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FROM THE CHIEF EDITOR

Vladimir A. ILYIN
Doctor of Economics
Professor
Honored Scientist of the RF
Director of ITSED RAS
ilin@vscc.ac.ru

Dear readers,

Reducing recovery rates of the domestic economy after the severe crisis creates a new wave of proposals aimed at finding ways to move forward. This process enhances expanding preparation in the country for upcoming December 2011 elections to the State Duma of the Federal Assembly, and in March 2012 – elections of the President of Russia. Views at the economy modernization and ways of implementing it are specified and a number of authors grow as well who believe that withdrawal of Russia from the crisis is not confined to elimination of failures revealed in functioning of fiscal and production systems as well as reducing of social problems acuteness. These authors consider current measures not to solve existing problems if a new ideology and strategy of society reconstruction are not developed and the people are not armed with understanding of ultimate goals of transformation and if purposes themselves do not give rise to spirit and energy. According to the authors of the recently published book "Non-economic brinks of economy", "the success of reforming and its popular support are guaranteed when it gradually increases the level of living, steadily expands purchasing power and, consequently, the market for industry and agriculture. In this case, based on the growth of production the social orientation of the state policy increases"[1].

In the center of rethinking of goals and ways of modernization there is a question of the role of the state. Conductors of market reforms in Russia have called for withdrawal of the state from the economy. Meanwhile, the international practice demonstrates growing involvement of the state to redistribute created revenue. The world has realized that only in the power of the state to oppose elements of growing social stratification of population, to ensure equitable access of people to public goods and thus promote consolidation and stability of society. According to recent national studies, in the USA the share of own accumulated income through taxes, excise taxes and duties range from 40 to 43% of gross domestic product, in Europe – from 45 to 50%, and the Scandinavian countries – up to 65%. In Russia the share of consolidated budget is much smaller – about much smaller – about 30% of official GDP, while taking into

[1] Non-economic brinks of economy: unknown interference. Research and publication notes of sociologists / interdisciplinary project manager and research editor O.T. Bogomolov, deputy manager of interdisciplinary project B.N. Kuzyk. - M.: Institute to Economic Strategies, 2010. – p. 6.

account undeclared (shadow) incomes – less than 20% of actual GDP[2]. As a result, we can not properly ensure maintenance of army, education, health care, culture, science, law machinery, subsidize agriculture, finance many important infrastructure projects.

Flaws of the course of market reforms conducted in the country emerged with great force in the global financial crisis which has seized Russia. Despite the reinforcement of the budget with the reserve fund established due to high foreign export prices for oil, the budget system of the country has experienced serious shortage. In 2010, in the federal budget it was 5.3%. From 2011 and in 2012 – 2013 high federal budget deficit will be eliminated, gradual decline in its revenues and expenditures to GDP, growth of public debt and budget allocations directed for its maintenance are formed. Growing social obligations are accepted as capacity to meet them reduces. Negative dynamics can be traced for most of components of innovation expenditures[3].

These problems are more acute in the budget process of the majority of Russian regions. Thus, analysis of consolidated budgets of subjects of the North-West Federal District, carried out by ITSED RAS, showed that their actual content deteriorated in 2008, in 2009 budget deficit to its own revenues have 9 regions out of ten within the District. In the Vologda and Archangelsk oblasts, in the Republic of Karelia deficit exceeded 20% (primarily because of decline of production and sales in metallurgical, timber and machine-building complexes). According to factual implementation of consolidated budgets in 2010 the budget deficit to personal incomes in the Novgorod oblast was 20.3%, in the Vologda oblast – 19.3%, and thus there were

Table 1. Consolidated budget deficit of the RF subjects in the North-West Federal District, in % to own income

Regions	By the actual execution			By the approved indicators for 2011
	Year of 2008	Year of 2009	Year of 2010	
Leningrad oblast	0	8.6	0	5.8
Republic of Karelia	2.0	20.2	2.2	6.8
Murmansk oblast	0.9	7.7	0	7.6
St. Petersburg	5.7	2.6	4.1	10.1
Novgorod oblast	6.7	10.3	20.3	10.9
Kaliningrad oblast	0	0	11.2	13.9
Vologda oblast	0	23.2	19.1	15.0
Komi Republic	1.1	3.0	0	15.8
Arkhangelsk oblast	12.0	21.7	0.6	18.0
Pskov oblast	0	6.5	5.3	27.0

Sources: data of Treasury of the Russian Federation, the calculations of ITSED RAS, the Laws of the RF subjects of regional budgets for 2011 – 2013.

7 regions with deficit in the District. It must be taken into account that this has occurred against the backdrop of a number of serious measures to reduce the formerly traditional expenditures. Particular attention should be paid to the fact that according to approved indicators supplies of all regional budgets of the District in 2011 were adopted with a deficit to own incomes *(tabl. 1)*.

Budgets of all regions of the District by their actual filling in 2008 – 2010 are burdened by the growing debt, which according to taken for 2011 indicators has a strong growth trend *(tabl. 2)*.

Reduction of specific constant weight of capital investments is characteristic for the structure of consolidated budget expenditures of the majority of regions of the District in 2008 – 2010 *(tabl. 3)*.

In 2010, the sum of capital investment in relation to volumes in 2008 in the republics of Karelia and Komi, the Vologda, Arkhangelsk and Leningrad oblasts decreased by one third. It is still very difficult to talk here about modernization orientation of budgets.

[2] Nigmatulin R.I., Nigmatulin B.I. Original theorems of economic modernization of Russia // Non-economic brinks of economy: unknown interference. Research and publication notes of sociologists / interdisciplinary project manager and research editor O.T. Bogomolov, deputy manager of interdisciplinary project B.N. Kuzyk. – M.: Institute to Economic Strategies, 2010. – p. 44.

[3] Goregliad B. Singularities of the federal budget draft for 2011 and for the planning period of 2012 - 2013. // Federalism. – 2010. – № 4. – p. 83-90.

In the fourth issue of our journal over the past year the expert's report of the Public Chamber of the Vologda oblast to a draft of the Law of the Vologda Oblast "On Regional Budget for 2011 and a new planning period of 2012 and 2013" was published.

The paper characterized taking into account the current state the reserves of replenishment of profitable part of its budget and increasing of efficiency of the budget expenditures. The discussion in Legislative Assembly of a number of proposals submitted in the expert's report, were reflected in the enactment.

However, the relevance of formation of regional budgets and raising of their role in socio-economic development of territories requires amplification of attention of the scientific community and practitioners to this issue. For this purpose the editors of the journal open a special category, and hope that it will provoke a substantive discussion on ways to enhance the role of regional budgets in the transition to the innovation economy.

In this issue of the journal there is an article by the researcher of ISEDT RAS A.I. Povarova, which considers the problem of revenues increase of the Vologda oblast. These capabilities, as the author approves, are primarily associated with the diversification of income potential of the region (increase of production in traditional industries, adoption of advanced technologies, development of competitive corporate structures that are interested in innovations). However, own revenues of the regional budget are largely dependent on the level of tax raising, optimizing of the use of regional standards for preferential tax treatment (elimination of the existing aggregate arrears on payments to the budget would increase regional revenue of the regional budget by 1.9 billion rubles or 6%. Another 1.9 billion rubles of revenues from regional taxes can be obtained as a result of partial abolition of tax benefits granted in accordance with the regional legislation). Organization of a system of indicative planning is of great importance, which will ensure better management of the budgetary process.

Table 2. Public debt of the subjects of the North-West Federal District, in % to own income of regional budgets

Regions	By the actual execution of consolidated budget			By the approved indicators of a regional budget for 2011
	Year of 2008	Year of 2009	Year of 2010	
St. Petersburg	0.1	0.7	2.3	11.8
Leningrad oblast	10.5	12.0	10.6	17.2
Pskov oblast	1.7	3.7	13.2	30.6
Komi Republic	8.3	20.2	16.5	
Murmansk oblast	2.4	22.0	23.0	32.0
Arkhangelsk oblast	15.3	37.5	40.0	
Republic of Karelia	23.2	55.4	45.2	62.,4
Kaliningrad oblast	30.7	54.8	67.5	67.0
Novgorod oblast	17.0	29.4	51.3	75.6
Vologda oblast	3.8	39.4	52.8	77.3

Sources: data of Treasury of the Russian Federation, the calculations of ITSED RAS, the Laws of the RF subjects of regional budgets for 2011 – 2013.

Table 3. The share of consolidated budget expenditures of the subjects of North-West Federal District on investment, in % to total expenditures

Regions	Year of 2008	Year of 2009	Year of 2010
St. Petersburg	33.5	31.0	27.0
Kaliningrad oblast	26.7	28.9	26.1
Novgorod oblast	14.5	9.3	14.6
Arkhangelsk oblast	18.3	10.4	10.7
Vologda oblast	14.7	10.0	10.0
Murmansk oblast	11.0	9.2	10.0
Pskov oblast	9.7	6.9	9.1
Leningrad oblast	15.0	12.7	8.9
Komi Republic	10.8	9.3	6.7
Republic of Karelia	10.5	6.6	6.0

Sources: data of Treasury of the Russian Federation, the calculations of ITSED RAS.

