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Problems of socio-economic development of Russian territories in the post crisis period*

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In his speech at the Congress of "United Russia" on September 24, 2011, the party leader, V.V. Putin proposed a configuration of power in the next six years, answered the questions about the personal candidacies for the two highest government posts of the Russian Federation. This introduces the election campaign of the new political cycle into a quiet stream, without creating the possibility of overheating the election atmosphere in the society, both from the extreme left and extreme right the political forces and Russia's foreign "friends".

V.V. Putin's and D.A. Medvedev's public speeches show that they are seriously concerned about the socio-economic situation prevailing in the country after the global financial crisis. The lack of quality control of socio-economic processes from the power elites came to light.

In his speech, September 24 V.V. Putin listed the most pressing unsolved problems with which the country is entering a new political cycle: **"We must say openly (say it again) about the dependence of our economy on the raw materials, about a dangerous level of social inequality, violence, corruption, feelings of injustice and illegality, which people often have when going to state institutions, the courts or law enforcement agencies, about the barriers to initiatives in business, public service, in social activities – all this, unfortunately, is still accompanying us. We can and we must overcome these problems. We can and we must!"**

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The paper sets out the content of the report at the plenary session of the VI International Scientific and Practical Conference "Strategy and tactics of socio-economic reforms implementation: the regional aspect" in Vologda on October 7, 2011.

Table 1. The dynamics of structural changes in the Russian industry (% of total)

Industry	1990	2000	2008	2009	2010
Industry, total (%)	100	100	100	100	100
Fuel and Energy Complex	**19.1**	**26.0**	40.1	44.3	**44.1**
Consumer complex	21.3	16.7	12.1	13.3	13.3
including: light industry	**6.4**	1.8	0.7	0.7	**0.7**
food industry	14.9	14.9	11.4	12.5	12.6
Investment demand industries	**27.5**	23.3	18.9	15.1	**15.4**
including: engineering industry	**24.2**	**20.5**	14.5	11.6	**12.1**
Industries of intermediate demand	29.2	31.8	27.0	25.6	25.8
including: metallurgy	**15.0**	**18.9**	14.1	13.1	**13.0**
chemical Complex	6.9	7.5	7.2	7.1	7.2

Source: Rosstat yearbooks for 1990 – 2010; calculations of ISEDT RAS.

At present in all layers of Russian society there is active discussion of socio-economic situation of the country. The scientific community is also actively involved in evaluating the results of a very liberal economic and financial policy, which was conducted by the Russian Government in the recent decades. In this connection I would like to highlight some key findings of scientific research of ISEDT RAS, held in the recent years. There will be listed a number of important dynamics indicators which should assess the quality of socio-economic processes from the Russian Government and the ruling party.

1. The research of ISEDT RAS as well as many other scientific institutions in the country and experts suggest that in Russia, despite the inviting rhetoric, there is no real change in the species and sectoral structure of industry.

This is clearly evident from the data presented in *table 1.*

In 2010 compared with 2008 the share of fuel and energy sector in the industrial production of the country rose from 40.1 to 44.1%, the share of investment demand industries has decreased from 18.9 to 15.4%, including engineering industry – from 14.5 to 12.1%. And for twenty years, the share of fuel and energy complex in industrial output of Russia increased 2.3 times, investment demand industries reduced their share by 1.8 times, including engineering industry – 2 times, the proportion of consumer demand sectors decreased more than half.

The absence of any significant positive changes in industry structure is characteristic for the overwhelming majority of Russian regions.

Figure 1 shows the structure of manufacturing the Vologda Oblast in the last 20 years. It is evident that there was consolidation of the monopoly of the steel industry; its share is now 64%. The share of engineering industry fell twice.

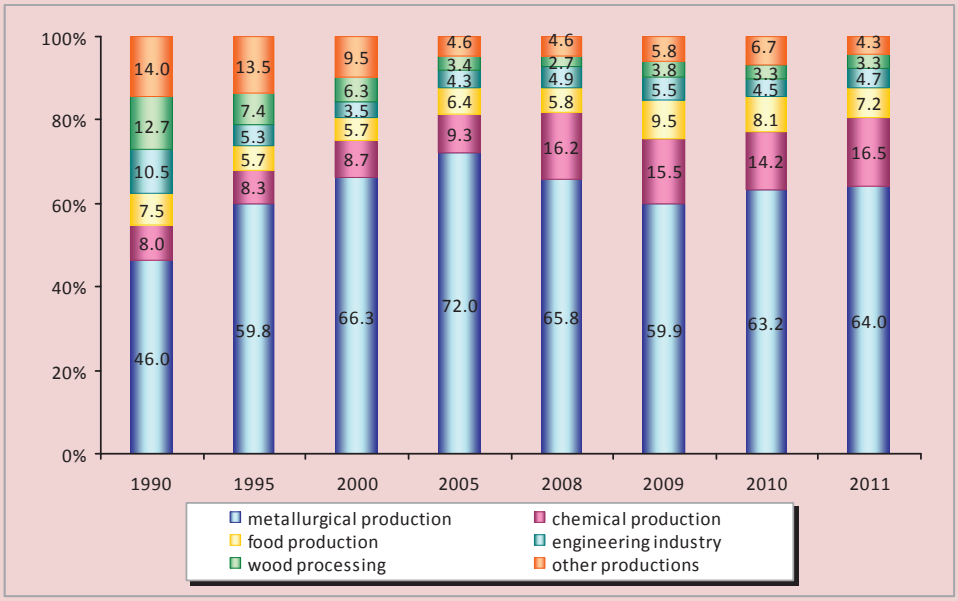
Throughout the country, the production volume of major machinery and equipment, vehicles is now multiply less than it was twenty years ago *(tab. 2)*.

Domestic production does not meet the needs of upgrading with necessary equipment and goods, forcing to increase their import. According to experts, at the expense of imports there are currently being met 60% of the requirements for equipment and innovative products, 45% of food needs, 80% of clothing and footwear, 100% of home appliances[1].

Government measures to maintain the producers of these and other import substituting goods can and should be the actual start of modernization. There are the possibilities for this.

[1] Tatarkin A.I., Tatarkin D.A. Innovative mission of modernization of the social order – the need for sustainable development of Russia // Economics of contemporary Russia. – 2011 – № 5. – P. 9.

Figure 1. The structure of the delivered goods by the Vologda Oblast industry, %*



* 1990 – 2000 – according to IBAN: the proportion of the industry "Mechanical engineering and metal processing" in the industrial production.
Since 2005 – according to NACE: the total proportion of "Machinery and equipment production", "Production of electrical and optical equipment" and "Production of vehicles and equipment" in the volume of shipped products by economic activity, "Manufacturing".
Sources: Industry of the Vologda Oblast: stat. coll. / Vologdastat. – Vologda, 2010. – P. 10; Industry the Vologda Oblast: stat. coll. / Vologda oblkomstat. – Vologda, 2003. – P. 17.

Table 2. Russian production of certain types of machinery and equipment in 1992 – 2009

Type of equipment machines	1992	2000	2007	2008	2009	2009 to 1992, reduced
Metal-cutting machines, thousand pieces	53.4	8.9	5.1	4.8	1.9	28 times
Press-forging machines, thousand pieces	16.5	1.2	2.7	2.7	1.3	12 times
Excavators, thousand pieces	15.4	3.4	6.3	5.5	1.4	11 times
Harvesters, thousand pieces	42.2	5.2	7.3	8.1	6.9	6 times
Tractors, thousand pieces	141.6	19.3	14.0	17.3	8.3	17 times
Electric big machines, thousand pieces	14.9	4.1	5.2	4.9	2.3	6 times
Trolleys, pc.	1685	498	651	778	773	2.1 times
Trucks, thousand pieces	583	184	285	256	91.7	6.4 times

Source: Russia in figures. 2011: stat. coll. / Rosstat. – M., 2011.

In the Vologda Oblast, for example, during the reform years a number of jobs in machine-building enterprises have decreased by more than 20 000 *(tab. 3)*. But even now there is a considerable reserve of manufacturing space.

When updating the fixed assets, the organization of planned training of qualified personnel of massive working occupations, these reserves provide an opportunity increase the production of many complex products, imported from abroad in the region in a relatively short time.

Growing attention to the increase of import substituting goods will allow optimizing the economic structure in favor of investment value sectors, expanding the domestic demand for domestic goods, connecting more effective institutions and mechanisms to the structural diversification.

Table 3. The number of industrial personnel in machine-building enterprises of the Vologda Oblast

Enterprises	1990	2000	2008	2010	2010 in % to 1990
Machine-building enterprises, total in the region	30422	16357	10063	8269	27.2
Bearing plant	9442	6748	3479	3201	33.9
Optical-Mechanical plant	about 7000	…	2286	2365	33.7
Machine-Building plant	1448	347	417	400	27.6
Source: data from regional statistics service					

Table 4. Major investment flows of the federal center in 2010 – 2020

Winter Olympics 2014 (Sochi) World Student Games (Universiada) 2013 (Kazan) FIFA World Cup 2018 (13 cities)	APEC summit in 2012 (Vladivostok) Innovation Center in Skolkovo Problems of the North Caucasus republics Spaceport "Vostochny" (the Amur Oblast)

We believe, modernization should be based mainly on domestic production, finance and credit opportunities and other reserves.

2**. As a result of breaking centralized planned economy a new institutional system of spatial development was actually born in the country; it consists of two organizational and financial technologies: "government programs" and "strategies" of regional development. They should actually build the regional economic performance and ensure the overall economic equilibrium in a spatial context. In fact, there is no relationship between these technologies.**

Major investment flows of the current decade of the federal center are formed taking into account a kind of package of the mandatory projects *(tab. 4)*.

These are large-scale and expensive projects, most of which were approved without the necessary scientific discussion, efficiency calculation and payback period. For example, investments in football championship preparations are estimated at 632 billion rubles[2]. In sum, the above projects involve trillions of rubles of investments.

During the projects implementation, of course, there will be the corresponding points of growth. But it is not clear yet how the combination of these projects can describe the balanced spatial dynamics of national development, promote the adoption of decisions on priorities for allocation of public resources. The policies and programs for individual regions that exist and that are being developed are autonomous instruments, reflecting the nature of the statistics indicators relationship.

We agree with the opinion of local experts, who believe that one or another national priority must be achieved in the process of rational resources allocation for spatial development, and then through the integration of local results at the national level[3].

There is a serious obstacle to implement such a policy; it is the virtual absence of resources that could be centralized in the regions for priorities. In Russia, nearly 85% of the regions and more than 90% of the municipalities are subsidized for over ten years. The share of own revenues in local budgets during this period has been steadily declining. In 2010, on the average in Russia, this figure was 40.4%, in the regions of the North-West Federal District – 39.7%, including the Vologda oblast – 35.8%, and in the Novgorod oblast – only 30% *(tab. 5)*.

[2] According to: http // news.mail.ru/sport/news/football

[3] See, for example Minakir P.A. Spatial heterogeneity of Russia and the problems of regional policy // Journal of the New Economic Association. – 2011. – № 10. – Pp. 150-153.

Table 5. The share of own revenues in local budgets (% of total revenue)

Territory	2000	2003	2006	2007	2008	2009	2010
Murmansk Oblast	68.0	69.0	30.3	34.3	36.5	39.8	45.0
Republic of Karelia	78.6	58.8	39.2	37.8	38.3	43.4	43.7
Komi Republic	73.2	61.4	36.5	38.8	38.6	40.3	42.9
Leningrad Oblast	83.1	55.1	30.3	32.5	38.0	42.8	42.6
Pskov Oblast	59.0	57.3	52.5	45.3	47.3	40.2	42.5
Arkhangelsk Oblast	81.3	49.6	45.7	45.2	40.2	43.2	41.5
Kaliningrad Oblast	75.8	67.0	49.8	48.9	47.6	36.0	36.9
Vologda Oblast	80.3	70.5	32.2	37.4	43.4	38.8	35.8
Novgorod Oblast	65.8	69.4	27.6	28.8	29.0	29.9	30.3
NWFD	74.0	62.0	37.4	38.2	38.9	39.4	39.7
Russian Federation	71.2	57.0	39.2	39.5	40.1	39.5	40.4

Source: the data of the Treasury of Russia; calculations of ISEDT RAS.

Table 6. Effective strategic planning system

Federal block	• advance long-term forecasts (30 – 50 years); • proper strategic plan for the long term (15 – 20 years); • federal target programs in selected areas; • indicative plans for the medium term (3 – 5 years);
Regional block	• the territorial system of forecasting, strategic and indicative planning and programming for macroregions (federal districts), regions (Federation subjects) and large municipalities, linked to the federal system;
Control and management block	• the system report, control, forecasting and planned balances for main kinds of resources; • the system of analytical monitoring of strategic plans and programs; • a specialized body of executive power developing and controlling the implementation of strategic plans and programs; • upper authorities headed by the president and chairman of the Government, exercising leadership and coordination.

Source: Yakovets Yu.V. On the combination of long-term forecasting and strategic planning // Economist. – 2008. – № 6.

There are many reasons for this. But all they are just a part of a general problem, the problem of weak, ineffective country's controllability, and its socio-economic and social development.

To solve this problem we must first take logical and reasonable government action to create a system of effective strategic planning. Reasoned proposals on this subject are expressed by a competent specialist in integral forecasting Yu.V. Yakovets *(tab. 6)*.

And, secondly, the existing shortcomings can be overcome only through intensive training of state and municipal leaders. Under modern conditions, in order to run the state, its institutions and bodies it is necessary to have research and educational management skills, knowledge of characteristics of the management object, the ability to work with scientific and educational organizations, to support and form the creative atmosphere among the subordinates, to show high responsibility for entrusted task.

3. The research of ISEDT RAS found that in contemporary Russian reality there is a growth of negative manifestations of the economic interests of large corporations' owners (the so-called oligarchs), which leads to inhibition of solving national problems and challenges of economic growth in the regions.

These studies were carried out based on the analysis of the activity of the leading metallurgical holdings in the country. It was revealed that in the "fat" years, much of their profit went to consumption at the expense of renewal of production *(tab. 7)*.

Table 7. Dividends accrued in the enterprises of ferrous metallurgy in 2005 – 2010, bln. rub.

Enterprise	2005	2006	2007	2008	2009	2010	Total for 2005 – 2010
OJSC "Severstal"	8.2	10.3	19.2	31.1	0	6.8	75.6
% of net profit	24.0	29.2	45.7	80.2	0	loss	X
OJSC "NLMP"	18.0	18.0	18.0	12.0	1.3	10.9	78.2
% of net profit	51.1	35.6	44.4	16.7	20.8	31.0	x
OJSC "MMP"	19.7	34.1	10.5	4.3	4.1	4.1	76.8
% of net profit	66.1	91.9	20.3	42.6	15.0	16.8	x

Source: annual reports of metallurgical enterprises.

Table 8. Dividends accrued to the main shareholders of ferrous metallurgy enterprises in 2005 – 2010, bln. rub.

Enterprise	2005	2006	2007	2008	2009	2010	Total for 2005 – 2010
Severstal	6.8	8.4	15.6	25.5	0	5.6	61.1
Novolipetsk MP	16.2	15.0	15.2	10.4	1.1	9.5	67.4
Magnitogorsk MP	19.1	33.1	9.2	3.7	3.6	3.5	72.2

Source: annual reports of metallurgical corporations; calculations of ISEDT RAS.

Table 9. VAT charged for payment in the budget and recoverable from the budget in 2006 – 2010

Indicators	Russian Federation						Vologda Oblast					
	2006	2007	2008	2009	2010	2006 – 2010	2006	2007	2008	2009	2010	2006 – 2010
VAT charge to be paid to the budget, bill. rub.	1858	1340	2127	2341	2527	10193	5.1	9.9	14.3	12.2	9.6	51.0
VAT charged recoverable from the budget, bill. rub.	811	278	922	1110	1122	4243	2.2	2.4	4.0	7.7	6.6	22.9
% of the charged amount	43.7	20.7	43.4	47.4	44.4	41.6	42.4	24.3	28.0	63.4	68.6	45.0

Source: data of the Russian Federal Tax Service, data of the Vologda Oblast Federal Tax Service Administration; calculations of ISEDT RAS.

And most of the dividends received major owners of corporations - their CEOs *(tab. 8)*.

Social responsibility of the owners of Russian companies remains very low. Federal and regional authorities do not make them requirements that correspond to the interests of society as a whole, territorial communities and moral standards specific to socially-oriented state.

To restrain large-scale private businesses in their quest for a permanent enrichment, a significant adjustment of existing legislation, the adoption of clear practical solutions is required.

The matter is, in particular, on such measures as: the introduction of a progressive tax and the abolition of taxes to a certain level of income, the abolition of the export refund for VAT *(tab. 9)*, three-, four-fold increase in taxes on dividends that are displayed in the offshore *(tab. 10)*.

Table 10. Tax rates on dividends in Russia and some EU countries

Country	Rate indicator
Russian Federation	9% – for residents 15% – for non-residents
Finland	29%
Germany	25%
France	
Norway	
Luxembourg	
Portugal	
Sweden	28%
United Kingdom	
Italy	27%
Denmark	from 25 to 40%

Source: Taxes on dividends // Current accounting. – 2010. – № 2.

These measures will reduce the tax burden on the poor and increase tax revenues from the imposition of windfall profits, and ultimately to stimulate the development of consumer demand, which is the basis for economic growth.

4. Meeting the challenges of modernization is impossible without a continuous increase in labor productivity levels which to a great extent depends on the state of the labor potential use, development of people's creative abilities.

Monitoring measurements of qualitative state of population's labor potential having been taken by ISEDT RAS since 1997 show that among the eight basic assessments of the population's social viability the index of creative abilities is the lowest. Moreover, its general trend is the decreasing one *(tab. 11)*.

Our measurements showed that the level of implementation of labor potential varies considerably depending on the size of wages: it is higher in groups with large wages *(tab. 12)*. Moreover, positive developments in the use of labor potential start when the rate of wages exceeds the minimum wage 5 times or more. The level of cognitive capacities implementation, for example, increases in this case from 63 to 84%.

Table 11. Labor potential quality of the Vologda Oblast

Quality	Index value in 1997	Index value in 2009	Index value in 2011	Rank in 2011	Index change in 2011 as compared with 2009	Trend line 1997 – 2011
Physical health	0.682	0.728	0.728	4	no change	/ increasing
Mental health	0.699	0.739	0.759	2	▲ increase	/ increasing
Cognitive capacity	0.630	0.614	0.626	7	▲ increase	\ decreasing
Creative potential	0.593	0.572	0.589	**8**	▲ increase	\ decreasing
Sociability	0.733	0.736	0.743	3	▲ increase	/ increasing
Cultural level	0.609	0.674	0.651	5	▼ decline	/ increasing
Moral level	0.775	0.757	0.765	**1**	▲ increase	\ decreasing
Need in achievement	0.612	0.643	0.647	6	▲ increase	/ increasing
Capacity (Integral index of labor potential quality)	0.655	0.674	0.676	–	▲ increase	/ increasing

Source: Monitoring of labor potential quality status in the Vologda Oblast; ISEDT RAS.

Table 12. The level of labor potential implementation in groups with different wages (%)

Labor potential quality	Wage rate per month					
	Below the minimum wage (up to 4430 rub.)	From 1 to 2 minimum wages (from 4430 up to 8660 rub.)	From 2 to 3 minimum wages (from 8660 up to 12990 rub.)	From 3 to 4 minimum wages (from 12990 up to 17320 rub.)	From 4 to 5 minimum wages (from 17320 up to 21600 rub.)	More than 5 minimum wages (from 21600 rub.)
Physical health	71.9	78.8	80.0	80.4	85.8	84.1
Mental health	65.8	76.5	78.2	78.5	80.5	81.9
Cognitive capacities	63.4	75.9	78.1	80.7	81.1	83.5
Creative potential	62.0	67.8	68.2	69.5	73.2	71.3
Sociability	69.1	78.6	79.3	82.5	85.0	83.0
Cultural level	68.1	77.6	78.4	78.1	81.1	78.1
Moral level	67.7	77.4	79.1	77.8	81.3	78.8
Need in achievement	61.1	67.7	69.5	72.9	73.2	79.1
Average	*66.1*	*75.1*	*76.4*	*77.5*	*80.1*	*80.0*

Source: Monitoring of labor potential quality status in the Vologda Oblast; ISEDT RAS, 2009.

Wage rise is an essential requirement not only for the growth of social well-being of the population, but also for ensuring the increasing dynamics and efficiency of production. We consider the proposals of many experts on the introduction of hourly wage standard in the country as justified.

5. The success of the modernization, the transition of the economy to innovative development are to a great extent determined by the growth of human capital, its qualitative characteristics, and above all the increasing level of intellectualization and creativity. The education system has a key role in this process.

A continuous process of education reform has been held in Russia in the past two decades. However, the positive effects of educational innovations cannot be seen yet.

Despite the rhetoric about the importance of the transition of education to an innovative type of development, there are no fundamental changes in state funding for education, its growing commercialization is clearly visible. The share of education expenditure in GDP in recent years is to just over 4%, while in the leading countries it is 6 – 7%.

Measures to increase teachers' salaries promised in public documents are not performed *(tab. 13, fig. 2)*.

Lagging of wages in the education system from the average for the economy takes place in all regions of the North-West Federal District. At the same time the wages of government officials in relation to average earnings is steadily increasing (tab. 14). Their numbers is increasing continuously, while the number of employees of educational institutions is declining *(tab. 15)*.

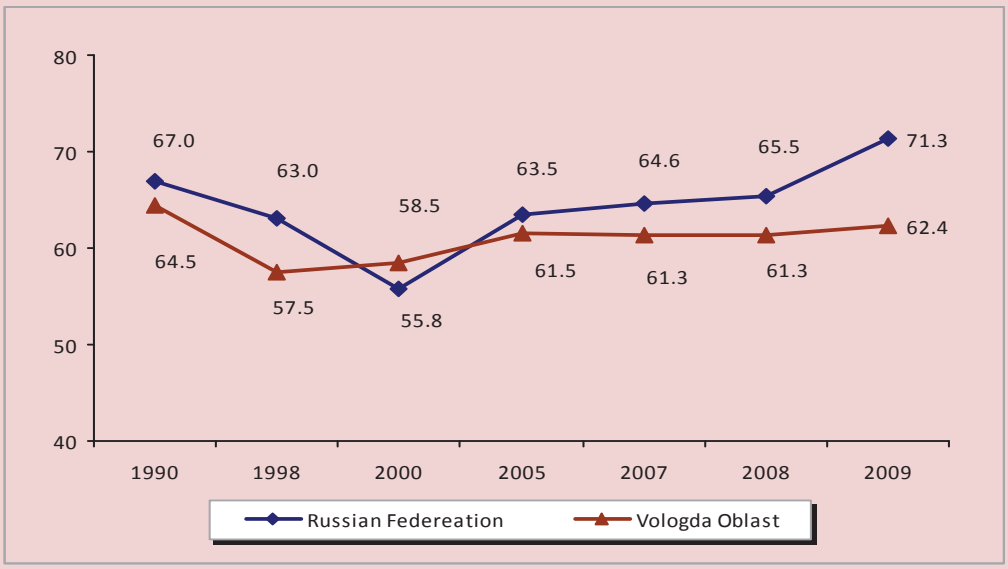
A study of the economic situation and social well-being of teachers of the Oblast's educational institutions held by ISEDT RAS in the middle of the current year presented a very disturbing picture.

Almost 46% of the surveyed teachers assess their families' economic condition as poor and very poor, 60% in rural areas (we should note that 33% of the entire population of the Oblast evaluate their condition in this way). The level of assessment of the authorities' activities and trust to them is significantly lower among the teachers than the average among the population. 90% of respondents would not want their children to become teachers *(tab. 16)*.

Table 13. Salaries in education: the declaration and reality

Public document	Actual level of wages in education, as% of average
The law "On education" dated July 10, 1992 № 3266-1 read that **"the average wage and salary rate ... for teachers and other educationalists <should be> not less than the average wage of industrial workers in the Russian Federation"**	**1992.:** in Russia – 61% in the Vologda Oblast – 57%
The Message of the President of Russia B.N. Yeltsin to Federal Assembly reads on the state program designed to **"...restore respect for the teacher, to provide the people of this occupation with decent living conditions"**	**1998:** in Russia – 63% in the Vologda Oblast – 58%
The Message of the President of Russia V.V. Putin to the Russian Federal Assembly reads on the need to "... increase state employees' incomes not less than 1.5 times within three years. ... **in this case we'll be able to achieve the approximation of the average wage in the public sector the average wage in the country"**	**2005:** in Russia – 64% in the Vologda Oblast – 61%
The main activities of the RF Government for the period up to 2012 among the objectives of education: **"... teachers' salaries should not be below the average wages of workers employed in the entities of economic sphere of the Russian Federation"**	**2008:** in Russia – 66% in the Vologda Oblast – 62%
	2009: in Russia – 71.3% in the Vologda Oblast – 62.4%
Source: the yearbooks of Rosstat and the Vologda Oblast.	

Figure 2. Salary of education employees, as a percentage of average wage



Source: Education in the Vologda Oblast in 2006 – 2010: stat. coll. / Vologdastat. – Vologda, 2011. – Pp. 22-36.

Table 14. Ratio of average wages of employees in education and public administration with the average of the economy

Territory	% of the average of the economy				Growth in 2010 relative to 2002			
	Education		State management		in rubles		in %	
	2002	2010	2002	2010	Education	State management	Education	State management
Russian Federation	**65**	**66**	**109**	**119**	**7903**	**14764**	**+1**	**+10**
NWFD	66	67	114	127	7671	15966	+1	+13
St. Petersburg	65	75	112	109	13250	17675	+10	-3
Pskov Oblast	74	74	132	140	5989	11873	0	+8
Novgorod Oblast	70	74	109	123	7003	12166	+4	+14
Kaliningrad Oblast	75	74	119	113	8493	12642	-1	-6
Leningrad Oblast	62	70	105	106	10915	15485	+8	+1
Murmansk Oblast	66	64	115	120	8972	20212	-2	+5
Republic of Karelia	73	63	145	**156**	5024	17166	-10	**+11**
Arkhangelsk Oblast	68	62	132	**150**	6916	**20417**	-6	**+18**
Vologda Oblast	64	58	101	**124**	5777	15585	-6	**+23**
Komi Republic	61	54	109	**131**	4611	15147	-7	**+22**

Table 15. Dynamics of the number of individual categories of employees in Russia, thousand people

Categories of employees	1995	2000	2005	2010	2010 as % to 1995
Number of teachers in secondary schools	1717	1761	1594	1079	62.8
The number of employees in state and local government agencies	1061.8	1161.5	1468.0	1648.4	155.2
Source: Russia in figures // Rosstat. M. – 2011. – Pp. 58, 136.					

Table 16. Distribution of teachers' answers to the question: "Do you want your children to become teachers?" (% of respondents)

Answers	Vologda	Cherepovets	Dostricts	The survey average
Yes, most likely yes	2.0	0.0	4.8	2.6
Most likely no, no	87.5	**94.3**	86.9	**89.3**
Difficult to answer	10.5	5.7	8.3	8.1

Source: data from the survey of teachers of educational institutions of the Vologda Oblast, ISEDT RAS, June 2011.

Safety margin is getting smaller. In fact there rises a threat of losing this part of the intelligentsia as the best prepared socio-cultural group. Without this advantage, which we had before to other countries, it is impossible to compete in today's world. This competition starts from school and training department. As far as teachers' class is respected in the community, so its respect is back to the society, the state in the next generation of citizens. Education personnel are the most important structure-forming element of good society.

6. The research of ISEDT RAS confirmed that without strengthening of regional scientific and technological potential the transition to innovative development will be virtually blocked, and that is happening now.

For various reasons, both historical ones and those caused by destructive processes of market formation which were actively taking place in the 1990s, the regions do not have today the volume of research and scientific and technical personnel needed to implement large-scale economy diversification and its sustained quality growth.

Here is the saturation of the economy with researchers in the country and regional profile *(tab. 17, 18)*.

In May 2009, ISEDT RAS sent the regional authorities a project of a long-term program of scientific and technical potential development of the Vologda Oblast for the period up to 2025, providing a significant increase in key indicators of science and technology.

Unfortunately, the regional authorities have not taken any significant steps in this regard yet.

7. One of the most serious obstacles to the development of Russia is corruption, and speaking Russian it is bribery and embezzlement.

To suppress the corruption of administrative type requires increased use of formal state mechanisms.

The greatest harm is done by public and political corruption. It is a tool for the powers that seek to subject the activities of state institutions to their private interests acting contrary to the public interest.

Unfortunately, our society is scattered today. It destroyed by anomie, that is, rejection of the moral and social norms, commitments and conscience.

This is evidenced by the recently discovered facts of participation of employees of law enforcement agencies in the protection racket of illegal businesses. Journalists' investigations devoted to real estate of major Russian officials became resonance. Social networks in the Net are also full disclosure of corruption.

Without formulating and solving the basic issues on values, equity and social cohesion, as well as its goals and ideology of progress, it is impossible to overcome public and political corruption.

And to escape from the vicious circle an active dialogue between the government and society is required; the formation of strong institutions of civil society is a key imperative of sustained development. Precisely because of this you can exercise effective control of the society for the implementation of the planned large-scale strategic decisions and plans for the long-term socio-economic development of Russia.

Table 17. The number of personnel engaged in research and development for some countries, per 100 thousand population, people.

Country	2000	2005	2009	2009 to 2000, in %
Finland	1012	1105	**1058**	104.5
Japan	707	721	**712***	100.7**
France	555	573	**754**	135.9
Germany	590	576	**646**	109.5
Russia	**607**	**570**	**523**	**86.2**
China	73	105	**148***	202.4**

* Data from 2008.
** Data from 2008 to 2002, in %.
Sources: Russia and the countries of the world. 2010: stat. coll. / Rosstat. – M., 2010. – 372 p.
Eurostathome [Electronic resource]. – Available at: http://epp.eurostat.ec.europa.eu/portal/page/portal/science_technology_innovation/data/database

Table 18. The number of personnel engaged in research and development (per 100 000 population, people)

Territory	2000	2005	2010	Ratio to the average of 8 regions of NWFD, %
Russia	607	570	523	×
NWFD	823	769	727	×
St. Petersburg and the Leningrad Oblast	1636	1514	1411	×
Murmansk Oblast	300	271	300	220.6
Komi Republic	208	208	201	147.8
Kaliningrad Oblast	264	221	198	145.6
Novgorod Oblast	176	129	177	130.1
Republic of Karelia	179	134	145	106.6
Arkhangelsk Oblast	96	116	94	69.1
Pskov Oblast	55	39	55	40.4
Vologda Oblast	33	38	40	29.4
The average of 8 regions of NWFD	155	142	136	100.0

Sources: Development of the innovation process in the Vologda Oblast / Vologdastat. – Vologda, 2011. – P. 31;
Website of the Federal State Statistics Service www.gks.ru

In a recently published article entitled "Russia's Development Strategy" the leading economists of the RAS reasonably argue: "In general, Russia still has sufficient foreign exchange reserves and natural resources to finance the new industrialization of the Russian economy, its modernization on the basis of high-technology of modern technological order. The Russian financial system is not completely integrated into global financial pyramid yet. This allows blocking the channels of "poisoning" their own financial system with speculative "toxic" instruments, re-directing it to the domestic sources of credit and directing savings to support innovation and investment in the promising areas of the Russian economy. The presence of natural raw materials and defense capabilities gives us the objective possibilities for independent policy, even with negative scenarios of the global recession resumption Russia has the resources necessary not only for survival but also for the advanced development"[4].

[4] On the strategy of economic development of Russia / S.Yu. Glazyev, V.V. Ivanter, V.L. Makarov, A.D. Nekipelov, A.I. Tatarkin, R.S. Grinberg, G.G. Fetisov, V.A. Tsvetkov, S.A. Batchikov, M.V. Ershov, D.A. Mityaev, Yu.A. Petrov // Economy of contemporary Russia. – 2011. – № 3 (54). – P. 29.

I would like to return to the words of V.V. Putin, which I quoted above: **"We must say openly (say it again) about the dependence of our economy on the raw materials, about a dangerous level of social inequality, violence, corruption, feelings of injustice and illegality, which people often have when going to state institutions, the courts or law enforcement agencies, about the barriers to initiatives in business, public service, in social activities – all this, unfortunately, is still accompanying us. We can and we must overcome these problems. We can and we must!"**

There comes a time of real and effective action to address the systemic problems in public administration recognized by the leader of the ruling party V.V. Putin, doesn't it?

I really hope it does!

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The published below summarizing materials covering the results of VI International Scientific and Practical Conference on "Strategy and tactics of economic reforms implementation: a regional aspect" held October 6 – 8 in Vologda, present how the scientists and experts participating in this forum consider the ways and mechanisms to address the new challenges.

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As in the previous issues, we present the results of the recent public opinion monitoring of the state of the Russian society.

The following tables show the dynamics of some parameters of social well-being and socio-political sentiments in the Vologda Oblast for the period from October 2010 to October 2011.

Estimation of the social condition

In % to the total number of interrogated people								Dynamics indexes Oct. 2011 to 8 months 2008	
8 months 2008	Oct. 10	Dec. 10	Feb. 11	Apr. 11	June 11	Aug. 11	Oct. 11		
Usual condition, good mood									
70.2	63.4	64.7	54.6	64.0	64.5	66.7	64.7	**0.92**	
Feeling stress, irritation, fear, depression									
22.1	29.0	29.8	32.4	28.1	29.4	24.1	29.4		**1.33**
Everything is not so bad, it's difficult to live, but it's possible to stand it									
81.0	68.2	76.7	68.9	76.1	78.0	73.2	73.9	**0.91**	
It's impossible to bear such plight									
10.9	18.5	16.0	18.7	16.1	15.9	11.3	15.8		**1.45**
Consumer sentiments' index									
107.5	88.1	87.8	88.6	90.1	86.1	92.9	88.5	**0.82**	
The share of people who consider themselves to be poor									
39.8	45.2	46.6	47.6	46.8	43.9	40.8	44.6		**1.12**
The share of people who consider themselves to have average incomes									
50.7	37.3	42.1	40.0	42.4	46.1	46.2	41.8	**0.82**	

Estimation of the authorities' activity

Chain of command	Approval in % to the total amount of the interrogated people								Dynamics indexes Oct. 2011 to 8 months 2008	
	8 mon. 2008	Oct. 10	Dec. 10	Feb. 11	Apr. 11	June 11	Aug. 11	Oct. 11		
President of the RF	75.0	64.5	57.7	57.3	61.9	62.7	62.1	56.6	**0.75**	
Prime-Minister of the RF	76.4	63.9	61.1	58.9	64.3	60.3	60.4	59.1	**0.77**	
The Vologda Oblast Governor	57.8	46.1	47.2	42.4	46.1	46.7	49.5	47.7	**0.83**	

Chain of command	Disapproval in % to the total amount of the interrogated people								Dynamics indexes Oct. 2011 to 8 months 2008	
	8 mon. 2008	Oct. 10	Dec. 10	Feb. 11	Apr. 11	June 11	Aug. 11	Oct. 11		
President of the RF	9.3	17.4	25.5	23.3	23.5	22.1	19.7	29.0		**3.12**
Prime-Minister of the RF	10.4	19.6	23.5	22.8	22.3	24.3	21.4	24.7		**2.38**
The Vologda Oblast Governor	19.9	28.1	28.6	29.9	31.1	29.5	24.4	32.1		**1.61**

What party expresses your interests?

Party	8 mon. 2008	Oct. 10	Dec. 10	Feb. 11	Apr. 11	June 11	Aug. 11	Oct.11	Dynamics indexes Oct. 2011 to 8 months 2008	
United Russia	40.5	28.3	28.3	27.3	35.9	34.0	33.7	29.8	**0.74**	
CPRF	6.8	9.5	7.5	8.4	9.7	8.2	10.0	12.1		**1.78**
LDPR	7.7	7.9	8.1	6.8	7.5	6.9	7.5	9.1		**1.18**
Fair Russia	5.0	4.1	3.8	2.7	3.2	5.7	2.7	5.6		**1.12**
Other	1.4	3.2	2.0	2.4	1.7	1.1	2.4	3.1		**2.21**
No party	20.1	35.1	36.6	36.0	28.8	30.4	28.9	28.1		**1.40**
It's difficult to answer	13.7	11.9	13.6	16.3	13.1	13.7	14.8	12.2	**0.89**	

The basis for comparison is the average data obtained in the course of four measurements taken by ISEDT RAS for the time interval from January to August 2008. As can be seen from the tables, the parameters of the pre-crisis period have not been achieved yet.

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This issue also contains a rating of the previous publications of the journal.

The first 10 articles according to the frequency of their viewing for the recent 12 months (November 2010 – October 2011)

Rating	Article	Total time of reading, minutes for the whole period *	Number of readers for the whole accounting period*	Number of views for the recent 12 months	Number of views for the recent 3 months	Average time of viewing (minutes) for the whole accounting period*	Issue	Release date	Authors
1	Development of the regional clusters' system	10741	423	200	39	25	№ 1	March 2008	Uskova Tamara Vitalyevna
2	Problems of local budgets' and municipal property's formation	5096	291	256	32	17	№ 1	March 2008	Valentey Sergey Dmitriyevich Khabriyeva Taliya Yarullovna
3	Diversity strategy of the regional economy	6413	313	181	14	20	№ 1	March 2008	Iogman Leonid Genrikhovich
4	Intellectual resources as the factor of the innovational development	2641	125	123	13	21	№ 11	September 2010	Ilyin Vladimir Alexandrovich Gulin Konstantin Anatolyevich Uskova Tamara Vitalyevna
5	Methodology of the comparative estimation of the scientific and technical potential of the region	1886	96	96	11	19	№ 12	December 2010	Zadumkin Konstantin Alexeyevich Kondakov Igor Anatolyevich
6	Tendencies and perspectives of the socio-economic development of the Murmansk Oblast	3739	211	112	17	17	№ 1	March 2008	Didyk Vladimir Vsevolodovich
7	Small-scale business as an important reserve of the mono-town development	1669	87	85	0	19	№ 11	September 2010	Tkachuk Stepan Nikolayevich
8	Dynamics of the socip-economic development of Komi Republic	2098	139	88	19	15	№ 1	March 2008	Lazhentsev Vitaly Nikolayevich
9	Integrated ecologically ballenced natural resources use is the basis of the Northern regions development	1779	127	94	4	14	№ 1	March 2008	Larichkin Fedor Dmitriyevich
10	Agriculture of the European North: the results of the All-Russian agricultural census	997	51	50	0	19	№ 11	September 2010	Ivanov Valentin Alexandrovich Ivanova Elena Valentinovna

* Account of the site's viewing has been carried out since 2009, December, 12

Uskova T.V.

At the center of attention – problems of the economy and society modernization

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The current stage of global, national and regional economy is characterized by uncertain and unstable development, the rapid change of situations. These changes throw new challenges to real life. They must be adapted, responded. For the domestic economy in the new XXI century the challenge is the economic and social modernization of Russian regions.

6 – 8 October, 2011 Vologda hosted VI International Scientific and Practical Conference "Strategy and Tactics of Socio-Economic Reforms Implementation: the Regional Aspect". The main emphasis of the conference was on the determination of prospects for modernization, the search of opportunities and mechanisms for its implementation. For the first time such a forum was held in 1997, and then conferences have been held every two years. Importance to this event has been largely attached by its preparation and implementation under the direct guidance of Academician Dmitry Semenovich Lvov. The authority of Dmitry Semenovich contributed to the enlisting of academicians and leading scholars in Economics of RAS for the conference.

Participation in such events of the leading scientists of the Russian Academy of Sciences, the workers of scientific and educational institutions, the heads and specialists of federal, state and local authorities, the representatives of economic entities allows to take into account a variety of views and form a broad look at the problems in question, understand more deeply the implementation aspects of the strategy and tactics of territorial systems and economic entities in the current economic conditions.

2011 is the year of the post-crisis economy recovery. For our country it is also characterized by the end of one political cycle and the beginning of another. However, the financial and economic crisis showed that the problems of the Russian regions are similar to the problems of other countries, the way out of this situation we should find together, using each other's experience. In this regard, the current, sixth conference was attended by the representatives of foreign countries. Thus, September 28 – 30, 2011 in Vologda within its framework there was the Russian-Chinese

forum on issues of the development of trade and economic relations between Russia and China, cooperation in solving regional problems.

Scholars from the Republic of Belarus, Poland and Finland spoke at the conference. The representatives of Hungary and Slovakia were able to take part at the conference via the Internet.

Scholars and practitioners from Moscow, St. Petersburg, Yekaterinburg, Ufa, Novosibirsk, Khabarovsk, Petrozavodsk, Pskov, Syktyvkar and Vologda represented Russian audience. Overall, over 250 participants attended the conference.

Opening the plenary sitting, Director of the Institute of Socio-Economic Development of Territories of RAS (ISEDT RAS), Doctor of Economics *V.A. Ilyin* noted the importance of the forum in the difficult period for Russia and expressed appreciation to the Economics section of the Department of Social Sciences of Russian Academy of Sciences, the Government of the Vologda Oblast, the administration of Vologda for their support and assistance in organizing this very important event.

In his welcome speech Vice-Governor of the Vologda Oblast *N.V. Kostygov* noted the importance of supporting the economy and social sphere by regional bodies, emphasized the need of participation of all civil society in modernizing the economy, the importance of recommendations of scientific conferences for the sustainable socio-economic development of the region.

The report of Academician *V.I. Mayevsky* was focused on key issues of the development strategy of the Russian Federation. He criticized the views of representatives of the liberal persuasion with respect to the competitiveness of Russia, ability to attract investment in the modernization of its economy, strengthen the country's dependence on sales of natural resources, as well as the negative demographic processes. Economic growth models proposed by liberal economists, according to Academician, have no prospects. He pointed to the importance of rethinking the strategic choice of the Russian Federation, need to strengthen the state's role in the socio-economic development.

The conference presidium

General Director of the Governance and Problem Analysis Centre, professor *S.S. Sulakshin* presented the concept of a new governance model in Russia, based on the concept of "target criterion of successful development in different spheres of the country", aimed at the economic growth and departure from the liberal paradigm.

The speech of First Deputy Governor of the Vologda Oblast, Ph.D. in Economics *L.G. Iogman* was focused on the socio-economic development of the post-crisis period, the key directions of strategy and tactics of modernizing the region's economy.

Director of ISEDT RAS, Doctor of Economics *V.A. Ilyin* drew attention to the problems of Russia's development, including: the lack of any significant positive changes in the industrial structure, the negative manifestations of economic interests of the owners of large corporations, the low level of labor potential use, etc.

In the report of Academician of the National Academy of Sciences (NAS) of Belarus *P.G. Nikitenko* the questions of competitiveness of territorial socio-economic systems were raised. Based on the author's theoretical and methodological concept, established on the basis of a systematic approach, principle of synergy, self-organization phenomena, the analysis of the level of competitiveness was carried out, the necessity of policy adjustment, depending on the specifics of the region, was proved.

Deputy Director of the Institute of Economics and Industrial Production of RAS, corresponding member of RAS *V.I. Suslov* devoted his speech to the problems of synergy of regional innovation systems.

The Head of Vologda *E.B. Shulepov* told about a new approach of managing the city, based on the project approach, government partnership, society and business.

The report of Doctor of Economics *O.B. Braginsk*y (CEMI RAS) was devoted to the creating of a gas and chemical complex of the world level in Cherepovets.

Senior scientific associate of the Institute for Socio-Economic and Energy Problems of the North of the Komi Science Centre of RAS, adviser *V.N. Lazhentsev* represented results of the assessment of levels of socio-economic development of the European North and proved the necessity to strengthen the internal Russian spatial integration, including new emerging macro- and mesoeconomic structures.

The conference participants

Doctor of Economics *J.G. Lavrikova* (the Institute of Economics, the Ural Branch of RAS) told about the cluster principles of the realization of regional development strategies, the cluster initiatives of regional authorities of the Ural Federal District, problems impeding the establishment of clusters.

In the speech of Director of the Institute of Economics, Karelian Research Center of RAS, Doctor of Technics *A.I. Shishkin* was raised the problem of modernizing the economy of the European North based on partnership of government, business and society.

Director of Institute for Social and Economic Research, the Ufa Science Centre of RAS, Doctor of Economics *D.A. Gainanov* focused on the issues of the socio-economic development of municipal formations.

In the report of the Head of the Department of Humanities and Social Sciences of Scientific and Organizing Management of RAS, PhD in History *V.K. Egorov* were presented the problems of the formation of corporate social responsibility in the Russian Federation. In his opinion, we should "avoid uncritical borrowing of Western socio-economic practices, taking into account own historical experience and the peculiarities of national psychology in the legislative activity among other information".

The conference was divided into six breakup groups.

The participants of the breakup **group №1** "Problems of Sustainable Socio-Economic Development of Territories" considered a wide range of the issues of socio-economic development.

The problems of the industrial and postindustrial transformation processes of northern region were represented by the Head of the Laboratory of the Institute for Socio-Economic and Energy Problems of the North of the Komi Science Centre of RAS, Ph.D. in Geography *T.E. Dmitrieva*.

In the speech of the Head of the Department of Finance and Credit of the Vologda State Technical University (VSTU), Ph.D. in Economics *E.S. Gubanova* was raised the issue of the intensification of the investment process in the Vologda Oblast.

The speech by Deputy Director of the Institute of Economics of the Karelian Science Centre of RAS, Ph.D. in Economics, Ph.D. in Physics and Mathematics *O.V. Tolstoguzova* was devoted to the differentiation of Russian regions and problems of improvement of a regional policy.

The significance of public-private partnership for economic properties of Vologda was mentioned by Deputy Head of Vologda, Head of the Department of Economic Development *L.D. Fomicheva* who described the dialogue between business and government.

The role of rural building in the sustainable development of rural territories was considered in the speech of Ph.D. in Eonomics *G.S. Staroverova* (VSTU). Head of the Bureau of Monitoring of Socio-Economic Development of Municipalities of the Municipalities' Development Department of the Vologda Oblast, Ph.D. in Economics *A.N. Poromonova* drew attention of participants to factors contributing to the sustainability of the socio-economic development of rural territories.

