of public utilities (hot and cold water supply, sewerage, heating, gas or electric cookers).

In recent years, market reforms have been actively implemented in the housing sector. Thus, in 2012, about 90% of apartment buildings were serviced by private management companies and homeowners associations (HOA)[3]. Moreover, the share of municipal organizations has been decreasing.

Public utility companies have large production capacity, however, their activity is characterized by significant resource losses (water – 19.7% of the total volume of water, supplied to the mains), due to the high level of wear and tear of fixed assets in the housing and municipal sector. In particular, on group average in 2012 almost 55% of heating systems and 28% of water supply systems were overage and needed changing [3, p. 7; 33].

[3] See information on structural transformations and organizational activities in the Vologda Oblast housing and communal sector – form No.22-ZHKH (reform) for 2012.

Table 4. Characteristics of the state of housing and communal services in different types of the Vologda Oblast municipalities

Indicator	Group average value*			**Oblast average**
	II	III	IV	
1. Share of failing housing stock, *as a percentage of the total municipal housing area*	2.3	9.2	11.9	**6.0**
2. Amount of housing, provided with all amenities (water supply, sewerage, heating, gas or electric cookers), *%*	91.7	25.6	16.7	**57.6**
3. Apartment buildings managed by private management companies, homeowners associations (HOA), housing cooperatives (HC), *as a percentage of the total*	89.2	47.3	48.6	**54.8**
4. Share of public utilities, not needing changing, *as a percentage of total length:* – water supply; – heat supply.	 72.4 45.2	 64.7 74.7	 73.4 70.7	 **67.9** **59.2**
5. Main resource losses, %: – water supply; – heat supply.	 19.7 6.2	 29.2 11.2	 22.1 12.8	 **21.7** **8.5**
6. Amount of communal resources distributed on the basis of metering values, *as a percentage of total consumption:* – heat energy; – hot water; – cold water.	 67.8 80.5 95.4	 23.9 41.6 52.9	 25.9 25.6 23.2	 **55.4** **75.9** **87.5**
7. Share of lighted streets, roads, embankments, %	86.0	65.4	69.4	**76.4**
8. Share of dumps (landfills) of solid domestic waste (SDW), where recoverable waste is kept in record, *as a percentage of the total number of SDW dumps*	87.5	27.2	8.9	**54.3**
9. Ratio of the enterprises' receivables to the cost of rendered housing and communal services, %	50.6	49.6	38.2	**49.9**
* Average values were calculated by the formula of weighted arithmetic mean.				

In turn, the financial situation of public utility organizations is unstable (in 2012 their receivables exceeded 50% of the cost of rendered services), which limits the possibilities for independent resolution of these problems and procurement of capital.

A significant part of the Vologda Oblast municipalities (19 of 28 municipalities), housing and communal services of which continue to be in a severe and systemic crisis, is included in the III group. The main issues include the following:

• high rate of housing stock depreciation (in 2012 failing housing stock amounted to over 9% of housing area, which exceeds the oblast average);

• low level of improvement (only ¼ of housing is provided with all kinds of public utilities);

• high deterioration level of engineering infrastructure (over 35% of water mains and 25% of heating systems need changing);

• significant non-productive losses of utilities in the mains (water – 29.2%, heat – 11.2%), due to the wear of fixed assets, technological backwardness of the majority of public utility enterprises;

• ineffective system of consumption records (only 24% of the total volume of heat energy was supplied on the basis of the values of metering devices, hot water – 42%, cold water – 53%);

• low development level of the improvement sector (in 2012 only about 65% of the total length of streets, parks, embankments was provided with street lighting services).

• unstable financial situation of housing and utilities organizations (unprofitability of production activities, high level of receivables and payables);

• low rates of implementing market mechanisms of economic management [8].

At that the level of budget financing provided to the sector (except for Sokolsky

District – Sokol) is not high. The main source of funding is the payments of the population for housing and communal services.