The editorial staff believe that during the discussion the authors of the journal will make constructive suggestions to improve the mechanisms of increasing effectiveness and quality of budget process management on the federal, regional and municipal levels.

This issue contains articles that affect other important aspects of the economy modernization in Russia. The real picture to date is quite controversial. The content is capaciously represented in the preface to the monograph “Problems of development of market economy” by the Chief of the Economics section of the Department of Social Sciences RAS, academician N.Ya. Petrakov. I believe that readers of the journal will look through with interest the text of this preface.

As in previous issues, we continue to publish results of monitoring assessments of public opinion about the state of Russian society.

The tables show the comparison of some parameters of social well-being and sentiments of the population of the Vologda oblast. April 2011 was taken as a reporting period. The base for comparison is the averaged data obtained in the course of four measurements performed by ITSED RAS for the period from January to August 2008[4].

In March 2011 the circle of institutions supporting our journal joined National Nuclear Research University MEPI. Professor Alexander V. Putilov - Dean of the faculty of management and economy of high technologies NRNU MEPI entered the editorial board on the recommendation of the management of NRNU MEPI. Doctor of Economics, Professor Alexander G. Vorobiev – Head of the Department of Economics of NRNU MEPI became a new member of the editorial board.

[4] Methodical aspects of public opinion studies (see the journal “Economic and Social Change: Facts, Trends, Forecast”. – 2010. – № 3. – P. 6).

Evaluation of social status

In percentage to the total number of respondents		Change coefficient	
8 months of 2008	April 2011		
Normal condition, perfect mood			
70.2	64.0	0.91	
Experiencing stress, anger, fear, anguish			
22.1	28.1		1.27
It’s not so bad and we can live, life is hard, but we can bear it			
81.0	76.1	0.94	
We can not suffer our misery any more			
10.9	16.1		1.48
Consumer sentiment index			
107.5	90.1	0.84	
The share of people who consider themselves poor and destitute			
39.8	46.8		1.18
The share of people who consider themselves middle class			
50.7	42.4	0.84	

Evaluation of activities

Line of command	Approval in % to the total number of respondents		Change coefficient	Disapproval i n % to the total numфber of respondents		Change coefficient
	8 months of 2008	April 2011		8 months of 2008	April 2011	
President of the RF	75.0	61.9	0.83	9.3	23.5	2.53
Prime Minister of the RF	76.4	64.3	0.84	10.4	22.3	2.14
Governor of the Vologda oblast	57.8	46.1	0.80	19.9	31.1	1.56

Support of the parties’ activities

Parties	8 months of 2008	April 2011	Change coefficient	
United Russia	40.5	35.9	0.89	
Communist Party	6.8	9.7		1.43
Liberal Democratic Party	7.7	7.5	0.97	
A Just Russia	5.0	3.2	0.64	
Others	1.4	0.0	0.00	
None	20.1	28.8		1.43
Have difficulty to answer	13.7	13.1	0.96	

The geography of articles in the journal broadens. The editorial portfolio currently has research papers from the economic institutions of RAS, which publish the journal, and others as well (Republic of Belarus, Institute for Socio-economic problems of the population RAS, St. Petersburg Branch of the National university – Higher School of Economics, Samara State University of means of communication; Mordovia State University, Bashkir State University, Penza State Academy of Technology).

In April 2011 on the site of the journal a poll was conducted for readers, in which 22 respondents took part. Here are some results of this survey.

Most readers assess changes in the journal in 2010 as positive *(tab. 1)*.

The level of published materials in 2010 most readers rated high enough *(tab. 2)*.

Respondents expressed their views on future popularization of the journal: publication of articles by foreign authors, organization of distribution in Russian universities to offer cooperation, open access to articles.

Respondents supported the usefulness of thematic planning of the journal *(tab. 3)* and the expected topics of the journal in 2011 *(tab. 4)*.

There were suggestions to attract for cooperation such famous economists as P.A. Minakir, S.A. Suspitsyn, S.I. Grigoriev, A.I. Subetto, as well as expansion of the territorial zone of distribution of the journal to the Far East.

The editors will take measures to implement the suggestions.

Table 1. How would you rate changes in the journal as compared to 2009?

Answer variant	Number of answers	In % of total answers
Affirmative, rather affirmative	13	62
Negative, rather negative	1	5
Have difficulty to answer	7	33

Table 2. How would you rate the overall level of published materials in the journal in 2010?

Answer variant	Number of answers	In % of total answers
High, high enough	19	95
Average	1	5
Low, below average	0	0

Table 3. Would you agree with the proposed theme of the journal for 2011?

Answer variant	Number of answers	In % of total answers
Yes	17	81
Нет	4	19

Table 4. Would you consider planning of the journal in categories reasonable?

Answer variant	Number of answers	In % of total answers
Yes	18	90
No	2	10

In this issue, some modified form of popularity rating of articles is proposed to readers. Periods of visit statistics to the site of the journal remain unchanged and are 3 and 12 months.

In the tables articles which kept their position in the rankings are highlighted with yellow, articles that are again or firstly hit the top ten – with green, articles that dropped out of the rankings – with orange. In addition, the column is added, which explains change of the position in the ranking compared with the data published in the previous issue.

The first ten articles of the journal by duration of their viewing over the past 12 months (April 2010 – March 2011)

Rating	otal time of viewing, minutes	Total number of views	Average viewing time, minutes	Article	Issue	Authors	Changing of the position in comparison with the previous issue	
1	1908	76	25	Development of the regional cluster systems	№ 1	Tamara V.Uskova	○	0
2	1788	72	25	Strategy of region's economy diversification	№ 1	Leonid G.Yogman	▲	4
3	1730	49	35	The tourism industry: administrative levels and methods of forming	№ 5	Tamara Ey. Dmitrieva Vitaly A. Schenyavsky	▲	1
4	1715	72	24	Intellectual resources as innovation development factor	№ 11	Vladimir A. Il`in Konstantin A. Gulin Tamara V. Uskova	▲	7
5	1557	92	17	Problems of local budgeting and municipal property	№ 1	Sergey D. Valentey Taliya Y. Habrieva	▲	5
6	1310	72	18	Small business is an important reserve for development of a one company town	№ 11	Stepan N. Tkachuk	▲	70
7	1141	46	25	Comparative assessment methodology of the region's scientific and technical potential	№ 12	Konstantin A. Zadumkin Igor A. Kondakov	▲	84
8	1086	55	20	Status and prospects of tourist industry development in the Vologda region	№ 5	Svetlana A. Selyakova Liudmila V. Dubinicheva Kirill V. Markov	▼	1
9	971	48	20	Strategic reserves of labor productivity growth in the regional economy	№ 9	Vladimir A. Il`in Konstantin A. Gulin Tamara V. Uskova	▲	10
10	703	31	23	Budget provision of municipal entities in the Vologda region: state, problems and improvement ways	№ 9	Anna I. Povarova Tamara V. Uskova	▲	22
Left the top ten								
23	481	20	24	Prospects of Small Innovation Enterprises in the Academic and University Sectors of Science in Saint-Petersburg	№ 6	Alexey A. Rumyantsev Alexey G. Strelnikov	▼	20
34	352	17	21	House Building in the Region: Problems and Tracks of Solution	№ 6	Anna I. Povarova Olga N. Gordina Tamara V. Uskova Anna M. Cherevko	▼	29
60	222	21	11	Prospects for bioenergetics	№ 8	Viktor V. Grachyov Roman B. Markov	▼	51
84	134	10	13	Spatial aspects of the region's population socio-economic differentiation	№ 7	Liudmila V. Kostyleva	▼	82
86	131	10	13	Methodological basics of agrarian and industrial complex innovative development	№ 2	Valentin A. Ivanov	▼	78

The first ten articles of the journal by duration of their viewing
over the past 3 months (January 2010 – March 2011)

Rating	Total time of viewing, minutes	Total number of views	Average viewing time, minutes	Article	Issue	Authors	Changing of the position in comparison with the previous issue	
1	1245	51	24	Strategy of region's economy diversification	№ 1	Leonid G.Yogman	▲	5
2	1162	40	29	Intellectual resources as innovation development factor	№ 11	Vladimir A. Il`in Konstantin A. Gulin Tamara V. Uskova	▼	1
3	1141	46	25	Comparative assessment methodology of the region's scientific and technical potential	№ 12	Konstantin A. Zadumkin, Igor A. Kondakov	▲	14
4	1078	59	18	Small business is an important reserve for development of a one company town	№ 11	Stepan N. Tkachuk	▲	10
5	917	58	16	Problems of local budgeting and municipal property	№ 1	Sergey D. Valentey Taliya.Y. Habrieva	▼	3
6	573	21	27	Development of the regional cluster systems	№ 1	Tamara V.Uskova	▼	1
7	541	14	39	The system of goods promotion as a factor of engineering production development	№ 9	Olga A. Gribanova	▼	3
8	524	27	19	Regulation of regional industrial development (on the example of the Murmansk region)	№ 8	Nataliya I. Zershikova	▲	114
9	489	15	33	Russia and the global crisis	№ 12	Jacques Sapir	▲	7
10	355	9	39	Social development of rural areas as agriculture stability factor	№ 11	Alexandr N. Chekavinsky	▼	1
left the top ten								
11	328	18	18	Dynamics of socioeconomic development of the Komi Republic	№ 1	Vitaly N. Lazhentsev	▼	3
13	286	14	20	Agriculture on the European North: All-Russian agricultural census results	№ 11	Valentin A. Ivanov Elena V. Ivanova	▼	6
23	145	12	12	The prospective ways for prediction of energy consumption of North	№ 1	Svetlana S. Tuinova	▼	20
110	6	1	6	The Vologda region: prospects of territory's demographic development	№ 11	Alexandra A. Shabunova Anton O. Bogaturev	▼	100

Attention! The conference dates are carried over!