The report of Associate professor of the Department of Geography of the Vologda State Pedagogical University (VSPU), Ph.D. in Geography *N.V. Soldatova* was devoted to the dynamics of settling and system of local centers of the Vologda Oblast. Head of the Department for Migration of the Migration Service of Russia in the Vologda Oblast *A.N. Porokhova* touched upon the issue of migration processes that affect the socio-economic development of territories.

The impact of globalization and its influence on the formation of competitive environment was considered by Head of the Department of Commerce and Merchandising of the Vologda Business Institute, Associate Professor, Ph.D. in Economics *I.E. Sorokina*.

To the assessment of competitive advantages in the region was devoted the speech of *A.P. Ermolov*, Consultant of the Strategic Planning Bureau of the Department of Economics of the Vologda Oblast Government.

The participants knew about the results of the project "Velikiy Ustyug – Homeland of Father Frost" from the report of the Chief Specialist of the Bureau of Tourism of the Department of International, Interregional Ties and Tourism of the Vologda Oblast *J.N. Bulatova*. The speech of Junior scientific associate of ISEDT RAS *E.G. Leonidova* was devoted to the priorities of tourism development in the districts of the Vologda Oblast.

At the sitting of the **group № 2** were considered theoretical and practical aspects of enhancing effectiveness of the functioning of organizations in different spheres, as well as the issues of competitiveness of the region.

In his report the Head of the Information and Publications Division of the State Regional Center of Standardization, Metrology and Testing in Saint-Petersburg and the Leningrad Oblast, Ph.D. in Economics *V.V. Ilyin* raised the issue of the economy and quality of the regional development.

Objectives and ways to increase the efficiency and quality growth of the real sector of the economy were presented in the speech of the deputy of the Legislative Assembly of the Vologda Oblast, leader of the faction of the Communist Party *N.A. Zharavin*.

Doctor of Economics, Professor of the Vologda State Dairy Academy named after N.V. Vereshchagin (VSDA) *P.M. Sovetov* touched upon the issue of sustainable growth of agroeconomy of a northern region.

The problem of forest certification as a factor of the sustainable development of the forest sector was identified in the report of Scientific associate of ISEDT RAS *R.Yu. Selimenkov*. On the problems of private farms in Russia at the beginning of the XXI century drew attention the Head of the Department of post-graduate courses of VSPU Ph.D. in History *S.G. Karpov*.

One of the most urgent for the discussion was a report on the development of flax cluster in the region, represented by the Head of the Department of Industry, Science and Innovation Policy of the Vologda Oblast Government, Ph.D. in Economics *A.V. Maklahov*.

Problems associated with the study of competitiveness of enterprises and industries were raised in the reports of two participants of the group. The teacher of the branch of the St. Petersburg State University of Engineering and Economics in Vologda *Y.M. Gorina* represented methods and techniques of assessing competitiveness in the textile industry. Deputy General Director of JSC "Vologda bakery plant" *S.B. Nikolaev* raised the issue of improving the competitiveness of the enterprise.

Issues relating to the scope of work and personnel policies were considered in the reports of Deputy Head of the Department of Strategic Planning and Investment Policy of the administration of Vologda, Ph.D. in Physics and Mathematics *I.A. Makaryina* and Associate Professor of the Department of Applied Psychology of VSPU *A. Klimova*.

Associate Professor of VSTU, Ph.D. in Economics *O.G. Moronova* raised the issue of food security in the regions of the European North of Russia. Assistant professor of VSDA named after N.V. Vereshchagin *O.I. Barinova* concentrated on the issues of improvement of information system of management at an enterprise.

The problem of import substitution in the engineering industry of the Vologda Oblast was reflected in the speech of Associate Professor of the Department of Economics and Management of VSTU, Ph.D. in Economics *I.M. Guliy*.

In the course of the **group № 3** were examined issues related to the main governmental priorities of modernization of the regional economy, highlighted the key problems, prospects and ways of modernization of the Russian education system, designated tasks of innovation and technological development of the regions and cities of Russia.

The sitting of the group began with the speech of Pro-rector for Research Work of VSPU, Head of the Department of National History, Doctor of History *M.A. Beznin* who represented the mechanisms of intellectual capital formation of the Russian countryside in the light of Soviet experience.

Reports of the Head of the Industrial and Innovation Policy Department of the Institute of Economic Problems named after G.P. Lusin of the Karelian Research Center of RAS, Ph.D. in Technics *V.A. Zuckerman* and the Head of the Department of Marketing of Scientific Products and Information Service of ISEDT RAS, Ph.D. in Economics *I.A. Kondakov* were devoted to the modernization of the regional economy.

The Head of the Sector of Scientific and Technological Development of the Institute of Economics of NAS, Ph.D. in Economics *V.A. Kolotukhin* highlighted the main directions and prospects for improving scientific and technological cooperation of NWFD of Russia and Belarus.

O.I. Martyniuk, Deputy Dean for Education of the Faculty of Physics and Mathematics of the Pskov State Pedagogical University named after S.M. Kirov spoke about a student-centralized approach as the basis of the educational process in the transition to the federal state educational standards of higher education.

The problems of development of education at the regional level were disclosed in the reports of Pro-rector for Scientific and Methodological work of the Vologda Institute of Education Development, Ph.D. in Pedagogy *M.A. Uglitskaya* and Management Consultant of the Bureau of Strategic Planning of the Department of Economics of the Vologda Oblast *A.A. Efremova*.

The problems of modernization of the industrial complex of the Vologda Oblast were considered by Associate Professor, Ph.D. in Economics *O.A. Gribanova* and Junior scientific associate of ISEDT RAS *E.A. Mazilov*.

Issues of formation of the institute of social technologists in gerontology social work of the Vologda Oblast were highlighted by Associate Professor of the Department of Social Sciences and Humanities of VSTU *I.Yu. Korolev*. The employee of the "Vologda Center for Hydrometeorology and Environmental Monitoring" *Yu.O. Mamadkulov* outlined the problem of using the results of hydrometeorological modeling for the economic evaluation of possible damages.

The report of Scientific Associate of ISEDT RAS, Ph.D. in Economics *O.V. Podolyakin* was addressed to the issues of the social development potential of small businesses in the region. *A.A. Gordeeva*, post-graduate student of VSDA named after N.V. Vereshchagin, drew attention of listeners on the problems of innovation-oriented agricultural development in the region. Rector of VBI, Ph.D. in Technics *A.M. Perfiliev* told about promising technologies of funding innovative projects.

The participants of the breakup **group № 4** considered issues related to the problems in modern domestic education, health care, as well as a number of important issues related to human capital.

The sitting began with a speech of the Head of the Regional Department of Federal State Statistics Service of the Vologda Oblast *A.G. Lysov* who gave the analysis of census results in the Vologda Oblast. The reports of representatives of the Department of Health Care of the Vologda Oblast, Ph.D. in Medical Science *M.D. Duganova* and *T.E. Lazareva* were devoted to health care issues in the Vologda Oblast.

Casimir Popelskiy, Professor of the Catholic University of Lublin (Poland), spoke about the importance of human capital in support process of health. His colleague, Doctor of Psychology *Lily Sukhotskaya* raised the issue of responsibility for health. The representative of the University of Applied Sciences Kymenlaakso (Finland), *Henrik Luikko* spoke about interna-

tional exchange as a factor in qualitative growth of human potential. The role of economic science in the evolution of social consciousness was highlighted in the report of the Head of the Department of Economics of VSDA named after N.V. Vereshchagin, Doctor of Economics *M.V. Selin*.

Deputy Head of the United Center of Northern Caucasus Social Research of the Institute of Social and Political Studies, Ph.D. in Social Science *I.A. Seleznev* told about the reform of higher education and the problems of information development in Russia. *M.A. Terent'eva*, Junior scientific associate of the Institute for Socio-Economic and Energy Problems of the North of CSC RAS highlighted the features of the labor potential use of the region.

The problems of motivation and stimulation in continuing education were disclosed in the report of Associate Professor of the Department of Pedagogy of VSPU, Ph.D. in Pedagogy *I.V. Balashova*. Deputy Director of ENGECON in Vologda *L.V. Babich* represented the results of studies on the effectiveness of human capital at the regional level. Active discussion among the participants of the group was caused by the report of Senior scientific associate of ISEDT RAS, Ph.D. in Economics *L.V. Kostyleva* which was devoted to inequality and poverty in Russia.

At the sitting of the breakup **group № 5** were examined issues related to the development of civil society and its institutions in the modern period. Associate Professor of the Vologda Institute of Educational Development, Ph.D. in History *V.A. Talashova* dedicated the report to the question of the significance of the introduction and implementation of design technologies in educational institutions.

Associate professor of the Department of General Pedagogical Psychology, Ph.D. in Psychology of VSPU *I.V. Fokina* considered the theoretical aspects of civil selfconsciousness.

The social aspects of modernization of territories were disclosed in the speech of Deputy Director of ISEDT RAS, Ph.D. in History *K.A. Gulin*. The features of social perception of economic and political processes (public protests, social identity, the level of approval of the institutes of civil society) were discovered by the employees of ISEDT RAS: Senior scientific associate *T.A. Guzhavina*, Junior scientific associates *T.P. Kozhina* and *I.N. Dementieva*.

Scientific associate of ISEDT RAS, Ph.D. in Economics *M.V. Morev* presented the main results of the research on the social health of population. The problems of creating conditions for the self-determination of youth in Vologda in social and professional life as the important aspect of economic development of the municipal economy were considered in the report of Junior scientific associate of ISEDT RAS *M.A. Golovchin*.

The breakup **group № 6** was devoted to the modernization of mechanisms and municipal government development of socio-economic systems. The Head of the Department of Strategic Planning and Investment policy of the administration of Vologda, Ph.D. in Economics *K.A. Zadumkin* presented the main elements of the strategic management of a municipal formation, showed the video on the importance of participation of each resident in the environmental improvement of the city.

E.A. Cheremukhina, the Head of the Municipalities' Development Department of the Vologda Oblast told about the program of low-rise building in the Oblast. This topic was continued in the report of Junior scientific associate of ISEDT RAS *N.Yu. Litvinova*.

The issues of agriculture and rural development, mechanisms of state support, motivation of workers in agricultural organizations were disclosed by the Head of the Committee of Economic Policy of the Department of Agriculture, Food Stocks and Trade of the Vologda Oblast *M.N. Ivanova*, Associate Professor of

the Department of Production Management of VSDA named after V.N. Vereshchagin, Ph.D. in Economics *A.S. Cheshin*, Junior scientific associates of ISEDT RAS *A.N. Chekavinsky, V.S. Uskov, I.S. Rogova,* Research engineer of ISEDT RAS *O. Yu. Garmanova*.

Deputy Head of the Department of Finance of the Vologda Oblast *V.N. Artamonova* told about the problems of the formation of regional budget. In the report of *A.I. Povarova*, Scientific associate of ISEDT RAS were reflected the problems and prospects of budget provision of the regions of the North-West Federal District. Scientific associate of ISEDT RAS *A.L. Mikishanov* focused on the issues of social funds in the period of the economic crisis.

The questions of local budgets were taken up in the report of Junior scientific associate of ISEDT RAS *M.A. Pechenskaya*. The most acute problems of local self-government were raised in the speeches of *A.V. Kolesnikov*, Executive Director of the Association "Council of Municipalities of the Vologda Oblast" and *V.I. Chevgunov*, the Head of the Vytegra district.

The conference participants have summarized that the country faces major tasks: to create an innovative economy, strengthen democratic institutions, ensure the citizens of Russia to feel positive changes in their lives. Based on the necessity to solve these problems, participants recommend:

1. Federal and regional authorities to develop the substantiated strategy and tactics of gradual modernization of the country and its regions. Conduct the public discussion and harmonization of national and regional programs of modernization of social and economic development.

2. Intensify efforts to validate the innovative techniques of modernization of modern Russia in order to create conditions for transition to the innovative way of development.

3. Strengthen the emphasis of regional socio-economic policies for diversification of material production, investment stimulation. Based on the restructuring of the economy to achieve rapid development of industries and enterprises, which are the basis of a new technological structure.

4. To improve regional policies of the development of labor resources to get balance on the labor market. To encourage cooperation of employers with educational institutions, to improve the system of continuing professional education. To use more fully the possibility of migration processes to improve the quality of labor resources.

5. Regional authorities and management to seek insistently ways of strengthening local government, forms and methods of stimulating territories that implement development programs, strengthen their income base, increase their own tax revenues. To use the potential of self-organization and regional development centers.

6. Regional and local authorities to intensify the modernization of social sphere, to expand access to quality education and health services for the majority of population. To further the formation of healthy lifestyle.

7. To promote interaction between government, business community, science and media; to spread more actively existing local experience in the field of the management of socio-economic potential of territories.

8. Representative and executive bodies, research institutions, higher education institutions to strengthen analytical, expertise and organizational activities to find the most effective forms, methods and tools of socio-economic processes. To pay special attention to improving forms and methods of support of creative and motivated employees.

9. To implement consistently in the regions measures of overcoming state and political corruption. To develop territorial institutions of civil society.

We have every reason to believe that the scientific conference will further the economic and social modernization of Russian regions.

* * *

The table shows the results of the express inquiry of the participants of the VI International Scientific and Practical Conference on assessment of their satisfaction with the event and its results and the level of the plenary and the breakup groups meetings organization.

Results of express inquiry (on ten-points scale: 1 point – low ... 10 – high)

Conference participants	Plenary meeting		Breakup groups meetings	
	Satisfaction with the event and its results	Overall organization	Satisfaction with the event and its results	Overall organization
Group 1	8.9	9.7	8.8	9.1
Group 2	9.2	9.4	8.7	9.5
Group 3	9.1	9.2	9.0	9.3
Group 4	9.3	9.6	9.2	9.4
Group 5	9.6	9.3	9.7	10.0
Group 6	9.2	9.3	8.5	8.8
Total assessment	9.2	9.4	9.0	9.4

Gulin K.A.

The problems of socio-economic development of regions of Russia and China

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From 28 to 30 September 2011 the problems of social and economic development of regions were being discussed in the Vologda Oblast within the IV Russian-Chinese forum on social sciences.

The main organizers of the event were the Russian Academy of Sciences and Chinese Academy of Social Sciences (CASS), the forum was held on the basis of Institute of Socio-Economic Development of Territories of RAS and the Vologda Branch of Saint Petersburg State University of Engineering and Economics, with the support of the Government of the Vologda Oblast.

The event has become an integral part of the VI International Conference on "Strategy and tactics of implementation of economic reforms: a regional aspect".

The program included three working sessions, visits to research and educational institutions (ISEDT RAS, the Vologda Branch of Saint Petersburg State University of Engineering and Economics, Cherepovets State University), visits to objects of industrial (OJSC "Severstal Tyazhmash", industrial park "Sheksna"), and cultural spheres.

Within the **Session 1 "Urgent tasks of social and economic reforms in Russia and China"** the following problems were being considered: the problem of the influence of the global crisis on political thought in the context of the dialogue among civilizations *(speaker – Adviser of RAS, Honorary Director of Institute of International Economic and Political Studies of RAS, Academician O.V. Bogomolov)*; tasks and direction of changes of ways of China's economic development (*Deputy Academician – Assistant Editor of Economic Department of CASS, academician Lu Zheng)*; the problems of formation and implementation of the spatial strategy of innovative development of Russia *(Head of the Center of the Economics of Federal Relations of Institute of Economics of RAS, Doctor of Economics, Professor S.D. Valentey)*; territorial features and problems of socioeconomic modernization of Russia *(Director of Institute of Socio-Economic Development of Territories of RAS, Doctor of Economics, Professor V.A. Ilyin)*, the problems of reforming of the institutional arrangements and transformation of the model of China's Development *(Head of the Department of Macroeconomics of Institute of Economics of CASS, Professor Zhang Syaotszin)*; problems and prospects of flax complex's development of the Vologda Oblast *(Head of the Department of Industry, Science and Innovation Policy of the Government of the Vologda Oblast, Ph.D. in Economics A.V. Maklahov)*; problems and prospects of development of Russian machine-building enterprise – "Vologda optical-and-mechanical plant" *(Technical Director of OJSC "VOMP" A.N. Dmitriev)*.

Session 2 "Sustainable development of socio-economic and social systems" was held at one of the leading universities of the Vologda oblast – Cherepovets State University. There were being discussed: theoretical and practical questions of reducing of climate risks of economic development *(Head of the Laboratory of analysis and forecasting of natural and technological risks of the economy of Institute of National Economic Forecasting of RAS, Doctor of Economics, Professor B.N. Porfiriev)*; problems of investment for sustainable economic growth of the city on example of the large industrial center – Cherepovets *(Head of the Department of Economics of Cherepovets State University, Ph.D. in Economics, Professor Z.M. Magrupova, Associate Professor of Economic Department of ChSU, Ph.D. in Economics V.S. Vasiltsov)*, new purposes of Jiangxi Province's development on example of organization of Economic zone of Lake Poyang *(the president of Chinese Academy of Social Sciences of Jiangxi Province, professor Wang Yuytsi)*; ways of solution of the ecology-economic problems of an industrial city *(Associate professor of Economy Department of ChSU G.S. Dresvyannikova)*; the social factors of sustainable development of area and the possibilities of administrative influence on it *(Head of Department of researching of level and way of population life of Institute of Socio-Economic Development of Territories of RAS, Ph.D. in Economics A.A. Shabunova)*; perception of the future of city and region through the eyes of young people *(Head of Sociology Department of Humanities Institute ChSU, Ph.D. in Philosophy A.A. Mehova)*.

Session 3 "Directions of Increasing Efficiency and Quality Growth of Real Sector of Economy. Problems and prospects of Russian-Chinese cooperation" was dedicated to discussing such questions as the trend towards the restructuring and development of Chinese industrial during the Twelfth Five-Year Plan *(Head of Department of management by enterprises of the Institute of Industrial Economics CASS, Professor Wang Qin);* investment development of the Vologda oblast and measures of its state Support *(Head of Investment Policy Department of the Government of the Vologda oblast R.B. Markov)*; problems of accelerated growing and development of new strategic branches of industry *(Deputy Director of the Institute of Mathematical and Technical Economics of CASS Qi Jianguo)*; the threat to economic security of the regions in terms of globalization *(Deputy Director, Head of the department of problems of socio-economical development and management of territorial systems of Institute of Socio-Economic Development of Territories of RAS, Doctor of Economics, Professor T.V. Uskova)*; innovative horizons for the Technical University's development *(Head of Department of finance and credit of the Vologda State Technical University, Doctor of Economics, Professor E.S. Gubanova)*; institutional legal mechanisms of amplification of Trade and Economic relations between China and Russia *(Deputy Director of the Center of Documentation and Information of CASS professor Zhang Shuhua)*; positive and negative factors of Russian-Chinese Regional cooperation *(Head of the Department of Economics of the Institute of Russia, East Europe and Central Asia of CASS Professor Cheng Iczyun)*.

The past three days have been productive in terms of generating of new scientific ideas; develop practice recommendations and also expanding scientific ties between institutions of the two Academies.

On the one hand, it was a success in demonstration of production, cultural and historical, scientific and educational potential of Vologda oblast to Chinese guests, and it may serve as an additional incentive for extensions of regional cooperation with China.

On the other hand, the Russian participants were able to, as they say, "from first-hand" to study the experience of China's reforms, the actual problems and objectives of one of the most dynamic economies in contemporary international peace.

For Institute for social and economic development of territories, RAS the conference has opened a new stage of relations with the Chinese colleagues. The signing of a protocol of intent between Institute of Socio-Economic Development of Territories of RAS and Academy of Social Sciences, Jiangxi Province of China became an important moment.

We hope that the implementation of the agreements reached will become a step in the development of productive international cooperation in Scientific-Innovation and educational spheres not only for ISEDT RAS, but for the region as a whole.

A letter of thanks from Academician-Assistant Editor of Social Sciences Department of RAS, Academician A.A. Kokoshin to Director of Institute of Socio-Economic Development of Territories of RAS, Doctor of Economics, Professor V.A. Ilyin had become the recognition of the event's high level.

As the result of the conference the publication of compilation is planed, it will help to study the content of participants' reports in details.

UDC 334.7(470.12)

Povarova A.I.

The influence of the metallurgical corporation owners' interests over the financial performances of the parent enterprise
(in the case of OJSC "Severstal")

The article represents the new results of the ongoing researches "The influence of the metallurgical corporation owners' interests over the national and regional development", which are carried out in the ISEDT RAS under the direction of Doctor of Economics, Professor V.A. Ilyin.

The first article, which dealt with that problem[1], represented the analysis of the financial and economical activity of the largest ferrous metallurgy corporations in Russia (OJSC "Severstal", Novolipetsk Steel, Magnitogorsk Iron and Steel Works) with all their segments on the basis of the reports prepared by the international standards. However, those reports didn't contain sufficient information about the parent enterprises of the corporations. This article analyzes the financial and economic activity of OJSC "Cherepovets Iron and Steel Complex "Severstal". The analysis is performed according to the annual account submitted in accordance with Russian Accounting Standards (RAS) and published on the official website of the company[2].

OJSC "Severstal", owners' interests, results of the financial and economical activity.

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Key results of the enterprise's financial and economic activity in 2010

The main factor determined the activity of OJSC "Severstal" in 2010 was a recovery of demand and prices for steel products. The world steel consumption grew by 17%, Russian consumption – by 38%.

The company managed to overcome the crisis decline in production; it increased its production volume by 2.7% in comparison with 2008. Increase in both export and domestic prices contributed to a significant gain in sales, primarily in the markets of the Russian Federation – almost by 35%.

[1] See: Ilyin V.A. The influence of the metallurgical corporation owners' interests over the national and regional development // Economic and Social Changes: facts, trends and forecasts. – 2011. – № 3 (15). – Pp. 14-37.

[2] Electronic resource. – Available at: http://www.severstal.com/rus/ir/disclosers/financial_reports/index.phtml

As a result, products sold proceeds increased by 1.5 times in comparison with 2009, but its pre-crisis level was not restored *(tab. 1)*.

However, the increase in revenue (46%) outstripped the production growth (17.7%). This fact proves that the increase in revenues was achieved mainly due to advance in market-price, rather than expansion of production.

When we speak about production development, we should note that corporate management channeled considerable resources in 2008 – 2010 to implement the chosen strategy which was oriented to the vertical integration through mergers and acquisitions in the external markets. According to the annual account of funds flow, they spent over 100 billion rubles, or almost 40% of investment costs, to purchase the subsidiaries *(tab. 2)*.

The growth rate of cost value (150.7%) outpaced the growth in revenues (146%) in 2010, which was the reason for the reduction of product profitability. At the same time all the costs components included in the profit margin index increased significantly. Cost value growth and low sales volume didn't indemnify for the crisis fall in gross margin. Although it increased by one third in comparison with 2009 *(tab. 3)*.

Table 1. The main business process perspectives of OJSC "Severstal" in 2008 – 2010

Indicators	2008	2009	2010	2010 in % to	
				2008	2009
Total output, thousand tons*	19196	16760	19722	102.7	117.7
Sales volume, thousand tons	10197	8675	10201	100.0	117.6
Including: domestic market	6271	4069	5478	87.4	134.6
external market	3926	4606	4723	120.3	102.5
Average price for steel products, doll./tons	1001	604	723	72.2	119.7
Including: domestic market	1073	710	816	76.0	114.9
external market	778	486	585	75.2	120.4
Sale proceeds, billion rubles	*243.6*	*143.6*	*209.8*	*86.1*	*146.1*

* Total output of pig iron and crude steel.
Sources: annual account of OJSC "Severstal" for the period of 2009 – 2010; calculations by ISEDT RAS.

Table 2. Subsidiaries acquisition expense of OJSC "Severstal"

Indicators	2008	2009	2010	Total for 2008 – 2010
Investment costs, bln. rub.	132.8	67.1	83.5	283.4
Acquisition costs, bln. rub.	48.6	31.0	24.2	103.8
Percentage to investment costs	36.6	46.2	29.0	36.6

Sources: Annual account of OJSC "Severstal" for the period of 2009 – 2010; calculations by ISEDT RAS.

Table 3. Cost value and gross margin of OJSC "Severstal" in the period of 2008 – 2010, bln. rub.

Indicators	2008	2009	2010	2010 in % to	
				2008	2009
Cost of revenue, total	157.4	104.5	157.5	100.0	150.7
Raw materials	98.2	67.6	116.0	118.1	171.6
Fuel	4.9	6.7	8.3	169.4	123.9
Electric power	6.1	4.0	5.3	86.9	132.5
Remuneration of labour	10.5	6.6	7.2	68.6	109.1
Gross margin	*86.2*	*39.0*	*52.3*	*60.7*	*134.1*
Profit margin, %	30.3	17.8	16.5	-13.8 p.p.	-1.3 p.p.

Sources: Annual account of OJSC "Severstal" for the period of 2009 - 2010; calculations by ISEDT RAS.

Figure 1. Financial performance dynamics of OJSC "Severstal" for the period of 2008 – 2010, bln. rub.

Table 4. Quarterly expense and profit dynamics of OJSC "Severstal" in 2010, bln. rub.

Indicators	I qu.	II qu.	III qu.	IV qu.	2010
Commercial expenses	2.2	2.4	2.5	2.8	9.9
Executive expenses	1.6	1.9	2.2	2.1	7.8
Interest payable	2.6	2.8	2.8	2.6	10.8
Other expenses	**5.1**	**10.3**	**8.6**	**73.5**	**97.5**
Total expenses	11.5	17.4	16.1	81.0	126.0
Profit, loss (-) before tax assessment	10.4	6.4	7.3	-58.2	-34.1
Net profit, loss (-)	8.4	5.0	5.8	-58.8	-39.6

Sources: Annual account of OJSC "Severstal" for the period of 2009 – 2010; calculations by ISEDT RAS.

It would seem that the company had to increase the tax base due to the significant increase in gross margin in 2010. However, the annual account proves the contrary of it: the loss amounted to 34 billion rubles before the tax assessment for 2010. As a result, the year was completed with the net loss of 39.6 billion rubles. Severstal had a profit for the tax purposes and net profit even in 2009 when there was a crisis large-scale collapse of revenues *(fig. 1)*.

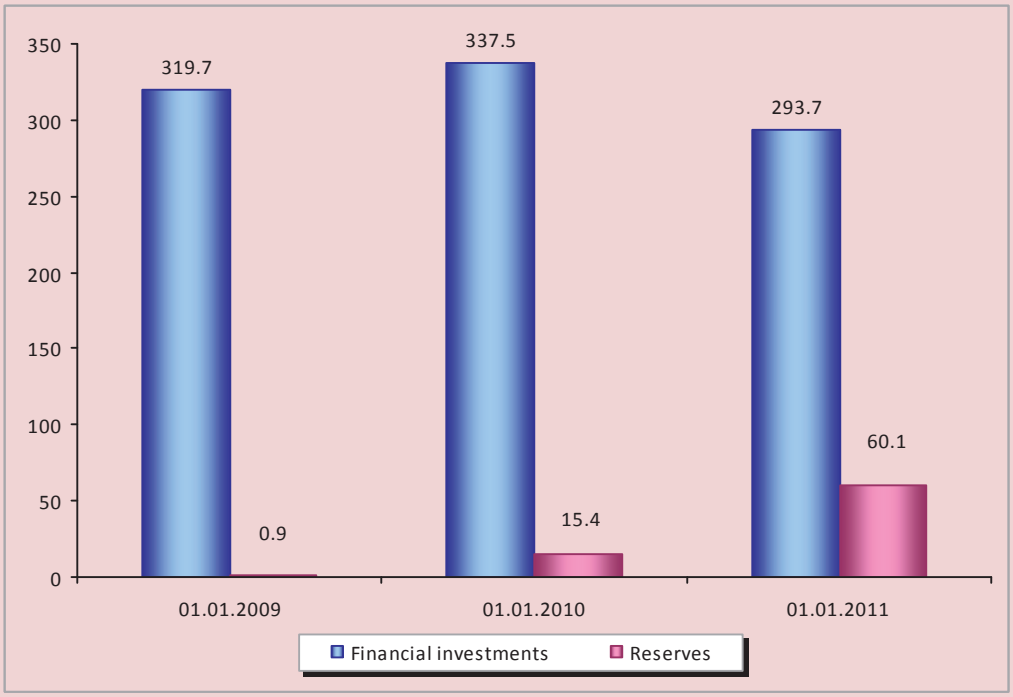
In order to understand the causes of the Company's loss, it is necessary to analyze the quarterly formation of the final financial performance in 2010.

It is known that the expenses which are not included in the sold production price index influence over the size of taxable profit. They are commercial, executive, interest and other expenses, including the reserves created for investment depreciation.

Table 4 contains the characteristics of expense and profit dynamics of OJSC "Severstal" in 2010.

This tables shows that OJSC "Severstal" operated in the black over three quarters of 2010, but it incurred losses in the fourth quarter which exceeded the consolidated returns for nine months almost by 2.5 times. The main source of loss was a rising scale of other

Figure 2. The cost of long-term and short-term investments of OJSC "Severstal" and the cost of the reserves created for their depreciation in 2008 – 2010, bln. rub.



expenses, which accounted for almost 80% of the costs included in the calculation of taxable income. In addition, the dynamics of other expenses remained stable during first three quarters, but they increased greatly by 8.5 times from 8.6 billion rubles to 73.5 billion rubles.

According to "Other income and expenses itemization" the reserves created for investment depreciation amounted to more than 60% of the other expenses[3].

[3] In accordance with the Regulations on accounting "Financial Investments Accounting" (PBU 19/02), approved by the Order of the Ministry of Finance of 10.12.2002 № 126n, depreciation of investments is a stable decline in value of financial investments. It is lower than the economic benefits which are expected to be gained by the organization during its usual activity. The organization has to verify the conditions for the stable decline in value of financial investments if there is a situation of possible investment depreciation. The organization should create the reserve for investment depreciation by the margin between the book value and estimated value of financial investments if the stable decline in value of such investments is confirmed during the verification. The reserve is formed due to the financial performance of the organization (among the other expenses). Methodology of fixing of financial investment's estimated value is developed by the organization on its own.

The dynamics of the company's financial investments in 2008 – 2010

OJSC "Severstal" was increasing the value of financial investments during the period from 2008 till 2010 *(fig. 2)*.

The vast majority of financial investment (75 – 80%) was directed to the authorized capital stocks of the subsidiaries and affiliates. On average, about 15% of the investments were used to take up the loans *(tab. 5)*.

93% of the total investments to the authorized capital stocks were the share of the management companies which were the controlling shareholders of other companies. They formed the main reserves for investment depreciation *(tab. 6)*.

The Cyprus Management Company Upcroft Limited sold 50.8% of its share in the Italian company Lucchini S.p.A for 1 euro to A.A. Mordashov in June, 2010. At the same time, net wealth of Lucchini, valued by the estimated value without sale costs, amounted to a negative sum.

Table 5. The structure of financial investments of OJSC "Severstal" in 2008 – 2010

Indicators	2008		2009		2010	
	bln. rub.	share, %	bln. rub.	share, %	bln. rub.	share, %
Financial investments, total	319.7	100.0	337.5	100.0	293.7	100.0
Investments to the authorized capital stocks of other organizations	239.3	74.8	253.2	75.0	232.6	79.2
Securities of other organizations	2.1	0.7	0.8	0.2	0	0
Loans granted	48.6	15.2	55.6	16.5	37.9	12.9
Deposits	27.5	8.6	26.2	7.8	20.9	7.1
Others	2.2	0.7	1.7	0.5	2.3	0.8

Sources: Annual account of OJSC "Severstal" for the period of 2009 – 2010; calculations by ISEDT RAS.

Table 6. The cost of OJSC "Severstal's" financial investments to the subsidiaries and the reserves created for investment depreciation in 2010, bln. rub.

Name of organization	Location	Basic activity	Value of investments at the end of 2010	Reserve
Upcroft Limited	Cyprus	Management	29707.2	29707.2
"Holding Mining Company" LLC	Cherepovets	Management	140832.2	14492
Severstal Investments LLC	The USA	Management	37713.9	7204.1
Severstal US Holdings LLC	The USA	Management	58008.7	7159.1
Waytrend Limited	Cyprus	Management	2568.6	859.1
Baracom Limited	Cyprus	Management	3959.1	661.1
"Promzhilstroy" LLC	Cherepovets	Construction	34.3	34.3
"Severstalskrap-Komi" LLC	Vorkuta	Iron-and-steel scrap procurement	11.7	11.7
		Total	272835.7	60128.6

Sources: Annual account of OJSC "Severstal" for 2010.

In this regard, investment depreciation in the company Upcroft Limited was used in corpore to create the reserve that increased the costs of OJSC "Severstal" almost by 30 billion rubles.

The real investment cost in the company Severstal US Holdings LLC was reduced by 15 billion rubles at the expense of the sale of three steel mills with negative net assets which were located in the USA (the reserve was formed for the entire selling price of doll. 225 million or nearly 7 billion rubles). The investment cost was also reduced by the discounting of the future cash flows of two U.S. factories where Severstal US Holdings LLC was a controlling shareholder. As OJSC "Severstal" shares 47.7% in the company Severstal US Holdings LLC directly, as well as it has the remaining shares indirectly through its subsidiaries Severstal Investments LLC and Baracom Limited, so the amount of admitted reserve was distributed to three companies (Severstal US Holdings LLC – 7.2 billion rubles; Severstal Investments LLC – 7.2 billion rubles; Cyprus Limited – 0.7 billion rubles).

The financial investment depreciation of 14.5 billion rubles was found in LLC Holding Mining Company mainly in the gold and coal mines where that company was a controlling shareholder.

They created the reserve in the amount of stable (over a year) decline in financial investment (0.9 billion rubles) for another Cypriot management company Waytrend Limited.

Overall, nearly 80% of the depreciation losses charged to the financial performance of the parent company were invested in the authorized capital stocks of the foreign management companies. They were the controlling shareholders of the unprofitable foreign companies which were bought by OJSC "Severstal" leaders in 2004 – 2008. Three of them went into liquidation in 2010.

Thus, the reserve created for investment depreciation caused the increase in other expenses. It was a key unprofitability factor for OJSC "Severstal" in 2010.

Excluding the reserve cost, the company's profit before taxation amounted to 26.1 billion rubles, net profit – 20.5 billion rubles and additional budget revenues – 0.9 billion rubles *(tab. 7)*.

Dynamics in the commercial, executive, interest payable and other expenses which are accountable for taxation

Cost escalation influenced greatly over the company's financial performances. Cost escalation amounted to 23% of the expenses which were used for taxation. This conclusion is clearly illustrated by *figure 3,* which represents the dynamics in the commercial, executive, interest payable expenses over the last three years.

Table 7. Influence of the subsidiaries' investment depreciation over the financial performance of OJSC "Severstal" in 2010, bln. rub.

Indicators	2010
Profit (loss)* before depreciation declaration	26.1
Profit (loss) after depreciation declaration	(34.1)
Current profit tax** (According to the report, f. № 2 by OAO Severstal)	4.3
Profit tax accrued on the amount of the profit before depreciation declaration*** (26073 bln. rub.)	5.2
Profit tax which wasn't remit to the budget (estimation)	0.9
Net profit (loss) before depreciation declaration	20.5
Net profit (loss) after depreciation declaration	(39.6)

* Financial performance before taxation.
** The current profit tax is calculated by OJSC "Severstal" on the assumption of the reference expense adjusted for permanent tax liabilities, deferred tax assets and deferred tax liabilities of the reporting period.
*** Because of the difficult calculating methodology of the current profit the tax is calculated by ISEDT RAS based on the amount of the potential profit and the current tax rate of 20%.
Sources: f. № 2 "Profit and Loss", the annual report of OJSC "Severstal" for 2010; calculations by ISEDT RAS.

Figure 3. Dynamics in the manufacturing expenses of OJSC "Severstal", which are included in the calculation of taxable income in 2008 – 2010, bln. rub.

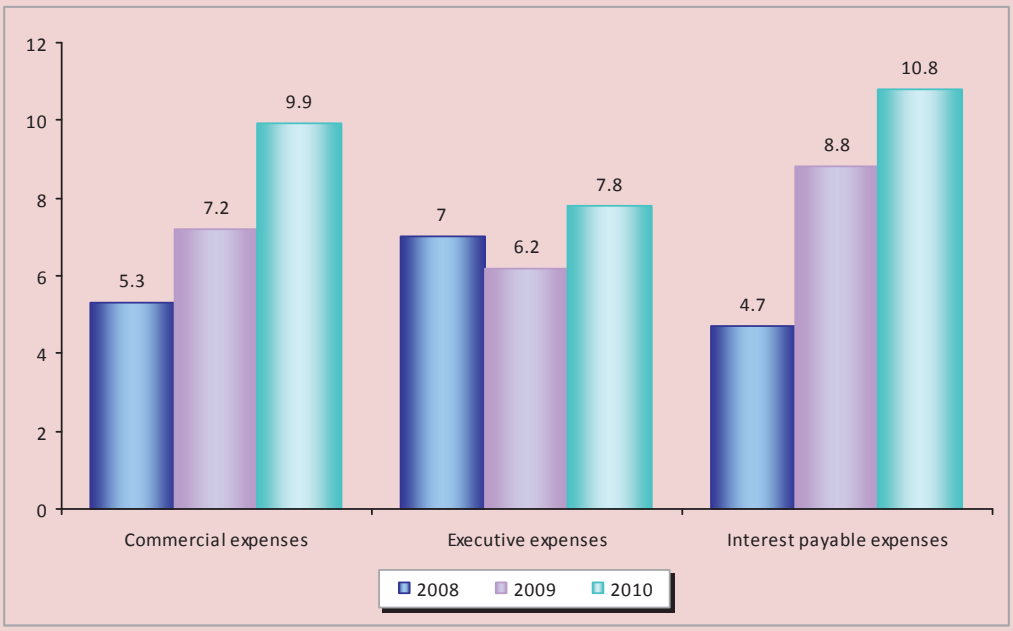


Table 8. The share of commercial and executive expenses in the gross margin of OJSC "Severstal"

Indicators	2007	2008	2009	2010
The total volume of commercial and executive expenses, bln. rub.	10.8	12.3	13.4	17.7
The share in gross margin,%	15.8	14.3	34.4	33.8
Sources: Annual account of OJSC "Severstal" for the period of 2007 – 2010; calculations by ISEDT RAS.				

Table 9. The share of interest payable expenses in the profit on sales of OJSC "Severstal"

Indicators	2007	2008	2009	2010
Interest payable expenses, total, mln. rub.	2387.3	5940.2	8936.9	11008.5
Interest charges, mln. rub.	2387.3	4675.8	8836.0	10798.2
Loan servicing expenses, mln. rub.	0	1264.4	100.9	210.3
The share in the profit on sales, %	4.1	8.0	34.9	31.8
Sources: Annual account of OJSC "Severstal" for the period of 2007 – 2010; calculations by ISEDT RAS.				

Table 10. The credits and loans received by OJSC "Severstal", bln. rub.

Indicators	2007	2008	2009	2010
Received credits and loans	0.5	84.4	16.0	31.8
Credit and loan indebtedness	26.2	127.1	141.1	147.8
Debt load, %*	8.5	41.0	45.3	55.3
Net asset value	284.1	309.6	311.4	267.5
* It was calculated by ISEDT RAS as the ratio of Credit and loan indebtedness to net assets. Sources: Annual account of OJSC "Severstal" for the period of 2007 – 2010.				

Commercial expenses increased by 85% over three years. Executive expenses grew less rapidly, because the company was forced to optimize them in 2009. However, executive expenses had grown again by the end of 2010. The volume of executive expenses amounted to two thirds of the wage fund (67.5% in 2008; 65.3% in 2009; 76.5% in 2010). Both commercial and executive expenses ate up more than a third of gross margin in 2009 – 2010 and reduced the income for tax purposes *(tab. 8)*.

Steady rising of interest payable expenses for the use of credit resources was the most important for the reduction of the tax base. Interest payable expenses[4] had already increased by 1.5 times in 2009, and they had increased by 1.2 times by the end of 2010. It took more than a third of operating profit of OJSC "Severstal" to pay interests on the loans and pay for debt service in 2009 – 2010 *(tab. 9)*.

[4] Interest payable expenses taken for the analysis include the cost of interest payments (line 070 p. № 2 "Profit and Loss" and the cost of servicing loans which are included in other expenses (line 100).

Such growth was the result of the large-scale borrowing of OJSC "Severstal" *(tab. 10)*.

The increase in debt on the borrowed funds and simultaneous reduction of financial investments promoted the decline in net asset value and the increase in debt load of the company from 40 – 45% in 2008 – 2009 up to 55% in 2010.

The principal creditor of OJSC "Severstal" is a public company Steel Capital S.A incorporated under the laws of Luxembourg. More than half of foreign loans are in its name *(tab. 11)*.

The largest credits and loans were taken in 2007 – 2008:

- in EBRD (credit contract of 17.12.2007) – 600 million euro;
- in Steel Capital S.A (credit contract of 29.07.2008) – 1250 million dollars;
- Deutsche Bank AG (credit contract of 22.09.2008) – 1200 million dollars.

EBRD credit payment term is December, 2017; two other credits must be canceled in September, 2013.

Table 11. Debt liability of OJSC "Severstal" in the context of creditors, bln. rub.*

Creditor	Remaining debt	
	01.01.2010	01.01.2011
Steel Capital S.A (the USA)	49.1	58.5
The European Bank for Reconstruction and Development (EBRD)	16.9	18.8
VTB Bank Europe (UK)	2.7	0.9
Deutsche Bank AG, Amsterdam	36.3	26.8
OJSC Sberbank of Russia	5.1	5.1
CJSC Severgal	0	2.7

* The debt was recounted by ISEDT RAS at the rate of euro and dollar on 31.12.2009 and on 31.12.2010.
Sources: Annual account of JSC Severstal for the period of 2007 – 2010; calculations by ISEDT RAS.

Table 12. OJSC "Severstal's" account payable

Indicators	2008		2009		2010	
	bln. rub.	Share, %	bln. rub.	Share, %	bln. rub.	Share, %
Account payable, total	154.2	100.0	165.2	100.0	189.9	100.0
Including: to suppliers and contractors	13.4	8.7	14.9	9.0	25.3	13.3
loans and credits	127.1	82.4	141.1	85.4	147.8	77.8
taxes-and-duties	0.5	0.3	1.1	0.7	0.6	0.3
other	13.2	8.6	8.1	4.9	16.2	8.5
Current liquidity ratio, %*	2.71		2.88		1.60	
Own circulating assets	-38.6		-52.9		-64.4	

* It was calculated by ISEDT RAS as the ratio of current assets to short-term debt liabilities.

The buyup of unprofitable North American assets (its peak was in 2008) was likely to be made due to those loans.

OJSC "Severstal" took up the currency credit for doll. 1 billion in Steel Capital SA for the period of 7 years in October, 2010.

Thus, Severstal employees would have to work to pay these credits, most of which were used to meet a lack of their own circulating assets of Severstal's foreign business in the form of loans. In order to analyze the credit history of OJSC "Severstal" it is important to consider not only the debt liabilities, but account payable of Severstal, paying particular attention to the calculations of payments to the budget *(tab. 12)*.

The cumulative account payable increased by 1.2 times during 2008 – 2010 mainly due to debt liabilities (credits and loans) and trade debt. It was the main reason for the decline of asset liquidity. The current liquidity ratio was 2.88 even during the crisis in 2009; it dropped to 1.60 in 2010 (in world practice if the value of current liquidity ratio is below one, it indicates the company's insolvency).

The company's relationship with the budget

In 2010 OJSC "Severstal" could significantly reduce the arrears in budget payments. But it is still about 500 million rubles. The arrears in budget payments are characterized again by the growth over six months in 2011 *(fig. 4)*. Meanwhile, the size of the deposits amounted to more than 20 billion rubles at the end of 2010. So, they can solve all the problems related to settlements with the budget.

According to the annual reports of OJSC "Severstal", the Company didn't take part in judicial proceedings in the period from 2008 till 2010. Such proceedings could influence over its financial and economic activities. We should note that although OJSC "Severstal" had large account payable during sharp decline in tax revenues to all levels of budget system, there were no claims to the company by the tax administrations of the Vologda Oblast.

OJSC "Severstal" also had the arrears in budget payments on value-added tax (VAT). It amounted to more than 1 billion rubles at the beginning of 2011 *(fig. 5)*.

Figure 4. Dynamics of the arrears in budget payments of OJSC "Severstal", mln. rub.