The state of housing and communal services of the Vologda Oblast municipalities of the IV group can be recognized as critical. Housing is in a poor technical state, the share of failing housing stock in the total area of housing amounts to 12%, i.e. is 2 times above the average Oblast value. Moreover, the level of improvement remains very low (only 17% of housing is provided with basic kinds of public utilities). Therefore, individual systems of public utilities (water supply and heat supply facilities) are becoming more and more widespread.

Public utility companies of the given municipalities are small and have small production capacity. Moreover, their activities are characterized by significant non-productive losses of resources, many times exceeding standard values (heat – 12.8%, water –22.1%) not only due to technological backwardness of public utility companies, but also due to extremely low provision of housing with metering devices (26% of heat energy, 23% of hot water was supplied in accordance with metering values). The provision of most housing and utilities services is unprofitable, that is one of the main reasons for unstable financial condition of public utility enterprises and for their impossibility to fully implement production and investment programmes.

The sector of municipal communal services is developed rather poorly in these areas. Thus, recoverable waste is kept in record only at 9% of SDW dumps, 69% of streets is provided with street lighting services.

In the context of the revealed differences in the housing and communal sector of the Vologda Oblast municipalities, the priority goal of the state policy is to create conditions for stable and steady functioning of this sphere in the whole territory of the region. The policy is to be differentiated from the point of view of territorial specificity, and to focus on the concentration and the efficient use of limited financial resources.

Thus, high deterioration level of engineering infrastructure (systems of heat and water supply) in the municipalities of the II group requires the implementation of large-scale investment programmes in the municipal sector, aimed primarily on the sector's technological upgrading. However, it is reasonable to finance them not only from tariff sources, but with private investment attraction.

Thus, the main priorities of state policy in the housing and communal sector of the given municipal entities are the following:

- audit over the activities of public utility enterprises (determination of the real prime cost of rendering services, in order to switch to economically reasonable tariffs and profitable principles of tariff formation (RAB method), which will create objective incentives for reducing dead expenses and increasing investment attractiveness of housing and communal sector);
- development of long-term production and investment programmes, approval of tariffs (for the term of over 5 years) in accordance with objective financial requirements for their implementation;
- debt restructuring of public utility enterprises;
- development of the debt financing tools of state support (guarantees, interest rate subsidies, etc.); in addition, limited budgetary funds should be focused on ensuring the access of the public utility organizations to the resources of the state development institutions (in particular, Support fund for the reform of the housing and utilities sector) and credit sources;
- implementation of measures, aimed at increasing the provision of housing with metering devices, that will allow improving the efficiency of resource use. It is advisable for the local authorities along with educating

the population to develop consumer support package, which will include concessional lending and payment by installments when installing metering devices.

In turn, OJSC "Corporation of Development for the Vologda Region" could be more proactive in attracting extra-budgetary funding to the housing and municipal sector and provide consulting, organizational, etc. support to the projects of state-private partnership at all stages of their life cycle.

Severe and systemic crisis of the housing and communal sector in the municipalities of the *III and IV groups* requires the development of integrated support measures of this economic sector. It is obvious that such territories are not attractive for private business, and the huge scale of the accumulated problems, limited budgetary resources prevent the local authorities from solving the set tasks independently. Therefore, the state policy should be aimed at the maximum organizational, financial involvement in the development of this sphere of municipal economy in close cooperation with business structures and the population.

At that, the main efforts of the authorities should be concentrated on the liquidation of failing housing stock. Along with the new system of complete overhaul (NCO Fund for complete overhaul of apartment houses in the Vologda Oblast), the participation in the regional targeted programmes, providing for co-financing by means of the Support fund for the reform of the housing and utilities sector. However, in order to get financial support of the Development Institute, the local authorities should intensify the activities on the implementation of the market reforms in the housing sector, cadastral registration of land plots under apartment buildings, registration of titles to the facilities of the communal infrastructure.

Furthermore, market-based financing schemes are to be used more actively. As the experience of Russian regions shows, it is possible to use payments for housing services as collateral for debt financing during complete overhaul of apartment buildings.