Journal № 1(13) published the information **about the holding** in the city of Vologda of the **VI International scientific and practical conference "Strategy and tactics of socio-economic reforms implementation: the regional aspect".**

According to the joint decision of the Vologda oblast government and the RAS Presidium the dates ar carried over to the second half of the year.

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Foreword to the monograph “Problems of Market Economy Development”

Nikolai Yakovlevich PETRAKOV
Academician, Head of the Economy Department of the Social Studies’ Branch of the Russian Academy of Science, Director of the Institute of the Market Matters of the Russian Academy of Science

Nowadays, as I see it, the general tendency to make all the spheres that should be paid for, – education, health care service, and transportation – is being carried into effect... All these issues are not announced from tribunes, but actually all these ideas are put into practice.

And everything is developing in a very odd way. For example, the essentials’ import (food and consumer goods) is growing again. We artificially inflated the ruble’s rate; we made the same mistakes which resulted in a crisis in 1998. Inflation for the recent 7-8 years has grown for 70-80 %, but the dollar exchange rate has changed very little. Instead of the production development, we have to import the goods due to oil and gas sale.

The USA dollar’s rate is artificially lowered, because B. Obama offered the program on overcoming the crisis. He understands that first of all it is necessary to finance science, and as for our country, very little means are allocated to science, in comparison with the advanced western countries. The Americans print dollars (conduct emissions) for the sake of it. What is the main principle in our country? The law is that if we add in some place, it means, that we certainly take away from the other one. If we raise the pensions then we have to raise the tariffs for the electric power, for the natural gas, for rent and so on.

The proclaimed course on enhancement is rather strangely combined with the attitude towards scientific researches. As it is known, the total academic budget in our country is equal to the budget of an average American university. As for the “Skolkovo” ideas, they seem very attractive, but it is not clear, why those tens billions which have already been invested into Skolkovo, were not invested into the development of the centers which had already existed in our country for a long time? We mean such centers as Dubna, Novosibirsk Academic Center, Troitsk and other points where our science had already been developing for a long time.

I saw the Silicon Valley in the USA; I was there in 1989, long before it was visited by the Russian president. In the USA the main principle is that a scientist is a proprietor of the research. The Californian universities located in the Silicon Valley, have the system according to which scientific centers “lease” their laboratory equipment to scientists. And a scientist, who invented something, has the right to dispose of this intellectual property. This system, at which a scientist is the owner of the intellectual property, is very important. In our country we don’t have such laws, and it seems to me, that our leaders do not understand, that the right of the intellectual property is the most important right for an inventor.

I do not know, in what way the "Skolkovo" idea will be carried out. They say there will be some preference for the scientists coming from the West, any privileges under the custom duties, but nobody speaks about the intellectual property - whom will it belong to? If it will be "nobody's" again, people will begin to leave the country. As, for example, our Nobel winners of the present year have left. In Russia these scientists could not realize their ideas. So as to realize their ideas, they had to leave. This is an awful position for our scientists because if they have new ideas, and they are not their proprietors, it means, they should emigrate, so as to realize them abroad.

If I am a proprietor of the ideas and discoveries, I can receive the credit to put the researches into practice, can involve managers to promote the idea. Thus some ideas perish and the others, on the contrary, become important and carry advantage. Certainly, there is some risk here, but only the mentioned way can really transform our country into a competitive and highly technological state.

It is not clear yet, what will happen to our economy further. That's because the orientation to the certain investment component which particularly has been not formulated yet, cannot give any results. All the national projects which we planned remained non-realized. Still I do not see abrupt expansion of investment into those branches which were promised to develop – aircraft construction, shipbuilding and so on. And as for the hi-tech branches... The intentions of their developing are great, but it is not clear, how it will be made... It is the first point.

The second point. It's not clear, what the proclaimed and propagandized enhancement is. We can hear different slogans, is there anything concrete in them? Shall we develop high technologies with our efforts or shall we just follow the western patterns, buy them and introduce them into our national economy? We don't know that.

Let's analyze the development of the motorcar industry. Till nowadays we got the western technologies, and we practically became the "screwdriver" production. We build factories for producing western automobiles, but we do not receive a full technological chain. Let's recall the situation with "Opel" when we tried to buy the full cycle of technologies. The West refused to give it to us. Now we are trying to buy military ships from France, but we do not develop own shipbuilding as separate branch, which earlier was developing rather quickly and successfully.

Unfortunately, serious shifts towards the innovational development are not observed yet. Russia still remains the "raw state" which provides deliveries of energy carriers to the West. The West defined Russia's place in the world economy as the economic deliverer of raw materials, so the country continues to keep it. "Gazprom" and oil companies, color and ferrous metallurgy are all our "trumps" for the forthcoming years. There are no any positive shifts in the field of high technologies or in the use of our national economy for our economy's intensification.

Russia is the country with huge natural and mental potential. It is the unique country in the world. There are countries with high technologies, but not having any natural resources, as, for example, Japan and South Korea. Europe also doesn't possess natural resources. On the other hand, the countries of the Arabian Peninsula have huge natural resources, but there is very low level of mental potential there. For our country all these things come together. Russia, the USA and Canada are among such countries... And we can develop very intensively, but...

Why we sell round timber to Finland and buy there paper, plywood and various building materials, including battens? The same situation is with oil: we sell oil to Poland, and we carry washing powder from Poland. Why cannot we establish processing? Why metallurgists produce bars, but do not produce rental complex profile? And in the West these bars are melted again, automobiles' carcasses and then are sold to us in ready automobiles with the exorbitant prices. Why? Do we really agree to have such a situation in our country forever?.. Let's answer these questions.

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The three-year budget: should we wait for stability?

For the first time the Vologda oblast accepted the budget for three years. In the conditions of sharp means' deficiency it is not an easy task to generate the main financial document in such a way so as to follow the social orientation and to list in the means for economic growth.

In the article the basic results of the regional budget's consideration (for the period from 2011 to 2013) having been carried out by the ISEDT RAS are represented. The main objective of the analysis was estimation of correspondence of the budgetary parameters to the prior problems of the area's development, to the growth of its population's well-being, to providing of the macroeconomic stability.

Regional budget, incomes, charges, budget deficiency, public debt, budgetary policy.

Anna I.
POVAROVA
Junior scientific associate of Institute of Socio-Economic Development of Territories RAS
anna631506@mail.ru

Management of the processes of the financial resources' creation, distribution and consumption is carried out with the help of the financial planning which object is money resources. Both at the national and territorial levels the financial planning is provided by the system of the financial plans, each of which solves the problems of the finance's organization and management. The components of the plans' system of the public finance are the federal and the regional budgets.

In the Budgetary Message of the President of the Russian Federation for the period from 2011 to 2013 one of the budgetary policy's problems in the middle-term and long-term prospects is the issue on coordination of the long-term strategic and budgetary planning. The mentioned problem arose in the connection with the fact that the strategic planning remains poorly coordinated with the budgetary planning. The elaborated strategy of the socio-economic development of regions frequently avoid financial providing the problems' and parameters' achievement within the framework of the mentioned strategy.

Long-term planning will enable to formulate the prior aims, to estimate the necessary resources for their realization and to determine the probable sources. It will allow leaving the inertial approach when the assignments are distributed on the indexing tendencies' basis over the recent years.