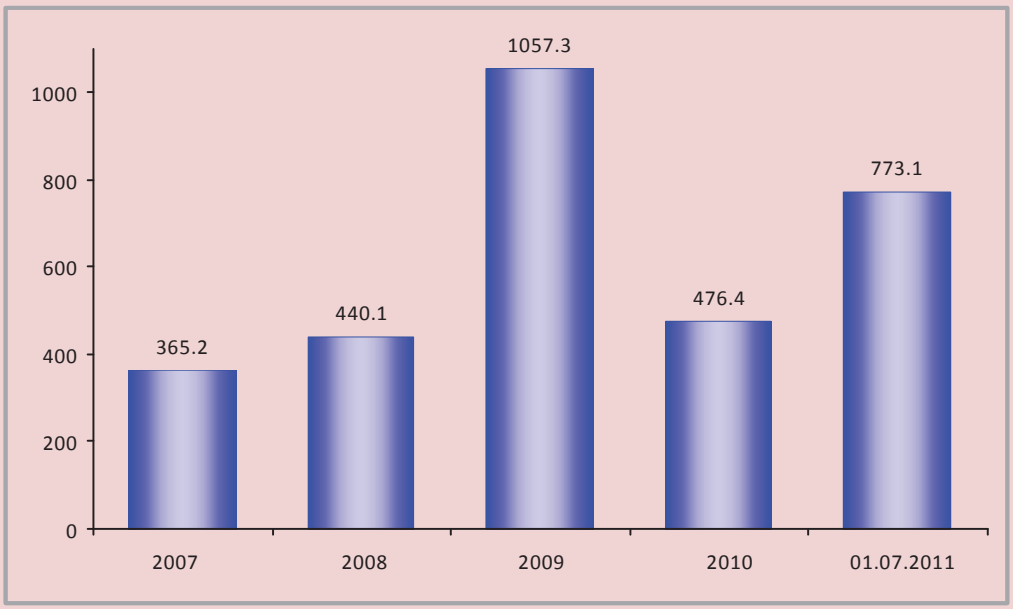
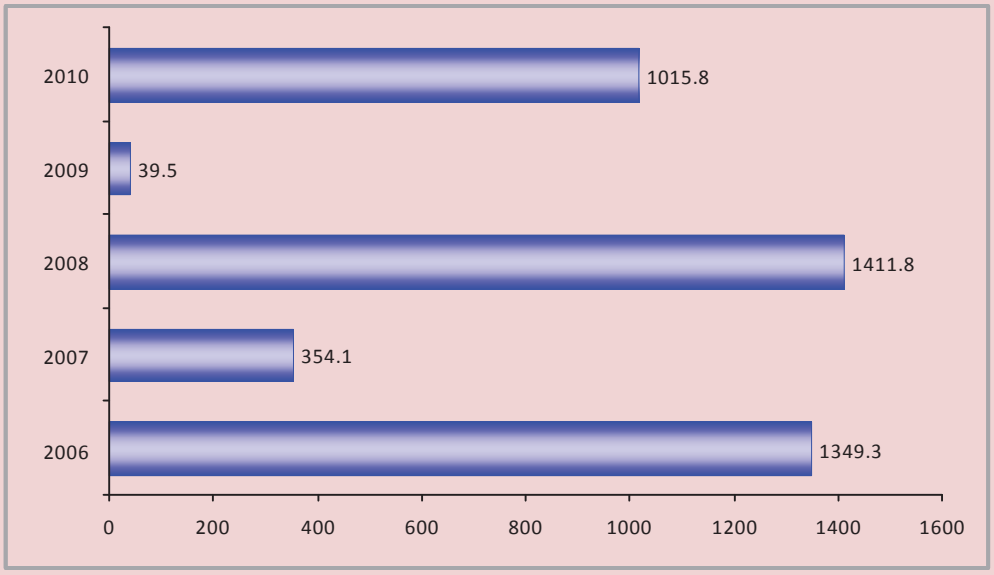


Figure 5. Dynamics of the budget accounts receivable on value-added tax, mln. rub.



Annual reports of Severstal do not contain comments on this debt. However, it can be assumed that it is a debt of the federal budget which requires VAT paid on export goods.

Since the Russian accounting standards do not reflect the amount of VAT calculated by the payer to refund the budget, let's use the annual reports of OJSC "Severstal" which is compiled by international standards. According to these data, the company filed for VAT refund in the amount of doll. 1.3 billion or 36.5 billion rubles[5] *(tab. 13)*.

[5] Amount of VAT, charged to be reimbursable from the budget in US dollars was converted in rubles at the rate of dollar fixed by the Central Bank of Russian Federation of December 31, 2006 – 2010.

Table 13. VAT charged to be reimbursable from the budget to OJSC "Severstal" in 2006 – 2010, bln. rub.

Indicators	2006	2007	2008	2009	2010	Total for 2006 – 2010
Reimbursable VAT, total	6635.8	6180.2	8358.7	6789.3	8491.5	36455.6
Including: Russian Steel	5446.0	5280.6	6850.4	5211.4	6725.8	29514.2
Severstal Resources	1189.8	899.6	1508.3	1577.9	1765.8	6941.4
Sources: Annual account of OJSC "Severstal" according to IFRS for the period of 2007- 2010; calculations by ISEDT RAS.						

Table 14. VAT which was assigned to be pay in the budget and to be repay from the budget in 2006 – 2010

Indicators	*The Russian Federation*						*The Vologda Oblast*					
	2006	2007	2008	2009	2010	2006 – 2010	2006	2007	2008	2009	2010	2006 – 2010
VAT which was assigned to be pay in the budget, bln. rub.	1858	1340	2127	2341	2527	10193	5.1	9.9	14.3	12.2	9.6	51.0
VAT which was assigned to be repay from the budget, bln. rub.	811	278	922	1110	1122	4243	2.2	2.4	4.0	7.7	6.6	22.9
In % of the gross amount	*43.7*	*20.7*	*43.4*	*47.4*	*44.4*	*41.6*	*42.4*	*24.3*	*28.0*	*63.4*	*68.6*	*45.0*
Actual compensation, bln. rub.	no data	no data	1104	963	no data		no data	no data	4.0	7.5	no data	
Sources: the reports of Federal Tax Service of Russia; the reports of the Federal Tax Service in the Vologda Oblast, calculations by ISEDT RAS.												

Export VAT refund leads to the substantial loss of federal revenues. According to the Federal Tax Service of Russia, the amount of the returned VAT for the whole country amounted to more than 2.2 trillion rubles in the period of 2009 – 2010. This amount could completely close the federal budget deficit (1.8 trillion rubles in 2010) or it could make up for a chronic shortage of the Pension Fund (over 1 trillion rubles). So this amount could become the financial basis of modernization.

According to the reports of the Federal Tax Service in the Vologda Oblast, there were 23 billion rubles of VAT which was assigned to be returned to Vologda taxpayers in the period from 2006 till 2010. It was almost a half of the gross amount of VAT payable to the budget and two-thirds – in 2009 2010 *(tab. 14)*.

With an unprecedented deficit of the budgetary system of the Vologda Oblast in the last decade (6.5 billion rubles and 6.9 billion rubles respectively) in the period from 2009 to 2010 the amount of VAT which was assigned to be repay from the budget could cover the deficit at the expense of additional transfers from the federal budget in the form of grants for balance. Meanwhile, the Vologda Oblast was one of the most vulnerable to the crisis effects among the regions of Russia. So it received that grant which amounted to 3.2 billion rubles in 2009 and only 681 million rubles in 2010.

The existing practice of the VAT refund is nothing more than as a form of tax concession[6]. According to the Federal Customs Service[7], on the average several large exporters of oil, gas, ferrous and nonferrous metals receive 75% of export VAT. But do these exporters really need tax eases? For example, the tax component of OJSC "Severstal" is very low – less than 10% of expenses.

[6] In accordance with Art. №164 of the Tax Code for the sale of goods exported under the export customs regime applicable tax rate is 0 percent. In this case the exporter is entitled to refund the tax amounts that were paid by them to vendors or manufacturers of purchasing goods.

[7] Reports on the results and main activities of the Federal Customs Service // [Electronic recourse]. – Available at: http://www.customs.ru/index.php?option=com_newsfts&view

Net profit, if we do not take into account the crisis years, was 16 – 22% of revenues, that is, corporate earnings covered the amount of VAT which was assigned to be repay from the budget *(tab. 15)*.

The scheme of VAT refund which is legalized in Russia reduces the effectiveness of tax policy. It is clear that the new deputies of the State Duma must decide on the VAT abolition to the companies exporting abroad raw materials and products of primary processing.

The leaders of Severstal were actively providing loans primarily to the related parties during the period from 2008 till 2010. They spent 160 billion rubles or nearly 20% of total expenditure to these purposes. The lending peak was in crisis 2009 *(tab. 16)*.

According to the cited data, a third of loans issued in 2009 almost two-thirds of loans issued in 2010 fell to the U.S. companies of Severstal. As it had been emphasized time and again, all those companies were unprofitable.

Consequently, the management corporation was forced to maintain them using the funds of their parent company, including the loans.

In 2010 three American steel companies (they are mentioned in the table) were classified on the balance sheet as assets held for sale. Those companies had loans which amounted to 10.3 billion rubles. Before their sale, those loans were transferred to the reserves for loans investment depreciation (10.2 billion rubles) and doubtful accounts receivable related to the repayment of accrued interest (0.1 billion rubles) and attributed to the loss of OJSC "Severstal". Consequently, the direction of the holding refused to recover the loans which were issued to American subsidiaries, thereby they increased the loss of the parent company in 2010.

Thus, debts to the budget which amounted to 1.5 billion rubles and deteriorated financial performance in the period from 2009 till 2010

Table 15. Taxes-and-duties payment of OJSC "Severstal" to the budget system of the Russian Federation, bln. rub.

Indicators	2006	2007	2008	2009	2010
Paid taxes-and-duties, bln. rub.	12.6	21.7	24.9	2.2	7.4
In % to current expenses	*7.8*	*10.5*	*9.5*	*1.5*	*3.2*
Net profit, bln. rub.	35.1	42.1	38.6	1.4	0
In % to profit	21.9	21.8	15.8	0.9	0

Sources: Annual account of OJSC "Severstal" according to IFRS for the period of 2007 – 2010; calculations by ISEDT RAS.

Table 16. The loans, which are issued by OJSC "Severstal" to the related parties, bln. rub.

Indicators	2008	2009	2010
Issued loans*, total	49635.4	58647.5	51475
In % to general expenses	*12.4*	*24.9*	*14.4*
Including foreign enterprises (North America)**	12753.7	18418.5	33538.9
In % to the total value of issued loans	25.7	31.4	65.2
including the loans to the companies, total	2814.9	7615.9	10313.3
Severstal Sparrows Point LLC (the USA)	0	4740.9	7349.8
Severstal Wheeling Inc (the USA)	2332.3	2392.4	2437.8
Severstal Warren (the USA)	482.6	482.6	525.7

* Including percents.
** Loans in U.S. dollars are converted by ISEDT RAS in the ruble equivalent on the basis of foreign exchange rates established by the Central Bank.
Sources: an explanatory note to the annual report of OJSC "Severstal" for the period from 2009 to 2010; Report about cash flows for the period from 2009 to 2010; calculations by ISEDT RAS.

Table 17. The guarantees, issued by OJSC "Severstal" to the third parties under obligations of the related parties, bln. rub.

Indicators	2008	2009	2010
Issued guarantees, total	20528.2	15187.0	16159.4
In % to net assets	6.6	4.9	6.1
Including foreign enterprises (North America)	14078.0	11631.2	4774.9
In % from the total amount of issued guarantees	68.6	76.6	30.0
Sources: an explanatory note to the annual report of OJSC "Severstal" for the period from 2009 to 2010; calculations by ISEDT RAS.			

Table 18. Accrued dividends of OJSC "Severstal" in 2010

Indicators	9 months of 2010	According to the results of 2010
The amount of dividends on a share, rub.	4.29	2.42
Accrued dividends, bln. rub.	4323.0	2438.6
In % to net profit	17.9	loss
The dividends accrued to the CEO A.A. Mordashov	3560.9	2008.7
Surplus earnings, bln. rub.	169.4	106.2
Own circulating assets	-52.0	-64.4
Sources: Quarterly reports of OJSC "Severstal" for the third and fourth quarters of 2010 and the second quarter of 2011, calculations by ISEDT RAS.		

did not prevent the management of OJSC "Severstal" to use more than 110 billion rubles for loans, the major portion of which was used to fill the deficiency of own circulating assets of unprofitable U.S. subsidiaries.

When we analyze loaning, we shouldn't lose sight of such important aspect as the guarantees for obligations issued by the third parties. OJSC "Severstal" provided the guarantees for 52 billion rubles in 2008 – 2010 *(tab. 17)*.

The table shows that the absolute part of the guarantees was granted to secure the credits and loans of the same American companies such as steel mills Severstal Dearbom, Inc and Severstal Columbus, LLC. Guarantees are issued for three years. The leaders of Severstal will likely have to pay the guarantees issued by the parent company because these plants are unprofitable.

Calculation and distribution of dividends

The Board of Directors of OJSC "Severstal" began to pay dividends again in 2010. The total amount of accrued dividends in 2010 was 6.8 billion rubles *(tab. 18)*.

An extraordinary general meeting of shareholders of OJSC "Severstal" announced the dividend payment for 9 months at the end of December in 2010. Of course, the net profit of the company amounted to 24 billion rubles at the end of three quarters of 2010 and promotion of shareholders was legitimate. However, the decision on dividend payment was made at the end of 2010, when negative financial performance of the year was obvious. Due to the cost of dividend reserve capital (surplus earnings) was decreased by 4.3 billion rubles. In spite of net loss in 2010, the general meeting announced dividend payments of 2.42 rubles per share on 27th of June, 2011. The total amount of funds allocated for these purposes, amounted to 2.4 billion rubles, including the dividends of 2 billion rubles accrued to A.A. Mordashov. Dividend expenses were charged to surplus earnings.

Consequently, in the presence of losses and the negative value of own circulating assets the dividends for 2010 were paid due to exhaustion of the reserve capital.

Conclusions and suggestions

The results of this research allow us to formulate the following conclusions:

1. In 2010 OJSC "Severstal" had all the chances to improve the final financial performances. The profit was increased by 66 billion rubles or by 1.5 times as compared with 2009 due to favorable pricing environment and growth in production volumes. However, the company completed 2010 with the net loss amounted to almost 40 billion rubles.

2. The main unprofitability factor of OJSC "Severstal" in 2010 was a sharp increase in other expenses at the end of the year which was provided by the reserves for investment depreciation amounted to 60 billion rubles. 80% of the losses were provided by the foreign low-margin structures of Severstal, where was a steady decline in value of their investments.

3. The increase in commercial and executive expenses led to the decrease of the profits for tax purposes by 34% in 2010.

4. More than a third of the operating profit, which served as the basis for the formation of taxable profit, was used to pay bank debts in 2009 – 2010. The company spent 20 billion rubles for these purposes. Despite these benefits, debt wasn't reduced. On the contrary, debt expenses were becoming more and more: in 2010 they increased by 23% as compared with 2009.

5. The decisive factor in the rising of interest payable expenses was the large-scale borrowing of OJSC "Severstal" in 2008. Their sum was estimated at 84 billion rubles. The company was buying up the U.S. assets during that year, which was unprofitable in the moment of purchase and in future. They used credit resources amounted to 35.6 billion rubles in 2009 – 2010. As a result the company debt amounted to 150 billion rubles at the beginning of 2011, including 80% of long-term external debt.

6. Available liquidity, including borrowings, was derived from the parent company in the form of loans to affiliated organizations. 211.6 billion rubles were used for these purposes in 2008 – 2010. At the same time the North American companies, three of which halted production in 2009 because of the falling demand in the automotive industry were provided with the loans and guarantees amounted to 95.2 billion rubles. Subsequently, during the classification of these enterprises as "assets for sale" Severstal's leaders refused of their own accord to recover loan debts and they canceled the remaining debt amounted to 10.3 billion rubles as the loss of the parent company.

7. When Severstal had the net loss amounted to 40 billion rubles, the Board of Directors took out almost 7 billion rubles from the Cherepovets Metallurgical Plant in the form of dividends by the reducing of reserve capital. In this case the main owner of the company, its CEO got 5.6 billion rubles.

8. According to the report of OJSC "Severstal", tax-and-duties debts amounted to 0.8 billion rubles on 01.07.2011.The debt of itself is not a violation of the law. However, it is difficult to justify the loans and guaranties to the related parties and dividend payments during the growth of short-term obligations not only to the budget, but also to extra-budgetary social funds, suppliers and contractors.

9. The system of tax benefits in the form of zero VAT rate on export products, which is legalized by Tax Code, dashed the budget system. Throughout the country the loss of the federal budget at the expense of VAT refund is more than 15% of the total revenues and 40% of the accrued VAT. VAT refund amounted to 14.3 billion rubles only in the Vologda Oblast in 2009 – 2010. It is comparable with the total amount of deficit in the region during this period.

In summary, we can emphasize that one of the main results of our research was the confirmation of the previous hypotheses on the financing of unprofitable foreign assets of Severstal at the expense of the parent company.

Only according to the disclosed information, in the period from 2008 till 2010 the leaders of the company sent about 200 billion rubles to these purposes (two thirds of the average net asset value) which were earned by the CMP employees.

The result of such practices was the net loss which was received firstly during the last decade, as well as the steady decline in solvency in the form of the negative value of its own circulating capital and the growth of debts.

The results of our research demonstrate once again the need for legislative consolidation of the mechanisms to counter the oligarchic nature of the Russian economy. In this regard, we consider that it is possible to offer to representative authorities of the Russian Federation the following activities:

➲ Denounce the agreement concluded between Russia and Cyprus "On avoidance of double taxation" (05.12.98), according to which the tax on dividends in favor of Cypriot companies is set at 5%. The president D.A. Medvedev proposed to domestic businessmen to pay profit taxes earned offshore or officially there to register there. These ideas have not implemented yet.

➲ It is necessary to use in practice the agreements of the Russian Federal Tax Service with major companies on pricing principles. For example, an inspection result of the coal industry which was carried out by the Accounting Chamber of the Russian Federation in 2009, showed that more than 80% of exported Kuzbass coal were implemented by using transfer pricing schemes, which allowed them to reduce selling price as compared with the market price. Budget losses for profit tax were estimated at 11.5 billion rubles.

➲ Consider the possibility of imposition of tax for the export of currency abroad not less than 20%. According to the economists' calculations, about 6 trillion rubles were transferred to offshore. It twined the budget deficit by two times.

➲ Resolve the issue about the abolition of export VAT refund without delay. It would allow us to increase revenues of the federal budget by 15%. The Federal subjects would have opportunity to get additional transfers (currently only 15% of the federal budget goes to the providing of financial assistance in the regions).

➲ Provide the Federal Tax Service of the Russian Federation with the power to obtain all the information about the activities of any enterprise. In particular, it is necessary to legitimize the receipt of information about transactions with affiliated parties. It will allow us to track the tolling schemes to output the export earnings, as well as strengthen control over transfer pricing[8].

P.S. ISEDT RAS is continuing to research the influence of the metallurgical corporation owners' interests over national and regional development. Their results will be published in the immediate journal.

[8] According to the itemization of "Sales to related parties" to the annual report of OJSC "Severstal" for 2010, revenue from sales to related parties amounted to 115.7 billion rubles or 55% of the entire implementation. At the same time, more than half of sales went to its subsidiary Severstal Export GmbH, registered in Switzerland. There is no other information about any trader in the reporting of Severstal and in electronic resources. We can only assume that export deliveries of OJSC "Severstal" are implemented through this sales structure. However, due to the absence of any information it's impossible to track these shipments in terms of the VAT paid, export revenues with "gray" schemes and transfer pricing.

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Challenges of heterogeneity and sustainability of economic expanse of the Russian North*

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

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

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

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

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

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

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

* The article was prepared under the fundamental research program of RAS № 28 "Fundamental problems of spatial development of the Russian Federation: an interdisciplinary synthesis".

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The major components of the theory of economic growth include:

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

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

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

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

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

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

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

The index of human development includes [3]:

– income, as measured by GDP per capita in the light of different purchasing power in different countries and the effect of the distortions introduced by the official currency exchange rate (real GDP) and the decreasing efficiency of income;

– life expectancy, as measured by life expectancy at birth;

– knowledge or education level, as measured by the number of literate people and the duration of schooling, the number of people with higher vocational education.

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

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

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

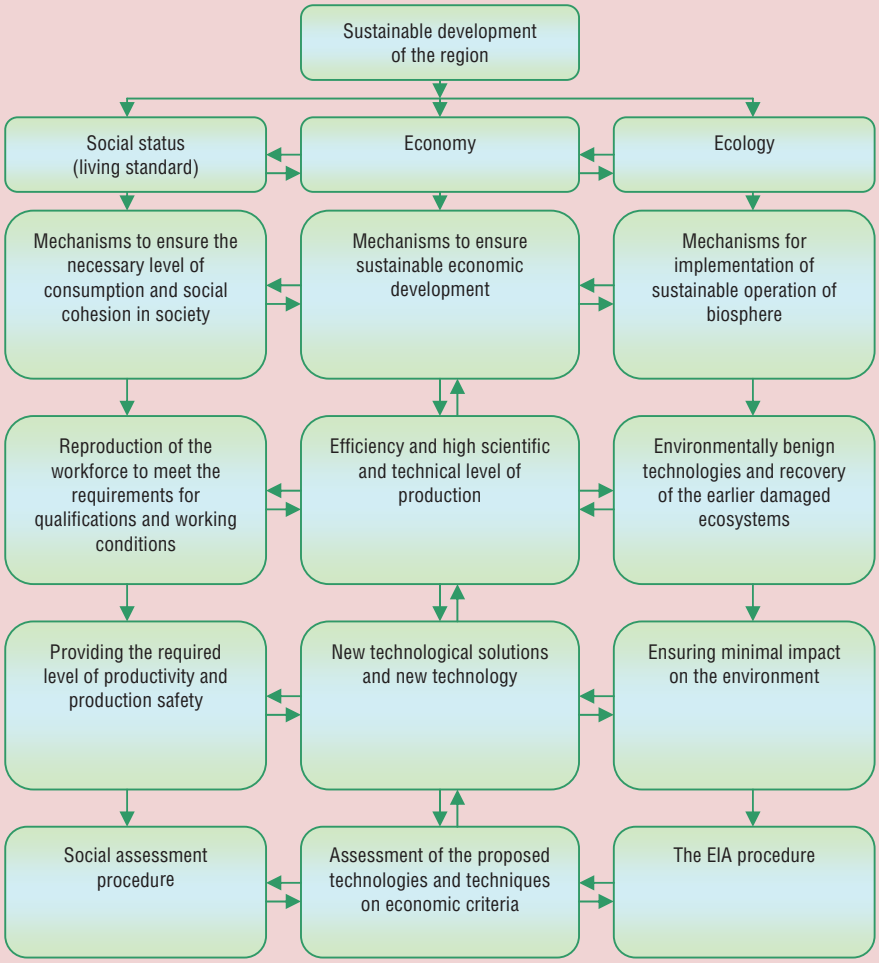
Thus, in the light of modern concepts sustainable development can be achieved only in cooperation and continuing coordination of priority of all directions of social development, primarily economic and social. They are so difficult to separate, that the term "socio-economic development" is usually used.

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

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

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

A comprehensive scheme of sustainable development



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

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

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

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

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

• underdeveloped – lagging behind in almost all major indicators, to maintain the socio-economic system they need continued subsidies, weak production and technical potential, development is impossible without large-scale foreign investment;

• pioneer exploration – matches the characteristics of underdeveloped, but there is no production capacity.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

In the past five years, the trend "washout" of northern guarantees is clearly pronounced in the public sector. Methodical aspects of intergovernmental fiscal relations are framed in such a way that these guarantees have very little impact on federal subsidies, and in terms of the limiting level of centralization of the budget this factor is determinative.

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

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

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

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

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

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

✓ stable and large domestic demand for energy (cold climate requires more energy consumption);

✓ the existence of long-term export contracts with stable prices that are not subject to significant fluctuations in the medium term;

✓ high investment attractiveness of northern industries and regions ahead of time.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The consolidated budget of Russia the northern territories listed, as is evident from *table 3*, almost 2 trillion. rub., or 25% of all taxes and fees, including the federal budget received 1.46 trillion. rub. or 40% of total taxes. Of course, major donors are the major raw material provinces, such as the Yamal-Nenets and Khanty-Mansiysk district. However, in the north of Europe as a whole situation is rather stable and payments to the federal budget reached nearly 50%, well above the average Federation. It may be noted that industrial regions, such as, for example, the Republic of Karelia, and Arkhangelsk region look relatively disadvantaged. However, the balanced outcome of the latter in conjunction with its member Nenets Autonomous Area is fortunate enough [10].

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

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

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

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

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

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

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

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

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

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

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

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

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

1) the acquisition by the parent company controlling interests in subsidiaries;

2) transfer of all domestic financial flows into a single control center for the preservation of its subsidiaries functions of the centers of costs;

3) use the mechanism of transfer pricing:

– underpricing in the primary stages of production (primary production and processing of raw materials);

– introduction of domestic means of payment (bills, bonds, parent companies);

– translation of individual stages in the scheme of internal tolling (processing of raw materials to give and take basis).

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

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

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

• standard - procedure to determine the structure of ownership and tax payments, providing capacity given in the preceding paragraph schemes and enhance the sustainable management;

• provide - that as an objective deterioration of raw materials for a long time producing fields as local sources to serve as a growing part of the differential and absolute rent;

• limit the flow of funds from the Far North in a vertically-integrated structures with the use of transfer pricing and other tools;

• identify the development of new deposits of rental payments in the transformation of the mechanism of transfer of non-renewable natural resources in funding for collection development heritage.

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The factors of innovation activity of St. Petersburg industrial enterprises

The paper provides an analysis of innovation activity of manufacturing industries of the city of St. Petersburg. Relying on statistical and accounting data, the authors try to explain the cause-and-effect relationships in forming the innovative activity of these enterprises and to identify the problems of their innovation development. The particular emphasis is placed on evaluating the results of innovative activities of enterprises in recent years.

Innovative activity; R&D, industry, revenue, net profit, number of employees, sources of funding; competitiveness.

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The development of innovation component in industrial enterprises activity is a key point in the strategy and tactics of management of the region economy. Developing the measures to create the conditions for solving this problem may be preceded by the identification of factors that promote or, on the contrary, hamper the innovative development of industrial enterprises.

The following factors that generally determine the bulk of investment in innovation at the enterprise were accepted as the analyzed factors: the gross revenue, net profit, the size of the company (average employee number), loan funds.

To identify and to estimate the factors of innovation activity the following tasks were formulated:

- to determine the range of the analyzed companies in leading industries of the city and the dynamics of their investment in R&D in 2007 – 2009;
- to analyze the impact of the factor of the volume of economic exchange and profits on innovation;
- to identify the influence of industry sector of the enterprise on their innovation activity;
- to assess the impact of enterprise's participation in various state and regional programs on the parameters under study;
- to analyze the impact of the banking sector on industrial policy of the enterprise;
- to compare St. Petersburg enterprises with the world leaders in their industries, i.e. to compare the costs for R&D and the technical performance parameters of products.

Qualitative and quantitative assessment of innovation activity of a number of backbone enterprises of St. Petersburg can become the basis for determining business activities of enterprises in St. Petersburg related to the development of innovation, as well as actions of the federal and regional authorities in this field.

St. Petersburg industry: the role of the analyzed companies. The economy of St. Petersburg is a significant part of the economy of the Russian Federation as a whole. In the analyzed year, 2009, gross regional product (GRP) of St. Petersburg was 1.473 trillion rubles, that is 3.8% of GDP of Russia. Only Moscow, Tyumen and the Moscow oblast take the lead over St. Petersburg by this indicator [1].

The mover of economic development of St. Petersburg is a manufacturing sector (its share in gross regional product – 22.5%) [2]. The same sector is the main arena of R&D: the enterprises for the research were selected out of this sector.

In all 15 enterprises of St. Petersburg were analyzed, they were selected from different core sectors of the city: mechanical engineering (especially power engineering and propulsion engineering), electronics, radio electronics, optical mechanics, pharmaceutical and food industries. These are mostly large enterprises leading in their form of economic activity.

Investments of St. Petersburg enterprises in R&D. The data on the enterprises were collected mainly by using their open accounting (most of the companies are joint stock companies). There was an attempt to establish the movement of indicators in 2007 – 2009 *(tab. 1)*.

Table 1. Investment of St. Petersburg enterprises in R&D, thousand roubles

Enterprise	Investment in R&D		
	2007	2008	2009
OJSC "LOMO"	318 500	329 000	724 000
OJSC "Svetlana"	247 600	298 900	178 000
OJSC "Krasny Oktyabr"	207 849	216 344	295 605
OJSC "Avangard"	142 500	239 000	197 000
OJSC "Silovye Mashiny"	45 360	124 000	1 990 000
CJSC "Vagonmash"	13 072	3 268	15 000
OJSC "Klimov"	10 000	55 900	25 500
OJSC "Khlebny Dom"	8 731	14 034	14 607
OJSC "Zvezda"	3 404	6 213	2 337
OJSC "Vibrator"	3 000	57 323	38 974
OJSC "Farmsintez"*	0	71 000	150 000
OJSC "Baltica"	0	10 800	3 502
OJSC "Kirovski Zavod"	No data	35 000	0
Federal State Unitary Enterprise of Central Research Institute "Elektropribor"	No data	No data	116 406
Ltd. "Gerofarm"	No data	No data	100 000
TOTAL:	1 000 016	1 460 782	3 850 931

* The data about OJSC "Farmsintez" are given for the period from 2008 to 2010.

As it follows from table the decisive role in the growth of investment in R&D was played by OJSC "Silovye Mashiny", having invested 3.84% of its revenue or 1.99 billion rubles in R&D in 2009. This is almost the same as all the rest 14 enterprises have invested in total.

Most enterprises in dynamics increased or left at the same level volumes of investments into R&D compared to 2007. "Kirovski Zavod", "Klimov", "Baltika" and "Svetlana" clearly reduced their investments.

In all, in 2009, 15 enterprises invested 3.85 billion rubles in R&D, that is 17.2% of the total costs of large and medium-sized St. Petersburg enterprises for research [4].

Further you can see the analysis of the factors having influence on the enterprises' investments in the innovation development.

The first group of factors: size of revenue and net profit. One of the main sources of financing the activities of the innovation of Russian enterprises is its own funds. According to the Federal State Statistics Service, the shortage of internal funds is the most popular response from the entrepreneurs to the question "What is holding back your investment activity?" – two-thirds of employers indicated this factor [5]. In this connection the relationship between analyzed companies' investments in the scientific and technological development and the results of their economic activity were investigated. The analysis was carried out over 2009. The objective was to estimate the influence of selected factors on the innovation of the enterprise by the example of one year.

Table 2 represents the data about revenue and investments in R&D of the enterprise.

As it is shown in table, research and development were actively carried out by the enterprises of electronic and instrumentation industries "Avangard", "Vibrator", "LOMO", "Svetlana", as well as the pharmaceutical industry "Farmsintez".

A bad result connecting with the ratio of R&D investment to revenue to was shown by "Kirovski Zavod", which did not invest in research and development at all, engine building plants "Klimov" and "Zvezda", as well as the food industry enterprises.

Table 2. The ratio between investments in R&D and gross receipt of St. Petersburg companies over 2009, thousand rubles

Company name	2009		
	Gross receipt	R&D investments	Ratio between R&D investments to gross receipt, %
OJSC "Baltica"	93 648 700	3 502	0
OJSC "Silovye Mashiny"	51 783 946	1 990 000	3.8
OJSC "Kirovski Zavod"	8 987 000	0	0
OJSC "Khlebny Dom"	8 394 813	14 607	0.2
OJSC "Krasny Oktyabr"	3 315 000	295 605	8.9
OJSC "Klimov"	3 305 140	25 500	0.8
OJSC "LOMO"	3 085 428	724 000	23.5
Federal State Unitary Enterprise of Central Research Institute "Elektropribor"	1 828 038	116 406	6.4
CJSC "Vagonmash"	1 655 221	15 000	0.9
Ltd. "Gerofarm"	1 430 000	100 000	7
OJSC "Svetlana"	977 244	178 000	18.2
OJSC "Zvezda"	904 836	2 337	0.3
OJSC "Avangard"	452 817	197 000	43.5
OJSC "Vibrator"	251 215	38 974	15.5
OJSC "Farmsintez"	228 000	71 000	31.1

Thus, OJSC "Khlebny Dom" having revenue of 8.4 billion rubles spent for R&D about the same as "Vagonmash", which has much lower rates of gross turnover. The high rate was showed by OJSC "LOMO": its revenue was 3.1 billion rubles and their R&D investment accounted for 23.5%. The similar index of the world famous photo optic manufacturer concern Canon was only 9.5%.

On the whole, one can say about the group of analyzed companies that a relatively high amount of gross revenue is not always a factor of significant investments in research and development, and it indicates the need for analysis of other factors.

Table 3 shows a comparison of R&D investments and net profit for the analyzed companies.

Table 3 shows that some enterprises' expenses for R&D are greater than their net profit. This is typical for the companies producing electronic components and pharmaceuticals. Such situation is taking place for several years. Consequently, the sources of funding for research and development are not only their own funds (and therefore, it is necessary to analyze other factors.) We will discuss it in details in the following sections.

In agricultural engineering the situation is different in a negative direction. The crisis of agriculture and the general decline of the Russian economy caused a sharp drop in revenue of "Kirovskii Zavod", its net loss in 2009 exceeded one billion rubles. Former innovation activity in manufacturing of the escalators for Petersburg underground and the tractors K-774R3M1 and K-9520 received no further in 2009: the company did not invest in technological development.

"Krasny Octyabr" and "Silovye Mashiny" stand out among the engineering companies: their indicators of R&D expenditure in relation to net profit are very significant.

In order to evaluate the level R&D expenditures by the companies under analysis, *table 4* compares the indicators of ratio of R&D expenditures to revenues of Petersburg enterprises with similar indicators of the foreign companies that are technology leaders in their niches.

Table 3. Ratio between R&D investments and net profit of St. Petersburg companies over 2009, thousand rubles

Company name	2009		
	Net profit	Investments in R&D	Ratio between R&D investments to net profit, %
OJSC "Baltica"	23 372 300	3 502	0
OJSC "Silovye Mashiny"	6 005 663	1 990 000	33
OJSC "Krasny Oktyabr"	396 600	295 605	75
OJSC "Klimov"	292 250	25 500	9
OJSC "Khlebny Dom"	274 421	14 607	5
OJSC "Svetlana"	123 784	178 000	144
Federal State Unitary Enterprise of Central Research Institute "Elektropribor"	64 259	116 406	181
OJSC "LOMO"	23 350	724 000	3 101
OJSC "Zvezda"	20 264	2 337	12
OJSC "Farmsintez"	14 043	71 000	506
CJSC "Vagonmash"	12 018	15 000	125
OJSC "Avangard"	7 833	197 000	2 515
OJSC "Vibrator"	5 329	38 974	731
OJSC "Kirovski Zavod"	-1 032 000	0	0
Ltd. "Gerofarm"	No data	100 000	No data

Table 4. The ratio of R&D investments to revenue in 2009: comparison of venues of Petersburg enterprises' indicators with similar indicators of foreign companies

Enterprise	Comparison of R&D investments to gross revenue, %	Sector	Comparison of R&D investments to gross revenue, %	Foreign company
		Pharmaceutics	22.8	Roche Holding
"Gerofarm"	7		15.7	Pfizer
"Farmsintez"	31.1		22.6	Novartis
"Zvezda"	0.26		14	GlaxoSmithKline
		Machine building	5.1	Siemens
"Silovye Mashiny"	3.84		3.9	Schneider Electric
"Kirovski Zavod"	0		2.1	General Electric
"Avangard"	43.5	Electronics	16.2	Cisco Systems
"Svetlana"	18.2		5.8	Samsung
"Vibrator"	15.5		1.9	Electrolux Group
"Elektropribor"	6.4			
"Khlebny Dom"	0.2	Food industry	1.9	Nestle
"Baltika"	0		4.2	Carlsberg group
"Vagonmash"	0.9	Carriage engineering	3.3	Alstom
"Krasny Oktyabr"	8.9	Aircraft building	6	Ruag Group
"Klimov"	0.8		1.9	Northrop Grumman Corporation
			1.7	Lockheed Martin Corporation
"LOMO"	23.5	Optical instruments and devices	9.5	Canon

As it follows from table 4, many analyzed companies are comparable with foreign competitors by the indicator. But we should not forget that in absolute terms all would be different: revenue of foreign companies is much higher. But we should not belittle the role of the relative index; it is a very sensitive indicator that characterizes the innovation activity of companies.

On the whole, the analysis of the influence of revenue and net profit over the innovative activity of enterprises didn't reveal unequivocal direct relationship between the indicators. This requires an analysis of other factors.

The second group of factors: average number of employees. According to official statistics, large enterprises are much more active in terms of innovation than small and medium-sized enterprises. This is primarily due to the fact that the larger the enterprise, the larger the human, technical and, above all, financial resources for innovation. On average in Russia about 65 – 70% organizations among those with workforce at least 10 000 employees perform technological innovation, and as for small organizations with workforce of up to 50 people, this indicator is 1 – 2% [4].

Table 5 represents the data on the average number of employees and their investments in research and development

As shown in table, the companies that invest in R&D more than any other investors are the largest of the presented companies. We are talking about the "Silovye Mashiny", "LOMO" and "Krasny Oktyabr". "Baltika" and "Khlebny Dom" fall out of this rule but it is justified by their industry affiliation.

You should also pay attention to the fact that relatively small companies that produce electronics invest a lot in R&D, they are "Svetlana", "Avangard" and "Vibrator".

Table 5. Innovation activity of organizations and number of employees in 2009

Enterprise	Average number of employees, people	R&D investments, thousand rubles	Size of R&D investments per an employee, thousand rubles
OJSC "Silovye Mashiny"	11978	1 990 000	166.1
OJSC "Baltika"	11000	3 502	0.3
OJSC "Krasny Oktyabr"	3092	295 605	95.6
OJSC "LOMO"	2568	724 000	281.9
OJSC "Khlebny Dom"	2428	14 607	6.0
OJSC "Zvezda"	1243	2 337	1.9
CJSC "Vagonmash"	1014	15 000	14.8
OJSC "Svetlana"	734	178 000	242.5
OJSC "Avangard"	720	197 000	273.6
OJSC "Vibrator"	283	38 974	137.7

The third group of factors: external sources of financing of R&D. Above we have outlined the results of analysis of the correlation between investment in R&D and gross receipts of enterprises, their net profit, which is the main own source of funding of R&D investments.

Along with it, the source of financing of the innovation can be loan capital: from distribution of shares on the exchange, from lending agencies, from the state and from the contractors. Obtaining financial resources from the contracting parties is an inappropriate source for their long "freeze" in R&D: the buyer and the providers usually lend to each other by turn, "short" money. Issue of shares and bonds is available to very few Russian companies. Therefore, the attention was focused on the lending agencies and budgetary sources.

Many high-tech enterprises enjoyed sluggish long-term borrowed current assets and invested in their development little: sometimes there was a lack of resources to replace run-down equipment. The long-term investments were performed solely at their own expense.

"Krasny Oktyabr", "Kirovski Zavod", "Farmsintez" and "Klimov" invest in non-current assets very little. "Svetlana", "Avangard" and "Zvezda" almost do not use long-term loans. We'll examine some specific examples below.

Table 6 shows that "Svetlana" builds up its non-current assets from year to year but it doesn't do this at the expense of long-term borrowed current assets, the society doesn't practically have them. The enterprise's net profit wouldn't cover even R&D investments. Therefore, the company has other funding sources, in this particular case – they are budgetary sources.

OJSC "Avangard" borrows relatively more "long" money than "Svetlana" *(tab. 7)*. In 2007 – 2009 the long-term borrowed assets allowed to fully cover the long-term investments. At the same time the long-term borrowed assets that were got by Avangard in 2007 – 2008, returned back in 1 – 2 years.

In the Russian financial system, the long-term loans are unavailable to most enterprises. According to the experts of Promsvyazbank: "banks cannot see beyond three years". And as for the loans for 2 – 3 years the effective interest rate is around 12 – 13% for the first-class borrowers, which include not all analyzed enterprises. A few innovative projects can be recouped within 3 years, especially at such a rate. Hence, the apparent contradiction between the intention to build an innovative economy and the real situation on the market of bank lending.

However, at the St. Petersburg economic arena there is a force that is able to soften the contradiction between the underdeveloped financial market and obsolescent capital assets and the cost of research and development. We are talking about the federal and regional government authorities.

Table 6. Correlation between long-term loans and non-current assets of OJSC "Svetlana", thousand rubles

Index	2006	2007	2008	2009	2010 – 3rd quarter
Non-current assets	818616	906624	970162	970359	1173509
Increase of non-current assets	-	88008	63538	197	203150
Loans and credits (long-term)	649	649	0	1	12
Increase of long-term loans and credits	-	0	-649	1	11
Conclusions by years		The investments were covered by the expense of sources diverse from long-term lending			

Table 7. Correlation between long-term loans and non-current assets in OJSC "Avangard", thousand rubles

Index	2006	2007	2008	2009	2010 – 3d quarter
Non-current assets	110981	134027	144264	179564	177241
Increase of non-current assets	-	23046	10237	35300	-2323
Loans and credits (long-term)	5025	68405	107990	35240	30968
Increase of long-term loans and credits	-	63380	39585	-72750	-4272
Conclusions by years		The investments were covered completely by long-term lending			

The performed analysis of the scientific and production relationship between the analyzed companies and the federal and regional government authorities has revealed their participation in carrying out the federal target programs (OJSC "Zvezda", OJSC "Svetlana", OJSC "Avangard", OJSC "LOMO", "Gerofarm" Ltd., OJSC "Farmsintez"), the state defense order (OJSC "Krasny Oktyabr", OJSC "Klimov", OJSC "Svetlana", OJSC "Avangard"), the regional order – project of new carriages "Neva" (CJSC "Vagonmash"), which provide for the expenses for R&D.

If there is some influence of the state and region on the policy of enterprises in research and development, the participation of the banking system in the rise of innovation (and investment) of enterprises continues to be inadequate.

Comparative analysis of technical and operational parameters for a number of products as the results of innovation. When dealing with manufacturing enterprises that produce goods with high added value, one of the most important criteria for determining the effectiveness of innovation processes is the product competitiveness. Below is a comparison of the technical and operational characteristics of certain products of the analyzed companies with foreign counterparts.

OJSC "Zvezda": engines for railway trains

Table 8 shows the characteristics of an earlier engine of "Zvezda" M7656-B1, its recent modification – M790, as well as their analog from GE – 7FDL12. Being comparable in size, the engines of "Zvezda" and GE dramatically differ in their characteristics. A modified model of the engine from "Zvezda" shows the local progress of the company (capacity in kW increased by 9%, the resource to a bulkhead of engine increased by almost 3 times), but the domestic engines are still far away from the level of 7FDL12. The capacity of 7FDL12 is higher by 186%, although the operating time to bulkheads has reached a comparable performance. In addition to greater power production, the engine GE also consumes less power. Engine saving setting, having been improved by GE since the mid 1980s, has reached 15%, while our manufacturers do not introduce energy saving technologies, besides it, the weight of 7FDL12 is by quarter less than the weight of M790 – it also speaks of a smaller engine power consumption in its operation.

Table 8. Comparison of technical and operational characteristics of 12-cylinder engines for the railway trains

Characteristics	OJSC "Zvezda"		General Electrics (the USA)
Model	M7656-Б1	M790	7FDL12
Capacity, kilowatt	736	800	2290
Resources to a bulkheads, hour	11000	29000	26000
Weight, ton	20	20	15,8
Energy saving, %	0	0	15

Table 9. Comparison of technical and operational characteristics of underground cars

Characteristics	CJSC "Vagonmash"		STIB/MIVB (Belgium)
Model	81-553/554/555 – car with asynchronous motor	"Neva": 81-55(6) – head motor with control cabin; (7) – intermediate motor; (8) – intermediate non-motor	Métro série M6
Lightweight, ton, no more	34	29.5 (28; 24)	26.7
Nominal capacity of passengers	161	174 (188; 188)	110*
Seating capacity	40	42 (48; 48)	33
Design speed, km/h	90	90	72
Average acceleration, м/(s^2)	1.2	1.3	1.3
Maximum deceleration м/(s^2)	1	1.4	1.5
* With standard of 5 persons per m^2.			

Thus, the production of OJSC "Zvezda" which invested relatively small amounts in R&D in recent years, is not competitive in technical terms against the background of one of the world leaders in the industry.

CJSC "Vagonmash": carriages for underground railway

Table 9 shows the comparison of innovative development of "Vagonmash" – a series of car "Neva" and a model that has been operated for many years in St. Petersburg, Moscow and other subway systems, as well as in Belgian coach.

Lightweight is an important characteristics because the train energy consumption depends on it directly. As table 9 shows, "Vagonmash" has made significant progress by reducing the weight of car tare. Intermediate non-motor cars have 8-10 tons less than earlier analogs. The STIB product has similar parameters of mass.

By size Petersburg trains are more massive than the foreign ones, they are by quarter longer, wider and can carry by 1.7 times more passengers. "Neva" has also more seats.

Design speed of the domestic trains is higher than that of analogs. But it should be noted that in St. Petersburg metro the rail condition does not allow to hope that the trains will reach a maximum speed of mortgaged to 90 km/h. Average train speed does not exceed 40 km/h.

Note that the "Neva" has the best average speed acceleration and a maximum deceleration compared with the earlier model (81-553/554/555) and they are closer by these parameters to the Belgian train. This fact is important: these parameters are responsible for the opportunity of the train to cover a distance between stations over shorter time intervals, besides slowing down the train is an important feature for the security of passengers at the open underground stations.

Thus, the class of cars "Neva", the first models of which were put into operation to the St. Petersburg subway in March 2011, are competitive in technical terms, in comparison with world analogues. It is proved by the efficiency of innovation activities of Vagonmash.

OJSC "Leningrad optic and mechanical association": medical microscopes

Table 10 compares technical parameters of microscope LOMO Mikmed-6 and its analog of American company Medical Microscope.

The optical properties of the microscope "LOMO" match the American microscope. Zooming up, a set of lenses and light-element match the level of me0048000m.

Significant investments from the state in R&D of the enterprise allow "LOMO" to support its products on the competitive technical level.

OJSC "Avangard": stationary gas detection

When comparing two sensors having approximately similar range of gas detection (the Japanese analog measures not only carbon monoxide and methane but also concentration of carbon dioxide), it became clear that the appliance of the foreign producer are relatively more sensitive. However, the performance of gas analyzer "Avangard" meets the industrial requirements of the absolute majority of production. For example, methane is explosive at its concentration in the air of more than 5%, the sensor MGS-98 (MAK-C2M) fixes methane at its concentration of 0.5%.

The difference of the sensors' thresholds is due to different requirements of state standards. In Japan they are stricter.

We add that the various meters of OJSC "Avangard" can determine the concentration of up to 13 different gases in the air. The performance of Yokogawa is more modest – only 5 different gases. The American manufacturer Signal USA designs meters to determine seven gases.