The issues concerning the modernization of public utility sector are of paramount importance in the given municipalities. The implementation of large investment programmes should provide the optimum combination of the instruments of the budget financing (at the expense of local and regional budgets, Support fund for the reform of the housing and utilities sector), bank financing, distribution of the financial burden between the current and the new consumers of utility services.

In order to prevent the dissipation of funds, it is necessary to create conditions for the efficient investment in municipal infrastructure, the key of which are the programmes of complex development of the communal infrastructure systems (PCD CIS). For the municipality PCD CIS is the tool of managing and optimizing the municipal infrastructure development that allows identifying "hotspots" in the development of the housing and communal sector and focusing the limited financial resources on their solution. The given programme will enable private investors to determine the guidelines for business development, and the projects that are the most promising in terms of payback.

However, such programmes have been approved not by all municipalities of the region (204 municipalities as of January 1, 2013, that is 67.5% of the total number), and frequently are not strategic and integrated [6]. In this context, the main problem is that their development is carried out by the municipal authorities, which, as a rule, do not have essential human and financial resources. According to the author, the solution to the problem is to provide targeted co-financing by means of the regional budget for the development of such programmes, or to include the expenditures incurred in the cost of the package of entitling documents submitted for the competition for the private investor.

The crisis situation in the housing and communal sector of these municipalities is aggravated by the fact that in rural areas many settlements become desolated. It is obvious that the construction of new communal facilities in this situation is unreasonable and extremely disadvantageous neither in commercial, nor in economic terms. On that basis it can be highlighted that the state policy should be aimed at the modernization of the existing systems of public utilities and the promotion of the installation of individual systems of public utilities (for example, heat supply stations as an alternative to municipal boiler houses) [2].

The implementation of this action plan will allow using scarce financial resources more efficiently, optimizing the territorial production structure of the housing and communal sector and enhancing the overall operating efficiency of the housing and communal sector in different types of the region's municipalities.

References

1. Vologda Oblast housing stock: background note. Vologda, 2013.
2. Kozhevnikov S.A. Problems of housing and utilities sector of rural territories. Territorial development issues. 2013. No. 8(8). Available at: http://vtr.isert-ran.ru/file.php?module=Articles&action=view&file=article&aid=3165
3. Vologda Oblast communal services in 2012: statistical bulletin. Vologda:Vologdastat, 2013.
4. On measures to improve the quality of housing and communal services: report of the State Council of the Russian Federation. Saint Petersburg, 2013.
5. Russia Public Opinion Research Center (VCIOM) official site. Available at: http://wciom.ru/index.php?id=459&uid=113767
6. Official site of the Vologda Oblast Department of Construction, Housing and Communal Services. Available at: http://www.depregion.ru/
7. Primin O. Ways to reduce water losses. Russian communal complex. 2013. No. 4(106). Available at: http://www.gkhprofi.ru/news.php?id=748
8. Consolidated report of the Vologda Oblast on the monitoring results of the operating efficiency of the local authorities of city districts and municipal areas at the end of 2012. Available at: http://vologda-oblast.ru/dokumenty/all/4252/
9. Skripnik O.B. The reform of the regional housing complex: methodology and practice. Moscow: Finansy i statistika, 2013.
10. Sorgutov I.V. Methodical approach to estimating the safety level of the territorial life support system: Ph.D. in Economics abstract of the thesis: 08.00.05. Yekaterinburg, 2013.
11. Uskova T.V., Barabanov A.S. Housing and communal services of the municipality: state, problems, tariff regulation: preprint. Vologda: ISEDT RAS, 2013.
12. Uskova T.V., Gordina, O.N., Barabanov A.S. Reforming housing and communal services: regional aspect. Problems of development of territory. 2010. No. 5. P. 14-19.
13. Chernyshov A.N. Management of the region's housing and communal sector on the basis of programme-oriented and goal-oriented approach: Ph.D. in Economics abstract of the thesis: 08.00.05.Chelyabinsk, 2011.
14. Marin P. Public-private partnerships for urban water utilities: a review of experiences in developing countries. Washington DC: The World Bank, 2009. Available at: http://elibrary.worldbank.org/doi/pdf/10.1596/978-0-8213-7956-1

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