Table 1. The change of incomes, regional budgets' deficiency and public debt of the NWFD subjects in 2008 – 2010

Region	Budget incomes, % to the total income			Budgeted deficit, % to the home income			Public debt, % to the home income		
	2008	2009	2010	2008	2009	2010	2008	2009	2010
Karelia Republic	60.0	57.1	61.6	3.2	25.3	5.0	23.3	44.0	55.3
Komi Republic	84.5	72.2	79.6	3.5	5.5	0	8.3	20.2	16.9
Arkhangelsk oblast	60.4	48.3	55.3	20.7	28.7	4.5	15.3	37.5	41.3
Vologda oblast	**87.1**	**60.8**	**71.7**	**0**	**34.1**	**27.3**	**3.8**	**39.4**	**73.0**
Kaliningrad oblast	56.9	42.2	60.7	0	0	12.0	31.4	54.8	63.8
Leningrad oblast	79.5	78.4	81.9	0	9.8	0	10.5	12.0	18.0
Murmansk oblast	64.0	63.6	73.9	0	7.9	0	2.4	22.0	19.3
Novgorod oblast	68.5	62.0	70.0	13.0	9.4	24.9	17.0	29.4	58.3
Pskov oblast	54.0	47.8	50.7	0	8.9	6.8	1.7	3.7	8.5
Saint-Petersburg	84.5	77.5	81.1	5.8	2.7	4.1	0.1	0.7	2.3
NWFD	78.5	70.0	75.6	4.4	6.5	4.0	5.5	13.8	16.7
The Russian Federation	76.1	66.6	71.9	1.1	8.4	2.2	12.2	24.0	25.5

The first step on the way to the long-term indicative financial planning is the three-year budget. Prolonging the planning is necessary according to the macroeconomic reasons that all the participants of the budgetary process would be able to understand, what macroeconomic situation will develop depending on the budgetary policy throughout the following three years. The transition to the three-year budget has even greater value at a micro-level as it will allow the budgetary establishments to conclude long-term contracts on goods' delivery, performing work and rendering services for the state needs.

The three-year budget should become not only the fundamentally new financial plan, but also the active mean of managing the economic development. In other words, the state has a real opportunity not only to collect incomes into the budget and to finance charges, but also to operate the development of the profitable potential of the budgetary system. It means the transition to a qualitatively new level of the public administration.

Providing the coordination of the strategic goals with the budgetary planning is especially actual now when in connection with the resources' limitation both the federal budget and the overwhelming majority of the territorial budgets are reduced to the deficiency.

Misbalance of the public finances under the influence of the global crisis' consequences was the key qualitative change in the budgetary sphere in 2009 and 2010. More than two thirds of the territorial budgets of the Russian Federation have been fulfilled with deficiency.

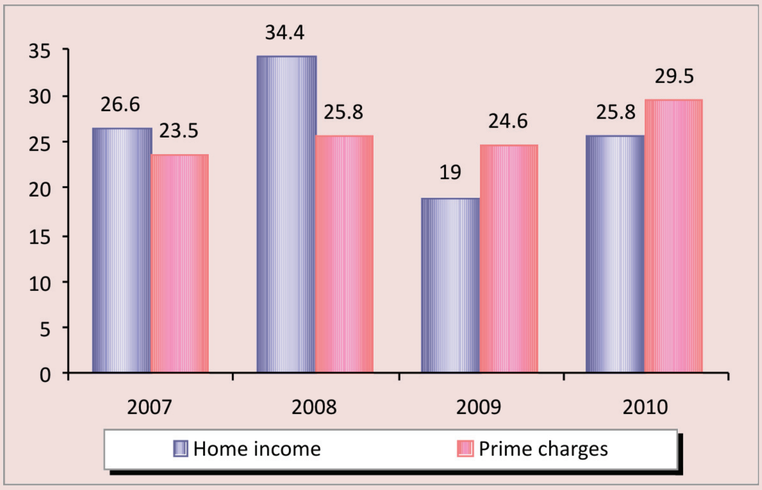
In the subjects of the North-West Federal District there also was deterioration of the parameters determining the stability of the regional budgetary systems *(tab. 1)*. Thus the Vologda oblast was characterized by the high level of public debt, the budget's deficiency and abrupt decrease of the profitable base.

The consequences of the financial crisis in Vologda oblast can be characterized by the fact that for the first time from the beginning of 2000 the region faced the problem of financial providing vital obligations to the population.

At the pre-crisis period Vologda oblast had a considerable stock of budgetary resources – own tax and non-tax incomes in 1.1 – 1.3 times exceeded prime charges[1]. In 2009 and 2010 the region did not have enough home means even for covering prime socially significant expenses *(fig. 1)*.

[1] Among prime budgetary charges are: wage; payments for services and communication, transport and communal services; materials' purchase; social transfers to the population; charges for public debt; charges on obligatory medical insurance of unemployed.

Figure 1. Home incomes and prime charges of the regional budget of the Vologda oblast in 2007 – 2010, billion rubles



The profitable component of the regional budget was practically reduced twice at growing social obligations.

Under such conditions at the budget's formation for the year of 2011 and the scheduled period of 2012 and 2013 the government of the region started with the charges' and deficiency's minimization. Thus the budgetary policy will be focused on the restraint of the public debt's further growth and on providing steady functioning of the social sphere.

The forecast of the area's macroeconomic parameters taken as a basis at the regional budget's formation in 2011 – 2013, is developed on the basis of moderate-optimistic forecast variant of economy's functioning in the Russian Federation, used at elaborating the federal budget's project. The rates of economic growth in the Vologda oblast, according to this variant, are determined at the rate of 3.5 – 5% at the all-Russian growth rates of 3.9 – 4.5% *(tab. 2).*

At the period of 2011 – 2013 restoration of the positive dynamics of the basic macroeconomic and budget-forming parameters is predicted. At the same time, the considerable economic growth is not expected, and the gain of some parameters can be noticed only in comparison with the low base of the year of 2009.

The main source of growth – investment into the fixed capital - will reach the nominal level of the year of 2008 only in 2013. In many respects it is connected to the abrupt reduction of the regional budget's participation in financing investments. Restoration of the enterprises' pre-crisis profit level is taken out of the limits of the year 2013 that will considerably influence the profits tax, which makes the basis of the regional budget.

The gain's rates of the wages' fund will be far from the parameters of the year of 2008. It is caused by actual wages' falling in 2009 – 2011. Thus the prognosis' wage fund does not take into account the payments' increases in the budgetary sphere. According to the calculations made by the Ministry of Economic Development of the Russian Federation, the real wages of state employees will decrease for 2.5 – 4% and even in case of indexation it will only make 55% from the average wages' level across the country.

It is obvious that at the payment's restraint in the budgetary sphere all the wage fund's increase will fall to the commercial structures' employees. The increase in actual available population's incomes is not expected either (a gain 0.7 – 1.1% in 2012 – 2013). Thus, it is possible to conclude, that the rates of growth of the population's incomes and wages concede to the rates of the economy's restoration that will result in actual reduction of income tax's takings.

Table 2. The basic macroeconomic parameters for making up he regional budget's project, % to the previous year*

Point name	In fact		2010, estimation	Prognosis		
	2008	2009		2011	2012	2013
GRP growth rates in comparable prices	-3.9	-13.0	+5.0	+3.5	+4.0	+5.0
Investment growth rates	-8.8	-29.3	+3.0	+12.9	+9.9	+10.3
Industrial production's index	95.8	87.5	108.5	103.5	103.0	104.5
Actual population's incomes	98.7	89.9	105.0	100.0	100.7	101.1
Actual wages' growth rates	+8.3	-5.9	-4.8	-1.6	+0.3	+0.7
Inflation, %	15.2	10.7	6.6	7.9	5.7	5.4
Budget-forming parameters						
Profitable enterprises' income, billion rubles	99.5	22.6	47.6	53.0	56.4	60.4
Growth rates to the previous year, %	+22.7	-77.3	+2.1 p.	+11.3	+6.4	+7.0
Wages' resource, billion rubles	90.5	86.1	91.1	97.1	103.3	110.1
Growth rates to the previous year, %	+24.5	-5.0	+5.8	+2.3	+6.4	+6.6

*Source: the Vologda oblast government resolution 18.10.2010 № 1208 «About the forecast of socio- economic development of Vologda oblast in 2011 – 2013».

In such macroeconomic conditions it is clear that it is impossible for the region to reach the level of the year of 2008 in immediate prospects on the budgetary incomes' volume. Moreover, the incomes' falling is observed, and not only in comparison with the year of 2008, but also with the level of the year of 2010. So, in 2010 the profitable part of the regional budget only made 14% to GRP. In 2011 this ratio will decrease to 11% and remain constant in 2012 – 2013 *(fig. 2)*. The real budget incomes will not exceed 80% of the pre-crisis level.