The meters made by Japanese manufacturer can be used in the laboratories where it is necessary to have high accuracy of determining the concentration of gases in the room, gas analyzers of OJSC "Avangard" is quite suitable for industrial uses of most industrial enterprises and, therefore, they are competitive at this point. This is facilitated by an active innovation policy of the enterprise. But with the development of industry the requirements for support systems, including a gas analyzer will grow. Consequently, with the lapse of time OJSC "Avangard" will have to develop sensibility of meters to the level of Yokogawa equipment.

Table 10. Comparison of technical and operational characteristics of medical microscopes

Characteristics	OJSC "LOMO"	Medical Microscope (the USA)
Model	Mikmed-6	me0048000m
Zoom, multiplicity	40-1500	40-1600
Objectives, multiplicity	4; 10; 20; 40; 100	4; 10; 20; 40; 100
Source of light, W	12; 20; 30	25

Table 11. Comparison of technical and operational characteristics of stationary gas detections

Company	OAO Avangard	Yokogawa (Japan)
Model	MGS-98 (MAK-C2M)	IR100TB
Measured gas	CO / CH_4	CO / CO_2 / CH4
The lower threshold of the measuring range, mg/m^3	1 / 0,5%	0 / 0 / 0%
Two operating thresholds	20; 100 / 1%	10; 40
Operating temperature range,	(-30, 50)	(-5, 45)
Notes: CO – carbon monoxide; CO_2 – carbon dioxide (dry ice); CH_4 – methane.		

Table 12. Comparison of technical and operational characteristics of gas turbines

Characteristics	OJSC "Silovye Mashiny"		General Electrics (the USA)
Model	GTPS-65	GTPS-160 (under license by Siemens)	LMS100
Peak capacity, MW	60	157	97.8
Gas temperature at the output	555	537	400
Gas flow rate at the output of gas-turbine unit, kg/s	184	509	453
Efficiency, %	35.2	34.4	44-50

OJSC "Silovye Mashiny": gas turbines.

Table 12 contains the comparison of operating parameters of three turbines: GTPS-65 made by "Silovye Mashiny" on its own technology, GTPS-160 – licensed by *Siemens* and LMS100 – turbine of GE production.

Gas turbine converts the energy of compressed and heated gas into mechanical work, driving the turbine blades which transmit the torque moment through the turbine disks to the shaft, which transfers energy to the generator.

In accordance with the flow of gas the analyzed turbines give comparable parameters of energy transfer to the generator. Efficiency is an important characteristic here, it characterizes the efficiency of converting thermal energy of natural gas into kinetic energy. By this parameter GE beats the units of "Silovye Mashiny" for more than 10%, if you are guided by a series of LMS.

This means that "Silovye Mashiny" should increase the processes associated with research and development to enhance the technical competitiveness of product, which is necessary for the functioning of the electricity industry.

Thus, the enterprises need to carry out innovative activity related to most marked in this section range of products in order not to be behind their global competitors in terms of deepening interpenetration of economic ties between the economic agents of different countries.

Conclusion

The analysis suggests the following conclusions:

➲ It confirms the well-known thesis that larger firms have greater access to monetary resources for innovation activity (equity or debt capital). There is a direct relationship between the number of employees at the enterprise and business spending on R&D.

➲ Equity is an important source of funding for R&D, but an unambiguous direct correlation between the sizes of revenue / profit and investments in R&D in 2009 for all analyzed enterprises is not detected, which indicates the effect of other factors (ex.: changes in market conditions of "Kirovski zavod").

➲ Weak role in financing innovation activities of Petersburg enterprises is played by the banking system, it is of little help to the strategic development of real sector production.

➲ Among the external sources of financing innovation activities of enterprises the leading role is played by the resources of federal and regional budgets. Targeted programs, defense contracts, state competitive biddings and competitive tenders are an important source and incentive of funding research and development by St. Petersburg companies.

➲ Without the deployment of innovative activity by St. Petersburg enterprises their lag in the production of core products from the world leaders can make the manufacturing industry of Petersburg uncompetitive.

It should be noted that the companies cannot rely only on federal and regional resources. To transit to the normal market functioning both the companies' efforts for building and implementing a long-term development strategy and the government efforts for developing legal and institutional field of regulation of industry and innovation activities are required, which are adequate to fiscal realities of the market of taxation and infrastructure conditions.

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Fish industry of the Murmansk Oblast in the system of the regional economic safety

The value of the fish industry of the European North of the Russian Federation in the system of food and economic safety of the region and the country is considered. The structure and the condition of the fishing fleet, fishery economic efficiency, and the potential factors of the development (the raw base, the technical policy, normative legal provisioning) are analyzed. The directions of the increase of the efficiency of the regional fish industry's functioning are proved.

European North of the Russian Federation, fish industry, industrial and financial activity, potential factors of development.

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From the very beginning during the Soviet era the fish industry in the European North of the country was formed as a territorial and production complex. Since 1920 it included the state enterprises of the Murmansk Oblast and the Archangelsk Oblast, later three fishery collective unions were formed, and since 1962 the enterprises of Karelia joined them.

The territorial production complex's formation was caused by the common sources of raw material, technological coherence, basing on the same port in Murmansk. For 70 years of the Soviet power the structure of the enterprises which are included into the complex, industrial and administrative structures were constantly changed, but the form of the organization (the territorial production complex) was kept. The management of the fishing industry in the country was carried out by the Union-Republican Ministry of Fisheries of the USSR.

In 1990 the structure of "North-Fish" included 37 production associations, enterprises and organizations. The fishing fleet totaled 397 units, including 269 units in the Murmansk Oblast. Fish processing on the coast was carried out by the Murmansk fish factory which included 8 fish factories, and in the Archangelsk Oblast and in Karelia 10 fish processing enterprises operated.

In 1990 the total catch made 1.6 million tons, including the catch of 1.2 million tons made by the fleet of the Murmansk Oblast, fish production on the ships made 1 390 thousand tons, unloading of the production made 1 059 thousand tons, including 1 044 thousand tons in Murmansk, production by the coastal factories made 141 thousand tons, including 100.9 thousand tons in the Murmansk Oblast, export made 24 thousand tons. In a regional product of the Murmansk Oblast the fish branch made over 30 %, the number of the employees made 48.7 thousand people.

As a result of the market transformations which began in 1990, the united fishing complex of the Northern basin divided according to the regional characteristics into four parts in the Murmansk Oblast and in the Archangelsk Oblast, in the Karelia Republic and in the Nenets Autonomous Okrug which can be considered conditionally as complexes as they have no corresponding attributes. The management was passed from the Federal level to the federal agency of fishery, and in the regions its policy is carried out by the Territorial managements (in the European North by Barents-White Sea) and the Regional (Republican) Committees on fishery. Apart from the Ministry of Fish Industry of the USSR and its basin centers, their duty is not the solution of the industrial problems, including those ones connected with the food safety of the country. Till 2007 the agency was exclusively engaged in monitoring of the condition of the biological resources' stocks, with the questions of the managing subjects' investment with biological objects' quotas.

According to the data for 2011 the fish industry complex in the Murmansk Oblast, alongside with the other key economic branches and kinds of activity, determines specialization of the region. The basis of the fish industry complex is the fish branch including catching and fish-processing enterprises. A number of enterprises of the industrial (production of instruments for catching, selling containers and ship repair) and non-industrial types of activity (transport fleet, fish port, motor transportation, supplying and marketing services) according to their specificity refer to services. In the Oblast there are educational institutions on training this branch's experts, the branch of the biological scientific research institute.

The fish branch of the Murmansk Oblast provides approximately 1/5 of the total amount of fish catching in the Russian Federation (500 or 650 thousand tons). It is a little bit less value of the Oblast in the fish products' release that can be explained by insignificant volumes of the coastal production (the repeated account).

In production of the canned food the Oblast lost its leading positions, owing to its non-competitiveness. The Oblast's index in fish catching and processing in the North-West District makes about 60%.

The share of the fish branch in the Oblast's export, despite of the recent growth, both in volumes and in cost, decreased from 31.5% in 2001 to 18.4% in 2008 that is connected to the higher rates of export in the other branches of the area.

The gross regional product in the current prices in the form of the economic activities "Fishery and fish industry" in 2008, in comparison with 2000, grew for 6585.0 million rubles (86.5%). However, its value in the regional product decreased from 13.3% in 2000 to 6.6% in 2008.

In the fish products' consumption (25.3 kg per head in 2009) the Murmansk Oblast exceeds the average level in the North-West Federal District (20.4 kg per head); for comparison: Karelia Republic produces 27 kg, the Archangelsk Oblast produces 31 kg, the Novgorod Oblast produces 23 kg, other areas take the lower positions than the average value. The reserves for the increase in sales and consumption of the fish production in the Murmansk Oblast, in our opinion, consist in expansion of assortment, especially cookeries, and in fish realization in the cooled kind.

In 2009 the mid-annual number of workers made 8 666 people (2.8% of the total number in the Oblast), including 7 200 people (2.3%) in fishery, 1 277 people (0.4%) in the coastal fish processing. The average monthly nominal charged wages in fishery make 40 594.6 rubles, that is 1.55 times higher than the average wages in the region, and in the coastal fish processing it makes 13 405.1 rubles [1].

Tax payments to the budgetary system of the Russian Federation (without taking into account UST) from the enterprises, which basic kind of activity is "Fishery", as a result of the legislative reduction of gathering for bio-resources (2008) and of the transition to

payment of the Unified agricultural tax (UAT) 2009, in 2010 made 1811.9 million rubles that is 25.7% lower than the level of 2007. The basic reduction of the tax receipt is observed for the account "Gathering for using the objects of the water biological resources": from about 1360.2 million rubles to 240.3 million rubles (in 5.7 times). Thus, the tax payments' receipt to the regional budget increased from about 1192.5 million rubles in 2007 to 1284.5 million rubles (for 7.7%) in 2010, that makes 6.9% in the tax receipts of the Murmansk Oblast.

Tax loading in fishery (the ratio of the sum of the gathered taxes to the volume of production) in 2007 made 15.1 kopecks/rubles, and in 2010 decreased to 11.0 kopecks/rubles or in 1.4 times. The modern tax loading in fishery is approximately for 11% less than on the average in the region and almost in 2.5 times less than the average in Russia [2, 3].

The industrial potential has undergone basic changes: the quantity of the organizations engaged in the oceanic fish catching increased from 12 units in 1990 to 110 in 2010, the quantity of the fish processing enterprises increased from 8 to 41. The number of the trade ships reduced from 269 units to 170 units (without taking into account small ships). Thus the quantity of the big ships decreased from 145 units to 31, but the number of the medium-size ships, on the contrary, increased from 72 units to 136 units; the average service life of the ships is about 24 years that is higher than the normative.

As a whole the present structure of the oceanic fishing fleet is characterized:

- by the considerable obsolete condition (from the most numerous group – medium-range trawlers numbering 136 units, of them only 35 units (25.2%) are younger than the normative service life of 19 years, among them from the 48 custom-made trawlers being most modern according the characteristics are 14 units (29.2%); the innovational repair was passed only by 8 large ships and about 20 medium-size);
- by the big charge of the fuel for a ton of the caught fish (in comparison with the data on the Norwegian fishery fleet, the excess at benthic aquatic's catching makes 63% (407 kg/ ton against 249.5 kg/ton), at pelagic fishing it exceeds in 3.1 times (5.9 kg/ton against 9.3 kg/ton) [4];
- by Insignificant quantity of the trawlers with catch complex processing (on the majority of the medium-size trawlers fishmeal plants are absent, so waste products from cutting and sub-standard fish are thrown over the board, that is the principal cause of the reduction of the fish meal production as a whole in Russia in 10 times, in the Northern basin in 15 times);
- by insufficient presence of the equipment for fish processing with the high added cost;
- by the presence in operation of only 2 refrigerator trade ships with the high efficiency on catching, which deliver caught fish to the Russian ports in the cooled kind;
- by smaller labor productivity of fishermen and the low wages (according to the statistical data the mid-annual catch for a fisherman in Norway makes more than 200 tons, and at the fleet of the Murmansk Oblast – approximately 61 tons, the same situation is observed in payment).
- by the low result: catch for one ton of displacement in the Norwegian fishery makes 6.5 tons, in Russia it makes 1.8 tons (it is less in 3.6 times).

The majority of the mentioned parameters testify to the unsatisfactory condition of the fishing fleet, the significant obsolete condition of the ships, the necessity of their enhancement follows here. Especially this problem becomes urgent in view of the rise in prices for fuel.

Since 1993 the coastal craft which had been stopped in 1940s started to revive. Nowadays about 90 organizations are occupied with catching in the Barents Sea. The quotas of the cod and haddock, accordingly 11.5 and 5.5 thousand tons, are allocated to 53 companies (on the average 320 tons for a company). 70 small ships (34 m long) participate in the craft, ~ 80 units of the small ships with the capacity

of the main engine of 55 kw and from 10.7 m to 25.2 m long. The normative service life of about 80 % of the coastal ships approximately expired. The trade tools of the basic part of fleet consist of manual circles, fishing tackles and trawls. Only 5 units are armed with automatic circles.

In the White Sea the coastal catch is carried by about 50 users. Among them are: 13 – 15 companies and 30 – 35 individual businessmen. The basic trade objects are salmon, White Sea herring, seaweed. The catch volumes are insignificant. For example, herring catch makes less than 1/4 of the recommended volume. The reasons are difficulties with selling, owing to the absence of the fish processing and freezing enterprises, backwardness of the coastal infrastructure.

The mid-annual total catch by the ships of the Murmansk Oblast for the period from 2000 to 2010 made 605.0 thousand tons, that almost 3 times less than the high catch in the 1980s. The quality of fish cutting aboard the shills is low: the ratio of total amount of the released production to the catch in 2000s is within the limits of 80 – 83% while in 1970s and 1980s it made 50%.

The share of the deliveries to abroad in the total amount of food production aboard the ships in 2000s made from 41.7% to 52.9%. Thus the improvement of the "export" assortment due to hi-tech production was not observed: fillet sales decreased from 12.3 thousand tons (2001) to 10.6 thousand tons (2010), and its value in the total amount of export decreased from 0.6% to 0.45%.

The mid-annual release of the fish products by the coastal enterprises of the Murmansk Oblast for the period 2001 – 2010 makes nearly 30 thousand tons (in 1990 it was 100.9 thousand tons). The development of fish processing is determined by the enterprises, which production is based on deep processing of the demersal fish species with orientation to export. For the Murmansk Oblast, from this point of view, the substantial growth of the coastal quota since 2004 has become positive.

The researches of the tendencies of the fish industry functioning complex of the Murmansk Oblast showed that its condition from the economic point of view should be counted unstable, and its indicators are:

- ➲ fluctuation of the catch volumes, fish processing and financial parameters, absence of their steady growth;
- ➲ the low level of the production profitability (change from 1.4% to 26.7%, in separate years unprofitability);
- ➲ big densities of the organizations which lose from the financial and economic activity in fishery: 48.0% in 2000, 60.9% in 2003, 61.9% in 2005, 41.1% in 2006, 38.1 in 2007, 46.7% in 2008, 35.3% in 2009; in the coastal fish processing: 2004 – 62.5%, 2005 – 80.0%, 2006 – 41.0%, 2007 – 39.5%, 2008 – 32.3%, 2009 – 45.2%;
- ➲ long term of the trade ships' service (on the average 23.5 years), that exceeds the normative term of their service;
- ➲ high power consumption of catching; bottom fishing is 1.6 times higher, than at Norwegians, pelagic fishing is 3.0 times higher;
- ➲ out-of-date, demanding enhancement industrial equipment at the majority of the coastal fish processing enterprises (~ 90 %);
- ➲ throwing out sub-standard fish.

Alongside with the stated points, the irrational use of the extracted bio-resources is observed:

- ✓ non-complexity of the catches' uses for fish processing – the majority of the ships obtaining benthic aquatic, throw out waste products and sub-standard fish at the presence of the big deficiency of fish meal;
- ✓ low level of cutting benthic aquatic and of the added cost, first of all for the bottom fish. The ratio between the volumes of the fish products to catches during last 8 years is makes 80 – 83% and the tendency of the increase in cutting fish is not observed;
- ✓ excessive export of fish products abroad directly from the sea. The share of the deliveries abroad in the total amount of fish production aboard the ships reached 58%.

Potential factors of the complex's development, first of all, are connected to the external environment: raw material base, normative-legal providing and technical policy.

Raw material base. Of the 13 basic objects of catch in the Barents sea and adjacent waters, 4trade stocks and quotas in 2010 and the subsequent periods can increase insignificantly (cod, haddock, pollock and halibut); haddock catch is expedient only by highly effective ships as the decrease of payment for the right for catch does not solve to the full the problem of economic efficiency of its catching; for the adjustment of a large-scale shrimp catch specialized ships are necessary, equipped for output of a boiled-and-frozen kind of products, capelin catching renewed in 2009 with the quota of 152 thousand tons for Russia (for the Murmansk Oblast – 80 – 90 thousand tons). The total amount of catch made 116.3 thousand tons (development – 76.5%), the fleet of the Murmansk Oblast made 64.4 thousand tons (development – 75.8%); in 2010 accordingly, 110.0 thousand tons (62.7%) and 86.9 thousand tons (69.5%). The quotas decreased because of under-catch.

It is necessary to note, that in view of the presence in the structure of the fishing fleet of the Murmansk Oblast only one vessel with RWS-tanks, the population and fish processing enterprises were provided with fresh capelin with by the Norwegian trawlers. The quotas of whiting despite of their reduction were not completely fulfilled recently: in 2009 at the quota of 108.7 thousand tons 100.3 thousand tons were caught (92.3%), in 2010 accordingly, 95.3 thousand tons and 79.9 thousand tons (83.4%). In the North-West Atlantic the condition of fish resources is unsatisfactory and it doesn't worth expecting the essential increases in fish catching.

On six most significant objects of catch (cod, haddock, capelin, whiting, herring, mackerel), the total amount of the established quotas can make about 1 million tons.

Except for it the underutilized raw material base of catch in the seas of the European North and in Northern Atlantic is determined by experts in 167 – 217 thousand tons [5]. It is necessary to emphasize, that in connection with the proceeding warming of the Northern Atlantic waters there can be the displacement of the living area of some aquatics to the east and the increase in the efficiency of the Barents Sea and the catch in this economic zone of the Russian Federation can increase [6].

For the stable work of large ships outside the Northern Atlantic and the creation of economic conditions the raw-material base is necessary for achievement of the average level of fish industry efficiency. We believe that the part of large ships could work in the conditions of the state-private cooperation in the Corporation planned to be created in the Southern ocean.

Technical policy. The technical policy, on the one hand, is the internal factor of the development as it is formed by the organizations' management; on the other, it is the external factor as it depends on the condition of the ship-building branch, the prices for trawlers, systems of crediting in the Russian Federation and abroad. The technical policy appreciably determines the industrial potential and the efficiency of the organizations.

In the medium-term prospect, probably, preconditions will be created and the process of the fleet's innovational updating, which will end by 2025, will begin. As the calculations show, for bio-resources' development of the Northern Atlantic instead of the available 265 trawlers for the oceanic catch it is necessary for the Murmansk Oblast to have about 70 – 80 ships, including:

- the basis of the fleet must be the ships-factories of different size;
- in the fleet structure it is expedient to have some seiners-trawlers of the combined type for the frozen and cooled fish delivery to the ports;

➲ in the medium-term period it is necessary to equip the coastal fleet with passive catch instruments and to start getting specialized ships; as a whole the structure of this fleet will be generated outside the medium-term period and appreciably it will be determined by the width of the zone of the coastal fishery.

At the coastal factories the process of modernization is supposed to be finished in the medium-term period; it is expedient to equip the enterprises, processing cod, haddock and roll with individual shock frost's equipment.

Personnel. In the medium-term prospect (till 2018 – 2020) the industrial trade personnel in a great measure will not be renewed and, hence, the labor productivity will insignificantly increase, the companies' heads attitude towards to the hired personnel will change insignificantly. At the same time the competition for the staff will accrue on the part of the oil-and-gas branch. These factors can result in the staff overflow to the large trade companies, and also to the non-trade ships that will create complexities with personnel providing for the fishing fleet. In the same direction the increase of the general standard of living of the Murmansk-dwellers will operate.

For the improvement of the staff providing it is necessary to raise the level of payment and labor productivity, that, probably, will be observed outside the medium-term period due to the updating the industrial apparatus.

Normative-legal provisioning. The amendments brought into the FL № 166 "About fishery and preservation of the water biological resources" and into the FL № 52 "About the fauna", are directed on the increase in the efficiency and competitiveness of the complex for the account:

1. Increases in the catch unloading in the Russian ports, including Murmansk.
2. Exit of the fish and monetary streams from the shadow.
3. Reduction of the price for fish products, increase of its processing at the coastal factories and of the consumption by the population.
4. Increases of the capacities' use of the Murmansk fish port and other service productions.
5. Intensification of the process of the fleet's and the coastal enterprises' construction and modernization.
6. More full development of the ODU.
7. Receptions of multiplicative economic benefit along the whole technological chain of fish processing (incomes, taxes, employment will increase).

Alongside with the expected positive influence from the changes in the legislation and normative base, made for the recent 2 years, it is necessary to name probable costs.

With the beginning of the innovational actions ship-owners still had one serious reason not to enter the domestic ports, i. e. the necessity of duties' payment and the VAT for a ship, bought and repaired abroad, approximately 26% from its cost. It is just the type of ships which are capable to get the most part of the accessible bio-resources. It is obvious, that for getting the expected positive results from innovations it is expedient for the state to make the duties' and the VAT's cancellation for the mentioned ships. Otherwise fish production in the ports will be delivered by transport and economic benefit will be insignificant. The rates of the basic production assets' updating are also connected to the duties' and the VAT's cancellation.

The other, more rigid variant is also possible: the investment with the quotas for bio-resources causes the duty's and the VAT's payment. In this case it is expedient to develop the economic mechanism of their payment for the long term.

Formation of favorable normative-legal and economic conditions for call of the trade ships does not mean their 100-percent returning. Obligatory declaring of the fish products in the domestic ports, according to the accepted amendments to the law on fishery, concerns only the catches in the Barents Sea.

They make about 1/4 of the total amounts of its extraction and at desire of ship-owners can be reduced. Thus, such tendency (catch in the western areas of the sea) meets to the bio-economic recommendations [7, 8]. The essential stimulus is decrease of gathering for bio-resources for 90% on catch delivery in the Russian ports. But as in the law for this privilege's reception there is no requirement of the obligatory production realization at the Russian market as the practice of this position's realization shows, that fish products after declaring are exported, and the budgetary receipts from gathering for bio-resources use only in the Murmansk Oblast decrease for 500 – 1000 thousand rubles.

The volumes of the fish products' export, in connection with its obligatory declaring in Russia, were not reduced [1]. The state received the income as duties, but will be compelled to compensate the VAT for the goods and the services got in the Russian territory. Taking into account the high cost of fuel, industrial equipment and other supply, we believe, that the sums of the VAT to return are adequate to the sums of duties.

Almost full cancellation of the payment for bio-resources, included into the cost price, should result in the increase in the profit and the tax from it. On the other hand, the growth of the operational charges connected to the fish products' delivery for declaring in the Russian ports, will increase the cost price of catching and processing fish products. We believe that in a result the profit and the tax for it at the Murmansk managing subjects will change insignificantly.

Complex influence of innovations on the tax payments' receipt is shown in *the table*.

As "Fish industry and fish culture" in the structure of the tax payments' receipts in the Russian Federation takes only 0.2% [9], and the taxes' receipts to the territorial budget even increased insignificantly, the above-mentioned legislative innovations passed without serious consequences.

Great influence on the development of catching and processing organizations and providing the country with fish products is rendered by the systems of quotes for the water biological resources, fish products' unloading and selling. Investment of the organizations with the ODE shares for the long period as it is determined now, creates steady conditions for economic activities, allows accumulate the financial assets for the industrial apparatus' updating.

Change of the tax payments' receipt into the budgetary system of the Russian Federation in the Murmansk Oblast from the enterprises, the basic kind of activity where is "Fishery" for the period 2007 – 2010 (2010 in comparison with 2007) [1]

Parameters	Change of the total sum of the receipts		Including			
			to the federal budget		to the territorial budget	
	thousand rubles	%	thousand rubles	%	thousand rubles	%
In total	-627569	-25.7	-719584	-57.7	+92015	+7.7
Including: federal taxes	-710856	-30.8	-719584	-57.7	+8728	+8.2
Of them: - the tax to profit	-97266	-26.3	-61135	-54.1	-36131	-1.4
-VAT	+245624	+in 1.35 times	+245624	+in 1.35 times	0.0	0.0
- gathering for using the objects of the water biological resources	-1119991	-82.3	-904073	-95.0	-215837	-52.9
- other federal taxes	+260696	+65.2	0.0	0.0	+260696	+65.2
- regional taxes	-33567	-28.3	0.0	0.0	-33567	-28.3
- local taxes	+7596	+in 1.4 times	0.0	0.0	+7596	+in 1.4 times
- taxes of the special tax mode	+109058	+in 26.4 times	0.0	0.0	+109058	+in 26.4 times

At the same time, the present system does not stimulate the increase of the efficiency of bio-resources use; at the insufficient control it creates the conditions for getting and hiding the incomes. With a view of the perfection of giving quotas and the increase of the economic potential of the fish branch it is offered:

- at quotas' distribution to take into account the criterion of the efficiency of the fish industry at the re-perspective period that will allow to get rid of the inefficient organizations;
- not to resolve the choice of quotas to the non-owned ships; to enter the annual account of the quotas' choice and to carry out their redistribution.

In the majority of the countries with the advanced fishery requirements providing the communication between the fishing ships with the native country are legislatively established and only in Russia they are absent.

For example, in Norway the order of fish use, processing, sale and storage are determined in the Law from 14.12.1951 "About selling fish". This law establishes that all the caught fish should be realized only through the corresponding marketing cooperative societies of Norway. This position subsequently was also fixed in the Law №40 "About the sea crafts". Thus, the basic part of catch should be unloaded on the Norwegian coast, as it can be observed actually.

Fish export is supervised by the Council on export at the Ministry of fishery which has recommendatory functions. At the same time without the Council's sanction independent exit of fishermen to the international market is not supposed.

The Council on export carries out studying commodity markets, prepares marketing actions, is engaged in the consulting activity, gives information to exporters.

In Russia, according to the Decision of the Government № 704, 2004, to the domestic coast fish products from coast should be delivered, and since 2009 fish products from the whole water area of the Barents Sea. In total for the Murmansk Oblast it makes 40 – 60 thousand tons of the demersal fish species and all the catch of capelin and rolls.

The production export is not regulated. The fisherman makes their decision independently, being guided by their own momentary benefits.

The researches of the markets with a view of assistance to fishermen are not made. The state removed itself from the protection of fishermen's interests at the international market.

Low economic efficiency of fishery and under-developing the quotas in the certain measure are the consequence of their dispersion between a plenty of managing subjects (in the oceanic craft them more than a hundred). As practice shows, the enterprises are not ready to the voluntary consolidation of both the raw and the industrial resources, and integration occurs very slowly. For example, in 2010 8 small-scale enterprises were united into 3.

The growth of fish production from the cooled raw material at the coastal factories will depend on the volumes of the coastal quota, from the rules working in the coastal fishery, and also from the structure of the fleet (from the presence of the ships with insignificant operation cycle), and also the presence of the reception devices in the port. It is expedient to restore in the coastal fishery the norm of the fish products' delivery only in a fresh kind and to oblige to sell fish for processing by the coastal factories. Otherwise, it will lose its basic distinctive attribute, and the authorities will have the right to demand termination of giving quotas for coastal catch. Cancellation of this norm in 2007, alongside with the reduction of the cooled raw materials' deliveries for import, resulted in reduction of output by the coastal factories in the subsequent period: in 2007 – for 26.4 %, in 2008 – for 32.1 %, in 2009 – for 25.3 %.

Achievement of the raw materials' deliveries to the coastal factories under the effective prices in the volume of 90-100 thousand tons (recently it is processed 30-35 thousand tons) is possible for the account:

– increase in the volumes of catch in the coastal zone and return to the norm "deliveries of the raw material only in the cooled kind";

– renewal of capelin catch and its deliveries in the cooled kind by seiners-trawlers;

– adjustments of the aquatics' extraction (stimulation by the quotas of cod and haddock);

– processing of fillet of the frozen cod, haddock and pollock.

Integration and merger of enterprises, purchase of new courts will allow increasing the labor productivity and the wages not less than in 2 times (due to the greater security quotas of the available productive ships).

The regional feature of the fish branch of the Murmansk Oblast is the ability to achieve high competitiveness due to the deep innovational processing of the demersal fish species, first of all cod. The most part of them is expedient for using for fillet production. To do it aboard the trade ships in many cases is unprofitable according to the ratio of the expenses for the raw material, work and the price for fillet production.

For these reasons the ship processing capacities are used no more than for 20 % [10]. Therefore the basic place of the fillet production should be coastal factories. Installation of the new equipment for IQF production allows competing successfully to the western producers both in raw material purchase, and on the sales of high-quality products from the demersal fish species. In these purposes it is also expedient to develop the corresponding market brand of production from the demersal fish species caught in the pure waters of the Barents Sea, to bring up fishermen's and the seaside population's attitude towards cod as the national property.

The fish branch remains the potential animator of the financial assets for the fishing complex's revival. Nowadays there are favorable conditions for this animator's start: stocks of the traditional biological resources in the Northern Atlantic are in good condition and allow increasing the volumes of catch, a number of legislative innovations stimulating catch unloading along the Russian coast and the increase of the fish products' sales, including demersal fish species at the home market is accepted. The problem will be to admit the accepted solutions directed on the fish streams' turn towards the Russian coast.

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Financial provision of investment processes in the regions of the North-West federal district

The presence of various potentialities in achieving economic growth and stirring up investment processes at the regional level is complicated by spatial inequality of financial resources distribution. This study has revealed epy specificity of forming fixed capital financing structure influencing the differentiation level in economic development of regions. Solution of the problem requires improvement of the financial system functioning. Information basis of the study includes statistical collections, published by the Federal statistic service. Methods of statistical analysis are used for the results substantiation.

Fixed capital financing, investment resources, self-financing, financial investments, profit, external financial sources, lending, organizations' loans.

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Financial provision of investment process is associated with the search for solutions in the area of identification the possible investment financing sources, ways of their mobilization, and effectiveness increase.

Getting down to the analysis of investment financing sources, it should be borne in mind that their formation has its own peculiarities at the macro and micro levels. In both cases, there are internal and external sources. At the macroeconomic level the internal sources include: state budget financing, savings of population, savings of enterprises, commercial banks, investment funds and companies, private pension funds, insurance companies, etc. The external sources include foreign investment, lending and loans. At the microeconomic level, the internal sources of investment include income, depreciation, investment of enterprises owners; the external ones – public finance, investment loans, mutual funding in the non-financial corporate sector, the funds attracted by placing own securities [2].

With incomplete information and lack of institutional environment various ways of financing are not completely interchangeable and equally effective and, depending on certain information or institutional conditions they produce a fundamentally different economic dynamics on both the macro- and microeconomic level [1].

The object of the present study is the micro level, i.e. the level of enterprises and organizations.

In countries with developed market economies the structure of investment financing sources at the firm level varies, usually depending on the phase of the business cycle: the share of internal sources is reduced during the periods of revival and growth, when

investment and business activity rises, and increases in the periods of economic recession that is due to the reduction of investment, reducing the money supply, rising prices of credit [2].

In the Russian Federation the structure of fixed capital financing sources has changed significantly in the direction of reducing their own funds for the period of 2000 – 2009. This trend is characteristic not only for Russia as a whole, but also for its individual regions. In particular, it is quite pronounced in the regions of the North-West Federal District *(tab. 1)*.

The own funds share is higher than the average value (in averaged index over the period) in the regions such as the Murmansk, Vologda, Pskov, Kaliningrad oblasts, Komi Republic. In the Kaliningrad Oblasts, which is characterized by almost the highest proportion of self-financing at the beginning of the study period, the share of own funds since 2003 has been rapidly declining. A similar trend has been observed in the Vologda Oblast since 2004. The lowest values of this index is in the Arkhangelsk Oblast and its constituent Nenets Autonomous Okrug (the exception is the crisis year of 2009) and in St. Petersburg. Sharp decline in self-financing since 2006 has also been observed in the Leningrad Oblast.

The described process is actually accompanied by economic growth (except for certain periods primarily the crisis one), but its occupancy with sufficient investment resources is differentiated *(tab. 2)*.

The Arkhangelsk Oblast with its member Nenets AO marked by high activity to attract investment resources have leading positions in terms of economic growth and provision with investment resources relative to the gross regional product (GRP). They are followed by the Leningrad Oblast. Nevertheless, the subjects considered are characterized by positive correlation between the gross regional product growth rates and the share of own funds sources *(figure)*.

The Murmansk Oblast and Karelia also have positive dependence. Both regions are characterized by low economic growth (the Murmansk Oblast is on the final position by this indicator), and insufficient volume of investment.

A negative correlation is characteristic of Russia as a whole, clearly expressed in Saint-Petersburg, the Pskov, Novgorod, Kaliningrad and Vologda Oblasts. Among the most secured with investment with respect to the GRP is the Kaliningrad Oblast. In time of crisis the position worsened in the Vologda Oblast, and slightly improved in the Novgorod Oblast.

Table 1. Own funds in the structure of fixed capital financing sources [5]

Territory	2000	2005	2006	2007	2008	2009	Average*
Russian Federation	***47.7***	***44.5***	***42.1***	***40.3***	***39.5***	***37.1***	***44.05***
North-West F. D.	*49*	*42.9*	*34.3*	*31.8*	*31.3*	*29*	*41.1*
Republic of Karelia	55	41.9	33.6	43.8	34.5	30.3	40.77
Komi Republic	57.2	33.7	43.7	56.1	51.7	31.1	47.81
Arkhangelsk Oblast	44.7	31.3	20.1	17.0	22.1	35	30.63
including Nenets AO	24.9	33.1	18.5	13.0	18.4	35.3	23.67
Vologda Oblast	19.1	39.8	38.4	34.4	44.0	36.7	46.15
Kaliningrad Oblast	74.8	36.3	37.4	29.7	25.3	21.6	45.08
Leningrad Oblast	59.5	55.8	27.4	30.4	26.7	19.8	43.33
Murmansk Oblast	77.0	61.9	49.2	54.0	42.3	43.8	58.28
Novgorod Oblast	48.8	48.7	48.4	45.3	33	23.4	43.48
Pskov Oblast	42.7	55.5	58.3	40.2	42.1	32.1	45.31
St.-Petersburg	45.4	42.3	36.2	***29.4***	28.7	30.5	38.99

* Average value is calculated for the period 2000 – 2009.

Table 2. Characteristics of the regions in terms of GRP growth (in constant prices, % to the previous year) and the share of investment [5, 6]

Index	2000	2005	2006	2007	2008	2009	Average *
Russian Federation							
GRP growth rates	***110.6***	***107.6***	***108.3***	***108.3***	***105.7***	***92.4***	***105.9***
Share of investment in GRP	***20.3***	***20.1***	***21.2***	***23.45***	***25.6***	***24.7***	***21.8***
North-West F. D.							
GRP growth rates	*109.7*	*106.6*	*107.7*	*109*	*104.7*	***94.9***	*106.2*
Share of investment in GRP	*20.2*	*26.9*	*29.6*	*30.1*	*30.7*	*26.8*	*26.1*
Republic of Karelia							
GRP growth rates	108.3	106.9	105.1	108.5	**95.4**	**87.6**	102.7
Share of investment in GRP	22.7	19.8	21.5	18.3	22.7	17.6	21.6
Komi Republic							
GRP growth rates	110.1	104.0	108.6	**99.6**	103.3	**98.5**	103.8
Share of investment in GRP	28.8	29.4	33.9	26.1	28.7	36.0	28.6
Arkhangelsk Oblast							
GRP growth rates	116.4	109.0	107.2	112.2	100.0	102.2	108.4
Share of investment in GRP	16.9	28.7	40.9	48.6	50.3	20.4	30.6
including Nenets AO							
GRP growth rates	…	108.8	114.6	118.7	**86.7**	122.6	114.7
Share of investment in GRP	32.1	50.2	74.5	93.2	95.2	26.4	62.6
Vologda Oblast							
GRP growth rates	107.5	104.5	104.8	105.1	**96.7**	**87.1**	102.4
Share of investment in GRP	12.4	31.3	32.7	32.6	26.6	26.1	23.8
Kaliningrad Oblast							
GRP growth rates	115.1	103.6	115.3	119.9	104.7	**91.5**	108.5
Share of investment in GRP	19.6	36.6	31.6	32.1	39.5	31.5	28.6
Leningrad Oblast							
GRP growth rates	112.6	109.6	111.2	106.3	105.3	**99.6**	109.2
Share of investment in GRP	34.4	40.3	48.0	40.9	43.3	45.5	40.7
Murmansk Oblast							
GRP growth rates	104.2	102.4	102.7	102.2	**99.8**	**91.2**	100.7
Share of investment in GRP	13.0	15.1	15.5	14.0	21.9	20.5	16.1
Novgorod Oblast							
GRP growth rates	102.9	103.8	104.0	105.5	108.2	**98.9**	104.4
Share of investment in GRP	22.7	21.9	25.3	27.6	29.5	31.5	24.5
Pskov Oblast							
GRP growth rates	105.8	100.3	104.9	105.6	103.1	**93.8**	102.8
Share of investment in GRP	15.1	13.7	14.8	22.2	22.5	17.3	16.8
St.-Petersburg							
GRP growth rates	110.1	108.3	108.3	113.1	109.3	**94.3**	108.1
share of investment in GRP	19.1	23.5	23.5	27.1	26.0	22.0	23.4

* Average value is calculated for the period 2000 – 2009.

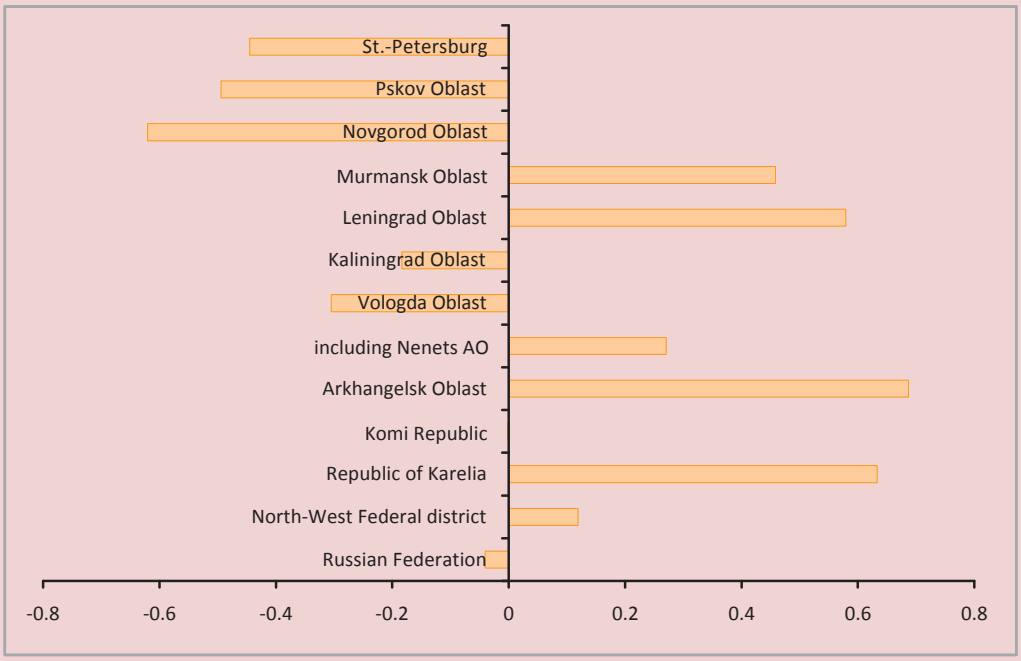
The ambiguity of interpretations of the identified relationships requires more careful analysis of the financing structure of investment processes in the regions studied.

Initially, we shall try to identify the causes of decline in the share of self-financing in the structure of fixed capital investments funding.

A key role in the structure of own sources of financing investment activities of enterprises and organizations, belongs to profit.

Most regions of the North-West during the study period are characterized by a significant increase in weight gains. However, against this background its role in the investment process

Correlation dependence between the GRP growth rates and the share their own sources in the structure of fixed capital financing investment (author's calculations on the basis [5])



is substantially reduced not only in the overall fixed capital funding structure, but also in the structure of the ways of income uses *(tab. 3)*.

Thus, we can conclude that the decline in the share of profits is due to not only the increasing demand of economic entities in additional capital against the background of increasing economic activity, but rather because of its replacement with attracted resources: financial performance of companies and organizations primarily and substantially exceed the funds that are directed to the purpose of investment.

The situation would be justified in terms of current needs of businesses in the accumulation of capital within a certain period in order to further investment.

Indeed in some regions there are bursts of activity aimed to use the financial results for investment purposes. These include: the Pskov and Arkhangelsk Oblasts and Nenets Autonomous Okrug. In certain periods the amounts of investment in these regions exceed income of the current period, which, respectively, may indicate the accumulation of profit with its subsequent investments. However, in this case it is notable that the selected three regions have the lowest financial performance relative to the GRP *(tab. 4)*.

The most productive in terms of profit are the Vologda, Leningrad, Novgorod, Murmansk Oblasts and St. Petersburg. However, the share of the profit directed for investment purposes in these regions tends to decrease (excluding the crisis period). Accordingly, the profit is used for other purposes.

An alternative investment in fixed capital is financial investments. It should be noted that in a market economy it is one of the main forms of capital accumulation.

In accordance with the Russian regulations [4] the financial investments include:

- state and municipal securities, securities of other organizations, including debt securities, in which the date and the redemption value is determined (bonds, promissory notes);

Table 3. Evaluation of profits participation in fixed capital investment, % (calculated by the author on the basis of [5, 6])

	2000	2005	2006	2007	2008	2009
Russian Federation						
Share of profits in FCF *	***23.4***	***20.3***	***19.9***	***19.4***	***18.5***	***14.8***
Share of investment in TVP **	***18.1***	***15.9***	***12.5***	***15.8***	***23.2***	***14.6***
North-West F.D.						
Share of profits in FCF *	*27.5*	*21.9*	*16.4*	*13.3*	*13.4*	*11.5*
Share of investment in TVP **	*21.6*	*33.1*	*20.3*	*15.4*	*19.5*	*14.8*
Republic of Karelia						
Share of profits in FCF *	38.2	15.3	11.8	13.3	8.8	4.2
Share of investment in TVP **	55.0	14.9	19.3	19.1	11.7	14.5
Komi Republic						
Share of profits in FCF *	38.5	10.2	14.1	12.2	15.1	10.4
Share of investment in TVP **	30.5	17.2	31.0	18.2	42.9	19.9
Arkhangelsk Oblast						
Share of profits in FCF *	23.4	12.3	7.5	3.7	6.9	9.5
Share of investment in TVP **	20.7	30.7	45.6	32.0	101.0	20.2
including Nenets AO						
Share of profits in FCF *	5.9	13.5	6.5	1.7	6.7	10.7
Share of investment in TVP **	3.7	46.7	70.8	28.4	159.5	16.1
Vologda Oblast						
Share of profits in FCF *	29.7	28.2	25.0	16.0	21.8	10.3
Share of investment in TVP **	7.7	28.3	22.8	14.4	15.1	27.4
Kaliningrad Oblast						
Share of profits in FCF *	63.4	12.2	16.9	17.1	4.6	8.5
Share of investment in TVP **	46.4	18.2	30.3	33.3	17.7	14.5
Leningrad Oblast						
Share of profits in FCF *	15.4	35.7	16.6	13.5	14.6	8.1
Share of investment in TVP **	22.3	54.3	37.3	21.9	28.5	19.9
Murmansk Oblast						
Share of profits in FCF *	46.7	21.4	20.2	23.1	22.0	22.6
Share of investment in TVP **	29.9	20.8	15.0	12.9	23.6	21.5
Novgorod Oblast						
Share of profits in FCF *	21.9	30.3	29.4	25.4	18.1	13.0
Share of investment in TVP **	26.0	37.5	20.6	14.7	54.4	10.0
Pskov Oblast						
Share of profits in FCF *	20.7	22.2	36.1	18.5	20.5	12.5
Share of investment in TVP **	28.8	61.4	130.8	78.9	91.9	52.9
St.-Petersburg						
Share of profits in FCF *	21.5	20.8	16.7	14.9	13.5	13.8
Share of investment in TVP **	17.7	38.3	12.1	12.0	12.8	11.1

* FCF – fixed capital funding.
** TVP – total volume of profits.

Table 4. The ratio of profit to the GRP, % (calculated by the author on the basis of [5])

Territory	2000	2005	2006	2007	2008	2009	Average
Russian Federation	***23.7***	***20.4***	***27.1***	***22.9***	***15.6***	***18.2***	***19.8***
North-West F. D.	*22.4*	*15.1*	*20.2*	*21.6*	*17.4*	*16.5*	*16.7*
Republic of Karelia	14.0	17.1	11.2	11.1	13.6	3.6	10.0
Komi Republic	28.1	16.3	14.1	15.1	8.5	17.2	15.9
Arkhangelsk Oblast	15.5	10.6	6.2	5.2	3.1	8.6	7.8
including Nenets AO	31.9	14.2	6.8	5.5	4.0	17.3	12.3
Vologda Oblast	42.4	28.5	31.0	31.5	31.4	8.2	27.7
Kaliningrad Oblast	20.9	16.2	12.3	10.8	7.2	11.0	13.1
Leningrad Oblast	22.0	22.2	18.0	21.9	19.4	15.2	18.1
Murmansk Oblast	23.5	13.5	18.3	22.8	18.1	18.7	15.7
Novgorod Oblast	17.0	14.2	28.7	34.3	7.5	27.9	17.5
Pskov Oblast	7.7	3.5	3.2	4.0	3.8	2.9	4.2
St.-Petersburg	18.7	10.5	26.1	26.9	21.9	20.7	17.6

Table 5. The share of short-term investments in financial investments [6]

Territory	2000	2005	2006	2007	2008	2009	Average*
Russian Federation	***77.2***	***79.9***	***84.2***	***76.4***	***82.8***	***78.6***	***79.3***
North-West F. D.	*93.5*	*76.0*	*58.4*	*88.7*	*88.6*	*86.4*	*83.0*
Republic of Karelia	89.6	83.6	54.1	76.7	94.7	19.7	73.1
Komi Republic	68.9	90.2	37.0	42.7	74.7	96.8	62.8
Arkhangelsk Oblast	91.0	81.1	88.0	93.9	96.9	94.5	89.8
including Nenets AO	99.8	92.0	97.1	97.7	97.6	91.8	90.9
Vologda Oblast	99.2	36.9	12.6	82.7	82.5	84.1	71.4
Kaliningrad Oblast	79.9	86.7	84.9	86.8	82.7	85.9	85.8
Leningrad Oblast	97.4	93.4	65.3	47.5	75.2	81.5	83.8
Murmansk Oblast	92.0	83.8	78.2	97.1	92.7	79.7	87.6
Novgorod Oblast	77.3	95.2	91.3	68.6	30.0	57.3	76.3
Pskov Oblast	85.8	58.1	68.3	89.4	81.5	99.3	74.8
St.-Petersburg	79.8	82.2	75.8	93.8	94.7	89.2	84.0

* Average value is calculated for the period 2000 to 2009.