The structural peculiarity of the regional budget's profitable part in the scheduled period is restoration of the tax revenues' share in 2011 to the level of the year of 2008 and its further

Figure 2. The Vologda oblast regional budget's incomes in 2007 – 2013

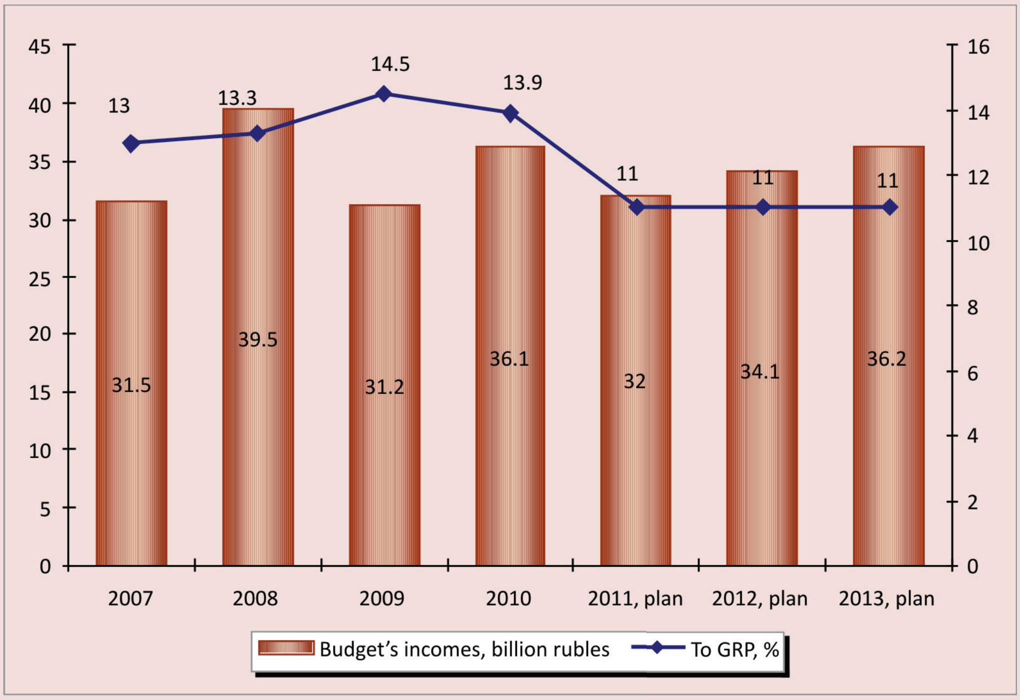
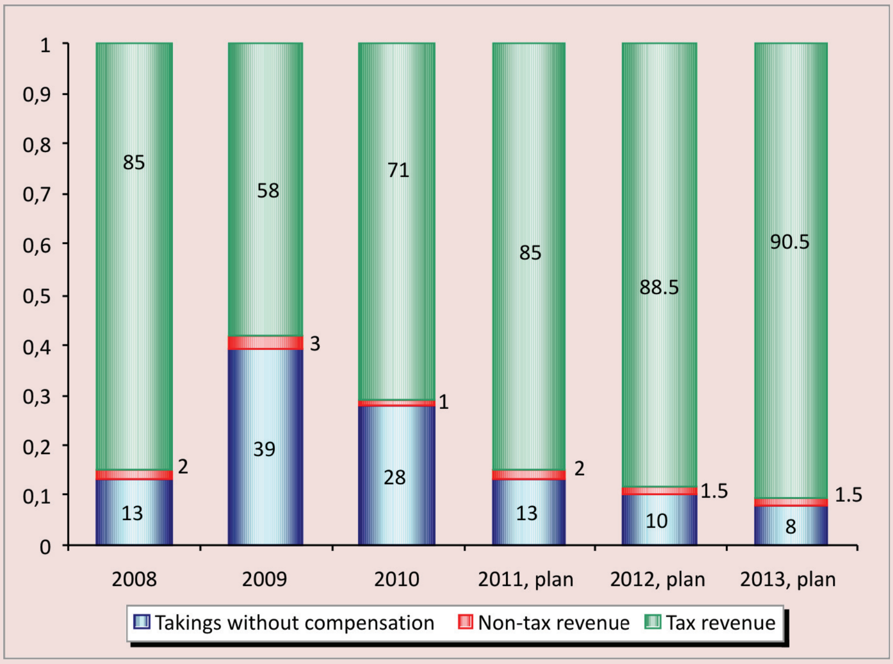


Figure 3. Structure of the regional budget's profitable part of the Vologda oblast in 2008 – 2013, %



increase to 90.5% in 2013. Simultaneously the decrease of the non-tax takings' and gratuitous receipts' role in the budget takings' formation will occur *(fig. 3)*.

The basic sources of the regional budget's taxes for the forthcoming three years still are the deductions from regulating taxes, providing to 80% of all receipts. Though profits tax will obtain its dominating role in the budget revenues' formation, which was lost at the crisis' time, still in connection with the abrupt profit falling in the real sector of the economy in 2009, nominal takings of the profits tax will make 60% of the pre-crisis level, and these takings' position in the aggregate bud get's revenue will make 35% on the average, comparing 53% in 2008 *(tab. 3)*.

The absolute level of the regional budgets revenues and first of all the profits tax is predetermined by the price for metal products. According to the data of the Ministry of Economic Development of the Russian Federation the world forecast of growth on steel consumption in 2011 – 2013 will make approximately 5% a year; in this connection the growth of the ferrous metals' export prices can make from 510 USA dollars for a ton in 2010 to 617 dollars in 2013. The export incomes are supposed to form 40% of the profits tax. Hence, the tax base of the region will be still adhered to the metallurgical complex the following years *(fig. 4)*.

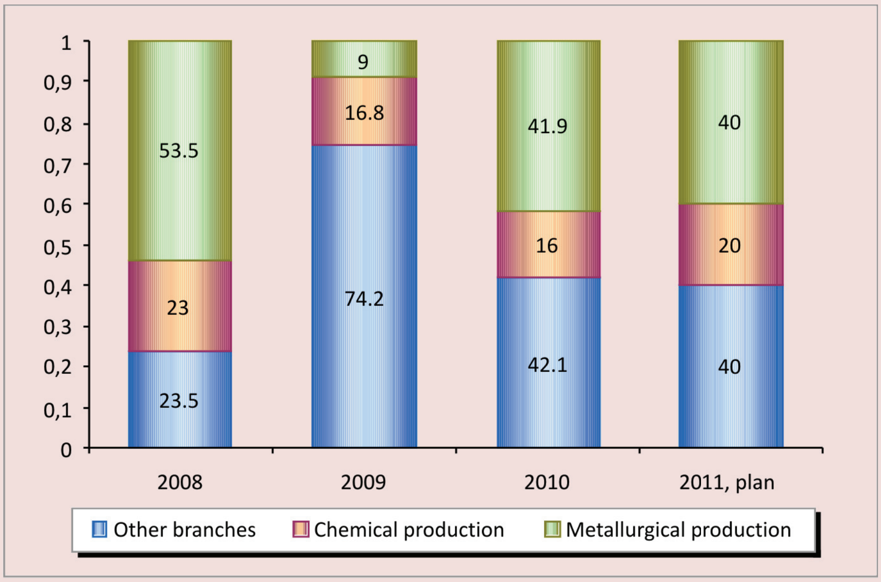
Unfortunately, the three-year budget is not focused on the solution of the basic strategic problems of the soci0-economic development determined by the government of the area in the forecast for 2011 – 2013, that is, overcoming the mono-structural character of the economy.

One of the diversity's directions of the regional budget's tax base we should consider the increase of the regional payments' role, first of all the tax to the organizations' property. Though the share of the regional taxes in the formation of the budget's incomes will increase about 6% in 2008 to 12% in 2011 – 2013, according to the international norms, the fiscal function of the regional taxes is still low (for example, in the European countries the territorial payments form about 40% of the budget).

Table 3. Tax revenues and the regional budget's takings (Vologda oblast) in 2008 – 2013, million rubles

Point name	Actual taking			Prognosis		
	2008	2009	2010	2011	2012	2013
Total tax revenue	33627.3	18243.5	25627.5	27257.5	30184.6	32714.9
Including						
Federal tax	31285.3	15233.5	22605.5	23587.8	26087.5	28462.2
position, %	79.2	48.7	62.7	73.8	76.5	78.6
– income tax	20843.9	4807.0	10766.3	11410.5	12228.9	13269.9
position, %	52.7	15.4	29.9	35.6	35.9	36.7
– income tax on individuals	7805.9	7343.5	7889.8	8251.3	8825.4	9444.6
position, %	19.7	23.5	21.9	25.7	28.4	26.1
– excise	1897.1	2412.9	2989.6	3200.9	4003.2	4615.4
position, %	4.8	7.7	8.3	10.0	11.7	12.7
Regional tax	2342.2	3010.0	3022	3684.2	4112.3	4264.3
position, %	6.0	9.6	8.4	11.5	12.1	11.8

Figure 4. Branch structure of takings into the regional budget of the Vologda oblast from the profit tax in 2008 – 2011, %



The regional budget is greatly influenced by the changes in the federal tax laws. It is necessary to note, that the offered tariffs of the insurance payments are atypically high for the majority of the advanced countries.

The consequences of the growth of rates of the payments insurance can be:

- decrease of the taxes' receipts paid within the framework of special modes, reduction of the taxation base;
- complication of the competitive situation in the regional markets;
- termination of a part of small enterprises' activity;
- redistribution of incomes between the subjects' budgets and the budgets of the system of the state off-budget funds for the benefit of the second ones that will complicate the uneasy situation with the incomes' formation of the sub-federal budgets.

According to the forecasts, the outstripping growth of prices for the industrial output concerning the growth of selling volumes will be one of the negative reactions to this tax innovation. The enterprises have already started to increase the prices, thus reducing the efficiency of an anti-inflationary authorities' policy. According to the data of the Department of Economy of the Vologda oblast, in December, 2010 the price index of the industrial goods' manufacturers reached its maximum and made 130.3%.

As a whole the predicted tax modifications are directed on the growth of the indirect taxes' share in the structure of tax loading that will inevitably result in the increase of the tax burden for the low-profitable layers of the population. The question on the transition to the progressive model of surtax in the considered period is not solved, and also there arises the question on the tax's introduction for the real estate.

One of the main risks of the regional budgetary system's functioning in the considered period the decrease of the gratuitous financial help from the federal budget is. The federal authorities continue to call regions to adhere to the policy of restriction of the budgetary charges' growth, and also to search for ways of additional completion of the regional budgets, thus reducing their dependence on the federal support. The volume of inter-budgetary transfers in territorial budgets for three years will be reduced in 1.4 times. In this situation the social guarantees of the population all in the greater degree will depend on the sub-federal budgets, the overwhelming part of which is deficient. Meanwhile the regions have to solve the most part of problems. It is obvious, that in the conditions of reducing the financial support regions will have to reduce the long-term target programs.

The reduction of inter-budgetary transfers for the Vologda oblast in the federal budget is calculated for three times, including grants (in 25 times).

So what is the reason of such hard inter-budgetary relations? The matter is that during all the period the federal budget will be carried out with deficiency, mainly because of lack of the oil-and-gas incomes *(tab. 4)*.

The pension system's imbalance is the second factor of the federal budget's deficiency. The support of the Pension fund will demand considerable budgetary bringing in on the background of the pension payments' indexation. On financing the transfers to the Pension fund 9% of the federal treasury will be directed, and by 2013 their volume for the first time will exceed the volume of the financial help to the subjects of the Russian Federation.

The third reason of the federal budget's deficiency is the beginning of the state arms program which will demand the increase in the defense cost from 13 to 19% of the gross national product.

It is possible to conclude, that the worsening in the regional budgetary systems' work in 2011 – 2013 in many respects will be caused by the federal budget's instability. So, on the results of the year of 2010 in three subjects of the North-West the budgetary proficiency was observed; in 2011 the regional budgets' deficiency is expected in all the subjects of the District *(tab. 5)*.

The financial crisis which put the budgetary system of the Vologda oblast into the frameworks of rigid deficiency, forced the regional authorities to change their opinion on carrying out of the so-called soft budgetary policy, characteristic for the recent decade. The growth

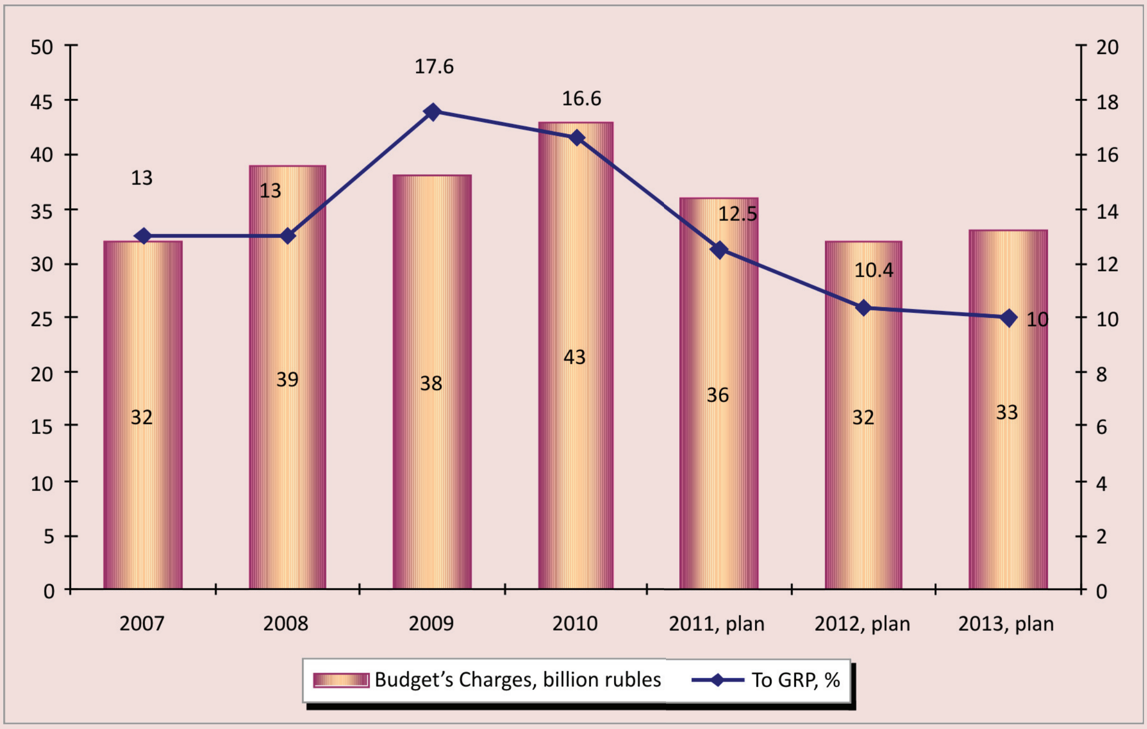
Table 4. Key parameters of the federal budget for 2011 and the scheduled period of 2012 – 2013, % to gross national product

Parameter	2008	2009	2010 (estimation)	prognosis		
				2011	2012	2013
Total income	22.4	18.8	17.4	17.6	17.0	16.8
Oil and gas income	10.6	7.6	8.3	8.1	7.9	7.5
Total charges	18.3	24.7	22.7	21.2	20.1	19.7
Deficiency (-), proficiency (+)	**+4.1**	**-5.9**	**-5.3**	**-3.6**	**-3.1**	**-2.9**
Sources: data Finance Ministry of the RF.						

Table 5. The result of the regional budgets' carrying out if the subjects of the NWFD in 2010 – 2011, (deficiency-, proficiency +)

Region	2010, actual		2011, prognosis	
	million rubles	deficiency to home income, %	million rubles	deficiency to home income, %
Karelia Republic	-768.4	5.0	-1035.3	6.8
Komi Republic	+1359.8	0	-5100.7	15.8
Arkhangelsk oblast	-1224.5	4.5	-4709.3	18.0
Vologda oblast	-7048.9	27.3	-4172.1	15.0
Kaliningrad oblast	-2140.2	12.0	-2620.8	13.9
Leningrad oblast	+2573.6	0	-2409.7	5.8
Murmansk oblast	+2212.2	0	-2290.4	7.6
Novgorod oblast	-3177.3	24.9	-1597	10.9
Pskov oblast	-627.9	6.8	-2767	27.0
Saint-Petersburg	-11638	4.1	-29587	10.1
NWFD	-20183	4.0	-57571	11.2

Figure 5. The Vologda oblast regional budget's charges in 2007 – 2013



of tactical incomes provoked the acceptance of additional social obligations. As a result the increase in charges outstripped the growth of the budget revenues. Realizing the impossibility of the further annual escalating of the state obligations in the conditions of post-crisis development, the government of the area chose the course on their reduction. For the following three years the account part of the regional budget will decrease in 1.3 times at the tendency to the reduction of its share in GRP from 16.6% in 2010 to 10% in 2013[2] *(fig. 5)*.

Judging by the basic parameters of the expenditure, the bulk of budgetary resources will continue to be spent on traditional functions. Most large-scale items of expenditure will

[2] In order to compare the data the expenses are calculated without taking into account inter-budget transfers.

Figure 6. The structure of the regional budget expenditure of the Vologda oblast, %

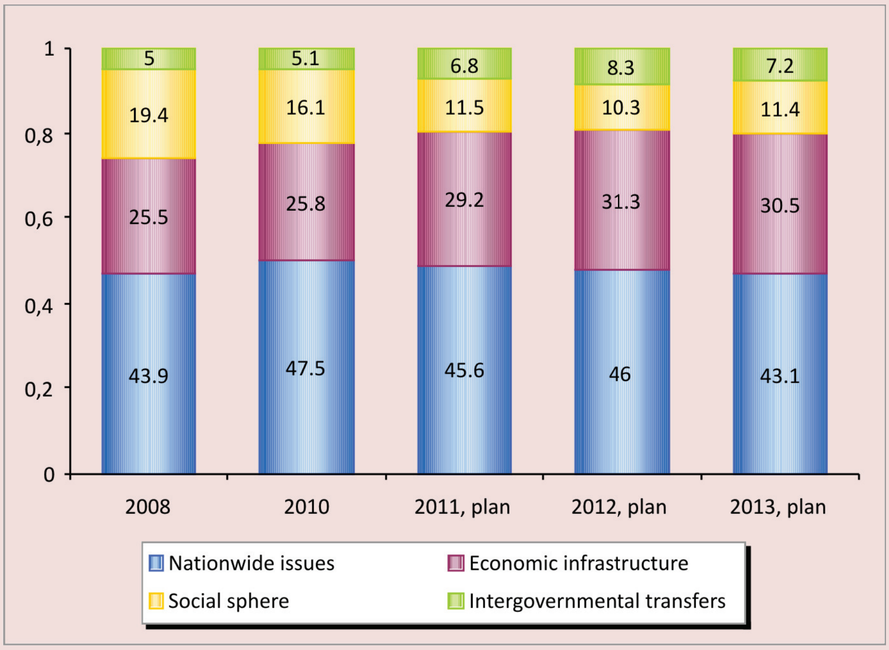


Table 6. Regional budget expenditure of the Vologda oblast in sector "National Economy" in 2008 – 2013