- investments to authorized (reserve) capital of other organizations (including subsidiaries and affiliates);
- loans granted to other organizations;
- deposits with credit institutions;
- receivables acquired on the basis of assignment of claims;
- investments to the organization and partnerships under a partnership contract and others.

Some of these areas can potentially act as a direct investment for other enterprises (organizations). In particular, they include investments in corporate securities (stocks, bonds) and loans to other organizations. Such investments like deposits are an indirect form of financing through commercial banks. In both cases these funds may be used as an investment resource only in case of long-term investment.

Unfortunately, in the regions of the North-West Federal District, though, as in Russia as a whole, by short-term financial investments dominate *(tab. 5)*.

However, the enterprises and organizations have a real opportunity to build a long-term resource, since the bulk of financial investments is made by own funds (most available and predictable source), and in most regions of the District, this figure is much higher than the national average *(tab. 6)*.

Table 6. The share of own funds in financial investments, % *

Territory	2005	2006	2007	2008	2009
Russian Federation	***79.8***	***83.5***	***68.0***	***66.0***	***85.0***
North-West F. D.	*65.7*	*59.3*	*68.8*	*72.0*	*72.4*
Republic of Karelia	**88.5**	63.2	58.8	94.8	74.2
Komi Republic	15.6	55.8	88.6	**94.7**	**97.8**
Arkhangelsk Oblast	55.1	**80.5**	**81.5**	70.4	**82.5**
including Nenets AO	59.9	**95.1**	**95.9**	**97.3**	78.9
Vologda Oblast	**83.8**	37.2	**98.1**	**99.0**	**98.0**
Kaliningrad Oblast	49.1	**80.3**	**88.0**	**80.5**	**88.7**
Leningrad Oblast	**86.2**	79.0	71.6	44.8	**85.9**
Murmansk Oblast	73.5	79.0	**97.0**	**96.8**	**96.3**
Novgorod Oblast	**98.5**	**99.9**	**99.8**	**98.8**	**98.4**
Pskov Oblast	**88.9**	67.0	**94.2**	56.3	**97.4**
St.-Petersburg	61.3	59.1	52.1	57.1	57.5

* Calculated by the author based on [5, 6], the data on financial investments formed at the expense of own funds until 2004 in an information based of Federal Statistics Service is absent.

Probably the highest risks of investing in securities and the illiquidity of stocks and bonds of most companies-issuers do not allow the firms to consider them as long-term investments.

Nevertheless, the potential exists and it is not small. This is shown by comparing the volume of investments generated through own funds with the general volume of investments *(tab. 7)*.

In some regions (marked in bold in table 7) investments formed through own capital significantly exceed not only the own capital invested in fixed assets, but the total volume investment. This is to a great extent inherent to the resourced regions which were discussed above (see table 4). The exclusion makes the Leningrad Oblast.

Thus, it seems that the more the region earns, the more actively it uses its own resources to finance, and investment needs are covered by outside sources.

We should recall that the rates of decline in the own funds share and, consequently, the activity of attracting resources in the context of the North-West Federal District are sufficiently differentiated (see table 1).

To make the results convenient and clear for the analysis of external sources of investments financing it is necessary to separate them because of a different nature of their operation [3]. Some of them are engaged on a market basis, but some are based on other principles. For example, public funding, for should be mostly aimed at creating a favorable investment environment, i.e. the creation of conditions enabling an increase in investment activity of private investment, which does not exclude direct government participation in investment projects. Inside the nonfinancial corporate sector there are own sources. This is borrowing from other businesses, parent organizations funding of their departments, share in construction, etc. In this case, the effect of market principles is limited as in the allocation and reallocation of resources a limited number of individuals are involved, and investment decisions, to some extent can be subjective. Purely market sources include bank loans and securities issues. The use of market sources determine the degree of involvement of financial markets in the financing of fixed capital and affect the efficiency of the processes of transformation of savings into investment.

In regions of the North-West Federal District market sources have not been well developed, not only in the initial stages of market reforms, but also in the study period. This is especially true for the issue of shares and bonds *(tab. 8)*.

Table 7. The ratio of investments to financial investments, formed through the own capital (calculated by the author based on [5, 6])

Index	2005	2006	2007	2008	2009
Russian Federation					
TVI/ IFOC	***49.2***	***39.3***	***52.6***	***50.4***	***41.0***
OCI/ IFOC	***36.8***	***32.5***	***54.2***	***40.5***	***49.2***
North-West F.D.					
TVI/ IFOC	*189.1*	*153.3*	*85.9*	*62.1*	*56.4*
OCI/ IFOC	81.1	52.7	27.3	19.4	16.3
Republic of Karelia					
TVI/ IFOC	368.3	203.4	142.9	**45.8**	200.5
OCI/ IFOC	154.3	68.3	62.6	15.8	60.8
Komi Republic					
TVI/ IFOC	912.6	593.7	277.5	258.1	304.9
OCI/ IFOC	307.5	259.4	155.7	133.4	94.8
Arkhangelsk Oblast					
TVI/ IFOC	174.8	264.1	635.8	648.7	157.7
OCI/ IFOC	54.7	53.1	108.1	143.4	55.2
including Nenets Autonomous Okrug					
TVI/ IFOC	123.3	239.4	503.0	484.4	295.6
OCI/ IFOC	40.8	44.3	65.4	89.1	104.3
Vologda Oblast					
TVI/ IFOC	**96.4**	**90.2**	**35.5**	**13.8**	**11.3**
OCI/ IFOC	38.4	35.1	12.1	6.1	4.1
Kaliningrad Oblast					
TVI/ IFOC	514.5	170.0	156.3	241.9	157.7
OCI/ IFOC	186.8	63.6	46.4	61.2	34.1
Leningrad Oblast					
TVI/ IFOC	357.0	522.0	483.6	622.7	160.6
OCI/ IFOC	199.2	143.0	147.0	166.3	31.8
Murmansk Oblast					
TVI/ IFOC	226.0	**77.9**	**19.7**	**54.7**	**57.2**
OCI/ IFOC	139.9	38.3	10.6	23.1	25.0
Novgorod Oblast					
TVI/ IFOC	**46.3**	**46.8**	**39.9**	**46.9**	**85.2**
OCI/ IFOC	22.5	22.6	18.1	15.5	19.9
Pskov Oblast					
TVI/ IFOC	731.7	1371.2	1371.6	1671.6	410.1
OCI/ IFOC	406.1	799.4	551.4	703.8	131.7
St. Petersburg					
TVI/ IFOC	180.8	107.2	**69.8**	**47.8**	**42.4**
OCI/ IFOC	76.5	38.8	20.5	13.7	12.9

Notes: TVI – the total volume of investments; IFOC – investments, formed through own capital; OCI – own capital investments.

Table 8. The share of funds raised through market mechanisms in the structure of fixed capital financing, % (calculated by the author on the basis of [6])

Index	2000	2005	2006	2007	2008	2009
Russian Federation						
Issue of shares and bonds	***…***	***3.4***	***2.3***	***1.9***	***0.9***	***1.0***
Lending	***2.9***	***8.3***	***9.5***	***10.4***	***11.8***	***10.3***
North-West F.D.						
Issue of shares and bonds	…	*0.7*	*1.5*	*1.5*	*1.0*	*1.2*
Lending	*5.2*	*8.6*	*7.8*	*9.4*	*10.6*	*9.2*
Republic of Karelia						
Issue of shares and bonds	…	0.1	0.1	0.4	0.7	0.0
Lending	1.2	20.3	8.7	13.9	21.1	11
Komi Republic						
Issue of shares and bonds	…	0.2	0.1	0.1	0.2	0.0
Lending	9.8	2.1	1.7	9.3	10.4	15.7
Arkhangelsk Oblast						
Issue of shares and bonds	…	0.5	0.5	0.0	0.2	0.0
Lending	0.5	4.2	2.3	4.3	6.5	3.3
including Nenets Autonomous Okrug						
Issue of shares and bonds	0.0	0.0	0.0	0.0	0.0	0.0
Lending	…	3.6	0.6	1.3	3.2	0.9
Vologda Oblast						
Issue of shares and bonds	…	0.2	0.2	0.1	1.5	0.0
Lending	3.8	7.5	3.7	11.5	7.2	9.2
Kaliningrad Oblast						
Issue of shares and bonds	…	0.6	0.4	0.2	0.4	1.8
Lending	3.6	30	12.5	27.1	24	5.3
Leningrad Oblast						
Issue of shares and bonds	…	0.8	5.0	7.1	1.6	0.0
Lending	1	4.2	6.9	6.7	6.9	4.5
Murmansk Oblast						
Issue of shares and bonds	…	0.0	0.3	0.0	2.7	19.9
Lending	1.1	6.5	4.6	11.3	3.7	9.3
Novgorod Oblast						
Issue of shares and bonds	…	0.8	0.8	0.0	1.1	0.0
Lending	1.2	3.2	10.3	7.6	14.9	14.3
Pskov						
Issue of shares and bonds	…	6.6	0.0	0.0	2.7	7.3
Lending	0.2	2.2	10.1	17.8	17.7	19.5
St. Petersburg						
Issue of shares and bonds	…	1.2	1.2	0.9	1.0	0.0
Lending	10.2	11.6	14.9	9.6	12.3	10.7

Table 9. The share of budget financing in the funding structure of investments in fixed capital formation, % [5]

Territory	2000	2005	2006	2007	2008	2009
Russian Federation	***22.0***	***20.7***	***20.2***	***21.5***	***20.9***	***21.8***
North-West F. D.	*15.5*	*15.0*	*15.7*	*20.9*	*21.3*	*23.8*
Republic of Karelia	17.0	14.7	18.1	18.2	20.8	24
Komi Republic	6.8	5.9	5.5	7.3	6.7	4.6
Arkhangelsk Oblast	12.7	6.8	4.3	6.3	6.9	16.1
including Nenets AO	3.4	3.7	1.8	2.1	2.5	7.2
Vologda Oblast	20	6.3	5	6.3	11.5	10.1
Kaliningrad Oblast	13.9	18.3	21.4	15.3	21.2	29.9
Leningrad Oblast	12.5	7.3	12.9	7.2	12.4	17.1
Murmansk Oblast	11.6	16.8	15.1	19.7	18.2	19.2
Novgorod Oblast	7.6	10.6	6.3	7.9	12.2	21
Pskov Oblast	39.6	21.1	19.2	26	21	28.8
St.-Petersburg	22	28.5	32.1	43	39	39.8

Therefore, among the market sources the main share is made up by loans. The increasing share of lending which is typical for Russia, in the North-West is carried out more slowly.

Credit resources in the investment sphere are most actively attracted by the Republic of Karelia, the Kaliningrad Oblast and St. Petersburg. In the recent years, the Pskov Oblast has been activated. The last three of them have a special status: Saint-Petersburg is the "Northern capital", the Kaliningrad Oblast is a special economic zone, the Pskov Oblast is a depressed region.

Practically the same composition of the federation subjects stands out as the main recipients of budgetary resources *(tab. 9)*. The Murmansk Oblast is added to them.

For the leading regions in attracting external investment resources (the Arkhangelsk Oblast, Nenets Autonomous Okrug) the funds redistributed within the financial sector are their primary source of capital: loans from other enterprises (organizations) and the means of superior organizations *(tab. 10)*.

The close dependence of investment processes activity on the superior organization is inherent in almost all northern regions. They are joined by the Leningrad Oblast.

Thus, the decrease of own funds in the structure of fixed capital financing sources is compensated by non-market sources, which violates the market principles of financial resources redistribution. In this case, if it comes to public funding, it can be an incentive for increased involvement of market sources. Examples of such influence are the Pskov Oblast and the Republic of Karelia with a fairly high proportion of loans in fixed assets financing.

The predominance of sources being redistributed within the nonfinancial corporate sector in investment financing may have the following consequences for the region: the restriction of the competitive environment, impediment for the development of diversified economy, reducing the possibilities of achieving stable economic growth. This particularly concerns the dependence on the superior organizations' funds (the northern resource oriented regions mainly fall into in this group) and, respectively, on management decisions taken by management companies. The latter are usually registered outside the region and are not interested in its economic development.

Therefore, the stimulating of development of exactly market sources of fixed capital financing should become the priority in terms of improving the investment processes financial security.

In expanding the use of market mechanisms to attract investment resources one should be based on the following assumptions.

Table 10. The share of other sources in the structure of fixed capital funding, % (calculated by the author on the basis of [6])

Index	2000	2005	2006	2007	2008	2009
Russian Federation						
Superior organizations	…	10.6	12.5	11.3	13.8	15.4
Loans from other organizations	7.2	5.9	6.0	7.1	6.2	10.7
North-West F.D.						
Superior organizations	…	*18.6*	*24.4*	*14.9*	*18.3*	*24.4*
Loans from other organizations	*9.5*	*9.3*	*12.2*	*16.8*	*12.0*	*9.2*
Republic of Karelia						
Superior organizations	…	14.3	31.0	6.3	9.3	23.2
Loans from other organizations	2.7	4.3	5.1	10.3	7.2	5.8
Komi Republic						
Superior organizations	…	48.9	43.2	21.6	26.2	47.5
Loans from other organizations	6.7	5.8	3.9	3.1	1.9	0.7
Arkhangelsk Oblast						
Superior organizations	…	23.6	31.8	8.4	17.3	22.2
Loans from other organizations	18.0	32.0	39.0	62.7	45.2	23.0
including Nenets Autonomous Okrug						
Superior organizations	…	8.6	13.8	0.9	4.5	23.9
Loans from other organizations	56.7	49.4	63.0	81.9	69.3	35.1
Vologda Oblast						
Superior organizations	…	42.9	48.8	42.9	28.6	35.2
Loans from other organizations	4.0	0.7	0.9	1.2	2.3	0.5
Kaliningrad Oblast						
Superior organizations	…	0.5	11.8	2.5	10.3	18.0
Loans from other organizations	2.1	12.7	13.8	21.0	16.6	33.9
Leningrad Oblast						
Superior organizations	…	15.7	28.4	31.2	36.8	39.3
Loans from other organizations	19.6	13.8	16.4	12.4	9.3	14.1
Murmansk Oblast						
Superior organizations	…	5.7	24.2	8.0	27.1	20.0
Loans from other organizations	4.2	0.4	3.0	3.3	2.8	1.8
Novgorod Oblast						
Superior organizations	…	7.3	14.4	18.7	15.2	18.4
Loans from other organizations	0.6	20.3	10.0	6.4	13.8	15.6
Pskov Oblast						
Superior organizations	…	3.6	2.5	2.9	3.2	5.7
Loans from other organizations	3.1	6.0	6.2	5.2	4.8	5.4
St.-Petersburg						
Superior organizations	…	3.15	3.45	4.25	7.1	6.8
Loans from other organizations	4.9	4.3	4.9	6.2	3.9	5.5

Incorporation as a method of attracting resources, as well as the issue of corporate bonds, is effective only for competitive large enterprises. The presence of large plants, often limiting the possibilities of diversifying the economy and restraining the development of a competitive environment (which, inter alia, affect the financial resources reallocation), is characteristic of the northern regions. On the other hand, these are the large enterprises which need the mechanisms that can provide large-scale investments. These include mechanisms to attract resources through the stock market. Activation of the latter requires the following measures to be taken:

- formation of a system of providing information on investment opportunities in the region, investors, stock market participants, as well as the method and means of organizations' attracting investments through the tools of securities market;
- support in building the information infrastructure of the securities market: the organization of education, training and consulting for issuers, specialists of the regional government, law enforcement bodies and the public;
- organization of study, methodical compilation and dissemination of experience of issuers in other regions, successfully attracting investment through issues of corporate securities;
- creating conditions for free circulation of securities of the region's companies by facilitating the organization of the stock centers and stores, ensuring the output of regional businesses' securities to the national stock market.

Bank lending will continue to be the main mechanism of attracting investment resources for small and medium-sized businesses.

Banks' participation in the investment processes may be activated by the creation of favorable environment for business: setting up preferences in the form of tax concessions, provision of the areas with engineering infrastructure, providing investment guarantees and compensation payments for interest paid to a bank lender at the expense of budget funds.

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Human capital as an indicator of sustainable development of the territory

Human capital is a component of national wealth, therefore, in the formation of regional policy its development should be considered as a factor of enhancing the sustainability of the territory. The analysis conducted by the authors shows that the trends of human capital development lead to a decrease in the stability of the region, as evidenced by the aging population, declining the quality of labor potential, and, above all, its intellectual characteristics and health capital.

Human capital, sustainable regional development, labor potential, population's health.

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As world practice shows, sustainable economic development is not possible without the multiplying of human capital. Its value in terms of modernization of all aspects of social life is increasing steadily. As the World Bank estimates [1], in the developed countries 64% of the national wealth belongs to human capital, 16% to physical, and only 20% to raw materials factor.

In Russia, by contrast, raw capital occupies 72%, in 14% – physical and human capital; Russia takes 71st place in the world by the quality of human capital [5].

In this regard, human capital is listed as a key factor of the transition to an innovative type of economic development, designated in the Concept of socio-economic development of the Russian Federation until 2020 [9].

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Man as an important part of social wealth has been considered in the works of representatives of classical political economics [6]. In the works of economists of the subsequent schools it was noted that the man is not only the main means of production of this wealth, but also "serves as the ultimate goal of wealth..." [11].

The foundation of human capital theory was laid down in the second half of the twentieth century. Then the idea of priority of human development received scientific evidence and recognition of the society (T. Schultz in 1979, and H. Becker in 1992 were awarded with the Nobel Prize in economics for laying the foundations of the theory), it was launched in national development and international cooperation projects.

The subsequent evolution of this theory has provided recognition in the new millennium of science, education, technology and healthcare as the key factors in the socio-economic development.

Russian researchers define human capital as a set of qualities that affect labor productivity and are a source of income for individuals, families, businesses and society [4]. These qualities are usually considered to be natural abilities, knowledge, abilities, skills acquired through formal training or education or through personal experience, creativity, and moral-psychological and physical health, motivation of activities, providing the opportunity to generate income.

Study of scientific basis for sustainable socio-economic systems shows that the concept of "sustainable development" in its broadest sense is interpreted as the harmonization and balanced development of economic, social and environmental subsystems [18]. At the heart of the concept of "sustainable development" there is the principle of "reproduction of human rights", according to which the access to resources and opportunities for a balanced development should be provided with not only present but also future generations.

Sustainability includes the issues of equitable distribution of development opportunities within each generation, without sacrificing anyone's interests, needs and opportunities. In this vein, human capital development must be related to such goals as freedom of choice of lifestyle and basic life benefits, a long healthy and active life, continuing education throughout life, the possibility of obtaining the resources necessary for decent living, high quality of life and harmonious development.

Thus, population viewed in the context of the ideology of human capital development, quantitative and qualitative potential of its reproduction is a condition, the basis and the goal of sustainable development of the society and the state [10].

Health and demographic processes. Government policy in any area of public life should be first of all accentuated to addressing the most urgent, priority tasks. In recent years, the problem of depopulation – a steady population decline in Russia – has been included into them. A fundamental factor in shaping demographic processes is the public health; the development of such processes as mortality and fertility, and life expectancy largely depends on its level.

Thus, the health of the nation shall determine the number and quality of human resources not only at present but also in the future [15, p. 18]. A population possessing a certain living and labor potential loses it at every stage of generations due to injury, illness, abortions, stillbirth, premature mortality, etc.

The currant demographic situation in Russia is characterized by a persistent population decline that began in 1992. During the period from 1992 to 2009 it decreased by 4.3%. Reduction was observed mainly in Asian pert of the country (-11.3%). In the European part of Russia there was observed a slight (-2.6%) decrease in population, mainly in the period from 2002 to 2009 The analysis of population changes in federal districts reveals that in the European

part of Russia, the problem is most acute in the North-West Federal District (-11.8%). The data in *table 1* show the unevenness of depopulation process within the district and allow to allocate especially problem "northern" areas: the Murmansk Oblast (-27.9%), Komi Republic (-21.5%), the Arkhangelsk Oblast (-18.8%) and relatively problem-free the Kaliningrad (+4.3%) and the Leningrad (-2.7%) Oblasts. The position of the Vologda Oblast is close to the median.

Significant reduction in population between 1992 (the year with a maximum number) and the present is due to its large natural wastage. Despite the favorable trends in natural population growth in recent years and the level of net migration, the situation remains critical, especially in the northern regions and republics of the NWFD *(tab. 2)*.

Another trend of modern development is the demographic impoverishment of the village, because the reduction of the population is more characteristic of rural areas. Population decline in the NWFD was 12% (urban and rural – 11 and 13% respectively). In the Vologda Oblast the overall decrease in population was 10% over the same period, urban population – almost 6%, rural – 19%.

The natural loss of the villagers in the Vologda Oblast in 2009 was 75% of the overall reduction, in the rest it was due to out-migration. The share of urban population in the Oblast has increased by 4% *(tab. 3)*.

The urbanization of Russian territories is taking place, exposing rural communities, which poses a threat to rural development and its sustainable development.

Table 1. Population change in the NWFD subjects

Territory	Population size, thous. people (on January, 1)			Population change in relation to the number at the beginning of the period,%		
	1992	2002	2009	1992/2002	2002/2009	1992/2009
North-West Federal District	**15259**	**13972**	**13462**	**-8,4**	**-3.7**	**-11.8**
Murmansk Oblast	1170	905	843	-22.6	-6.9	-27.9
Komi Republic	1222	1029	959	-15.8	-6.8	-21.5
Arkhangelsk Oblast	1554	1350	1262	-13.1	-6.5	-18.8
Pskov Oblast	837	769	696	-8.1	-9.5	-16.8
Novgorod Oblast	748	700	646	-6.4	-7.7	-13.6
Republic of Karelia	789	721	687	-8.6	-4.7	-12.9
Vologda Oblast	1353	1278	1218	-5.5	-4.4	-10.0
St. Petersburg	4986	4688	4582	-8.6	-2.3	-8.1
Leningrad Oblast	1678	1672	1632	-0.4	-2.4	-2.7
Kaliningrad Oblast	898	955	937	6.3	-1.9	4.3

Sources: Regions of Russia. Socio-economic indicators / 2004: stat. coll. / Rosstat. – M., 2004. – 966 p.; Demographic Yearbook of Russia 2009: stat. coll. / Rosstat. – M., 2009. – 525 p.

Table 2. Typology of NWFD regions by indicators of population dynamics (1992 – 2009)

Results of aggregate change	Results of natural change	Results of migration	Subject of the North-West Federal District
Population reduction	Natural loss	Migration loss	Komi Republic, Karelia, Arkhangelsk and Murmansk Oblasts
	Natural loss	Migration increase	Leningrad, Novgorod, Pskov, Vologda Oblasts, St. Petersburg
Population increase	Natural loss	Migration increase	Kaliningrad Oblast
	Natural increase	Migration loss	Nenets Autonomous District

Table 3. The share of urban population in total population on 1 January, %

Territory	1992	1995	2000	2005	2008	2009	2009 to 1992 in %
Russian Federation	73.6	72.9	73.13	72.9	73.1	73.1	100
North-West Federal District	82.3	81.9	82.2	82.3	82.3	82.4	100
Vologda Oblast	65.9	67.4	68.7	68.0	68.6	68.8	104

The natural loss of population in the region is not compensated by the migration movement. Since 2001, the level of net migration in the Vologda Oblast remains very low *(fig. 1)*: in 2009 it amounted to only 0.5 people for 10 thousand people of the population.

For comparison: in 2008 in Russia (international migration) and in the NWFD the net migration rates were 3 – 4 times more than in the Vologda Oblast (17 and 21 people per 10 thousand people of the population, respectively). In the European Union in 2008 the figure was 29 people per 10 thousand people of the population.

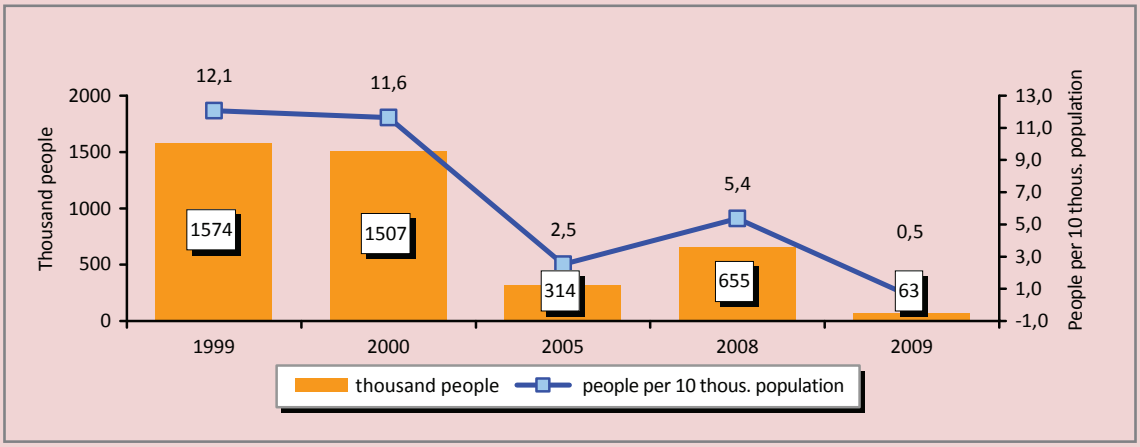
The increase in gender disparities. The gender ratio is of primary importance in the reproduction of population. Saving gender parity is good for demographic development. Demographers estimated the sex ratio distortion in Russia that emerged in the XX century, had no equal in the country's history. In 1946, women outnumbered men by 33.9% [2, p. 158].

Thereafter, for more than half a century, until 1995, the gender structure of the Russian population improved. Under the influence of the processes having occurred in the society in the 90s of the twentieth century (supermortality of men, ethnic conflicts, etc.), the gender ratio began to deteriorate again and by the time of the 2002 census, the number of women again exceeded the number of men by 14.7%. These disparities have remained by 2009 (14%; in the Vologda Oblast – 15.5%).

High mortality rate and a significant difference in life expectancy between men and women (in the Russian Federation in 2009 – 62.7 years and 74.7 years respectively) shall affect the further increase in gender imbalance (for example, in early 2009 there were 85 men per 100 women in the Vologda Oblast, and in 2020 this figure will be equal to 83).

Many possible changes in the demographic sphere are clearly visible when comparing modern and prognostic age-sex pyramids:

Figure 1. Migration increase / decrease in the Vologda Oblast, people



Source: Statistical Yearbook of the Vologda Oblast: stat. collection. – Vologda, 2009. – P. 47, authors' calculations.

➢ compression of the pyramid to the age axis shows the decrease of the total population size;

➢ the tapered base indicates a decline in fertility;

➢ the increased asymmetry of the age-sex pyramid indicates an increase in gender disparities;

➢ the broad upper part warns of the imminent increase in mortality, etc. *(fig. 2)*.

Figure 2. Sex and age composition of the population of the Vologda Oblast (left – at the beginning of 2009; right – the forecast at the beginning of 2020; people)

The analysis shows that the demographic situation in the Vologda Oblast is far from favorable. Even in comparison with the average for Russia and the NWFD the Vologda Oblast loses: it has a higher level of mortality, a significant economic burden on individuals of working age, low levels of migration.

Life expectancy. The integral indicator of public health and demographic development is the life expectancy, which has been lower for a long historical period in Russia than in developed countries.

But if in 1970s the gap was not very great, now it is 15 – 19 years for men and 7 – 11 years for women.

Given the conventional separation of the states according to the level of income adopted in the international statistics, there are four groups of countries (high, upper middle, lower middle and low income). Russia is in a group of lower middle income, and health indicators of our countrymen at the present stage of historical development are comparable to those of developing countries such as Morocco and Nigeria *(tab. 4)*.

The period since 2000 to 2008 was characterized by stabilization of the political and socio-economic processes in the Russian Federation, economic recovery and living standards improvement. This is certainly reflected in the state of public health. During this period, the life expectancy of the population has grown by nearly 3 years – from 65 in 2000 to 67.9 in 2008 *(tab. 5)*. The level of infant mortality has decreased by 40%.

However, such small positive moves cannot be regarded as the beginning of sustainable change in public health of the Russian population for the better.

Figure 2. Sex and age composition of the population of the Vologda Oblast
(left – at the beginning of 2009; right – the forecast at the beginning of 2020; people)

Table 4. Infant mortality, average life expectancy and gross national product in Russia, in the world and in some countries (2007)

Area	Child mortality under 1 year per 1,000 of live births	Life expectancy at birth (years)		GDP per 1 inhabitant (PPP int. doll.)*
		Men	Women	
The whole world	**46**	**65**	**70**	**9872**
High level (average life expectancy of 80 years)				
USA	6	76	81	45850
Canada	5	78	83	35310
Japan	3	79	86	34600
Rwanda	109	49	51	14400
Argentina	14	71	79	12990
…				
Highest average level (average life expectancy of 70 years)				
Brazil	20	70	76	9370
Egypt	30	66	70	5400
…				
Lowest average level (average life expectancy of 68 years)				
Morocco	32	70	75	3990
Russia	**10**	**60**	**73**	**2930**
Nigeria	83	48	50	1770
…				
Low level (average life expectancy of 57 years)				
Haiti	57	59	64	1150
Guinea	93	52	56	1120
…				

PPP int. doll. – purchasing power parity in international dollar rate Source: World development indicators 2007. – Washington: DC, World Bank, 2008. – URL: http://www.worldbank.org/data (selection February 13, 2009).
Source: World health statistics 2009 / World Health Organization, 2009. – URL: www.who.int/whosis/whostat/2009/

Table 5. Life expectancy of the population in the NWFD

Region	1991	1995	2000	2005	2006	2007	2008	2009
North-West Federal District	68.9	63.7	64.5	64	65.6	67	67.4	68.2
Novgorod Oblast	67.2	62	62.8	61.7	62.7	64	63.6	64.5
Pskov Oblast	67.6	62	61.9	60.2	61.2	64.1	63.6	64.5
Komi Republic	67.9	61	63.5	62.3	64.2	65.8	66.2	66.5
Karelia Republic	68.2	60.8	62.9	62.1	63.8	65.1	65.5	66.6
Leningrad Oblast	67.9	62.3	63	62	63.1	64.6	65.2	66.7
Murmansk Oblast	70.4	63	64.5	63.8	65.2	66.7	66.7	67.2
Vologda Oblast	69	64	65.7	63.1	65.4	67	66.9	67.3
Arkhangelsk Oblast	69.1	62.8	62.8	62.9	64.8	66.3	66.9	67.6
Kaliningrad Oblast	68.5	64.7	63.6	61.5	64.1	65.8	66.5	67.7
St. Petersburg	69.5	66	66.7	67.8	68.9	69.9	70.5	71.2

With great caution we can only assume that the population began to adapt to the prevailing socio-political and socio-economic situation. It should be borne in mind that the situation can move in any direction.

An important reason for Russia's lag in terms of LE from the developed countries is the low value of the gross national product per capita. In Russia the figure is 16 times lower than in the U.S., 12 times lower than in Japan and Canada. The value of GDP is an integral indicator: low GNP is the poor quality of food, bad water in the water supply system, fake alcohol, low salaries of doctors and the appropriate level of medical care, inability to purchase medical equipment, needed (expensive) drugs,

poor quality or complete absence of treatment facilities at factories, sewage flows leading to an increase in infectious diseases, as well as prostitution, including the children's one, crime, corruption which aggravate the negative situation, the growing social and material differentiation and polarization of the population, etc. [13, pp. 41-55].

In addition to the GNP, a depth and breadth of social inequality, which is formed as a result of the implementation of redistributive relations, have not less, but even greater impact on the quality of the population and sustainable development of the areas [3].

Aging of the population. In direct relation to the natural reproduction and migration is the formation of population age structure, the deterioration of which occurred in parallel with the processes of depopulation. Demographers concern that for the first time in Russian history, the proportion of elderly population has exceeded the proportion of children. In 56 regions of the country the share of children and adolescents account for less than one fifth of the population (at the beginning of 2000 there were 41 such regions, in 1990 – 3).

According to the UN classification of the state population is considered old if the proportion of people aged 65 and older among the inhabitants is more than 7%; at the beginning of 2009 10% of the Russians were in the above age groups. In the Vologda Oblast the share the "old" population was twice the limit set by the WHO. Among the regions of NWFD the most critical situation is observed in the Novgorod and Pskov Oblasts *(tab. 6)*.

At first glance, the causes of aging seem obvious. Many people believe that in general the population is aging in the same way as separate individuals: life expectancy has increased, so, in total the whole population is aging. It is logical; there is every reason to believe that the achievement of a growing number of people the lower limit of the elderly age by reducing death rates in the previous period of life is an important prerequisite for the formation of the population aging process. But the main reason defining this process in the modern period is not the increase in forthcoming life expectancy for people of elderly age but the declining share of young people as a result of fertility decline. There is a circular relationship: the higher are the fertility rates, the younger the population in average is, and vice versa – the higher is the proportion of young people, the higher the fertility rates are.

Degradation of the demographic structure of the population has a direct impact on the overall level of fertility. To illustrate this thesis, we consider the change in the total fertility rate required for simple reproduction. In 2007 – 2008 for the replacement of parental cohorts with children's generations it was necessary to an average Russian woman of childbearing age

Table 6. The proportion of population aged 65 and older in the regions of the North-West Federal District, in %

Region	1991	1995	2000	2005	2006	2007	2008	2009
North-West Federal District	**10**	**12**	**13**	**14**	**14**	**14**	**14**	**10**
Komi Republic	5	6	7	9	9	9	9	8
Arkhangelsk Oblast	8	10	11	12	13	12	12	8
Kaliningrad Oblast	8	10	11	13	13	13	13	8
Murmansk Oblast	4	5	6	8	8	8	8	8
Leningrad Oblast	11	13	14	16	16	15	15	11
Republic of Karelia	8	10	11	13	13	13	12	12
St. Petersburg	12	13	14	16	16	16	15	12
Vologda Oblast	**11**	**13**	**14**	**15**	**15**	**14**	**14**	**13**
Novgorod Oblast	13	14	16	17	17	17	16	16
Pskov Oblast	14	16	17	18	18	17	17	16

giving birth to an average of 2.1 children. However, by 2025 to replace parents with children per one woman it will require more than 3 live births [16, p. 66]. But the given the number of births would only provide simple reproduction of the population, that is the achievement of population stabilization, when the population is not growing numerically, but is not reducing, demonstrating the so-called zero growth.

At the same time, achieving at least a minimal population growth, which is extremely needed in Russia, suggests higher rates of fertility: it means that in 2007 per one woman of reproductive age it would require 2.2 – 2.5 of live births, and already in 2025 at least 3.5 – 4.

The process of demographic disadvantage growth (causing a permanent increase in the minimum birth rates required to exit the demographic hole) is associated with adverse changes in the sex-age composition of the population. Low fertility of the past years leads to a situation of rapid reduction in the number of female reproductive contingents, which automatically triggers a further decline in fertility in the very approximate future. Reduction in the population represents the most serious threat to the national state security. Maintaining the current level of fertility and mortality will lead to the fact that the population of our country could reach about 123 million by the beginning of 2025, having decreased by 20 million people compared to 2006 (or 1/7).

Labor potential as a form of human capital implementation. For Russia, which has nominated the task of society modernization as the priority objective, a high-quality human capital is required. Demographic resources of the society in which human capital is formed, have quantitative measurement.

One of the quantitative indicators reflecting the problem field of labor potential as a major component of human capital is the population of working and younger working age. Currently, these indicators show negative trends for the sustainable development of territories.

The number of working age population, the main carrier of the labor potential of the Russian society, is beginning to decline noticeably today already. This trend will continue in the future. According to the forecast of Rosstat by 2030 working age population in Russia will decrease by almost 12% *(tab. 7)*. According to the calculations made in ISEDT RAS, the reducing of this population category in the Vologda Oblast will amount to 18% by 2020 [19].

The effectiveness of the state's innovation efforts depends greatly on the proportion of young people in the total labor force. In this regard we have to state that this category of the population is projected to remain unchanged and will be the same 16% as in the base year of the forecast. The share of Russian population aged 60 and older will increase by 27% by 2030 .

In other words, between 2008 and 2030, the population aging will continue, the consequences of which will be significant for demographic ("base" for low fertility and high mortality rates), economic (slowdown in labor substitution, increase the load on the working-age population) and social (increase in spending on social welfare, increased load on social infrastructure) aspects of social life.

Reducing the number of working age people can be a significant obstacle to further economic growth. Labor force shortage which is not always apparent under the conditions of crisis economic phenomena, in the long term would require compensation, either by increasing labor productivity (and besides for GRP growth rate in the Vologda Oblast to be comparable with that of the GDP of the Russian Federation, the region will require higher labor productivity growth rates than those that are planned for the whole country), or the migration of labor force from other regions of the Russian Federation and from abroad [19].

Extremely high mortality rate of working age people has an adverse effect on the quantitative indicators of Russia's labor potential: about one third of all deaths per year are able-

bodied adults, which is on average three times higher than in the developed countries and two times higher than in the developing ones [1].

One of the first leading causes of death is occupied by external causes (accidents, poisoning, injuries). Deaths from injuries in Russia are much higher than in the developed countries *(tab. 8)*.

Quantitative reduction in the labor force is compounded by reduction of its quality. Monitoring measuring of the qualitative state of the labor potential in the region held in the Vologda Institute of Socio-Economic Development of Territories of RAS since 1997, show a downward characteristics trend, urgently needed in the transition to innovative development.

Thus, the index of creativity, which is calculated by the original method (in terms of man's relation to creative work and his or her actual participation in the creative work), is the lowest among the eight basic quality indices[1] of labor potential *(tab. 9)*.

Table 7. Population forecast of the Russian Federation by age groups (inertial version, at the beginning of the year)

Years	Younger than working age		Working age		Older than working age	
	thous. people	as a percentage of the total population	thous. people	as a percentage of the total population	thous. people	as a percentage of the total population
2011	23185.4	16.3	87524.0	61.7	31286.7	22.0
2020	25935.1	18.3	79033.2	55.7	36939.7	26.0
2025	25148.2	17.8	77148.0	54.8	38619.9	27.4
2030	22845.4	16.4	76770.5	55.1	39755.9	28.5
Source: gks.ru						

Table 8. Deaths from injuries and external causes (per 100 thousand people)

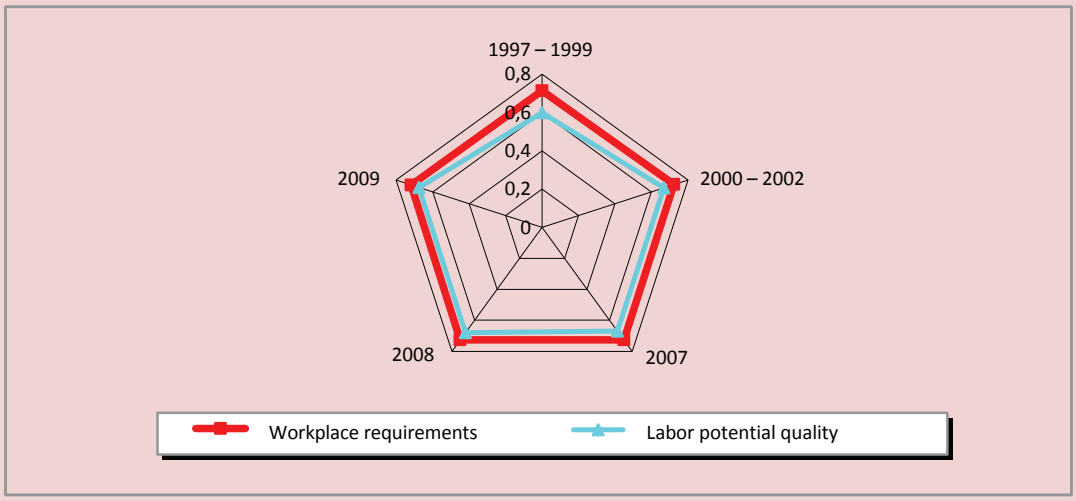
Country	Index	How much mortality rate in Russia higher
Russia	159	-
France	48	3,3 times
USA	47	3,3 times
Japan	39	4,1 times
Germany	29	5,5 times
Source: Aganbegyan A.G. On Health Care Reform (January 2011). – Available at: http://2020strategy.ru/g11/doc		

Table 9. Evaluation of labor potential quality of the Vologda Oblast [19]

The composition of the measured indicators	Index value		Rank	Trend line (since 1997 to 2009)
	1997	2009		
Moral level	0.775	0.757	1	\ decreasing
Mental health	0.699	0.739	2	/ increasing
Sociability	0.733	0.736	3	– parallel to the time axis
Physical health	0.682	0.728	4	/ increasing
Cultural level	0.609	0.674	5	/ increasing
Need for achievement	0.612	0.643	6	/ increasing
Cognitive capacity	0.630	0.614	7	\ decreasing
Creative potential	0.593	0.572	8	\ decreasing
The integral index of labor potential quality (social competence)	0.655	0.674		/ increasing

[1] The system of labor potential quality components is represented as a "tree" of properties, the apex of which is the most common property, social competence. According to the methodology, based on the monitoring, such structural components of labor potential are measured as population's physical and mental health, cognitive capacity, creativity, sociability, cultural and moral level, need for achievement. The integral index of individual quality, as well as the partial indices may not acquire a zero or negative value (as, for example, there cannot be zero-health). It is always a positive value greater than zero. The maximum value is unity.

Figure 3. Compliance of labor potential quality with the workplace requirements in the Vologda Oblast



Source: data from the monitoring of labor potential of the Vologda Oblast, 1997 – 2009 / ISEDT RAS

Low values of the population's creative potential index are due to a small share of people in the region who are actively engaged in creative activities, "always inventing something, writing, composing, etc." about 8% of the region's inhabitants, 45% "never doing anything "[17].

The cognitive capacities of the population measured in this study also tend to diminish in the long term. The main reasons for this situation are reduction of the base level of general education and basic breach of continuity in the development of professional knowledge and skills. The results of the International Programme for Student Assessment (PISA)[2], which made measurements four times in 2000 – 2009 show that the results of the Russian students are lower than their peers in OECD countries. A decrease in intellectual performance of the labor potential of Russian regions is also contributed by the so-called "brain drain". Researchers estimate [14, p. 25-30] that "the scope of this process over the last 25 years amounted to about 1 million people".

The current state of intellectual potential, a major component of human capital creates risks for the transition to innovative development. On the one hand, the domestic economy is full of manpower with higher education, on the other hand, as the studies show, they are used inefficiently and do not act as "engine" of innovation progress.

Targets of the labor potential development, both individually and on a social level is to match the demands of innovative economy *(fig. 3)*.

However, the conducted analysis shows that the requirements of the economy to the quality of the working population increase more rapidly than the quality of labor potential, which indicates that having high degree of depreciation of fixed assets of enterprises[3] and their low innovation activity people work "with their last strength", i.e. in addition to quantitative loss there is quality workforce "wear".

World experience shows that "human capital significantly enhances the competitive position of workers: the greater it is, the higher economic activity and employment is, the less the risk of falling into unemployment and the

[2] The aim of PISA research is to assess the capacity of 15-year-olds to use knowledge acquired in school for a wide range of vital tasks in different spheres of human activity, communication and social relations (the reading, mathematical and scientific literacy).

[3] Wear of material and technical base is at 54% (in Russia - 43%). Entering and updating of fixed assets is slowed down by the low volume of borrowed funds. Source: gks.ru

shorter its duration is, the higher the earnings and greater the access to attractive jobs are; the more intense the professional and territorial mobility is" [8].

The dynamics of relative indicators of economic activity of the Vologda Oblast's population in 1992 – 2008's has two periods:

- since 1992 to 1995 the level of economic activity was declining, employment and unemployment rates were increasing;
- since 1995 to 2008, opposite trends were seen: the level of economic activity and employment in the region has risen and unemployment declined *(tab. 10)*. In 2009, in connection with the financial and economic crisis, these trends were again interrupted.

Changes in employment and unemployment rates in the Vologda Oblast in the period since 1992 to 2009 had similar trends as the trends of these indicators in the average NWFD and Russia.

In Russian conditions, education has a significant impact on key labor market indicators. So, if the level of education increases the employment rate grows significantly: it reaches the maximum value (81%) for people having diplomas of higher education *(tab. 11)*. A similar relationship can be traced between education and wages. With regard to unemployment, its level is about two times lower among people with higher education than in most other groups.