The name of the subdivision	Actual execution					Forecast					
	2008, mill. rub.	2009		2010		2011		2012		2013	
		mill. rub.	% to 2008	mill. rub.	% to 2009	mill. rub.	% to 2010	mill. rub.	% to 2011	mill. rub.	% to 2012
Agriculture	2388.5	1730.1	72.4	1945.5	112.5	937.5	48.2	720.6	76.9	564.5	78.3
Forestry	471.7	474.7	100.6	630.9	132.9	455.7	72.2	415.0	91.1	414.3	99.8
Road sector	3225.8	1939.6	60.1	1103.3	56.9	927.1	84.0	1132.6	122.2	1173.2	103.6
Total	7232.7	6251.7	86.4	6150.5	98.4	3536.6	57.5	2930.7	82.9	3213.8	109.7

remain the social sphere, as well as intergovernmental transfers, the bulk of which is social in nature. Thus, to ensure the fulfillment of social obligations to the population and maintenance of the network of public institutions over two-thirds of funding will be allocated from the regional budget *(fig. 6)*.

It should be recognized that there are objective reasons for the persistence of such expenditures on social services.

Firstly, the negative demographics connected with the population aging requires additional measures to support specific categories of citizens. Secondly, the commitments in the sphere of education, health care, social benefits, indexation of salaries to state employees are constantly pushing social spending to increase. Third, reducing current expenses is more difficult than any others: for example, it is easy to add additional allowances to state employees' salaries, welfare benefits to needy categories of citizens, but it is practically impossible to eliminate or reduce them.

Maintenance of the necessary level of social commitments will be implemented primarily by reducing the share of the national economy expenditure, which is the most significant change in the cost structure of the regional budget.

In general, financing of sectors of the region's economy is cut in half. Moreover, this reduction to the greatest extent accounts for the year of 2011 *(tab. 6)*.

Most large-scale reduction of state support will affect agriculture. Compared to the pre-crisis period the cost of this strategic sector will be reduced 4.2 times and to the level of 2010 – 3.4 times. We should add that the reduction in funding agriculture will occur against the background of two-fold load increase on the wage fund of agricultural producers.

In addition, we should not forget about the consequences of heat waves in summer 2010, which resulted in the agriculture of the region suffered a loss of about one billion rubles. Meanwhile, the volume of funds from the federal budget for the elimination of these effects did not comply with its compensating function (50 million rubles, including 30 million rubles of credits to be refunded).

The Vologda oblast, as well as other regions of the country, needs colossal investment in infrastructure, especially in transport development. However, the dynamics of budget costs for construction and operation of roads indicates their significant reduction not only in comparison with 2008, but with the crisis period too.

Such inflexibility of the regional budget expenditure structure hinders the solving of other economic problems due to budget allocations. The Russian government expects to receive additional funds for repairs and construction of roads by raising excise taxes on gasoline and running the road funds. However, the legal basis for the formation and sustainability of road funds has not yet been created that will create a risk of inefficient use of budget resources allocated for these purposes.

On the background of a high level of the housing stock wear it is projected to reduce the financing of the housing and communal services annually. The scarce investment in the housing programs implementation is being minimized *(tab. 7)*.

It turns out that the regional budget is gradually removed from participation in solving the housing problem, shifting it on the citizens' shoulders, most of which are not able to do it. Co-funding of housing programs from the federal budget is provided only within the "Housing for young families" program at a rate of 40% of the total cost.

Speaking of the budget to support the economy, we cannot ignore the issues of financial security of strategic goals of modernization and innovation development. Resources provided by the main financial document of the Oblast for these purposes do not yet allow us to consider the budget as a tool for implementation of tasks assigned. For example, in 2011 – 2013 regional budget funding of the activities for the long-term targeted programs aimed at modernization and innovation development of economy, will be less than 5% of total expenditures *(tab. 8)*. Thus, three-year budget does not stimulate the structural shift in favor of innovative industries.

The federal budget provides up to 15% of total expenditure for innovative programs, which is also clearly not enough to implement the main idea put forward by the President. Obviously, the problem of modernization and innovation should be addressed through enhanced mechanisms of public-private partnership.

Table 7. Regional budget expenditure of the Vologda Oblast on programs on housing in 2008 – 2013, mill. rub.

Name of the program	Actually executed			Forecast		
	2008	2009	2010	2011	2012	2013
Providing housing for young families	56.4	10.0	15.2	15.0	0	0
Affordable Housing	72.1	17.4	249.9	80.0	80.0	80.0
Housing for orphans	75.9	50.0	158.3	200.0	160.2	160.2
Social Development of Rural Areas	90.7	20.1	0	78.4	40.0	0
Total expenses	295.1	97.5	423.4	373.4	280.2	240.2
Share in total budget expenditures, %	0.8	0.3	1.0	1.0	0.9	0.7

Table 8. Regional budget expenditure of the Vologda oblast on innovative development and modernization of the economy in 2011 – 2013, mill. rub.

Program	Forecast		
	2011	2012	2013
Development of flax complex of the Vologda oblast in 2009 – 2012	205.7	58.8	0
Comprehensive modernization of the city of Sokol in 2010 – 2012	146.8	240.7	0
Development and improvement of road network in 2009 – 2013	1008.2	1065.7	1123.3
Introduction of innovative technologies in the construction, reconstruction and maintenance of transport infrastructure, and in production of modern vehicles in 2011 – 2015	0.85	0.9	0.9
Energy saving and energy efficiency increase on the territory of the Oblast in 2010 – 2015 and up to 2020	96.1	101.6	107.1
Gasification of the Vologda Oblast in 2011 – 2013	43.2	48.0	48.8
Total expenses	1500.9	1515.7	1280.1
To total budget expenditures, %	4.1	4.8	3.9

We can conclude that the simultaneous solution of two major problems – modernizing the economy and social sphere – in the coming years will be extremely difficult. Federal and especially regional budgets are too small for this. It seems that the goal of modernization can be achieved through higher economic growth rates and search for extra-budgetary sources of financing.

For a number of years already, the regional budget of the Vologda oblast is positioned as a budget for social purposes. The share of allocations to social sectors and in the forecast period will not be reduced. From this perspective, the three-year budget fully preserves the status of socially-oriented. But if you follow the dynamics of nominal expenses to all priority sectors of the social sphere in 2011 – 2013, there will be an impression that they are being "frozen" *(Fig. 7)*.

The regional government has set a target to increase life expectancy in the region up to 70

Figure 7. Regional budget expenditure of the Vologda oblast on priority sectors of the social sphere in 2008 – 2013, bill. rub.

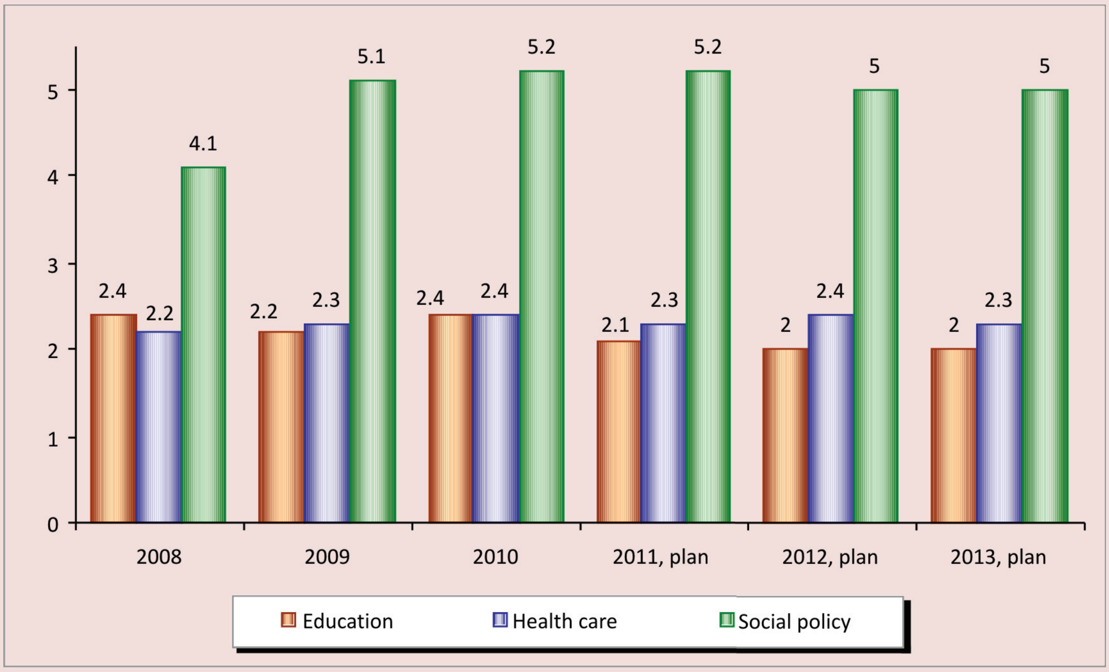


Table 9. Regional budget expenditure of the Vologda oblast on “Health Care” in 2001 – 2013