Table 10. Key indicators of labor utilization, in %

Indicator	Years					
	1992	1995	2000	2005	2008	2009
Russian Federation						
Level of economic activity	70.3	64.8	65.5	-	67.7	75.7
Employment rate	-	90.5	58.5	61.1	63.4	62.2
Unemployment rate	5.2	9.5	10.6	7.2	6.3	8.2
North-West Federal District						
Level of economic activity	71.8	67.3	66.4	-	71.2	70.8
Employment rate	-	-	60.0	64.8	67.5	66.0
Unemployment rate	5.8	10.7	9.6	5.5	5.2	6.8
the Vologda Oblast						
Level of economic activity	70.0	67.4	67.9	68.1	69.0	70.7
Employment rate	-	91.2	62.3	64.6	65.0	65.1
Unemployment rate	3.0	8.8	8.3	5.2	5.9	7.9

Source: Statistical Yearbook of the Vologda Oblast. – Vologda, 2010.

Table 11. Employment rate of the RF population in terms of education (as a percentage of the population of the respective educational group)

Year	Total	Having education						
		higher professional*	incomplete higher professional	secondary vocational	basic vocational	secondary (complete) general	basic general	having no basic general
2000	58.7	79.3	54.3	72.7	68.7	57.2	33.2	16.5
2001	58.4	80.0	40.8	72.2	69.6	54.4	27.4	11.8
2002	59.4	79.8	41.6	73.6	70.1	54.8	27.1	11.4
2003	60.1	80.8	42.4	74.2	75.2	53.5	29.6	12.7
2004	60.2	81.5	39.3	73.7	74.2	52.6	26.7	10.4
2005	61.5	82.0	40.0	75.4	76.0	52.9	28.2	14.5
2006	61.7	81.9	37.6	75.4	76.1	52.0	28.2	12.5
2007	63.2	83.2	39.7	75.8	75.9	51.7	29.0	11.4
2008	63.1	82.9	37.0	74.8	73.6	52.1	25.2	11.6
2009	62.3	81.2	-	73.5	71.2	49.0	25.2	10.7

* 2009 – including individuals with post-graduate education.

Table 12. Dynamics of labor productivity and the average monthly wage, in % to 2000

Indicators	2000	2005	2006	2007	2008	2009
Labor productivity in Russia	100	130.1	139.9	149.9	156.76	146.81
Labor productivity in the Vologda Oblast	100	136.9	123.7	131.0	135.62	131.46
Average monthly real wages in Russia	100	203.2	231.7	264.8	297.3	294.5
Average monthly real wages in the Vologda Oblast	100	182.6	202.1	217.1	237.0	227.2
Source: Regions of Russia. Socio-economic indicators. 2010: stat. collection // Rosstat. – M., 2010. – 996 p.						

People having minimum of human capital are more often subject to the most severe, stagnant forms of unemployment, while having higher education provides them almost complete immunity.

One of the main indicators of balance in the economy is the ratio of wages and productivity. Anticipatory increase in labor productivity relative to wages means the presence of sources of expanded reproduction financing in the economic sectors [7, p. 27-38]. In the Vologda Oblast, as well as in Russia as a whole, the situation is reversed – wages are increasing faster than labor productivity. Thus, over the period 2000 – 2009 average real wages in the Vologda Oblast grew 2.3 times, while labor productivity has declined *(tab. 12)*, indicating a narrowing of the sources of economic development.

The most fundamental issue of human capital of Russia is how the resources that our economy gets as a result of its operation are distributed among the populations. Even according to the official estimates of Rosstat it turns out that more than 30% of total revenues, which are available in the country go to less than 10% of the population. And the poorest get less than 2% of these revenues. That is, even by the official standards the inequality is very large. The face of poverty in Russia is mainly formed by the working population. This situation may be changed by redistribution of over incomes of the so-called "elite" [20].

Human capital renovation is the priority direction of the country's sustainable development. The prospects for Russia's transition to post-industrial stage of development depend on the quality and structure of human capital. But this requires a clear system policy of the state in this area.

In conclusion, we should note that characterizing the stability of the territory, we cannot ignore that it is determined not only by the economic situation and production capacity, technology and infrastructure, but to a great extent by the condition and dynamics of the population, its quantitative and qualitative characteristics, economic activity and intellectual potential. At the same time, our analysis shows that the trends of human capital development lead to a decrease in the stability of NWFD regions, as is evidenced by:

- population decline;
- low life expectancy;
- aging population;
- increase of economic burden on the working population;
- contraction of the sources of economic development.

The population is a carrier of a particular capital, the human one, which is an essential component of national wealth, therefore, in forming the regional policy the development of human capital should be considered as a factor of enhancing the territory's sustainability.

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Functions of small business in the development of the middle class in Russia

As international experience shows, small business performs a significant function in the development of middle class. It is therefore necessary to characterize the state of small business in today's socio-economic system of Russia, to identify the characteristics of small businesses representatives that identify it with the middle class, to determine the function of small businesses in the development of the middle class, to develop measures to support small businesses. The paper uses the methods of content, structural, functional and stratification analysis, presents the results of expert surveys and sociological studies conducted by domestic scientists and also by the author.

Small business, middle class, life quality, characteristics of the middle class, characteristic of small business, small business functions.

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The large number of middle-class is an indicator of social stability, efficiency of socio-economic system, the effectiveness of economic, social and political institutions of the country. As international experience shows, small business development promotes its formation.

Development and support of small business is one of the most important tasks of the state. That is why in modern Russia there is legal basis for its regulation. For example, the following laws and regulations are adopted in the country: Federal Law № 209-FL dated July 24, 2007 "On the development of small and medium enterprises in the Russian Federation", July 22, 2008 Government Resolution № 556 "On the limits of proceeds from the sale of goods (services) for each category of small and medium-sized businesses", Federal Law № 432-FL dated December 28, 2010 amending Article 33 of the Federal Law "On mandatory pension insurance in the Russian Federation" on insurance premiums rate cuts for small businesses in 2011 – 2012.

The attention of the scientific community is also paid to the problems of small business. Thus, the role of small businesses in the process of stratification of Russian society is analyzed in the works by N.D. Appakova, E.A. Arslanova, N.A. Bezzubenkova, A.V. Bykovsky, I.V. Dolgorukov, E.A. Isaeva, V.V. Korshunov, E.V. Mikhalkina, A.A. Rezvanov and others.

The condition of the modern small business in Russia, according to experts[1], largely reflects the modification of values and models of social and economic behavior, since its activity is

[1] Expert survey is carried out by the author, the time of the survey – March 2011; № = 12; experts: guidance of federal and municipal authorities, representatives of the information and analytical agencies; research objective is to identify the ways of social control aimed at improving the efficiency of small businesses.

not only influenced by the factor of traditional entrepreneurial risk but also volatility of the social environment.

In today's economic and social system small business is one of the most important sources of the middle class formation, and therefore it requires the creation of favorable conditions for its maintenance and development. The basis of small business support should be incorporated measures of social control.

According to V.V. Radaev, entrepreneurship is constituted by three essential elements: organizational action, initiating change, cash income as a goal and criterion of success[2]. From the perspective of classical economics, a psychological portrait of the entrepreneur consists of the following characteristics: intelligence and focus on new knowledge (I. Kirzner); imagination and ingenuity (J. Shekl); personal energy and will to act (J. Schumpeter, F. Wieser), a combination of intellect and imagination (W. Sombart)[3].

Thus, a small business is a peculiar form of social organization of economic activity, the complex economic mechanism, task of which is to find the ways and means of efficient use of scarce (rare) resources in the face of uncertainty. Federal Law № 209-FL dated July 24, 2007 "On the development of small and medium enterprises in the Russian Federation" establishes a staff including up to 100 people as a criterion for classifying firms to small business.

Small business is an objectively necessary element of any developed socio-economic system, without which the economy and society as a whole cannot exist and develop. True basis of countries life in market economy system are small businesses as the most massive, dynamic and flexible form of commercial activity. Small businesses, according to the results of stratification analysis, largely generate middle-class development in contemporary Russia.

According to the Federal State Statistics Service[4] of Russia on April 1, 2011 there were 230 900 small businesses. Small businesses form a separate group with distinct quality characteristics. According to the BEA Foundation "Bureau of Economic Analysis", representatives of small businesses noticeably surpass other groups in educational level, in all living standards measures, in all basic forms of social and economic activity. Entrepreneurs on average are more qualified, better financially equipped, more mobile. At least three-quarters of small businesses actually can be referred to the middle class by all the considered indications[5].

As social practice shows, a small business should be managed. For this purpose, as evidenced by the experts, participants of the survey, there appeared a scientific need to identify the indicators of small business. The main ones are the qualitative characteristics of the middle class. In modern science there are two major trends in the study of the middle class. The basis of the first trend is the recognition of some static characteristics of the middle class in all the historical circumstances and in all forms of economic society. A kind of universal model of the middle class is determined, the pattern of which is formed on the model developed in Western society. In the works of M. Weber, H. Spencer, A. Toynbee and others there is represented a subordinate analysis of the middle class in relation to social structure. The second trend is based on the assumption that in every society, there may be a specific middle class, depending on the type of society and historical era. In the works of T.I. Zaslavskaya, Z.T. Golenkova, I.E. Diskin, E.D. Igithanyan, V.V. Radaev, N.M. Rimashevskaya and others the Russian middle class made the immediate object of study within the framework of sociological analysis.

[2] Radaev V.V. Economic Sociology. Course of lectures: textbook. – M., 1997. – P. 99.

[3] Radaev V.V. Ibid. – P. 100.

[4] [Electronic resource]. – Available at: http://www.gks.ru/bgd/regl/b11_01/IssWWW.exe/Stg/d05/2-3-2.htm

[5] [Electronic resource]. – Available at: http://www.interned.ru/articles/other/formirovanie_srednego.htm

From the standpoint of normative approach to the definition of the middle class there are fairly stringent criteria. From the standpoint of the relativistic approach the middle class is seen as a product of specific socio-economic conditions. The objective one is the conclusion of N.A. Molkova that "the middle class now appears as a kind of analytic category, which can be viewed as a social fact, and as a terminological convention" [6].

The definition of L.A. Belyaeva is concise and adapted to Russian realities, according to which the middle class is a social entity having attributes that characterize its material resources, cultural capital and social status. These criteria allow to identify a social group of active, professionally trained and relatively financially secure population, which can serve as an actor of social and economic development of the country [7].

In the defining the essence of contemporary middle-class the basis are its four main features allocated by T.I. Zaslavskaya:

- a set of social groups, which occupy an intermediate position in the social structure of society and serving as an intermediary between the upper and lower classes;
- economically independence of part of society which is confident in the future and is interested in maintaining social order and social stability;
- the most skilled, socially active citizens contributing to the progressive development of society;
- the main carriers of the public interest and national culture making up the majority of the population and distributing images of their own culture to other social strata[8].

The concept of long-term socio-economic development of the Russian Federation until 2020, approved by the Government of the country on November 17, 2008 № 1662-r[9], it was noted that "a decent income and quality of life of our people, opening way for the formation of a truly massive and dynamic middle class can be guaranteed only on the basis of an efficient economy"[10]. The large number of middle-class in the system of social stratification is one of the components of a developed and stable society.

Middle class as a distinct social entity is the social basis and the driving force behind the reforms, it provides technological, technical and economic progress, contributes to the reproduction of a skilled workforce, creates and distributes samples of socio-cultural and socio-economic standards, develops and relays many innovative practices to the other social strata.

Stratified analysis shows that the Russian middle class is represented by all the strata of society: government officials, business leaders, owners of small and medium business, enterprise staff, employees of culture, education, medicine and others.

Analysis of scientific literature can provide the basic criteria for the definition of the middle class: way of life, spiritual values, education, freedom (personal and consumer), property, income, size and structure of costs, self-identity. A significant place in the middle class criteria structure is taken by a market approach (due to a functioning market economic and social system of the country), which is based on the characteristics of the material standard of living of the existing / potential the middle class representatives. In addition to the normal diet, the possibility of purchasing durable goods, according to NEIT the Institute of Enterprise Issues, the representatives of the

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[10] Transcript of the speech of Party Chairman V. Putin. – 24.11.2008 GMT.

modern middle class should have an apartment, a car, the ability to go to domestic resorts and abroad on holidays, to save money (5 – 30% of income)[11]. Most representatives of small businesses meet these criteria.

However, belonging to the middle class is not only determined by the level of income, income is the so-called "entry ticket" into the middle class. In a more condensed interpretation these criteria are as follows: income, education, ideological characteristics, self-assessment of own position in society[12]. In this regard, the Russian small business is not at a sufficiently advanced stage of development, but has a considerable potential.

According to the sociologists of IS RAN, who applied their own complex criteria for evaluating, the middle class in Russia includes 20 – 22% of the economically active urban population; these are mostly the representatives of small businesses[13]. The analyst of the Higher School of Economics supports them, he believes that "if we take only the level of income without taking into account education, occupation and lifestyle, then about 20% of the population may consider themselves as the middle class"[14].

According to research company "KOMKON" in Russia as a whole there are only 8% middle-class representatives (the researchers include here mainly senior and middle managers, small businesses representatives, skilled professionals with higher education).

According to the statistics portal "Statistika. Ru" the division by strata in Russia is conditionally as follows: the wealthy (rich) segments of society constitute 8 – 10% of the Russians, the middle class makes up 10 – 12%, the remaining 80% is the lowest segment, i.e. poor people are those living below the poverty line[15].

So, according to the estimates of various research centers, the proportion of middle class in Russia currently stands at 8% to 22%. All the experts agree on one thing: in comparison with developed European countries, where the middle class is nearly 70% of the population, the proportion of middle-class structure of Russia's population is negligible. However, the social structure of society is dynamic a phenomenon. Its dynamics is manifested in the fact that along with the structural elements that characterize the structure of society as a whole, that is, social groups that are formed depending on the nature of production relations, the new structure elements are arising[16].

One of these dynamic structures of contemporary Russian society is a small business. Entrepreneurs as the representatives of the middle class make a significant contribution to the development of Russian society, but with more support from the state and society, the deterministic balanced system of social control, a small business can have a significant positive impact on socio-economic processes.

Defining the functions of small businesses in the development of the middle class, it is necessary to identify the specific features of the representatives of Russian small businesses. However, as objective characteristics can be achieved by having analyzing the laws of modern society, having identified the common patterns. Both strategies are relevant because they are complementary to each other in the framework of functional analysis.

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[16] Goryunova S.V. Middle strata and "middle class" in contemporary Russian society // Social Sciences and the present. – 2006. – № 4. – Pp. 58-67 (P. 58).

Motivation of small business

What mainly drove you to organize your own small business? (Give no more than 2 answers)	Answers, %
Getting a higher level of income	89%
Poor employment conditions and prospects	35%
The possibility of doing things you love	25%
Prestige, improving social status	16%
Other	7%

Contradictory character of small business social status is that in traditional societies, according to V.V. Radaev, entrepreneurship has never been among the noble classes[17]. In contrast, employers were located closer to the lower rungs of the social ladder. The situation is changing in modern societies. But even here things are not so smooth. According to the author's sociological research[18] and expert survey, business is often chosen as employment mainly for reasons other than prestige.

The respondents were asked to select no more than two possible answers to the question "What mainly drove you to organize your own small business?" The answers are located as follows *(table)*.

It is essential that the motive of improving the social status in the list of responses of contemporary Russian representatives of small businesses is located only in 4th place (16% of responses). If the spiritual needs are not supported by material resources it becomes impossible to develop and strengthen the middle class.

At the same time, business has almost all necessary features of ideology as a systematic worldview, because it contains a set of rationalizing schemes relating to both individual action and to social development.

As noted by V.V. Radaev, often it is the ideology of liberated entrepreneurial spirit that proclaims everyone's right to economic initiative, undertaken with a view to material well-being[19]. Herein is the value and ideological function of small business in the development of middle class.

Stratified analysis showed that a small business as a social entity has a definite impact on the modern structure of Russian society. First, small businesses represent the state of the market society's culture. Second, for small business it is characteristic to gain a foothold in both the traditional and the new social niches. Third, the scope of small business is a mechanism for upward social mobility of those groups who previously were not included in the process of interaction with the market.

The downside of the modern market state of the Russian socio-economic system is that the functioning of many institutions is unbalanced. The results are not only visible on the surface phenomena of corruption in the administrative apparatus, the monopolization of the economy, joining of the bureaucratic state elite and the oligarchy, business shadowing, but also an unreasonably modest impact of small business on market processes development and the formation of a balanced market structure of society[20].

[17] Radaev V.V. Economic Sociology. Course of lectures: textbook. – M., 1997. – P. 123.

[18] Authorship sociological study – conducted in March-April 2011 among small entrepreneurs in Nizhny Novgorod and the Nizhny Novgorod Oblast, [General total – 564 thousand people; sampling error – 4.34; respondents – representatives of small business – N = 509; purpose of the study – to identify the ways to improve the social management technologies by small businesses; dates – March – April 2011, the group – "entrepreneurs".

[19] Radaev V.V. Economic Sociology. Course of lectures: textbook. – M., 1997. – P. 123.

[20] Rezvanov, A.A. Economic strategies in the social positioning of small businesses: doctoral thesis abstract, soc. Sciences. – Rostov-na-Donu, 2009. – P. 3.

As is shown by the results of an online poll conducted by "Voice of Runet", considering the possibility of different social groups to get into the middle class the Russians have estimated the opportunities of businessmen, entrepreneurs, attorneys, lawyers and judges as the best (49%). In addition, most respondents inclined to identify themselves with the middle class were the owners or part owners of companies (64%), individual entrepreneurs (54%)[21]. As explained earlier, self-identity is one of the main criteria for inclusion in the middle class.

The problem of Russia's future lies in the balanced development of social market economic system, in the implementation of the triune formula of "state-society-market"[22]. In order to develop recommendations for creating such an environment there was conducted a sociological analysis of small businesses in the context of their social significance.

It has been revealed that the integral criterion that characterizes the identity of the middle class is the quality of life. Quality of life is a complex socio-economic pheno-menon, which is measured by person's satisfaction with his or her life or its individual aspects depending on the particular set of objective socio-economic reasons, social and psychological environment, individual personal characteristics, attitudes and values. The role of small business in the development of the middle class is characterized by a comprehensive study of quality of life of its subjects.

In the last decades certain performance characteristics of small businesses in Russia has changed considerably towards improving, such as the: quality and standard of living, lifestyle, living conditions, needs and values, activity (functional) component, health, recreation and leisure, perspectives, the ability to and the degree of accumulation.

Thus, the quality of working life, in accordance with the definition of N.A. Gorelov, is work activity, which in itself and in its results in accordance with certain set of labor laws and other legal acts of the rules aimed at providing employees with opportunities to develop their creative abilities fully and their rational use in the process of meaningful work, to participate in management and decision-making, and also to ensure safe and supportive living and health conditions, providing recreational and leisure time[23]. Some researchers, for example, V.N. Bobkov, isolated not just the quality of working life in the structure of the quality of life, but "the quality of labor and business life", which is largely characterized by the quality of work, and is expressed in the level of workers' skills and productivity, in the amount of income from small businesses compared to the life cost and productivity, as well as in the creation of decent working conditions[24]. Thus, entrepreneurial activity from the point of view of its activity subject is a professional working activity having specific features.

Since the problem of life quality and, in particular, the quality of working life is a kind of determinant of the success of entrepreneur's meeting various needs and development of these needs[25], this is evidence of social and economic functions of small businesses in the development of the middle class.

In modern conditions the main factor in the development of society is a man with his or her intellect, high levels of education and training, business and social activity[26]; in small business

[21] [Electronic resource]. – Available at: http:// www.faraa.ru/publ/srednij_klass/7-1-0-275

[22] Rezvanov, A.A. Ibid. – P. 4.

[23] Incomes policy and the quality of life / ed. by N.A. Gorelov. – SPb.: Peter, 2003. – 104 p.

[24] Bobkov V.N. Poverty, standard and quality of life: analysis methodology and mechanism for implementing // Living standard of the Russian regions' population. – 2005. – № 1. – Pp. 8-11.

[25] Maslow A. Motivation and personality [Electronic resource] / transl. by A.M. Tatlybaeva. – SPb.: Eurasia, 2004. – Available at: http://psylib.org.ua/books/masla01/txt03.htm#2

[26] Belogrud I.N. Middle class as a subject of social and philosophical analysis: doctoral thesis. soc. sciences. – M., 2005. – 326 p.

some potential is concentrated that allows him or her to approach not only to economic indices of the middle class (mainly income level) but also to the socio-cultural ones (education, intellectual development, professional competence). It is of interest the point of view of researchers who mark the function of national culture values exponent among the functions of middle-class[27]. The modern small business rather reflects a certain mood and expectations of Russian society on the selection of the type of activity to produce the desired income level. It is early to speak about the function of relaying the national culture by entrepreneurs, but this must become one of the guidelines of the Russian socio-economic system development. In studying the role of small businesses in the development of the modern middle class the two blocks of values associated with the socio-economic sphere of life are important: characteristics of the individual consciousness of its subjects and the degree of tolerance to the competitive market economy of modern type. This demonstrates the resource function of small business.

Social practice suggests that the perception of competition as a positive phenomenon appears as an indicator of small businesses readiness to new environmental conditions, the formation of a new lifestyle.

The choice of equality of opportunities rather than equality of income supports the trend of shift in focus from general towards individual and increasing personal responsibility for lives.

Today's small businesses representatives are focusing more on individual responsibility and non-conformism, which testifies of their value-ideological and competitive function. Currently, the middle class representatives have more influence on economic development of the country; they are more tolerant to market conditions. It is essential that the middle class representatives are more likely than others to agree that it is better to stand out among the others and to be an individual than to live like everyone else[28].

Thus, small businesses subjects as members of a modern emerging middle class are more productive in a market economy, more tolerant to the existing socio-economic conditions, which is a positive indicator, and act as a middle class stabilizing.

As revealed earlier, the value guidelines of contemporary middle-class are: a sense of personal responsibility for destiny, determination to secure the existence of own work responsibilities and a desire to assert oneself in a free society[29]. The results of an author's survey of entrepreneurs prove that these qualities correspond to the life guidelines of modern small businesses, at the same time they serve as a source of proliferation of new aims and features of consciousness. The desire to get into the middle class, to stay in it and to help your children find a place there is a strong stimulus for sustained and high-performance work. Therefore, small business plays an essential function in the implementation of population's social mobility in society.

The results of the survey conducted by S.V. Goryunova are relevant to confirm the identification of small business with the modern middle class.

Representatives of the modern middle-class of the Russian society rely primarily on their own strength but not on state support, believing themselves to be able to influence what is happening to them and their families.

[27] Mareeva S.V. The middle class in the modern Russian society: the peculiarities of formation 2003 – 2009: Ph.D. thesis. soc. sciences. – M., 2009. – Pp. 112-113.

[28] Mareeva S.V. Ibid. – P. 114.

[29] Lyashenko V.I., Svetlichnaya T.V. The middle class and the place of entrepreneur in the socio-economic structure of a modern democratic and transition society // Ekonomichny visnik Donbass. – 2009. – № 4 (8). – Pp. 45-53 (P. 45).

A more positive assessment of life is also characteristic of the middle class. This suggests that the Russian middle class began to perform the function of maintaining stability in society[30]. These characteristics largely correspond to a portrait of a modern representative of small business. It is believed that its representatives strive to live, counting mainly on their own strength and abilities. Indeed, among those respondents who are inclined to identify themselves with the middle class, the percentage of those who believe in that change in their situation depends on individual effort, is 48 – 51%. In contrast, those who do not identify themselves with the middle class believe in the exclusive influence of personal effort only 29 – 31%[31].

In the development of the modern middle class a number of strategies can be viewed: the strategy of multiple employment has virtually leveled; the main factor of success for a job placement or establishing business contacts are personal contacts and acquaintances; evaluation of the state as a "Latin American model where the state controls everything, but is not responsible for anything"[32]. Multiple employments are relevant for many small businesses because they often lack the resources ability to move within a strategically chosen direction.

In life guidelines, strategies of economic behavior and social well-being of the middle class in comparison with the sentiments of other members of society, L.A. Belyaeva has revealed certain contrasts: "confidence in the future, optimistic estimates of next year, life satisfaction, financial status of the middle class is much higher compared to the entire array of respondents", "for most middle class representatives, especially for the upper layer, the market situation is more preferable than the non-market"[33]. Optimistic outlook for the future in general, positive assessments of the current financial situation, adaptation to the market environment are included into the features of a modern small business. Thus, small business performs not only economic but also political function in the development of the middle class.

Disturbing is the fact that from 2008 to 2010 the middle class in Russia fell by 5%. The Institute of Sociology of RAS considers a decline in welfare of a large part of qualified professionals as the main reasons for this. People are not interested in professional growth, because the state of the country's socio-economic system does not motivate them to do so. The situation may change, according to experts, only with a rapid development of high-tech industries and the development of small and medium-sized businesses[34].

Using a functional approach, V.I. Lyashenko and T.V. Svetlichnaya concluded that the more active the small businesses, the better all public resources are used, the more active is socio-economic development[35]. In this way small businesses promote the more harmonious and balanced development of socio-economic relations, so that the middle class is growing and developing.

Researchers in the field of social control point out that small business is a partner of the state not only in reducing social tension, minimizing the gaps between different population sectors and groups, but also in expanding the selection of different options for social development.

[30] Goriunova S.V. Middle strata and "middle class" in contemporary Russian society // Social Sciences and the present. – 2006. – № 4. – Pp. 58-67 (P. 60).

[31] [Electronic resource]. – Available at: http:// www.faraa.ru/publ/srednij_klass/7-1-0-275

[32] Avrahamova E.M. The middle class of the Putin era // Social Sciences and the present. – 2008. – № 1. – Pp. 28-36 (Pp. 32-34).

[33] Belyaeva L.A. Once again about the middle class in Russia // Sociological Studies. – 2007. – № 5. – Pp. 3-13 (Pp. 8, 11).

[34] Cultivating middle class [Electronic resource] // Chelyabinsk. – 2008. – № 5 (138). – Available at: http://www.chelmagazine.ru/viewart.php?id=1010

[35] Zaslavskaya T.I. Stratification of Russian society // Newsletter. – 1996. – № 1. – Pp. 16-23.

The social environment with well-developed middle class, serving a support for a modern democratic system is the best for the development of the small business sector. In addition, small businesses in the context of social positioning are the link between an array of the population belonging to the poor, low-income groups, and the new socio-professional groups, demonstrating the motivation toward achievement in their activity and the opportunities for a high quality of life.

Based on the foregoing analysis, devoted to the definition of the functions of Russian small businesses in the development of the middle class, it was able to identify additional arguments that the modern small business can be identified with the middle class for most features. Thus, the modern Russian small businesses have the following properties that suggest their belonging to the modern middle class and are the functional characteristics of small business in its development: tolerance to market conditions, adaptability to the market environment, personal responsibility for life, positive assessment of life and activities; satisfaction with the existing financial situation, optimism.

It should be stated that there is some inconsistency in the evaluation of the subjects of the modern small businesses of their socio-economic status. On the one hand, their views reflect individual responsibility and non-conformism and also independence, independence in actions and judgments; on the other they recognize that the successful performance of commercial activities is largely dependent on relationships and contacts. The latter is directly related to the identified lack of positive in the evaluation of the state – it "controls everything, but is not responsible for anything".

As the content analysis shows, the Russian small business is characterized by positive qualities: optimism, creative orientation, mobility and willingness to adapt to dynamic market conditions. However, administrative barriers, hard tax pressure, the lack of structure and transparency in the law do not allow it to realize its full potential, develop and operate for the benefit of the society. Small businesses can make a greater contribution to the development of the middle class in Russia only in the presence of a comprehensive and systematic support from the state.

Theoretical conclusions

The functions of small business having a positive impact on the middle class in Russia today are the following:

1. Social. Improving social climate, employment problem solution, unemployment limitation, disclosure of personal creativity. The sphere of small business is the mechanism of the upward social mobility of those population groups who previously were not included in the process of interaction with the market.

2. Economic. Accelerating economic growth and development of national economy, giving the flexibility to a mixed type market economy.

3. Political. Promoting a more tolerant society in a competitive market economy of the modern type and democratization of market relations.

4. Stabilizing. Promotion of balanced development and harmonization of socio-economic relations, maintaining stability in society.

5. Value-ideological. Small businesses act as "bearers" of new values; they serve as a source of proliferation of new facilities and features of consciousness.

6. Resource. Development and maximization of efficient use of public resources.

7. Competitive. Formation and maintenance of an effective competitive environment.

Practical guidelines

In order to develop small businesses, which in turn will have a positive effect on the growth and consolidation of the modern Russian middle-class the researchers in the field of social management, administrative and legislative bodies, associations and public organizations should develop and implement the following measures:

1. Conceptualization of sociological and managerial approaches to the study of the social potential of small businesses as a complex organized system, which includes a selection of object-subject institutional complexes regulating social potential of the Russian small business (administrative, economic and socio-cultural), goals, objectives, mechanisms and methods of managerial measures for its implementation .

2. The development of a scientific problem, which consists of the need for resolving the contradiction between the current practice of implementation of separate mechanisms and modes of small businesses social control, which determine the underdevelopment of its social potential.

3. Rationale for transforming the social foundation for realizing the potential of small business through socialization, the development of human and social capital, corporate culture, the formation of work values and motivation to work.

4. The complexity of the planning and implementation of government programs aimed at social and economic development of society.

5. The introduction of compulsory monitoring of the exponent of self-identification of representatives of all social strata identifying themselves as middle-class into social management.

6. Systematics of the impact on small business to develop its social potential, which includes theoretical and methodological foundations and social mechanisms.

7. Management effects on the realization of social potential of the Russian small business requires not only focusing on the processes of innovative management systems designing, but also the formation of the social basis of its regulation by the transmission and reproduction of the world values of socially responsible entrepreneurship through the mechanisms of socialization, the introduction of common social and cultural standards and strengthening the traditions.

8. The development of mechanisms of social control, social forecasting and modeling.

Thus, the level of small business development is one of the most important indicators of social orientation of modern development of the country. Small business in Russia took its place in the national economy and has a number of important functions in Russian society. The role of Russian small businesses in the development of the middle class, and, therefore, in the development of the quality and standard of living of the society is quite high, but the comprehensive measures to support and improve its efficiency are still needed.

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35. [Electronic resource]. – Available at: http://www.finance.rambler.ru/news/economics/12538916.html
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The combination of nature protection and neighborhood development: possibility of the model on the Kola peninsular

The possibility of application of a new Western paradigm as to the specially protected natural territories in the Extreme North of Russia is discussed in the article. It implies the combination of nature protection and neighborhood development. The author writes in brief about the new paradigm and the system of specially protected natural territories in the Murmansk Oblast. There are such problems of specially protected natural territories in the region as conflict of interest between different stakeholders, lack of support from the authorities and weak tourism infrastructure and competence in this sphere. However, the enthusiasm on the subject of local national parks and nature parks and a growing number of tourists allow us to suppose that the role of specially protected natural territories in the neighborhood development will be more significant in future.

Nature protection, new paradigm for specially protected natural territories, neighborhood development, ecological tourism.

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There are a lot of specially protected natural territories in the Barents Euro-Arctic Region. They were created under the common strategy of natural resources preservation of this territory. There are about one thousand of specially protected natural territories covering over 180 km^2 only in Russian and Norwegian parts of the Barents Region [1]. It has ever been the custom to think that specially protected natural territories are created to the prejudice of local economic development. However, the trend to integrate the needs of neighborhood development into the environmental policy has increased on a world scale in recent years. There are various models of integrated control and use of specially protected natural territories. For example, there is a model which is based on the right of every person to have access to such territories. It is implemented in the Nordic countries. Moreover, European models suggest different forms of interested parties' participation in the creation and management of specially protected natural territories [2].

The combination of nature protection aims and promotion to sustainable use of natural resources is the basis of various Western models of management and usage of specially protected natural territories. In Russia the creation and management of specially protected natural territories are characterized by the Soviet era politics based on the restricted access to the protected areas.

There were some indications that Russia would follow the lead of Western countries in public resources management after the collapse of the Soviet Union [3]. However, there were serious obstacles in the practical implementation of this direction. Various researches showed that there were difficulties when they tried to implement the elements of unified management in the post-Soviet context [4,5]. In this regard the key question is the possibility of principle to use the Western model of creation and management of specially protected natural territories in modern Russia. The article deals with this issue based on the analysis of local economic development and its relations with specially protected natural territories by way of example of three districts in the Murmansk Oblast which have the protected areas. The first example is the Lapland Biosphere Nature Reserve. It is a typical specially protected natural territory with strict protection regime which was established during the Soviet period. Currently the line of conformity with the original purpose (the Reserve has a status of Biosphere Reserve) matches the integration policy with local community. The second example is creating of Khibiny National Park. It is the best example of combination of different groups' interests. The third example is the State Natural Reserve of Kutsa. It is a local reserve which is situated in the Kandalaksha Region of the Murmansk Oblast. There are no conflicts of interests at the local level here and there are initiatives to transform the reserve into a natural park within the existing strategy of tourism development.

A new paradigm for specially protected natural territories – combination of nature protection and stable use of resources

The total number of specially protected natural territories in the world is more than 120 000 units. They cover near 14% of the Earth's surface. Despite the diversity of specially protected natural territories, the most widespread of them are national parks. The first national parks were initiated by the United States. For example, Yellowstone National Park was established in 1872. The classic model of specially protected natural territories is based on nature protection; it doesn't concentrate on the neighborhood development. The vertical structure of protected territories management oriented to the nature protection "from people" has been dominating for many years. Sometimes specially protected natural territories were created mainly for tourists but at the same time they limited the capacity of local communities.

However, the new paradigm was developing during last thirty years. It contained the propositions which were opposite to some ideas of the classical model. Social and economic objectives were moved to the center of protected area management and local population began to be regarded as the category which would benefit from its proximity to specially protected natural territories.

The most important changes in the management of specially protected natural territories have been occurring since the mid-1990s. Significant changes in the protected areas policy were noted between the IVth and Vth World Congress on National Parks which took place in 1992 and 2003, respectively. Also so-called "Seville Strategy" of UNESCO which was adopted in 1995 contributed to integration of environmental goals and sustainable development. It influenced over the world policy of protected areas management. One of the global surveys was oriented to the numerical score of the overall trend to increase the numbers of participants and control modes of specially protected natural territories [7].

The vast majority of respondents (83%) indicated that the number of various interested parties and the degree of their participation in the process of decision-making on the problems of specially protected natural territories have increased over the last decade. Moreover, there was a growing interest in the participation of local communities in the management of their own specially protected natural territories. In 1992 about 40% of respondents pointed out the lack of local communities' influence over the decision-making on the problems of specially protected natural territories. The results of the subsequent polls showed that such opinions were practically absent (2% of respondents in 2002). Another similar trend was the convergence of the interests of environmental protection and such economic sectors as mining, oil and gas sector and tourist industry. Some observers regard these changes as the changing role of specially protected natural territories because they operate as a tool of social planning and income generation.

The World Congress on National Parks approved a series of recommendations in 2003. One of the main among them was Recommendation №12 "Tourism as a vehicle for Conservation and Support of Protected Areas". It was noted during the congress that tourism and recreation sector can provide benefits for specially protected natural territories. And one of the recommendations concerned the necessity to ensure tourism's contribution to local economic development and poverty reduction (Recommendation 1c) [8]. Positive aspects of tourism development in the protected areas are widely covered in many publications and political documents [2, 9]. The whole point is that the new paradigm of nature protection support neighborhood development as an integral part of biological diversity conservation. It seemed "unthinkable" a few years ago. However, it's interesting question if these ideas can be realized in Russia and if the basic provisions of Russian protected areas system meet a new paradigm and integration goals of neighborhood development in environmental issues.

Specially protected natural territories of the Murmansk Oblast and neighborhood development

The Murmansk Oblast is located on the Kola Peninsula in the northwestern part of Russia. It borders on Norway and Finland in the west. The important characteristic of this region is a high level of urbanization: 92% of people live in the urban settlements.

The regional economy is based mainly on the use of huge reserves of natural resources, especially minerals. The region produces almost 100 percent of Russia's apatite concentrate, 43% of nickel, 14% of refined copper and 12% of iron-ore concentrate. Another important resource is fish. The regional share in the total Russian production of fishery products is 14% [10].

Nowadays there are 60 specially protected natural territories covering about 1300 thousand hectares in the Murmansk Oblast. They account for about 8% of the oblast's territory. There are three nature reserves among them. They are the Kandalaksha State Nature Reserve (it has an area of 70.5 thousand hectares), the Lapland Biosphere Nature Reserve (it has an area of 278.4 thousand hectares) and the State natural reserve "Pasvik" (it has an area of 14.73 thousand hectares). There are also eight state nature reserves covering about 619.07 thousand hectares. They include three federal natural reserves, five regional wildlife preserves and 51 natural monuments. There are no national parks and nature parks in the region.

The production activities of large industrial companies which were exploiting mineral raw materials for many years had a negative effect on the surrounding areas. At the same time the specially protected natural territories which are being considered in this article are located in close proximity to some of the industrial giants. The territory of the Lapland Nature Reserve is surrounded by several industrial sites, but production activities of OJSC "Severonikel Enterprise" and OJSC "Kola Mining" and

"Smelting Company" (Monchegorsk) had the most negative impact on the reserve. They plan to create Khibiny National Park in the heart of the mining area where they mine apatite-nepheline ores in Kirovsk. And the preserve "Kutsa" is located in Kandalaksha Region where the largest enterprise is OJSC "Kandalaksha Aluminum Plant".

Thus, the Murmansk Oblast is characterized by a high level of industrial development on the one hand, and the region remains attractive natural potential on the other hand.

This northern territory is famous for its native zones where tundra, forest tundra and taiga change each other. There are more than 130 000 lakes and rivers here. The region has rich flora and fauna. So, it attracts an increasing number of tourists.

Examples of various specially protected natural territories of the Murmansk Oblast

The Lapland Nature Reserve was established in 1930. It is one of the largest specially protected natural territories in Europe. It covers the area of 278.4 hectares. The reserve is located in the western part of the Murmansk Oblast in the Monchegorsk Region. The reserve was created to preserve the geographical landscape in its natural inviolability and to save the population of wild reindeer.

According to the system of the International Union for Conservation of Nature (IUCN), the Lapland Reserve belongs to the category 1, which means the most stringent environmental regime in the protected area and the prohibition of all forms of economic activity.

In the 1990s it was difficult for the reserves to perform their main functions of nature protection and science education because of the economic crisis and reducing of financing from the federal budget. This situation forced the natural reserves to find other sources of financing. To date, the sources of financing has been improved: for example, the share of financial resources to support the activities of the Lapland Nature Reserve is about 80%.

Another sources include OJSC "Severonikel Enterprise" which annually provides the environmental monitoring of reserves' territory and the industrial area of the company with finance. In addition, the enterprise sponsors a new activity of the reserve – facilitation in tourism.

The Lapland Nature Reserve was included in the global network of Biosphere Reserves in 1985. This fact can be considered as the first step towards the realization of some ideas of a "new paradigm" for specially protected natural territories. Biosphere Reserves network is a part of the UNESCO program "Man and Biosphere". The central element of this concept is consolidation of biodiversity preservation and the needs of local communities. Thereupon, the Lapland Nature Reserve has created the necessary prerequisites for the development of tourism. Tourism isn't a type of commercial activity here because natural reserves are not allowed to be engaged in business but it is an element of ecological education. Tourist services in the nature reserve are developed also within the scope of international cooperation with Norway and Finland, as well as with local businesses. In whole it should be noted that the Lapland Nature Reserve is an example of cooperation of the specially protected natural territory and the local community.

The regional preserve "Kutsa" is an example of another type of specially protected natural territory in the Murmansk Oblast. It was established in 1994. The main goal of the preserve was to keep the protected area in its natural state, to conserve the habitats of rare and endangered plant and animal species, to maintain ecological balance and to conduct researches and nature-conservative measures. The initiative to establish the reserve came from the local Council which enlisted support of the regional authorities and the federal authorities of forest management as a result of nine-year preparation process. Huge tracts of old-growth forests in that area became one of the determining factors to establish the preserve.

Besides the purposes of nature protection the local authorities proceeded from the current economic situation in the region and rising unemployment. They staked on the development of tourism because they dealt with the border territories. Currently, the necessary tourist infrastructure is improving for this purpose. In addition, there are plans to expand the preserve and change its status to a natural park in order to promote tourism.

However, the local potential employees are incompetent in the tourism industry. It is necessary to use the external resources to train skilled employees and to support local travel agencies. However, there is an enthusiasm for the development of tourism in the preserve.

A good example of a new trend in the sphere of specially protected natural territories in the Murmansk Oblast is the creation of Khibiny National Park. The main reason for this initiative is that the unique nature of Khibini mountains is traditionally a local recreation centre. It also attracts tourists from other regions of Russia and foreigners. There are no official statistics about the number of persons visiting this area but according to some estimates about 60 000 tourists go to Khibiny every year [10]. However, the popularity of Khibiny nature has its downside: because only a small amount of local travel companies are engaged in organized tours, most of tourists here are free-wheeling holidaymakers. They don't care of environmental conditions after their visits. On the other hand, exploitation of the new deposits of apatite and nepheline ores can damage the unique landscapes of Khibiny. In this situation the initiators of Khibiny National Park (local environmental organizations and institutions of the Kola Science Centre) consider the establishment of specially protected natural territory in this area as the only way to preserve its natural value.

However, the preparatory process for the creation of the national park in Khibiny has been lasting for many years but the final decision hasn't been adopted yet.

Owing to lack of interest in the creation of the park by the federal authorities, which must finance it according to the law as a federal specially protected natural territory, it was decided to create firstly Natural Park Khibiny (regional federal specially protected natural territory) as the more realistic project at this time.

The attitude of interested parties to the creation of the park in Khibiny is different at the local level. Local tourist agencies regard it as a positive step towards the development of in-coming tourism in the region. On the other hand, some of them are afraid of exclusion of the small local tourist companies out of business because large tourist companies from Moscow and St. Petersburg would be interested in the development of tourism in this region.

The attitude to the development of specially protected natural territories by large industrial enterprises is also important in this situation. As opposed to the examples of cooperation among enterprises and specially protected natural territories (as in the case of the Lapland Reserve) or indifferent attitude to the preserves with mild environmental regimes, the creation of a natural park in Khibiny has caused completely different reaction. OJSC "Apatite", whose production activities don't directly touch the protected area, takes a positive view of the park creation in Khibiny. At the same time its business rival OJSC "North-Western Phosphorous Company" is going to defend its right to develop the fields one of which is located in the vicinity of the prospective park.

The company is licensed to work, so the only way to stop its industrial activity here is withdrawal of this license. But it seems unlikely. We can suppose that in consideration of conflict of interests they would prefer business because it is very important for social and economic status of two cities – Kirovsk and Apatity. It is also confirmed by the opinion of the local population because a lot of people work at the regional mining enterprises. As a matter of principle, people haven't anything against

the park but at the same time they put their economic interests above any other considerations. At the same time defenders of nature are troubled about Khibiny area. If mining is developed in the region, unique natural area of Khibiny would be destroyed and this recreational resource would lose its value.

Nature protection for neighborhood development: is it a model for the Extreme North of Russia?

Has a new paradigm of specially protected natural territories which means the strengthening of neighborhood development and nature protection turned into the dominant model on an international scale? However, how are these ideas implemented in the Russian context? What role do specially protected natural territories play in the development of new economic activities? Do they contribute to the neighborhood development in the regions of the Extreme North of Russia?

It is interesting to note that in whole the state power in Russia is interested in the Western idea of combination of nature protection and various types of economic activity at the local level. The adopted federal and regional target programs for tourism development confirm it. These programs stress the importance of the development of tourism industry including specially protected natural territories. In practice, however, the predominant forms of specially protected natural territories are nature reserves and any economic activities including commercial tourism are prohibited in these areas. The only form of tourism which is allowed in nature reserves is so-called "educational tourism" that focuses on the educational aspects of this activity. The Lapland Nature Reserve develops such kind of tourism in the Murmansk Oblast. It offers cultural and educational tours for organized groups, primarily for pupils. Creation of nature museums and ecological trails in the reserves makes them more accessible to the public, although the overall number of visitors is still small. About 5000 people usually visit the nature reserves in the Murmansk Oblast *(table)* [11].

The discussion about the possibility of development of ecological tourism in the reserves has been carried on for a long time. The proponents of such opportunity argue their position by the fact that carefully controlled tourism on the specially protected natural territories will enhance the value of reserves for general public and authorities and reduce the possibility of pressure from the alternative activities that could be carried out in the protected areas. Most of the reserves also have demonstrated their desire to develop ecological tourism [12]. Opponents of tourism development on the specially protected natural territories stand for preservation and restoration of the unique ecosystem in the reserves in accordance with the original purpose of their creation [13].

The process of national parks establishment in Russia is very slow. There is also a lack of awareness of the real benefits of specially protected natural territories with a view to tourism development [14]. National Park Khibiny which is planned to be created in the Murmansk Oblast shows that the role of national parks is perceived by the community as a means to regulate and promote the recreational and tourist activities on the commercial basis.

The development of ecological and cultural tourism in the State Nature Reserves of the Murmansk Oblast

Indicator	2002	2003	2006	2007
Museums The number of visitors Foreigners	3 1757 22	3 3470 80	5 3739 99	5 4877 232
Visit-centers The number of visitors Foreigners	- - -	1 540 23	3 3779 124	3 4706 232
Ecological trails and routes	2	15	17	18

On the other hand, there are significant obstacles to combine nature reserve, sustainable use of resources and neighborhood development. First of all, the large industrial enterprises which have been operating in the area since the Soviet era dominate in decision-making. They don't give an opportunity to smaller firms and environmental organizations to influence over the results. Park Khibiny clearly shows this correlation of forces because environmental plans of this area are at variance with the interests of the mining industry.

In addition, slow progress of the process and lack of interest from the federal government have contributed to the situation as it was decided to create a natural park instead of the national park which had been originally planned. The bureaucratic procedures related to licensing and rental of land for tourism activities are also the problems. Though, the local travel companies continue to pin their hopes for business development with the creation of National Park Khibiny.

The situation with the preserve "Kutsa" in the Kandalaksha Region of the Murmansk Oblast is a little more optimistic because the projects of tourism development don't conflict with other economic interests. In addition, there are plans to change the status of the reserve and turn it into a natural park although both legislative regulation and financial standing of the regional natural parks are not as favorable as the federal national parks. Local initiators of the natural park also plan to create the necessary infrastructure and train of the stuff to develop ecological tourism in the area.

This problem is especially urgent because the Murmansk Oblast hasn't organized hiking trails and routes and there is a lack of tourists' accommodation and shortage of qualified personnel and training programs here.

The small businesses which have 5 or 6 persons in staff operate in the Murmansk Oblast. The total number of employees in tourism business in the region is comparable to the total staff of three reserves on the territory of the Murmansk Oblast.

Thus, there are a lot of serious obstacles and restraints on increasing of travel agencies and tourist traffic although there are positive steps towards the development of tourism as a promising new type of economic activity. In addition, today the role of specially protected natural territories in contributing to this area of neighborhood development can be described as modest.

The issue of establishing of national or natural parks remains open in the region. The role of nature reserves in point of local economic development will be very limited in any case due to their strict nature conservation regime. Proponents of the traditional role of reserves, obviously, also have their own weighty arguments when they criticize a new paradigm and "social approach" to environmental issues [15]. On the other hand, local initiatives to create new parks, growing trend of tourism development on the Kola Peninsula, the prospects for international cooperation, and the federal and regional authorities' approval upon the development of ecological tourism that can contribute to neighborhood development in near-term outlook.

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MODELING AND INFORMATICS

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Working of the development strategies of municipalities on the basis of simulation modeling

The article deals with the urgent problems and approaches to modeling the development of territorial socio-economic systems. The authors suggest an approach to working out the integrated tools for modeling the development of territory and represent some results of its practical testing within the framework of development «Comprehensive Program of Socio-Economic Development of the city district of Ufa in 2011 – 2015».

Economic policy, simulation, strategy of development, scenario analysis.

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Managing the development of social and economic systems of macro-level requires that the decision maker has a clear vision of not only past and current states of the system, but also sound idea about how this system will develop in the future. Meanwhile, one should consider both internal processes inside the system itself and external factors leading to the change of its condition. Thus, the task of forecasting is one of the primary tasks in territorial management.

However as of today forecasting as a part of the overall management of territorial development in the Russian Federation is coupled with a number of difficulties. The reason for this is common unresolved issues and controversies in the management of meso-and macro-economic systems.

Among the most serious problems affecting the quality of decisions we should note the following:

1. Lack of coordination in purposes at different levels of government. The presence of several control loops at various levels, implementing the management of area (the federal government and regional government, local authorities) requires the coordination of their actions and the avoidance of duplication of functions [5]. There is also a lack of coordination in the purposes of long-term development and received short-term solutions. In most cases the decisions taken at the municipal level are situational in nature and are not correlated with the long-term development programs. This is largely due to the lack of adequate resources (budget deficit), and this fact limits the possibility of financing the projects aimed at development.

2. The functioning of the municipal system, a great number of economic players, the objectives of which are different from those of other agents and authorities of state and municipal government. In this regard, there is no single criterion of optimality of development.

3. The absence of systemic nature of economic policy. The person responsible for making certain decisions in the sphere of social and economic development cannot take into account the diversity of factors that influence the processes under study. The complexity of accounting for such factors is also in the fact that the influence of some of them may be hidden, indirect or consequential. In this regard, working out the management decisions are based on experience and intuition and does not have sufficient scientific evidence.

4. Poor quality of initial information about the functioning of the municipality. The problems of statistical registration and use of statistics and lack of information on certain issues often lead to inefficient decisions. In some cases the cause of it is the data garbling. At the same time there is no clear system of analysis and effective use of management information.

5. Openness of the system and significant impact of external influences on the economy of the municipality. At the same time there is an underestimated effect of various internal and external factors, forming the imbalances of development, and all this together with previous problems increases the likelihood of making poor quality decisions.

These problems are urgent for both the state and the municipal levels of government. However, it is the municipality level that shows the problems most clearly because of a number of features (relatively small space, proximity of governing bodies to people and economic entities, low autonomy). However, many problems of management of municipal development are interrelated and interdependent. In this regard, a comprehensive approach to remove them requires. One of the most promising directions in this area is the use of tools and techniques of modeling. This approach allows us to go to a pro-active management, during which there is an opportunity not to eliminate the negative consequences of deviations but to prevent their occurrence.

As of today the theory and practice of economic and mathematical modeling use a number of fundamentally different approaches to modeling of social and economic systems. In particular, it may be a class of models based on the principles of economic equilibrium. The most common representatives of this class are various inter-industry models which are the modification of the classical "input – output" model by V. Leontiev. This class may include Wharton's annual model of the U.S. economy, Brooking model, the LIFT model, a model of fiscal policy the United States. In Russia this approach is realized within the framework of working out the projects SIREN, RIM. Another directions of the development of this approach are the CGE-models (RUSEC, CGE with built-in neural networks, Russia: Centre - Federal District), as well as the models of supply and demand [1].

The second large class of models of development of the territory is based on finding probabilistic and statistical regularities. In particular, this approach is represented by econometric models (Wharton model, Brooking model, Project LINK, R. Fera quarterly model, etc.). In the Russian practice the most famous member of this class of models is "Econometric Model of the Russian economy" developed in Central Economic and Mathematical Institute of RAS under the leadership of PhD in Economics S.A. Ayvazyan [1]. This class of models can be used under sufficiently long observation of the object relatively constant in its development [4]. The models are used most often to build short-term macroeconomic forecasts and scenario analysis.

The third approach is simulation modeling based on the construction of various models such as recurrent models and / or models of systematic economic dynamics and using the sequence of calculations they enable to reproduce the trajectory of "evolution" of socio-economic system with the specified parameters under various factors of effect and changes in the conditions of internal and external environment [2]. On the basis of the models of this class the information-analytical complex Prognoz (Perm State University), territorial automated system TAIS (Samara State Academy of Economics) have been implemented.

The fourth group includes the models based on the use of various intellectual information technologies, including incorporation of neural network modeling techniques into the structure of the model, of expert systems with knowledge bases, the apparatus of fuzzy logic and the "soft computing".

The expert systems are successfully used in the study of poorly formalized systems and processes, but they require substantial efforts and expenses to create knowledge base, which also makes them hardly applicable in the situations that are unknown to the experts making up the knowledge base.

Many models used in practice combine the elements of different classes and therefore it is impossible to assign them to one group. However, the practice of using data models and information systems shows that despite the wide functionality they also have important drawbacks that prevent obtaining high-quality forecasts.

In order to develop the researches in this area we offer a vision of building an integrated economic-mathematical model of the municipality, within the framework of the single computing diagram this vision is based on the integration of systematic and functional relationships of the elements of socio-economic system, algorithms of scenario modeling and a lot of finite indicators to carry out a comprehensive modeling and system presentation of the results of socio-economic development of the municipality.

The construction of the model was carried out in accordance with the following algorithm:

1. Building an information-logical model based on the existing economic relations between the elements of the system and forming a set of indicators for the further design of the model. At this stage the boundaries of the model are defined too.
2. Based on the formed set of indicators one collects baseline data for the formalization of the identified logical relationships and dependencies;
3. Formalizing the relationships and constructing a mathematical model (the stage supposes the use of a wide range of methods).
4. Defining the boundaries and the degree of change in the scenario parameters used in the model under different conditions defined by the development of the situation.
5. Checking the adequacy of the resulting model by analyzing the basic statistical criteria, as well as by validating and verification of the obtained results.
6. Construction of the system of final indicators to assess the effectiveness of the economic system.

7. Software implementation of the model.
8. Conducting experiments on the base of the model aimed at obtaining new knowledge about the functioning and development of the economic system and getting predictions.

Based on the proposed concept there was developed a model of economic system of the municipality, it allows conducting the experiments on modeling and quantitative evaluating the consequences of implication of different strategies for socio-economic development. The basis of the functioning of the model is the relationship between the three main economic agents – "Households", "Producers" and "State". Interacting in the markets of resources (material, financial, labor, etc.), these agents form the economic system.

Wielding economic resources (first of all, labor), the households (individuals and their families) as agents of proposal are their salespeople. Thereby, obtaining cash income for consumer goods and services, they become an agent of demand. The main purpose of their activities is to increase real incomes.

The economic agent "Producers" reflects the activity of economic entities. Purchasing the necessary resources, the company acts as a "consumer" (the agent of demand). Transforming the resources into the work-in-process first and then into the finished products during the production process, the agent plays the role of "producer". By passing the finished product to the sphere of circulation, it becomes a "resource provider" and the agent of proposal.

The economic agent "State" is a system of institutions of state and municipal authorities. Its main function is to ensure the social needs. At the same time he actively interferes in the economy, using various forms and methods (including fiscal policy).

The development of economic-and-mathematical model and further simulation are implemented on the basis of reporting statistics on the results of socio-economic development of the city of Ufa in the period 2000 – 2010.

External and scenarios conditions in the simulation process are accepted by the relevant general macroeconomic conditions of development in the medium-term outlook of the Republic of Bashkortostan and the Russian Federation. In this case three strategies have been identified.

Basic strategy in general implies the preservation of the existing medium-term trends of development for the main socio-economic indicators. The scenario and control parameters of this strategy form a "moderate" intensity of investment and fiscal policy. The calculations contain the pace of development of investment in fixed capital (at the level of 2010 with regard to the effects of the 2008 – 2009 financial crisis), wage increases and the dynamics of budget expenditures.

The main results of the basic strategy for the period up to 2015 in the context of the considered indicators are presented in *table 1* (in the prices of relevant years).

The analysis of implications of this strategy shows that in general for the period up to 2015 the significant changes in the dynamics and the proportions of social and economic indicators are not observed. At the same time a positive dynamics of growth is planned by some certain indicators. The increase in value of fixed production assets and in the number of population employed in the economy provides nominal growth of products shipped - over the period 2010 – 2015 by 1.26 times.

By some socially relevant indicators (including the value of cash income) a decrease in the positive dynamics is predicted. In the structure of population's income a slight increase in the share of income received as social transfers (from 13.9% in 2010 to 14.7% in 2015) is expected.

During the implementation of this strategy we also expect gradually decline in the share of expenditure on the purchase of goods and services from 87.3% to 85.7%. A share of compulsory payments and voluntary contributions will increase approximately by 2.2% (up to 10.0%).

Table 1. Forecast of the main indicators of socio-economic development of the city of Ufa for the period from 2010 to 2015 (option 1 – Basic Development Strategy)

№	Indicators	2010	2011	2012	2013	2014	2015
1	The volume of shipped products, mln.	485086.0	512659.0	544006.0	568704.0	584111.0	609008.0
2	Fixed capital investment, mln.	51650.0	53920.0	57750.0	62950.0	67990.0	72270.0
3	Labour productivity, thousand rubles / person	1000.18	1052.69	1114.77	1162.99	1192.06	1240.34
4	The average annual number of permanent residents, thousands of people	1040.0	1041.0	1041.4	1041.7	1041.9	1042.0
5	The average number of employed, thous.	485.0	487.0	488.0	489.0	490.0	491.0
6	The growth rate of average monthly wages,% to previous year	102.3	103.0	105.0	107.0	110.0	112.0
7	Money income per capita, rubles per month*	19034.0	20152.0	21230.0	22956.0	24604.0	25342.0
8	Cash disbursements per capita, rubles per month	29862.0	31377.0	32789.0	34626.0	36703.0	38905.0
9	Housing provision per capita, sq.m	21.0	21.3	21.6	21.9	22.6	23.3
10	Birthrate per thousand people	13.4	13.3	13.2	13.0	12.9	12.7
11	Tax and nontax budget incomes, Ufa, mln. rubles	8209.0	9203.0	9479.0	9763.0	9863.0	9961.0
12	Budget expenditures in Ufa**, mln. rubles, including:						
	State issues, mln. rubles	1052.8	1114.9	1179.6	1244.8	1307.4	1368.2
	National economy, mln. rubles	888.4	524.1	537.7	567.5	596.0	623.7
	Education, mln. rubles	4823.2	2845.3	2873.7	2902.5	2965.0	3102.7
	Health care, physical training and sport, mln. rubles	2610.3	1539.9	1580.1	1667.4	1751.3	1832.6
	Social policy, mln. rubles	397.3	441.8	490.8	541.1	596.5	657.7
13	Average monthly wage, rubles	20022.0	20539.0	21521.0	23028.0	25331.0	28370.0

* For the main sources of income (wages, income from entrepreneurial activity, property income, social transfers) averaging by the republic about 70% of all cash income of the population. The so-called «Other income» used in official statistics as a balancing item include income hidden or minimized in order to evade taxation, and therefore they can be calculated only indirectly. In this connection the article doesn't consider them.
** Expenses excluding the inter-budgetary transfers (except the year of 2010).

The structure of own revenue budget of Ufa is characterized by a slight increase in the share of tax revenues that will continue to be formed mainly by a tax on personal income – nearly by 86.0%. The structure of budget expenditures in Ufa is a controlled parameter and it depends on the specific tasks solved at a certain stage of socio-economic development. The basic strategy involves the preservation of existing ratios, small variations in the structure, which during the period (in most cases) do not exceed 0.5%. The results of calculations also showed that in 2011 – 2015 under the implementation of the baseline scenario we expect reducing the budget deficit of the city of Ufa. By other indicators the predicted growth is largely nominal and in real terms it is not considerable.

Within the framework of **socially-oriented strategy** the priority direction is directing resources for social development, concentration of efforts on the solution of significant issues for the city's population.

The scenario and control parameters within the framework of this strategy form a "moderate" intensity of investment policy under "high" intensity of social policy and fiscal policy in terms of budget expenditures by categories "Health", "Education", "Social Policy". The main results of the community-oriented strategy are given in *table 2*. The analysis and evaluation of the results of this strategy show that for the period up to 2015 some parameters will be changed in comparison with the basic strategy of economic development.

Table 2. Forecast of the main indicators of socio-economic development of the city of Ufa for the period from 2010 to 2015 (option 2 – Socially-oriented Development Strategy)

№	Indicators	2010	2011	2012	2013	2014	2015
1	The volume of shipped products, mln.	485086.0	511160.0	538042.0	561528.0	585511.0	609996.0
2	Fixed capital investment, mln.	51650.0	52750.0	55200.0	58860.0	63300.0	64900.0
3	Labour productivity, thousand rubles / person	1000.18	1045.53	1097.60	1143.18	1190.06	1238.32
4	The average annual number of permanent residents, thousands of people	1040.0	1041.9	1042.2	1042.9	1043.1	1043.4
5	The average number of employed, thous.	485.0	488.9	490.2	491.2	492.0	492.6
6	The growth rate of average monthly wages,% to previous year	102.3	115.6	116.3	114.0	112.6	113.9
7	Money income per capita, rubles per month.	19034.0	25287.0	28355.0	31274.0	34125.0	37363.0
8	Cash disbursements per capita, rubles per month	29862.0	36167.0	39316.0	42100.0	44449.0	46948.0
9	Housing provision per capita, sq.m.	21.0	21.3	21.9	22.4	22.9	23.4
10	Birthrate per thousand people	13.4	13.6	13.6	13.8	13.9	14.2
11	Tax and nontax budget incomes, Ufa, mln. rubles	8209.0	9437.0	9922.0	10602.0	11150.0	11852.0
12	Budget expenditures in Ufa, mln. rubles, including:						
	State issues, mln. rubles	1052.8	772.8	837.9	907.5	978.0	1059.0
	National economy, mln. rubles	888.4	539.2	572.5	625.9	680.5	745.1
	Education, mln. rubles	4823.2	3068.2	2966.8	3449.0	4013.6	4669.4
	Health care, physical training and sport, mln. rubles	2610.3	1498.2	1669.7	1921.7	2203.8	2518.9
	Social policy, mln. rubles	397.3	252.9	369.4	525.3	737.6	1081.8
13	Average monthly wage, rubles	20022.0	23145.0	26918.0	30686.0	34553.0	39356.0

Welfare and life quality indicators will increase – the average increase in wages for the period of 2010 – 2015 makes up 14.5%, cash incomes of the population will increase by 1.3 times respectively in real terms, the overall growth of the budget provision – by 1.4 times. The growth rate of labor productivity is inferior to the growth rate of remuneration of labor and makes up 4.4%. The implementation of this strategy is less conducive to the development of small and medium-sized businesses in the short term. In the structure of population's income the share of wage increases from 43.7% to 50.3% and the share of income from entrepreneurial activity decreased from 25.9% to 18.6%. The trend of decline in consumers' expenditure to 64.0% and the trend of growth of the savings to 27.0% by 2015 intensify. The structure of municipal budget income won't expect significant changes compared with the basic option.

As to the budget spending, the share of expenditures for education increases by 6.0%, for health, physical culture and sports – by 3.0%. By the indicators of production and economic activity the most indicators keep the growth dynamics at the level of the basic (inertial) development strategy.

An innovation-oriented strategy supposes a priority direction of financial and material resources into the real economy, in the sphere of production. The implementation of this strategy will require attracting significant investment resources at the expense of all sources of funding.

The scenario and control parameters within the framework of this strategy form a "moderate" intensity of social policy when stirring up the investment policy and fiscal policy in terms of budget expenditure in the part "National Economy". When calculating the rate of increase in wage one sets averaged indices over the previous years, when calculating the rate of increase in investments in fixed capital and the dynamics of budget

expenditures for the national economy one sets the range between average and maximum increase of index over the preceding period. The main results of the innovation-oriented development strategy of Ufa for the period up to 2015 are given in *table 3*.

The analysis and evaluation of this strategy show that for the period up to 2015 some parameters of development of Ufa will change as compared with both the basic strategy and the socially-oriented strategy. Compared with the basic strategy when increasing the volume of investment in fixed capital during the period 2010-2015, the respective increase in the volume of shipped products will increase by no more than 1.57 times. The quality of life is predicted to be improved relatively – the increase in population's cash incomes from 1.18 to 1.55 times, the increase in the birth rate to 14.1 people per 10 thousand people.

At the same time the level of fiscal capacity is expected to increase – from 1.2 to 1.3 times in nominal terms.

The advantage of innovation-oriented strategy compared with the socio-oriented development strategy is outstripping dynamics of production and economic activity. Meanwhile by the indicators of social nature a slight decrease of positive dynamics is predicted (population's cash income – from 1.73 to 1.55 times, the average rate of wage increases – from 12.2% to 6.5%). In the structure of population incomes the trend of growth in the share of income from entrepreneurial activity (to 28.8% by 2015) while reducing the share of wages to 39.4%. The tendencies of reduce in consumption expenditure to 77.3% and the growth of the savings rate to 12.8% by 2015 will intensify. Similar changes in the structure of expenditures are due to the degree of cash incomes growth which leads to reduction in the share of expenditure for purchasing goods and services.

The implementation of innovation-oriented strategy will increase the tax and nontax budget incomes up to 10582.0 million rubles by 2015.

Table 3. Forecast of the main indicators of socio-economic development of the city of Ufa for the period from 2010 to 2015 (option 3 – Innovation-oriented Development Strategy)

№	Indicators	2010	2011	2012	2013	2014	2015
1	The volume of shipped products, mln.	485086.0	522632.0	579235.0	644900.0	685204.0	762030.0
2	Fixed capital investment, mln.	51650.0	54630.0	58455.0	68570.0	73380.0	83950.0
3	Labour productivity, thousand rubles / person	1000.18	1069.00	1181.63	1312.91	1392.69	1546.95
4	The average annual number of permanent residents, thousands of people	1040.0	1041.8	1042.0	1042.7	1043.0	1043.3
5	The average number of employed, thous.	485.0	488.9	490.2	491.2	492.0	492.6
6	The growth rate of average monthly wages,% to previous year	102.3	108.6	108.6	106.9	106.4	106.1
7	Money income per capita, rubles per month	19034.0	24527.0	26754.0	28938.0	31200.0	33510.0
8	Cash disbursements per capita, rubles per month	29862.0	34971.0	36857.0	38644.0	40291.0	41700.0
9	Housing provision per capita, sq.m.	21.0	21.3	21.7	22.2	22.7	23.3
10	Birthrate per thousand people	13.4	13.5	13.5	13.7	13.9	14.1
11	Tax and nontax budget incomes, Ufa, mln. of rubles	8209.0	9232.0	9501.0	9979.0	10356.0	10782.0
12	Budget expenditures in Ufa, mln. rubles, including:						
	State issues, mln. rubles	1052.8	759.1	809.1	864.5	922.9	984.6
	National economy, mln. rubles	888.4	540.8	654.2	802.1	997.1	1235.2
	Education, mln. rubles	4823.2	2851.7	2518.8	2688.6	2866.5	3053.1
	Health care, physical training and sport, mln. rubles	2610.3	1541.9	1588.1	1687.1	1787.7	1890.5
	Social policy, mln. rubles	397.3	301.6	339.9	384.0	436.6	498.7
13	Average monthly wage, rubles	20022.0	21744.0	23614.0	25243.0	26859.0	28497.0

The strategy involves an active investment activity and therefore the share of expenditures for "National economy" will grow by 5.4% including due to reducing the share of social expenditures (expenditures for education and health, physical education and sport about by 1.0%). The implementation of innovation-oriented development scenario will provide the reduction in budget deficit by 2015. By other indicators the dynamics of indicators is generally in keeping with other considered scenario options.

The scenario calculations evaluation based on the formed set of indicators and the proposed strategies generally justify the relative preference for innovation-oriented development strategy for the city district of Ufa. The positive trends and results of the implementation of this strategy are most evident in the medium and long term. The developed model allows us to perform scenario calculations and can be used as a practical tool for substantiation of development strategies for state and municipal government.

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Population health of large cities: trends and risks*

The article considers the problem of forming and maintaining the health of the population living in the big city by giving an example of the cities of Vologda and Cherepovets. Based on the correlation analysis the factors having both positive and negative effects on the health of the population of large cities have been identified. With an allowance for intensive development of urban areas at the present stage the author has outlined the main priorities of the activities on maintaining the health of urban populations.

Large city, health, quality of life, life expectancy, morbidity, health determinants.

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Place of residence as a specific environment in which the person is, as a condition of his life activity, is one of the most important factors influencing its social well-being and health. Swift transition from rural to urban lifestyle, which was observed throughout the twentieth century, led to a significant increase in the number of population in the urban areas. According to the UN, 30 years ago there were about 38% of the world's population in the cities, in 2008 this figure was over 50% and made up 3.3 billion people. UN experts believe that by 2030 almost 5 billion people will be living in the cities[1]. Russia with 73% of urban population belongs to a group of countries with high (70.0 – 75.9%) level of urbanization.

According to one of the classifications of cities by population, large cities are settlements with a number of population from 250 thousand to 1 million people[2]. As of 1 January, 2010 in Russian cities with population over 250 thousand people lived more than half of the urban population (53%) or 38% of the total population.

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[1] The UN report on the prospects of urbanization of the planet [Electronic resource]. – Available at: www.ruslife.ru/patrol/statistics/2897.smx

[2] http://www.glossary.ru/cgi-bin/gl_sch2.cgi?RDuwukg

Large cities offer a unique opportunity for their residents to raise their income, provide better access to the educational, health and social services. These positive aspects encourage people to move and to live in the city. However, the concentration of population and their means of livelihood as well as positive traits exacerbate a number of problems, most important of which is reduction of the potential for health.

As far back as the XX century a connection between people's neuro-psychological state and the population density in urban areas was revealed. It was found that in super large cities (more than 1 million inhabitants) this type of disease occurred almost twice as often as in small towns (up to 100 thousand inhabitants). Over the past 18 years (1990 – 2008) the number of patients with mental disorders in the cities of Russia has increased by 20% and amounted 2710 per 100 thousand people. During the same period the prevalence of drug use among the urban population has increased by 13 times[3].

A feature of big cities is also a large quantity of malignant neoplasm cases. According to the data for 2000 – 2008 the incidence of cancer pathologies of the urban population exceeded the rural incidence by 14% on average. Since 1990s the incidence of malignant neoplasm in the cities has grown by more than 30%[4].

Among the problems related to public health in the large cities the problem of children and adolescents health is a matter of deep concern. The incidence of child population disease more fully reflects the influence of various factors on health, as the baby is more vulnerable and susceptible to the adverse effects of exogenous factors. During the period from 1999 to 2009 the infant morbidity in the large cities of the Vologda oblast grew by 30%[5].

According to the World Health Organization, the natural and transformed by man environment affects the health of the city population by means of quality of housing, water supply and sewerage, air quality, transportation system and infrastructure. Social and economic conditions including income, access to the economy, education, security and law enforcement, social services also have a huge impact on the health of urban residents. An important role in maintaining and improving the health of urban community is played by safety and quality of food products as well as availability of primary medical and sanitary help of good quality. And, finally, the administration of municipal services is inextricably linked to the health and well-being of urban community, and this provides a platform for the development of all spheres of urban population life[6].

The combination of factors and determinants of health (with a certain degree of conditionality) can be divided into those that are related to lifestyle and those that characterize the quality of life. Foreign studies note that the structural factors (occupation, income, place of living,) influence on the state of health much stronger than the lifestyle (physical exercises, smoking and alcohol consumption).

The quality of life, being a determining factor in the formation and preservation of the public health, characterizes the degree of satisfaction of material and cultural needs of people. It can be regarded as a comprehensive characteristic of economic, political, social and ideological factors that determine a person's position in society[7].

In our study the analysis of the factors that affect the population health was conducted by the example of cities of the Vologda oblast – Vologda and Cherepovets, which include 70% of urban population of the region.

[3] Public health service in Russia. 2010: stat. bulletin / Rosstat. – M., 2010.

[4] Ibid.

[5] Key performance indicators of health facilities / Medical Information and Analytical Center. – Vologda, 2010.

[6] Hidden cities: unmasking and overcoming health inequities in urban settings // World Health Organization, The WHO Centre for Health Development, Kobe, and United Nations Human Settlements Programme (UN-HABITAT), 2010. – P. 13.

[7] Prokhorov, B.B. Indicators of the quality of public health as indicators of sustainable development / B.B. Prokhorov // Sustainable development: Resources of Russia. – M.: RCTU Publishing Center. – 2004. – Pp. 80-104.

More than 40 factors describing the standard of living, availability of health services, environmental conditions etc. have been studied (for the period from 1997 to 2009)[8]. The choice of these factors is determined by the fact that they can be expressed in numerical form. While there are characteristics that are difficult to be quantified (architectural appearance of the environment, attractiveness and convenience of living, stress, transport fatigue of the population).

In order to identify the power of influence of one or another factor on the population healthy of large cities we used a method of correlation analysis. The task of correlation analysis is quantitative determination of closeness of the relationship between characteristics. As a working tool we used coefficients of linear correlation between the life expectancy (LE) of the population and different indices of socio-economic development. LE is one of the most important characteristics of the standard and quality of life. This indicator integrally reflects a great number of factors from the effectiveness of health service and environmental conditions to behavioural patterns. The correlation coefficient can take the value from 1 to -1. If the absolute value is closer to 1, it indicates a strong connection, and if it is closer to 0 – the connection is weak or absent at all. All factors were divided into several groups, which characterize the standard of living, health service, environmental conditions, etc.

The correlation analysis made it possible to reveal that the maximum positive connection of the index LE becomes apparent with the group of factors characterizing the level of urban population income *(tab. 1)*.

Of course, higher incomes are not an automatic guarantee of better health, but they allow us to provide a certain set of material values for preservation and promotion of health potential.

The second important group of factors that are beneficial for preservation of urban health is medical service. The level of health system development of large cities is an advantage in the way of maintaining health and increasing the life expectancy. The correlation coefficient between the LE and provision with doctors in the urban areas is 0.877.

In the large cities there is also a close positive relationship between life expectancy and morbidity of the population ($r = 0.838$). In interpreting this relationship, one should bear in mind that the term «morbidity» is not quite accurate, as it increasingly does not reflect the actual incidence but the level of medical aid appealability. Finding of patients, quality of diagnosis of their diseases are largely dependent on the availability of medical facilities, their equipment and proximity to the body of population. By turn, with a high level of disease intelligence and at earlier stages the likelihood of cure increases, which is reflected in the increased life expectancy of urban population.

A significant health influence of pollutant emissions into the atmosphere and wastewater discharges into the water bodies (r equals -0.638 and -0.629 respectively) is observed in the large cities of the region. According to sociological survey conducted by ISEDT of RAS in 2010, the population of big cities of the Vologda oblast estimates the environmental conditions at the place of their residence as poor 3 times as often as the rural residents (32 and 12% respectively)[9].

[8] Data sources: Income, expenditure and consumption in the households of the Vologda oblast in 2009 (based on a sample survey of household budgets): stat. bull. – Vologda, 2000 – 2010; Districts and cities of the Vologda oblast: stat. bull. – Vologda, 2000 – 2010; Key performance indicators of health facilities / Medical information and analytical center. – Vologda, 1999 – 2010; The state and protection of the environment of the Vologda oblast: stat. bull. – Vologda, 1999 – 2009; Cities of the Vologda oblast in figures. The main socio-economic indicators. 2000 – 2009: stat. bull. – Vologda, 2010.

[9] The survey is conducted in Vologda, Cherepovets and eight districts of the Vologda oblast. The sample size is 1500 respondents. Sampling is focused and quota. Representativeness of the sample is ensured by the following conditions: the proportions between urban and rural populations, the proportions between the inhabitants of different settlements (rural communities, small and medium-sized towns), the proportion of sex and age structure of the adult population. Sampling error does not exceed 3%. Technical information processing was performed in the programs SPSS and Excel.

Table 1. Factors influencing the life expectancy of the population of large cities of the Vologda Oblast (the period for analysis: 1997 – 2009)

Criteria for quality of life		Correlation coefficient (r) with LE
Standard of living	The expenditures for the purchase of products for home food (per a member of household, rubles a month)	0.919
	The expenses for medical services (per a member of household, rubles a month)	0.908
	Gross income (per a member of household, rubles a month)	0.902
	The average monthly nominal wages (thousand rubles per man)	0.767
	The volume of paid services to population (thousands rubles per capita)	0.767
	Sale of non-food products (thousand rubles per capita)	0.733
	The number of private vehicles (cars per 10 thousand people)	0.595
Health service	Provision of population with doctors (per 10 thousand people)	0.877
	Primary morbidity (per 100 thousand people)	0.838
	Total morbidity (per 100 thousand people)	0.831
Environment	The number of trapped and neutralized pollutants (tons per 1000 people)	0.735
	Pollutant emissions from stationary sources to the atmosphere (tons per 1000 people)	-0.638
	Wastewater discharge into water (thousand cubic meters per 1000 people)	-0.629
Housing stock	Commissioning of dwelling houses (sq meters of total area per capita)	0.687
	Commissioning of private dwelling houses (sq meters of total area per capita)	0.632
	Total area of housing stock (sq meters per capita)	0.470
Labour protection	The number of the injured in industrial accidents (per 1000 employees)	-0.606
	The expenses of organizations for the activities on labour protection (thousands of rubles per man)	0.453
Food quality	Consumption of fruit and berries (on average per consumer annually, kg)	0.643
	Consumption of fish and fish products (on average per consumer annually, kg)	0.531
	Consumption of meat and meat products (on average per consumer annually, kg)	0.467
	Consumption of grain products (on average per consumer annually, kg)	-0.353
	Consumption of potatoes (on average per consumer annually, kg)	-0.265
Lifestyle	The number of persons engaged in physical culture and sports (per 10 thousand people)	0.480

Among the most disturbing problems of big cities air pollution and poor quality of drinking water are of the greatest importance. The issue of high noise level and proximity to the highways are urgent for 45 and 41% of urban population respectively *(figure)*.

One of the leading causes of environmental degradation of the cities and towns is the rapid growth of motorization. From 1998 to 2009 the number of cars of all types of individual owners in the large cities of region increased almost twice. In 2009 every fourth citizen had a private car, whereas in 2000 – the only one in six[10].

In accord with the growth of road transport in the cities the emissions to the environment increase. It should be noted that the air emissions from motor vehicles increase not only because of the increase in the number of cars, but also because of lower capacity of streets and traffic jams during rush-hours.

The exhaust gases of vehicles create a high concentration of pollutants mainly in the lower atmosphere. Therefore, pollution affects children the most. According to the 2009 data, in the Vologda oblast the children had 10 times higher respiratory disease incidence than the adults.

[10] Districts and towns of the Vologda oblast: Stat. bulletin – Vologda, 2009.

Environmental problems of the Vologda Oblast in the context of territories (% of total respondents)

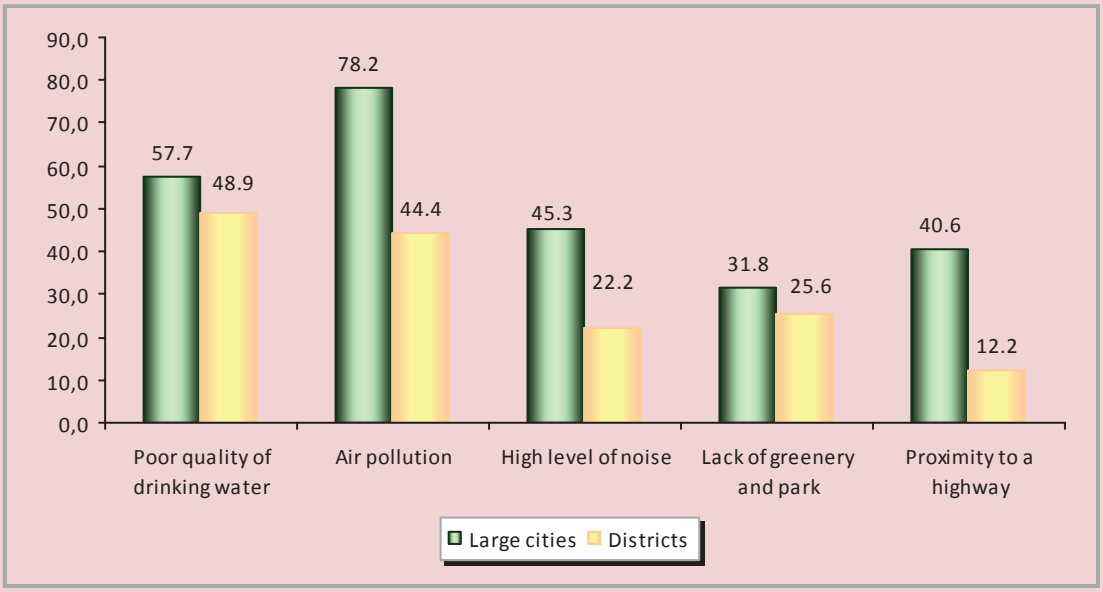

Table 2. The correlation relationship between the disease incidence in the large cities of the Vologda Oblast and the number of private cars

Indicator	Vologda	Cherepovets
The incidence of children at the age of 0-14 (per 1000 people)	0.848	0.932
The incidence of adults (per 1000 people)	0.293	-0.569

The correlation analysis shows that the disease incidence of child population of large cities in the oblast has a close positive relationship (r = 0.8-0.9) with the number of private cars *(tab. 2)*. At the same time it doesn't have a univocal relationship with the disease incidence of adult population.

On this basis, environmental protection measures in the large cities are of great importance, that is evidenced by the close positive correlation relationship between the LE and the number of trapped and neutralized harmful substances (r = 0.735).

However, it should be noted that the number of private cars and the LE of urban population have a positive relationship. This suggests one more time that with increasing the living standards, the characteristics of population's health improve.

The groups of factors, which also revealed their correlation relationship with the LE, but of less power (r is no more than 0.6) include: the state of housing stock, labour protection, quality of nutrition and lifestyle.

Today there is a need for new approach to urbanization and new paradigm of public health in the urban areas based on the disease prevention rather than its treatment. We need new management models which are capable to plan the space of city so that the physical, social and natural environment can prevent and reduce new risks to health.

The health care system that provides the advantage of the urban population in the way of health preservation is in need of speedy modernization. Electronic medical records and signing up to the doctor would greatly improve the quality and accessibility of medical care. Preventative health service should become a priority one. Each district should have health centers which permit to make a primary diagnosis more accessible, as well as disease prevention centers.

Modern cities need infrastructure, which would minimize man-caused impact on the environment and contribute to healthy living.

With the number of vehicles going on up, it is necessary to introduce the measures to reduce their negative effects: to increase the capacity of the streets (bringing into duplicate streets, road junctions at different levels, systems of non-stop movement of vehicles), to assign the zones banning the movement, to create additional parking spaces, to develop and strengthen the role of public motor and electric transport of high carrying capacity of intercity transportation. Besides when constructing residential buildings it is necessary to have them away from busy highways, to place them along the greenery and to install sound and vibration protection screens. Children's staying near the intersections and busy streets for a long time must be excluded.

To enhance the attractiveness and comfort of urban areas we should expand woodland park area, pedestrian walkways and introduce recreational complex objects intended for recreation. Due consideration should be given to aesthetic perception of the urban environment: use bright colours for the design of buildings and to avoid dense development.

In order to provide population with housing area it is necessary to develop a system of mortgage lending, as well as to create favorable conditions for private housing construction with the use of technology providing lower cost of housing without reduced quality.

To spread a healthy way of life it is necessary to create conditions so that each urban resident can go in for sports. Each district must have large sports centers, swimming pools, jogging and bike paths, playgrounds in every yard.

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Problems of sustainable development of rural areas in the Vologda Oblast

The article is devoted to the sustainable development of rural areas in the Vologda Oblast. It deals with the nature and objectives of sustainable development of rural areas. The analysis of the key indicators of agricultural activity and the state of social infrastructure in rural areas has been carried out and the main problems have been revealed. Regional and international experience in the development of rural areas is presented here. The results of this research allow us to suggest the ways of sustainable development in rural areas, which will be helpful to employees of regional authorities, managers of enterprises and organizations to create an effective system of rural development in the region.

Sustainable development, rural areas, agricultural activities, social infrastructure.

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The current situation in the countryside is characterized by the depreciation of agricultural labor, the weakening of the motivational mechanisms of its development and the lack of socially acceptable living conditions in rural areas. It is an obstacle to the formation of the social and economic conditions for sustainable development of rural areas.

Sustainable development of rural areas presupposes the stable social and economic development of rural territories, agricultural and fish production growth, effectiveness increase of agriculture and fish industry, full employment of the rural population, rise in the standard of its living and rational land utilization.

The works of such famous Russian and foreign scientists as A.N. Antipov, V.M. Bautin, S.N. Bobylev, A.V. Gordeev, A.G. Granberg, A.P. Zinchenko, S. Kuznets, G. Myrdal, S. Nikolskiy, A.V. Petrikov, V. Rostow, V.F. Tomilin, G.V. Sdasyuk, M. Todaro, I.G. Ushacheva, etc. are devoted to various aspects of rural areas development.

Sustainable development of rural areas is a complex problem. It is possible to solve it if we perform the following tasks:

- guaranteed employment and rise in the living standard of rural population;
- enhancement of the role of management factors, informatization and science in the development of agricultural production;
- achievement of the conditions when rural areas will be equal to urban areas in income and public goods;
- overcoming of the bureaucratic disunity in the rural areas management and coordination of rural development between the state and municipal authorities, public and commercial organizations, business entities and population;

• arrangement of conditions for increasing of production competitive strength, preservation and reproduction of natural resources which are used in agriculture and fishery;

• output expansion in crop production and livestock farming through improved crop yield and productivity of livestock and poultry;

• attraction of the largest investors' financial resources to realize the priority investment projects [1].

The rural population of the Vologda Oblast accounted for 350.4 thousand people on 01.01.2011 (29.2% of the total population). The total area of our oblast is 14.5 million hectares including 10% of agricultural land (882 hectares of arable land) and 65% of reserve land and forest resources. Agricultural sector of the Vologda Oblast produces 4% of gross regional product and takes 11% of total employment.

Analyzing population dynamics of the Vologda Oblast in the period from 1990 to 2009 *(tab. 1)*, we should note that the region is characterized by a dangerous tendency to extinction and migration of rural residents. So resident population size in the Vologda Oblast decreased by 137 thousand people (10%) in the period from 1990 to 2009 including depopulation in the urban areas by 49 thousand people (5.5%) and depopulation in the rural areas by 88 thousand people (18.8%). There are no permanent residents in the quarter of 8 thousand settlements in the region. These changes will allow us to think that despite the costs of the Federation and the Oblast to maintain the village viability, the process of spatial compression and depopulation of the region is continued. So, as a consequence, there is the fall in agricultural production as well as destruction of the material and technical base of agriculture and industrial infrastructure.

In confirmation of above-mentioned information, there is a significant decrease of the area under all crops from 815.1 thousand hectares in 1990 to 478.3 thousand hectares in 2009 (41.3%).

Table 1. The main indicators of agricultural activity in the Vologda Oblast

Indicators	Year						2009 to 1990, in %
	1990	1995	2000	2005	2008	2009	
Resident population size, thousand people	1355	1333	1290	1245	1223	1218	89.9
including urban areas, thousand people	887	904	887	847	839	838	94.5
including rural areas, thousand people	468	429	403	398	384	380	81.2
Area under crops in enterprises of all categories, thousand hectares	815.1	757.3	686.1	541.6	492.8	478.3	58.7
Livestock population in enterprises of all categories (at the end of year), thousand head:	1344	1004	716	524	474	459	34.2
livestock	613.3	438.9	317.0	233.1	215.3	204.5	33.3
including cows	253.4	201.1	150.4	109.2	99.9	93.5	36.9
pigs	280.1	251.2	187.9	149.9	135.3	139.4	49.7
sheep and goats	197.6	113.6	61.4	31.8	24.2	22.3	11.3
Production in enterprises of all categories, thousand tons:							
grain (weight after processing)	382.2	252.0	220.3	192.8	242.2	238.2	62.3
flax fiber	7.1	5.0	3.9	4.5	1.7	3.2	45.0
potatoes	322.3	925.7	481.5	255.1	256.8	235.5	73.0
vegetables	57.8	115.3	134.4	81.4	62.0	59.7	103.3
store (slaughter weight)	112.4	71.1	51.6	50.7	51.4	49.3	43.9
milk	755.3	494.9	494.9	470.1	481.5	465.9	61.7
eggs, mln. pieces	475.4	458.7	538.3	620.4	510.6	575.1	121.0

Sources: Statistical Yearbook of the Vologda Oblast. 2009: stat. digest / Vologdastat. – Vologda, 2010. – P. 38; Regions of Russia. The main characteristics of the subjects of the Russian Federation. 2010: stat. digest / Russtat. – Moscow, 2010. – P. 182, 184.

Menacing reduction in the total number of agricultural animals in the enterprises of all categories is going on in the region (decline from 50% up to 89%). Grain production dropped from 382.2 tons in 1990 to 238.2 thousand tons in 2009 (38%), potatoes and flax production decreased by 27% and 55%, respectively. Production of stored livestock and poultry decreased by 56%, milk production dropped by 38%, while egg production increased by 100 million (21%).

During observable period the number of profitable agricultural organizations in the region decreased by 232 units (60.3%), the number of unprofitable agricultural organizations increased by 17.7 times *(tab. 2)*.

Relative density of unprofitable agricultural organizations increased from 2% in 1990 to 44.7% in 2009. Profitability of economic activities of all agricultural organizations amounted to 7.9% from 1990 levels in 2009.

Thus, the study enables us to state the fact of economic devastation of rural areas, which had a negative impact on the agricultural sector, the possibility of preservation of cultural heritage in the region, regional originality and national identity.

Analyzing the dynamics of the main indicators of social infrastructure in rural areas of the Vologda Oblast for the period from 1990 till 2009 *(tab. 3)*, it should be noted that the process of reduction and refinement of the settlement

Table 2. Efficiency indicators of agricultural organizations in the Vologda Oblast

Indicator	Year						2009 to 1990, in %
	1990	1995	2000	2005	2008	2009	
Number of agricultural organizations	392	423	401	321	257	277	70.6
Number of profitable agricultural organizations	385	167	240	221	202	153	39.7
Number of unprofitable agricultural organizations	7	256	161	100	55	124	by 17.7 times
Relative density of unprofitable agricultural organizations (in % from the total number of agricultural organizations)	2	60.5	40.0	31.2	21.4	44.7	by 22.3 times
Profitability of economic activities of all agricultural organizations, in %	38	9.4	15.9	11.0	9.5	3.0	7.9

Source: The main indicators of financial and economic activity of agricultural organizations in the Vologda Oblast in 2008: stat. digest / Vologdastat. – Vologda, 2009. – P. 10.

Table 3. The main indicators of social infrastructure in rural areas of the Vologda Oblast

Indicator	Year						2009 to 1990, in %
	1990	1995	2000	2005	2008	2009	
Resident population size, thousand people	1355	1333	1290	1245	1223	1218	89.9
including urban areas, thousand people	887	904	887	847	839	838	94.5
including rural areas, thousand people	468	429	403	398	384	380	81.2
Total area of housing premises, per capita in rural area, square meter	22.0	23.4	25.4	28.1	29.4	30.2	137.3
Houses deployment in rural areas, square meter per capita	0.52	0.15	0.13	0.18	0.29	0.30	57.7
Number of preschool institutions	705	486	387	353	325	320	45.4
Number of full-time educational institutions	760	757	712	575	516	463	60.9
Number of village first-aid stations	818	759	696	674	611	586	71.6
Number of clubs	1122	900	720	682	257	273	24.3
Number of public libraries	711	640	613	598	580	568	79.9

Sources: Statistical Yearbook of the Vologda Oblast. 1999: stat. digest / Vologdastat. – Vologda, 2000. – P. 148; Statistical Yearbook of the Vologda Oblast. 2009: stat. digest / Vologdastat. – Vologda, 2010. – P. 38. 117, 125, 230; The main social and economic indicators of service industries in the Vologda Oblast: stat. digest / Vologdastat. – Vologda, 2010. – P. 81.

network caused weakening of social infrastructure potential conditional due to the decline of the financial basis of its development. Thus, during the study period the decrease in the rural population size was 18.8%, at the same time the reduction of educational institutions accounted for 39%, the reduction of health-care agencies accounted for 28% and the decrease in culture organizations was from 20% to 75%. These figures allow us to draw the conclusion about the further outflow of population from rural areas.

Rural pre-school educational system is characterized by the tendency to the dominance of small kindergartens – 60.8%, which consist of from 1 to 3 groups. The number of preschool educational institutions has steadily decreases; that indicator reached the level of 1990 in 2009 (45.4%).

The number of schools in rural areas of the region reduced by 297 units in 2009 (39.1%) in comparison with1990. The number of students in rural areas dropped by 2.5 times for the last 10 years: from 138.3 thousand pupils in 2000 to 55.5 thousand pupils in 2009.

There is a steady downward trend in rural areas. It is the closure of health-care agencies. The number of village first-aid stations decreased by 232 units (28.4%).

Rural cultural organizations suffered great losses during the period of market reforms. The number of clubs and recreation centers decreased by several times, the number of libraries decreased by about 20%. Because of traffic, financial and other difficulties the possibility of familiarization of rural population with theatres, museums and exhibitions is more theoretical than practical.

The state of housing stock is a factor which intensifies rural areas unattractiveness for young people and undermines the sustainability of agricultural production. Houses deployment in rural areas was substantially reduced in the early 1990s and it was remaining at the low level for a long time.

Only 0.30 sq. m. of housing per capita was deployed in 2009; it is 1.7 times less than it was in 1990. Total area of housing premises per capita in rural area increased from 22 square meters in 1990 up to 30.2 square meters in 2009 (37,3%).

The level of rural housing face-lift is low. According to the statistics, currently only 31% of living floor space is fitted with running water, 21% - with sewerage, 20% – with central heating, 62% – with gas (49% of them have natural and liquefied gas and 13% of them have natural gas), 14% – with hot water supply.

The volume of road construction decreased significantly during the study period. The network of public hard-surface roads is only 31.5%; 61% of them are the rough roads and the road with poor clutch characteristics of the road carpet. So many guest forms of medical, cultural, consumer and commercial services are complicated because of the bad roads. There is no bus service in many places in autumn and in spring (1957 rural settlements with 29.2 thousand residents). There are only three municipal districts of 26 ones (Cherepovets District, Ust-Cubenskiy District and Syamzha District) where 100% of rural settlements have regular transport service with the administrative centers [2].

Of course, if we carry out a comparative analysis of the social sphere development level over the last 20 years, it is necessary to note that the positive trends were also observed during that period. Thus, fixed location phones, cellular communications, satellite TV, Internet access appeared in many villages of the region; a range of goods at retail was expanded. The objects of civil engineering infrastructure were set in operation in several regions; some of them were supplied with gas [3].

The pilot project "Development of social potential of rural settlements" was started to realize in 2005 to solve those problems in the Vologda Oblast. Its main objective is to develop a new type of rural community behavior, a

new value system, where labour, family and responsibility for our native places will be the principal guidelines [4]. Within the scope of the project the exhibition "Pilot Settlements in the Vologda Region" was organized in Vologda in October 16, 2010. It was based on the Inter-regional exhibition, cultural and leisure complex "Vologda Settlement". There are five houses here where you can see the exhibitions of the pilot villages (Novlenskoe – Felt Boot Museum, Museum of Samovar; Smetanino – Flax Museum, an exhibition of A. Alyabiev's sport biathlon; Vanskoye – Crafts Museum with an exhibition devoted to Ustyuzhna blacksmiths, an exposition of Vologda Handicraft Chamber; Turovets – cranberry land).

Also, the Vologda Oblast government adopted the Decree № 57 "On the concept of sustainable development in rural areas of the Vologda Oblast for the period till 2020" in January 31, 2011. According to this concept a variant of integrated area development is selected as the most appropriate option for the further development. It involves the creation of an effective organizational and managerial mechanism to obtain optimum benefits from the available resources.

The main idea of the concept is the creation of the inter-regional Centers for rural development based on the municipal districts or the settlements that preserved the highest potential for development. These Centers will become the organizational and management tools, capable to manage the rural economy from the perspective of centralized examination of personnel problem, technological, logistical, infrastructural and financial security in rural areas [5].

It is necessary to consider the possibility of moving to a new competitive way of life in rural areas with modern economy and infrastructure. It should be a local version of the economy which is developed at the expense of the products with higher added value.

It is necessary to involve the following areas of rural development to form it:

- the use of "small" technologies that allow us to create the local production, which can compete with mass (imported) goods in the market and win back the local market;
- development of non-agricultural activities in rural areas and the services market that can take human resources, which can't work in the agricultural sector (personal services);
- creation of the Regional Innovation Development Center (industrial park);
- strengthening of the forest industry due to the production of related materials, including the development of new types of wood-based products (mini-plants for the production of OSB, MDF and wood pellets);
- collecting, harvesting and processing of wild plants, which have an obvious potential for entering the consumer market;
- the development of fishery;
- forming of building of infrastructure and services in the field of rural tourism, including the identification of innovative tourism products.

All these things can be successfully combined with the introduction of marketing technology (branding and place marketing) in rural areas, the development of online businesses and services, as well as the development of more traditional forms of small farming in rural areas – the farmers, personal subsidiary plots.

It is also important to guarantee qualitative basic social services: preschool and school education, public health, housing and communal services (electricity, gas, water supply and wastewater), communications and transport, roads, services of cultural institutions [6].

Considering the international experience, it is worth to note that the development of rural areas is becoming increasingly an important area of public policy of the European Union (hereinafter EU) in recent years.

The main areas for rural development in the EU (particularly in Germany and France) are the following:

✓ a multi-agency approach to solve the multifaceted problems of rural areas;

✓ a comprehensive (integrated) territorial approach based on the close cooperation of different levels of management, representatives of various economic sectors and rural population;

✓ a subsidiarity principle and participatory; implementation of the programs for rural development is mainly occurred at the municipal level with the active participation of the rural population;

✓ establishing of a agencies network for the rural development, development of agricultural production to meet the needs of rural areas;

✓ establishment of rural policies; rural policies are the territories and settlements which combine and promote the development of new activities in the certain areas and give a multiplier effect for other activities;

✓ creation of state policy to develop rural tourism and build a chain of guest houses. In the EU public policy on rural tourism is aimed mainly at depressed areas. It is a kind of social shock absorbers because rural tourism can create jobs and promote rural development [7].

The choice of rural development areas should be based on the analysis of production needs, existing and expected resources, demand and infrastructure restrictions, science and technology advances and best practices. Only joint efforts of the state, municipalities, science, business and civil society can bring rural areas to the sustainable social and economic development. So, it is necessary to use an integrated approach to the rural development to remove the bureaucratic disunity and determine the rural support priorities.

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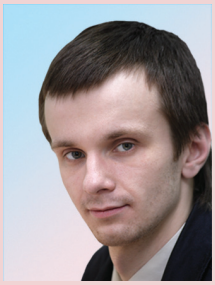
Recycling as the mechanism of ecological and economic equation of the regional development

In the article the role of recycling as the mechanism of the ecological and economic equation of the regional development is considered. The concept of recycling is proved; the problems, conditions and factors of its development are explored. The measures of recycling waste products from production and consumption are analyzed; recommendations on the recycling development in the region (including the organizational economic mechanism) are given.

Recycling, the system of recycling consumer wastes and residuals, eco-economic balance of the regional development.



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The need of practical reconsideration of the strategy of the regional development has appeared for the recent decades in connection with understanding of the fact, that disproportions in reproduction are connected, mainly, to the infringement of balance between economic development and preservation of the natural capital.

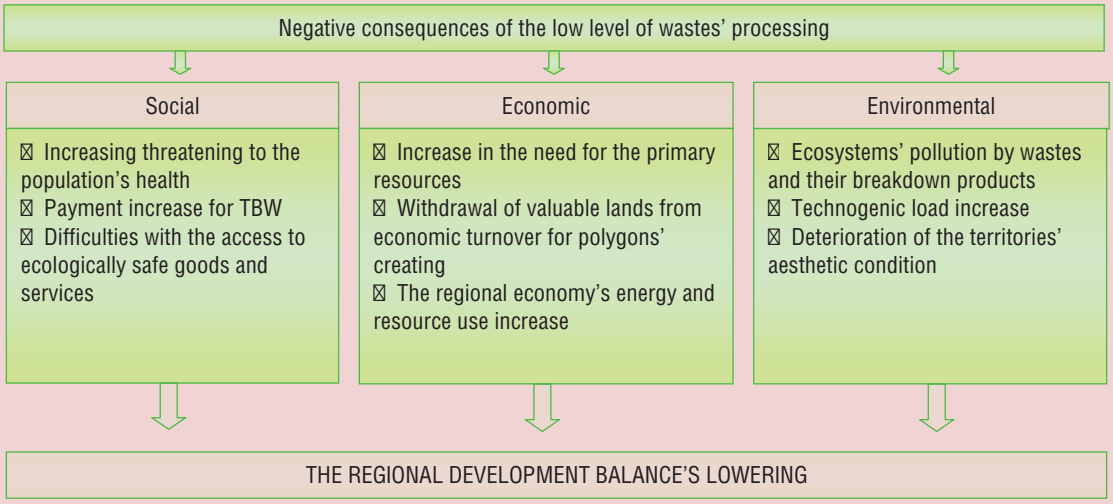
One of the main ways of this balance's preservation is maximal account (within the frameworks of knowledge existing nowadays) of ecological factors in the decision-making mechanisms of the regional development. It leads to the necessity of interrelation and interconditionality of the regional ecological policy with economic, scientific and technological, social, and demographic policy in the perspective of formation of the unified ecological and economic policy of the regional development. The efficiency of such policy's realization nowadays determines productivity of the transition to a steady socio-economic and ecological regional development [1].

For the recent decades the world community has begun to pay the increasing attention to the decision of the environmental problems, the rational use of the natural resources' potential of the region, the recycling development. Legislatively in foreign practice the established toughening of the requirements to production and services has served as stimulus to the formation of the demand for the environmental technology, non-polluting goods, and investments into environmental industry, and to the active development of business on waste products' processing (recycling).

Recycling is possible to be defined as the system of the organizational, economic and technological actions on returning production and consumption wastes into the repeated economic circulation.

The necessity of the recycling development as the mechanism of the ecological and economic equation of the regional development is caused by negative consequences arising from the wastes' influence on the environment at the low level of their processing *(fig. 1)*.

Figure 1. Influence of negative consequences of the low level of wastes processing on the regional development equation



The analysis of the modern recycling condition in the regions of the Russian Federation allows allocating the basic problems of its development:

- absence of the active state support of recycling;
- inefficient legal base;
- inefficient control system in the sphere of recycling in the regions;
- undeveloped infrastructure in the sphere of waste products' recycling;
- liquidation of the reception points of the population's waste products;
- absence of economic stimulus of involving wastes into the repeated economic circulation;
- low level of inter-regional interaction;
- insufficient influence of the public and professional associations on the decision-making by the state and municipal authorities in the sphere of the production and consumption wastes' recycling.

The recycling development in the Russian regions is of great importance in connection with the current situation with waste products from production and consumption.

In the territory of Russia more than 85 billion tons of waste products has accumulated [8].

According to the data given by the Association of recycling, annually in the country more than 3 billion tons of the industrial wastes, more than 40 million tons of the firm communal wastes, 3 million tons of the medical wastes are formed. Especial danger is represented by the toxic waste products, the rates of their formation in Russia (15 – 16% a year) outstrip the dynamics of the gross national product [13].

For example, the formation of wastes of production and consumption in the subjects of the North-West Federal District of the Russian Federation is characterized by the following data *(table)*.

As the table shows, from 2004 to 2009 the growth of volumes of wastes' formation has been fixed in such subjects of the Russian Federation as Karelia Republic (3.81%), Arkhangelsk Oblast (86.27%), Kaliningrad Oblast (3.57%), Leningrad Oblast (7.56%), Murmansk Oblast (29.99%), Pskov Oblast (66.67%) and Saint-Petersburg (18.31%). The reduction of the mentioned parameter has taken place in Komi Republic (-55.48%), Vologda Oblast (-5.49%) and Novgorod Oblast (-25.53%). On the whole in NWFD for the same period the growth of wastes for 17.74% has been observed.

Formation of the production and consumption waste products in NWFD, thousand tons [4, 14]

Territory	2004	2006	2007	2009
North-West Federal District	246000	332125	361148	289630
Karelia Republic	70030	101729	106379	72700
Komi Republic	11680	16715	6570	5200
Arkhangelsk Oblast	5100	10686	22501	9500
Vologda Oblast	16400	21410	17922	15500
Kaliningrad Oblast	560	390	281	580
Leningrad Oblast	1190	1759	1636	1280
Murmansk Oblast	140700	176985	202849	182900
Novgorod Oblast	940	914	945	700
Pskov Oblast	120	112	206	200
Saint-Petersburg	710	1424	1857	840

The great amount of the consumption wastes concentrates at the polygons and numerous non-authorized dumps which are the dangerous sources of air pollution, soil contamination, and cause harm to plants, underground and superficial waters. So, according to the data of the Rosprirodnadzor, in Russia by the beginning of 2010 23 963 objects of wastes' accommodation were taken into account (only 8% of the objects of wastes' accommodation meet to the established requirements), from them 11 193 are non-authorized dumps which constantly extend.

The special problem is an uncontrolled disposal of dangerous wastes (for instance, medical wastes). About 80 % of these waste products are not destroyed according to the requirements of sanitary norms and rules, and some part of them are thrown into garbage containers and to the waste polygons, threatening to health of the population [7]. Among dangerous waste products, except for medical and bioorganic, pesticides and herbicides, the delayed mineral fertilizers can be mentioned (in Russia it is 75 thousand tons).

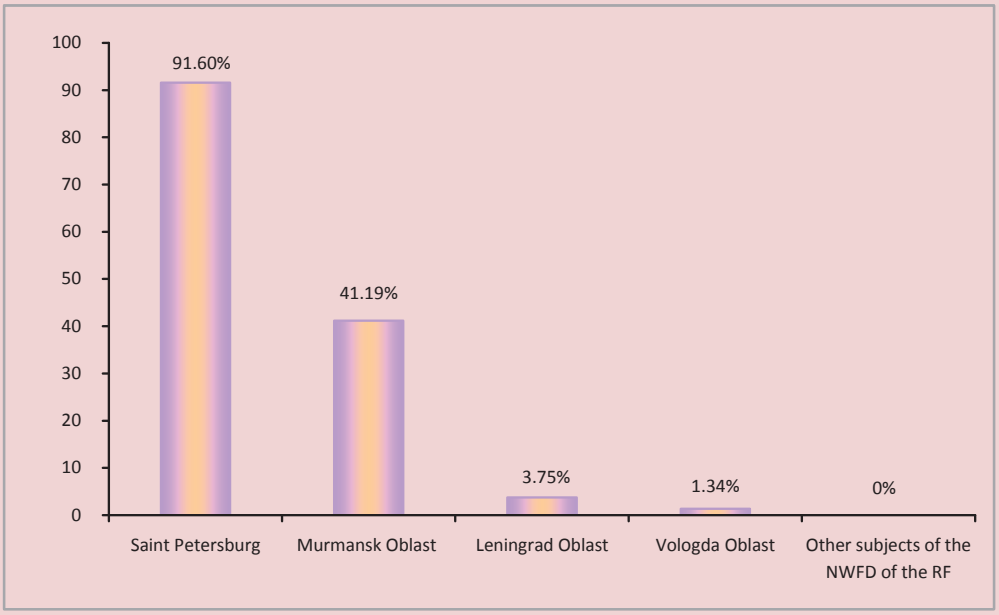
By now the advanced countries use from 50% to 70% of production and consumption wastes, planning in the long term completely to refuse using polygons. In Russia the use of the production wastes makes by different estimations from 25% to 45%, and the consumption wastes of about 2 – 5% [8, 9].

So, in 2008 in NWFD the enterprises of the production wastes' recycling only 35.71% of the total amount of the production waste products were processed (CFD – 22.8%, FFD – 4.9%, SFD – 2.6%, PFD – 2.6%, NFD – 1.9%, UFD – 0.1%), of them: in Saint-Petersburg 91.6%, Murmansk Oblast 41.2%, in Leningrad Oblast 3.7%, in Vologda Oblast 1.3%, in other subjects of the NWFD of the Russian Federation such waste products didn't come to the enterprises of processing *(fig. 2)*.

In foreign practice, in modern conditions recycling is applied: in Switzerland - 23%, in Japan – 20%, in the USA – 32.4% of household waste products. In the advanced countries such method of recycling of household dust as burning is widely used. The share of the burnt household waste products in their general volume changes over a wide range: in Austria, Italy, France, Germany - from 20 to 40%, in Belgium, Sweden – from 48 to 50%, in Japan – 70%, in Denmark, Switzerland – 80%, England and the USA – 14%. In comparison with these countries in Russia the lowest level of household dust burning makes 2%.

However simple burning FHW cannot be considered as economically and ecologically expedient technology as many substances which could be used, are destroyed and thus burning requires the additional energy expenses. Besides the existing garbage-burning installations at work form secondary toxic waste

Figure 2. The densities of the taken to the enterprises of the industrial processing waste products in the total amount of export in the subjects of the NWFD of the RF, 2008



products, for example, dioxins, producing the destroying influence on the human hormonal system that in a result leads to the reduction of the human potential in the region [2]. Garbage-burning factories represent special danger for the northern regions where their operation can especially result in degradation of the vulnerable ecosystems. Hence, the recycling development as more ecologically safe in comparison with burning, should become a prime measure in the increase of the environmental and economic equation of the regional development.

It is necessary to pay the special attention to the problem of recycling firm household waste products (FHW) having the greatest heterogeneity both on morphological structure of waste products, and on the territory where these waste products are formed. The inefficient system of gathering and sorting FHW in Russia leads to the low level of extraction of useful fractions from FHW.

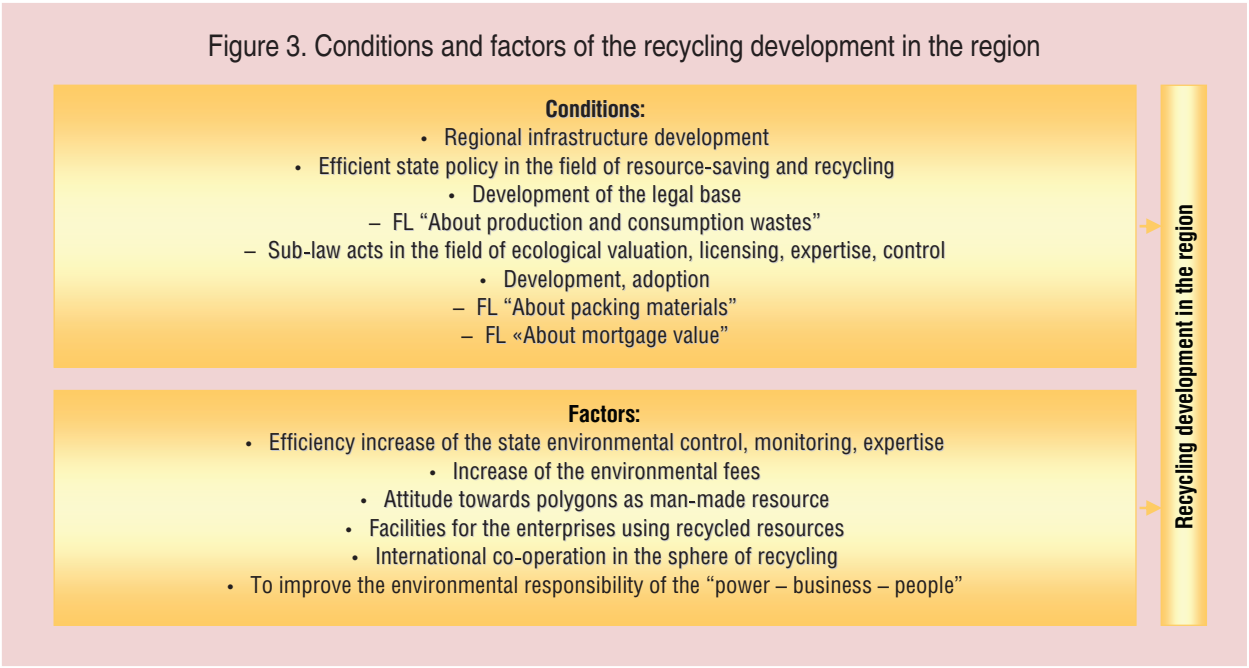
The important component of the recycling mechanism is restoration of places of acceptance as it allows reducing the quantity of FHW and labor input into their sorting at the following stages of processing. Such way of sorting FHW is the most economic and does not demand additional expenses for constructing sorting enterprises.

The development of the recycling industry is especially favorable and expedient now, during restoration of the Russian economy after the world financial and economic crisis. In these conditions, when there was a sharp necessity for the economy of all kinds of expenses, the use of the secondary resources provides the reduction of expenses at goods' production as involving of secondary resources into economic circulation is, as a rule, cheaper, than the initial resources.

The analysis of the current condition of FHW processing in the Russian regions allows allocating, in our opinion, the following factors and conditions of the recycling development *(fig. 3)*.

Economic efficiency of recycling is caused by the following facts. The analysis of the prices for the initial and secondary plastic raw material shows, that the difference of the prices makes from 1.5 to 2.2 times: polythene – initial

Figure 3. Conditions and factors of the recycling development in the region



raw material of 50 – 60 rubles/kg, secondary raw material of 25 – 40 rubles/kg; polypropylene – initial 40 – 62 rubles/kg, secondary 20 – 30 rubles/kg.; polystyrene – initial 53 – 59 rubles/kg, secondary 24 – 37 rubles/kg.

Thus, now, the share of the secondary raw material in production from plastics makes in Russia of 4 – 5% [12]. At the total amount of the market of polythene in 550 000 tons a year, the annual economy for consumers of raw material can make about 11 billion rubles; of propylene - volume of the market of 783 000 tons, the potential economy can be 15.6 billion rubles; polystyrene – the volume of the market of 474 000 tons, the potential economy can make 11.8 billion rubles.

The calculations carried out in Finland, show, that at tenfold use of a glass bottle in capacity 0.34 liters of the power consumption on its one turnover from a manufacturer to a consumer and back makes 24% from the level of power inputs on the same disposable glass container of secondary raw material and 9 – 16% – from the level of expenses for this container made of the initial raw material. In Russia the use of 1 ton of paper for recycling saves 3.5 m^3 of wood (1 million tons of paper for recycling allows to keep from cutting down 60 hectares of woods), 1 ton of secondary polymeric raw material – 0.7 tons of the initial polymeric raw material, 1 ton of the secondary textile raw material – 0.7 tons of natural or synthetic fibers. As a result of processing 120 – 130 t of cans 1 t of tin can be received that is equivalent to the extraction and processing 400 t of ores, thus the power consumption on producing aluminum cans, made of the initial raw material, is three times higher, than on producing cans of the secondary raw material [3].

According to the data of the RosStat, in 2009 in the North-West Federal District it was taken 8.98 million m^3 of FHW to the enterprises of industrial processing [4] from the territories of city settlements, that at their processing, at the average morphological structure of FHW for this region could make the economy of 1.25 million m^3 of wood, 95 thousand tons of the initial polymeric raw material, 250 thousand tons of natural and synthetic fibers [5].

In the opinion of experts, the probable level of recycling at the scientific and technical and innovational potential in this sphere created in the Russian Federation and abroad, can reach 70 – 90%, and the main vector of the development is introduction of technological innovations.

Besides the investment of means into construction and operation of enterprises processing wastes will allow creating new workplaces, improving ecological conditions in the regions of Russia, reducing the areas occupied with ranges and spontaneous dumps of garbage and as consequence, and reducing negative influence of waste products on the population's health.

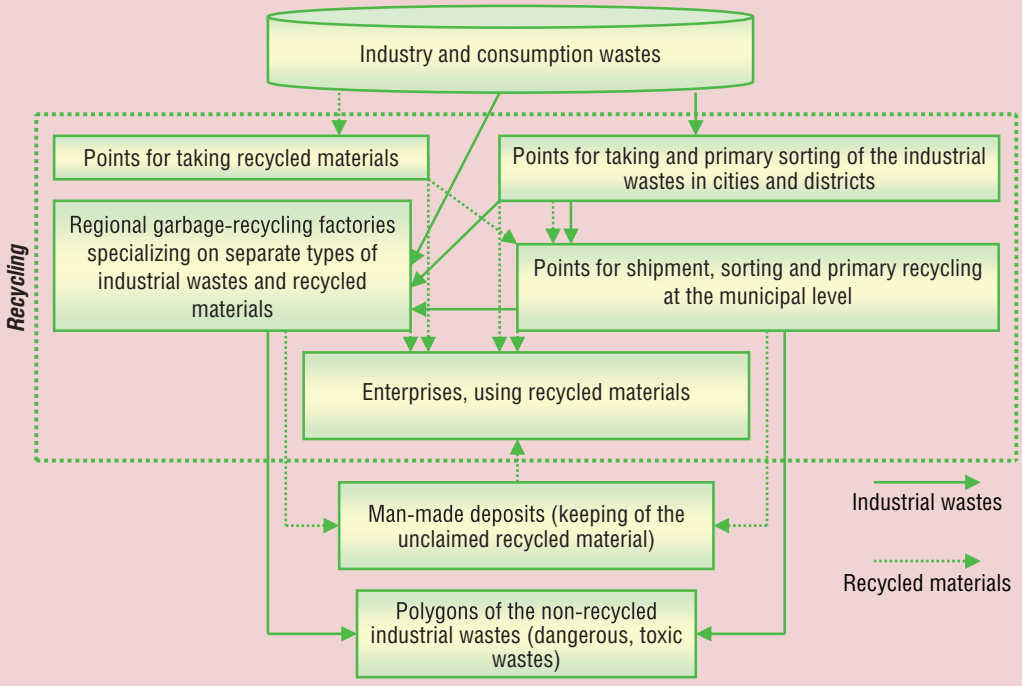
As the recycling experience in the foreign countries shows, market relations are not capable alone to adjust effective processes of wastes' processing. The majority of the EU countries solve the problems of recycling and wastes' processing by combining both state and market mechanisms of regulation. In Russia the creation of the complex regional systems of production and consumption wastes' processing on the basis of the recycling priority above other ways of use and neutralization of waste products to the most effective institutionalized innovations in the sphere of industrial and consumption wastes' processing could become.

Thus the special attention should be paid to inter-regional and trans-boundary aspects of such system's functioning. The recycling development under such scenario will result in creation in the region the industry of recycling as a sector of the regional economy. The special value for functioning of such inter-regional system belongs to the effective activity of subjects of managing, and also to the interaction between them. The basic subjects of managing in the market recycling, both the wastes' streams and secondary resources between them are submitted below *(fig. 4)*.

For the solution of the problem of technological recycling development studying of the existing latest methods of wastes' processing, the choice of the most effective of them and the investment projects' development is important.

As to the investment projects they can be both private and private-and-state with the use of the financial resources of the region. In the sphere of recycling it is necessary to involve the private capital more actively as at the rational organization it is profitable.

Figure 4. The basic economic subjects at the market of recycling and their interaction



Thus with the purpose of the private investors means' attraction for the development and realization of projects in the sphere of recycling it is necessary for them to be given tax privileges.

Also for the improvement of the situation with the development of recycling it is necessary to improve the legal base in the field of the recycling waste products. In the developed legislative acts it is necessary to fix the mechanisms of the producers' and importers' responsibility for gathering and processing wastes after the products' use, to make up the list of production, specifications and terms of its entering into operation; to develop the mechanism of collecting and distributing of payments for producers and importers for compensation of expenses for gathering and processing of separate kinds of production and packing.

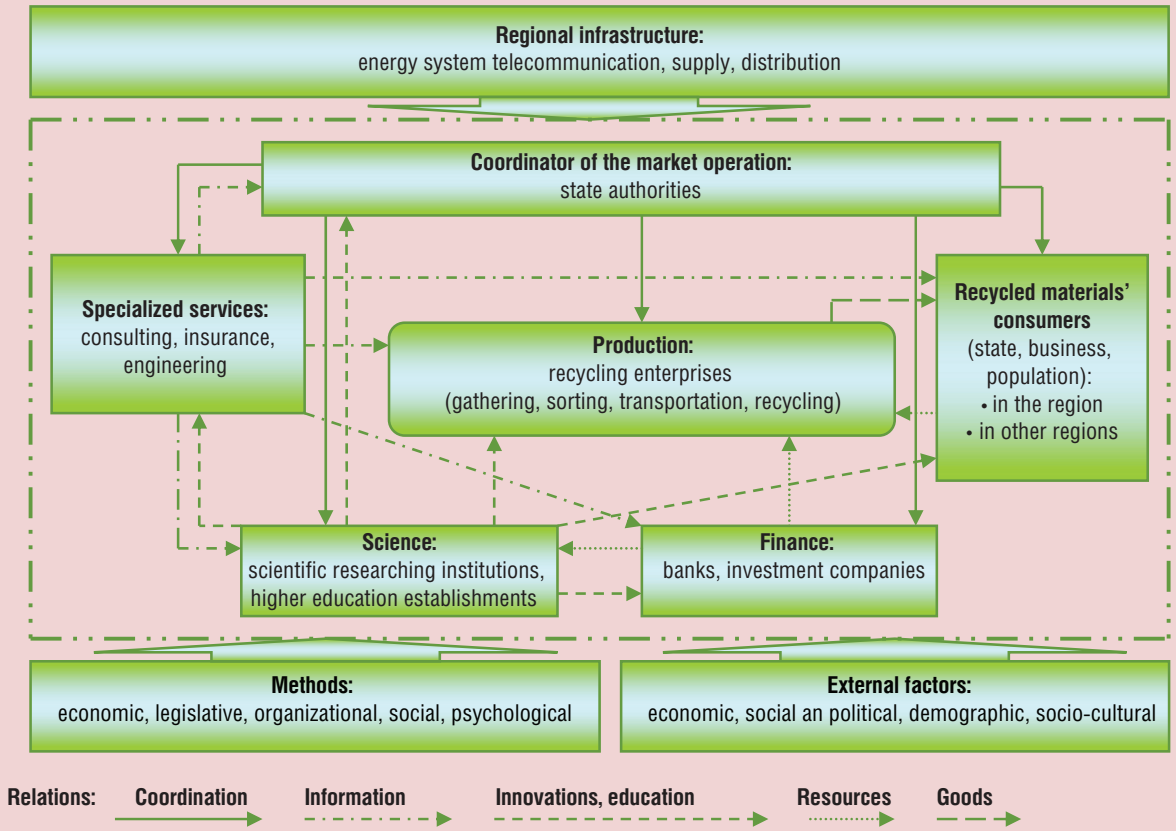
Tax and other stimulus are necessary for the organizations which are carrying out gathering of wastes from the population, ecologically safe recycling and introducing the best technologies, introduction of the principle of producers' responsibility for ecologically safe recycling of wastes products by the end of "life cycle" of production and establishing special requirements in the sphere of the recycling medical, biological and other ecologically dangerous wastes [7].

The prospects of the recycling development in Russia are connected to the creation of the effective organizational and economic mechanism of recycling which, in our opinion, should include the following basic components *(fig. 5)*.

For this mechanism to effectively function the following things are necessary:

- private and state investments into the research and the development in the sphere of recycling and liberalization of the tax policy for the enterprises which are carrying out such researches and development;

Figure 5. Organizational and economic mechanism of the recycling development in the region



- increase of the state policy efficiency in the sphere of the basic researches in the field of recycling technologies;
- liberalization of the customs policy;
- development of the legislative base;
- expansion of the scales of use of the effective technological innovations, including the methods of waste's processing, not providing their burning (experience of St.-Petersburg State Institute of Technology, Penza State University of Architecture and Construction, etc.) [6];
- legislative introduction of the principle of "the best existing technologies" at the enterprises which are carrying out recycling;
- professional training, capable both to develop the recycling technologies and to set the innovational equipment into practice;
- use of the program approach in the recycling development at the regional level and macro-regions on the basis of inter-regional interaction;
- development of recycling according to the principles of poly-subjectiveness and ecological responsibility;
- development of the organizational economic mechanism.

Thus, in the modern conditions recycling is the important mechanism of the social, ecological and economic problems' solution which importance is high, than productivity of the measures taken for their solution. In this connection the sphere of recycling should be considered as the integral component of the regional social and economic system creating the preconditions of ecological and economic equation of the regional development.

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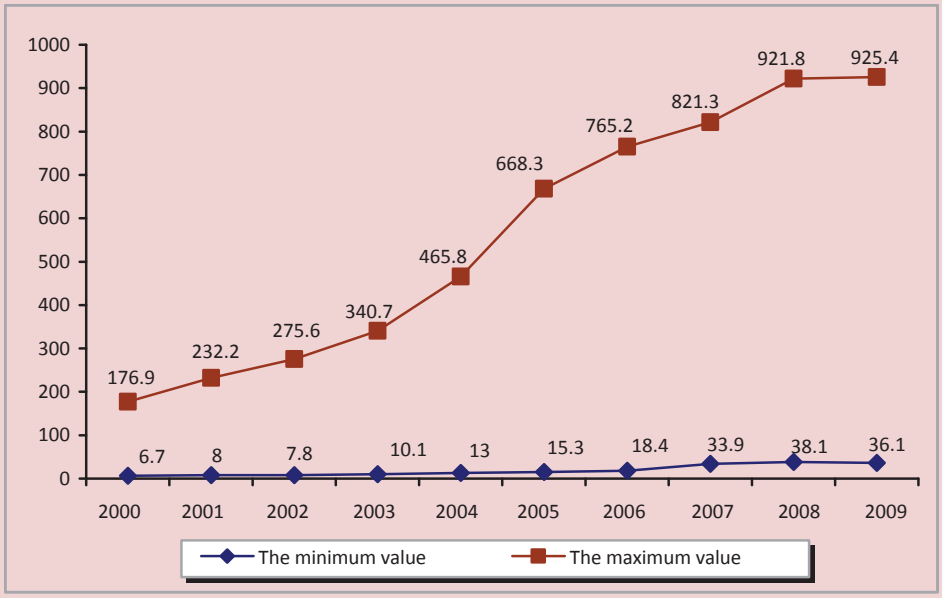
Actual problems of spatial development*

Economic and socio-political transformations in the Russian Federation, started in 1990s, promoted the authority decentralization and acquiring by the regions independence in the solution of the questions of socio-economic development.

At the same time the process of transformation of the socio-economic relations was accompanied by a sharp reduction of the state's role in regulation of economic processes, by opposition between the federal center and the subjects of the Federation, by easing of in-Russian economic relations. It led to the increase of asymmetry of the territorial socio-economic development. The dynamics of distinctions bet ween the subjects of the Russian Federation has not reduced [6].

The difference in economic development of the regions of Russia on the parameter of GRP per capita made from 26 to 28 times at the period from 2000 – 2009 *(figure)*. On the volumes of the industrial output per capita the difference reaches hundred times. The distinction of the subjects of the Federation on the social development is a little bit lower (according to the ratio of the monetary incomes per capita and the cost of living and according to the share of the population with the incomes 6 or 7 times lower than the cost of living), however is rather essential.

The dynamics of the minimal and maximal values of the gross regional product (in all regions of the Russian Federations), rubles per capita



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The extremely high level and constant strengthening of the territorial differentiation of the subjects of the Russian Federation threatens with infringement of the national economic space's integrity of and as the consequence, makes serious threat to the country safety. In this connection the problem of the spatial differentiation of the territories and search of the ways for its solution becomes the subject of the increasing number of the researches made by the leading Russian economists. The results of the researches carried out on the mentioned problematic are published in scientific journals on the regular basis.

Studying of the spatial development is one of the directions of the research activity of the Institute of economic researches of the Russian Academy of Science, headed by the academician P.A. Minakir. The basic achievements in this direction are represented in the materials of the journal "Spatial economy". But we would like to address to P.A. Minakir's article "Myths and the reality of the spatial economic disproportions" which was published in the first number of the journal "Federalism" in 2011. The author doesn't only prove the reasons of differentiation of the Russian regions, but also opens the methodology of management of the regional economic development based on the strategic approach.

It is necessary to agree with P.A. Minakir's statement that "in 1990s the spatial disproportions were considered as natural and even desirable result of the transition to the market mechanisms of distribution of economic resources..." to which the chosen liberal economic policy led. The consequence of this direction became the basic disproportions which cause anxiety and are the subject of the experts' discussions:

1. Amplification of inter-regional differentiation on the parameters of the standard of living of the population, and especially on the level of its incomes.

2. Growing inter-regional differentiation on the level of the economic development.

3. Progressing depopulation in a number of the Russian regions at amplifying concentration of the population in the capital, in the regions of the Central and Southern Federal Districts.

4. Amplifying disproportion between the economic growth and the development of infrastructure in the most effective centers of concentration of economic power.

At the same time it would be desirable to draw the readers' attention to such type of the territories' differentiation, as intraregional differentiation. The researches carried out at the Institute of the socio-economic development of the territories of the Russian Academy of Science allow drawing the conclusion that the spatial development of the territory of the Vologda Oblast follows the way of polarization.

Studying of the tendencies of the spatial development showed, that in the area the city agglomeration is formed; its structure includes two cities of the regional submission (Vologda, the regional center and Cherepovets, the largest industrial center) and 13 municipal areas [7]. The development of the agglomeration zones is also promoted by the creation of the industrial park "Sheksna".

Speaking as a whole about the spatial development of the region, it is necessary to note the increase of the quantity of the small settlements (with the number of inhabitants to 5 person) and at the same time of the large settlements (over 5 thousand person) in the structure of settlements.

Degradation of the structure of the settlements' networks, its degeneration cause secession of the grounds from agricultural turnover and loss of the socio-economic control over many historically explored territories. This process has steady character and is connected basically to the extinction of the aged population, outflow of youth and attenuation of the industrial, social and cultural activity in villages.

Cities absorb agricultural population of the extensive territories, simultaneously creating around them powerful fields of influence on rural areas, promoting concentration in the suburbs of the agricultural production directed on city needs' satisfaction. Therefore, where the density and the sizes of cities are greater, the wider are the areas with the developed agriculture, and the greater is the population. In the distance from cities there are the zones of the agrarian (and, hence, the general) depressions.

Thereof the polarization of separate areas accrues: a part from them (first of all the central and southern areas) concentrates the population, becoming the centers of the country-recreational activity, industry, logistical networks, etc.; the others, on the contrary, are "unpromising", differ by the reduction of the agrarian space, disintegration of the large-scale enterprises, reduction of the population.

This tendency is most brightly characterized with the data on the significant differentiation of municipalities according to the level of the development of industry and agriculture. In 2009 the break between the leader in the volumes of the industrial production (Cherepovets) and the outsider (Nyuksenitsa District) reached hundred times. If to compare the regional municipalities (without cities of Vologda and Cherepovets) the distinctions between them decrease a little, however all of them are rather significant. Besides the share of the areas in the Oblast's industrial production is reduced: in 2000 it made 14.2%, and in 2009 only 9.2% [6].

The situation in agricultural production is similar. The break between the rural areas in agricultural production increases. The difference in the volumes of agricultural production per capita between the Vologda Oblast, most advanced in this plan and the area-outsider makes more than 20 times. However the changes of the developed situation are not seen. The data on the level of intensification and efficiency of agricultural production allow making such a conclusion *(table)*.

So, counting for 100 hectares of farmland in the suburbs (I type) in comparison with the peripheral rural areas (IV type) fixed capital is almost 4 times higher, labor sources are 2.5 times higher, productivity of the capital is 2.5 times higher, labor (work) 3.8 times higher, land is 10 times higher.

Having 35% of the agrarian lands, the facilities of the suburbs in Vologda, Cherepovets, Sheksna and Gryazovets districts make 75% of the regional volume of agricultural products. And the facilities adjoining to this zones, and peripheral, having two thirds of farmland produce only 25% [2].

Level of the intensity and efficiency of agricultural production depending on the district types of the Vologda Oblast [1]

Fixed capital for agriculture, thousand rubles for 100 hectares of farmland	Manpower provisioning, people for 100 hectares of farmland	Realized production		
		thous. rub. for 100 hectares of farmland	rub. for 100 rub. of fixed capital	thous. rub. for 1 agricultural worker
I type. Suburbs (5)				
134	6.0	1476	109	246.2
II type. Areas situated nearby suburbs (6)				
44	3.2	340	77	101.4
III type. Peripheral areas with town-like settlements (8)				
42	2.7	203	48	74.5
IV type. Peripheral areas without town-like settlements (7)				
36	2.4	154	43	65

One more aspect of the problem of the spatial development is mono-cities.

During the development of the market economy socio-economic development of the majority of mono-profile cities was characterized by negative tendencies. However the global financial and economic crisis which occurred in the second half of the year 2008 aggravated economic and social problems of mono-cities.

The authorities of all levels undertake the efforts on stabilization of the situation in mono-cities. There is the search of forms and methods on their support. The solution of the problems of the mono-profile cities is considered as one of the basic priorities of the state policy.

The Russian scientific community also tries to solve these problems. Scientists investigate foreign experience of management in mono-cities. Models and programs of the foreign mono-cities' development are studied, the opportunity of their application to the Russian conditions is estimated. The ways of mono-cities' trajectory of the steady development are offered.

As well as in other regions, in the Vologda Oblast the socio-economic development of some city settlements is determined by the work of the city-forming enterprises, first of all, in the cities of Cherepovets and Sokol. The regional and municipal authorities develop comprehensive plans of these cities' modernization; the work on their realization is started.

However the realization of the mentioned programs is constrained with the shortage of the financial resources though the regional authorities try to find the reserves of financing. At the same time at the federal level this question is solved extremely slowly.

In P. Minakir's article it is marked, that now the growing differentiation of the territories becomes already a political problem. At the same time the realized spatial policy does not take into account the specificity of the country.

The methodical set of influences on economic development offered by the federal governmental bodies does not promote the solution of this problem. The concept "growth points", "zones of outstripping development", in P. Minakir opinion, will solve the problem of economic disproportions. And it is necessary to agree with it.

In the Russian conditions, as the scientists consider, the transition to the system of engineering strategy of the development in the subjects of the Federation and federal districts which is necessary to base and coordinate with the strategy of the development of the national economy.

Now the work on the creation of the strategy of the socio-economic development of the regions is carried out under the control of the federal bodies of the government. P. Minakir results the circuit of management of the regional economic development.

At the same time the transition to the strategic forms of management is required by the socio-economic development of the territories at the regional level.

These questions are also solved by the ISEDT of the RAS in which works [2 – 6] the methodology of the strategic planning and mechanisms of realization of the strategy of socio-economic development in the territories are submitted. The methodical set is approved by the development of the strategy of the socio-economic development in some municipal areas of the Vologda Oblast.

However not all the municipal formations in the area the have documents of the strategic character even at the regional level. It is impossible to speak about the presence of the strategy of the socio-economic development of settlements, especially rural ones. Besides the available strategies frequently have formal character. It also forces to doubt of the efficiency of the regional socio-economic policy directed on the alignment of the levels of economic development in the territories.

The urgency and acuteness of the problem allow concluding, that the researches of the question of the spatial differentiation of regions by the Russian scientists will be continued, and first of all regarding the development of the theoretical and methodological bases and methods of the reduction of economic disproportions. Application of the scientific experience into practice directly depends on the political will of power structures both in the center, and at the periphery.

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To the book by M.V. Klinova "State and private capital: from theory to practice of cooperation in European countries"

(M.: Master, 2011. – 400 p.)

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The monograph by M.V. Klinova "The State and private capital: from theory to practice of interaction in the European countries", which was launched in 201, is devoted to the research of the urgent problem of the state-and-private business and partnership in the countries of the European Union and Russia.

According to the logic of the narration the book will consist of two parts. The first part in a greater degree is devoted to concepts, and also to the documentary substantiation of cooperation between the state and private capital, including public services within the legal space of the EU. The second part is devoted to realization of practical interaction between the state and private capital (including state business) for the period from the last quarter of the 20th century to the beginnings of the 21st century.

The arrangement of the chapters from Unit One is caused by the system "thesis – antithesis – synthesis". In the beginning two extreme points of view towards the mutual relations between the state and private capital are investigated: reduction of the state's role to minimum and maximal nationalization. The views within the framework of which the symbiosis of the considered representations is planned, the turn of the economic idea to the synthesized approach in use of the state-and-private partnership (SPP) are also analyzed.

In the focus of the mentioned work is the foreshortening less researched by experts and nowadays rather urgent for the role of the state in the economy: its interaction with private capital mainly in the sectors of economy with the attributes of natural monopolies, starting from water, heat, gas, the electric power supply and finishing with the main pipelines, etc.

The separate chapter is devoted to the analysis of the legal provisioning of the SPP and regulation of the infrastructure development in the documents of the European Union, the organizations – social partners of EU (among which is the European center of enterprises with participation of the state in capital and enterprises of the general economic value), and also in the separate countries of EU. In the final part of the book the modern realities of cooperation between the state and private capital before, during and after crisis are submitted.

In the author's opinion, at the present period the state renders the essential influence on the economy, in particular consistently developing infrastructure. Methods, accents, intensity and directions of the activity of private capital (the basic driving force of progress in production) vary. Infrastructure development on the basis of partnership between the state and private capital acquire special importance everywhere in the conditions of globalization, competition aggravation, change of the ratio of forces in the poly-centralized world economy.

Referring to the history of economics allows revealing the number of the key problems of the state in the market conditions, namely support, protection, encouragement of the production development with relying on private initiative and firmness of the property right. Interaction between private capital and the state is obviously possible and justified both in the spheres traditionally categorized as natural monopolies, and in production in the form of state-and-private business.

However, the author marks, that both the surplus and the lack of the state participation in the economy are bad.

The search of the inevitable pragmatic compromise between the state and business which necessity was revealed by economic recession, shows, that at the highest point of the crisis the state and the private sector do not cooperate actively. The consensus' search, probably, as one of the variants of the Anglo-Saxon and continental models of partnership considered in the book is necessary.

As a whole the book represents fundamental work which will open to readers (students, post-graduate students, businessmen, everyone who addresses to the economic experience of the past and the present) less investigated data on dynamics, mechanisms of interaction between the state and private capital; will interest by the submitted comments, extrapolations.

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