Sub-section	2011		2012		2013	
	million rubles	% to 2010	million rubles	% to 2011	million rubles	% to 2012
Hospital medical aid	741.2	97.7	587.0	79.2	587.0	100.0
Ambulatory aid	182.5	102.9	160.0	87.7	118.8	74.2
Emergency	146.9	105.9	131.0	89.2	57.6	43.9
Donor blood supply	130.3	102.1	118.3	90.8	118.3	100.0
Insurance premiums for MHI of the unemployed population	2793.2	114.6	2728.5	97.7	2875.9	105.4
Total	5281.6	103.9	5298.7	100.3	5180.1	97.8

Table 10. The debt load of the regional budget of the Vologda oblast in 2008 – 2013

Program	Actually executed			Forecast		
	2008	2009	2010	2011	2012	2013
Receiving credits, bill. rub.	0	6.2	8.2	7.2	4.0	2.0
Public debt, bill. rub.	1.7	10.4	18.5	21.5	17.3	13.3
To own budget revenues, %	***4.9***	***54.7***	***71.7***	***77.3***	***56.2***	***40.0***
Debt service costs, mill. rub.	0	161.1	488.8	927.2	1346.5	1083.1
To the general budget expenditures, %	***0***	***0.4***	***1.1***	***2.6***	***4.2***	***3.3***

years by 2014. However, it is not clear by what means this goal will be achieved. This is evidenced by analysis of the apportionment of resources allocated to health care *(tab. 9)*.

As can be seen 53% in the structure of health care costs are made up by premiums for compulsory health insurance for the unemployed population. The core public health functions will take the least part of the budget investments; besides, there is an explicit tendency of their reduction. Even in the outpatient treatment, where a person gets first medical care the costs for the three years are cut down 1.5 times.

Since mid-2012 a law on a new funding mechanism for public institutions should come into force in its entirety. It can be assumed that it is in advance of this law there is provided costs stagnation for the maintenance of budget network offices, which means reducing the availability of public services. Moreover, given the projected growth rates of natural monopolies[3] and, adjusted for inflation, there will be a real reduction of expenditure allocated for the budget network development. In this regard, it is difficult to speak definitely of a socially oriented budget. Most likely, this is the budget of execution of necessary amount of social commitments made by regional authorities in the pre-crisis years.

Despite the fact that in 2000 – 2008 budget incomes of the Vologda oblast doubled every three – four years, in the region there haven’t been set up proper reserves, because the additional incomes were not sufficiently used for restructuring the tax potential[4]. Therefore, the regional government failed to conduct countercyclical fiscal policy without creating a risk of insolvency in crisis. To ensure the necessary amount of essential expenses they had to resort to debt financing. As a result, in 2009 – 2010, 15 – 18% of the costs were covered by bank and budget loans the interest on which laid a heavy burden on the budget system of the region *(tab. 10)*.

The aim of reducing the debt load will determine the strategy for the regional budget in the forecast period.

The amount of debt in 2011 will reach nearly 80% in the volume of own revenues.

3 As predicted by the RF Ministry of Economic Development, in 2011 – 2013 prices for gas and electricity will rise by 15%, for heat – by12%.

4 From 2000 to 2008 the surplus to the regional budget revenues amounted to nearly 50 billion rubles. Only one-third of them were aimed at increasing of economy industries and housing and communal services funding.

Table 11. Regional budget expenditure of the Vologda oblast on maintenance the management apparatus in 2008 – 2013

Activities	Actually executed			Forecast		
	2008	2009	2010	2011	2012	2013
Expenditures, mill. rub.	1694	1650	1532	1467	1333	1433
As % of total budget expenditures	4.3	4.4	3.6	4.0	4.2	4.3

In 2011 – 2013 it is expected to attract 13 billion of loans. As a result, the cost of their services will grow 2.3 times and amount to over 3 billion rubles that will exceed the funding of many vital industries. The expected budget surplus in 2012 – 2013 will be directed not at the cost but the repayment of credits.

On the backdrop of interest costs swift increase the share of the cost of maintaining the state apparatus is not reduced *(tab. 11)*. Nominal spending on administration exceeds the destination authorized under other sectors, except education, health care and social policy.

At the same time it should be noted that the undoubted advantage of the new budget is the expansion of the program funding. The share of expenditures formed not in the basic functional but in the programmatic classification will increase from 10 to 15%. Noteworthy is the Government's desire to balance regional fiscal system, for the first time since 2000-ies the budget is planned with a surplus in 2012 – 2013.

Of course, it is necessary to consider that in the short term most budgetary problems of the Vologda oblast which has not yet overcome the effects of the crisis will be determined by scarcity of the federal budget and the intensity of budgetary control.

In this situation it is required to have a new approach to the management of the regional finances. With low quality of institutional environment the most important measures to improve budget management, particularly budgeting by results, have remained unimplemented. Therefore, in the immediate cycle of fiscal policy it seems necessary to focus on the issues of restructuring the budget network, increasing innovation and transparency in the system of government procurement, optimization of individual budgetary procedures.

The most important reserves of strengthening the region's fiscal capacity should be considered the following:

1) Increasing the level of tax collection. To this end, tax and financial services of the Oblast should make more active use of the rights to undisputed penalties of existing debt payments to the budget. Potential additional revenue of the regional budget by eliminating the aggregate debt to the budget is estimated at 1.9 billion rubles, including arrears in the amount of 0.7 billion rubles[5].

2) Increase of regional taxes role in the formation of budget revenues by optimization of motivation tax policy both at the federal and regional levels. As a result of providing benefits on property taxes in accordance with regional laws the Vologda Oblast lost 7 – 11% of tax revenues with an average North-West performance of 5% in 2006 – 2009[6]. In connection with this an urgent task now is to review regional legislation in the sphere of tax benefits. Reduction of benefits to the average North-West level will increase the budget revenues by 1.9 billion rubles or by 6%.

In the area of property tax benefits are granted not only by regional legislation, but in accordance with the RF Tax Code. Only for the period of 2008 – 2009 the Vologda oblast's budget losses due to the benefits under federal law amounted for 1.5 – 3 billion rubles or 4 – 12% of tax revenues[7]. Cancellation of federal benefits for state and local taxes could provide an increase in income from property tax by

[5] According to the Federal Tax Service Office of the Vologda oblast on 01/01/2011

[6] According to the results of ISEDT RAS R&D "Methods of increasing budget capacity of the region", conducted in 2010.

[7] Ibid

more than 2 billion rubles; and from the land tax in the budgets of municipalities – by 0.2 billion rubles.

The need for changes in budget legislation in order to strengthen the revenue base of lower budgets is specified in the budget message of the Russian Federation President, but the Russian government is in no hurry to implement them. Meanwhile, federal benefits are fairly evenly distributed across the country, so the result of their withdrawal will be noticed by most regions and municipalities.

3) Increasing the level of costs execution. ISEDT RAS studies conducted on the budget problems show that during the regional budget execution there has developed the practice of underfunding of the approved expenditure. This disorganizes the functioning of all spending units. Thus, for the period of 2008 – 2010 the amount of unused budget appropriations by chief administrators of loans amounted to more than 3 billion rubles. The region returned to the federal budget 700 million rubles of unused targeted transfers. Given that most of the untapped resources are related to subsidies transferred from the federal budget at the end of the fiscal year, a significant legislative correction of a refund order of targeted subsidies in terms of their possible remaining in sub-federal budgets is required. It is necessary to legally establish the threshold of acceptable change in the budget during the year.

4) Further optimization of the costs on the administrative apparatus. Despite a rather significant reduction in funding for the regional state agencies in 2009 – 2010, not all administrative units found the opportunity to limit the costs on the operation of their bodies. For example, analysis of the departmental structure of the expenditure part of the regional budget has shown that in 2011 – 2013 there is provided increased funding for the Control and Audit Chamber, the Department for Magistrates, the Department of Civil Service and Personnel Policy, the Department of Employment.

5) Intensification of work on getting the federal budget loans. Out of the 13 billion rubles of credit funds, planned to bring in the regional budget in 2011 – 2013, the share of loans from the federal budget which are less burdensome in the size of interest payments, accounts for only 1 billion rubles. The forecast figures in terms of maintenance cost loans are 12.6 times cheaper than bank loans service. It is obvious that to reduce the debt burden of the regional budget system one must change the balance of borrowing loans in favor of federal budget credits. This will require additional work of the regional government with the RF Ministry of Finance.

Undoubtedly, the regional budget execution in 2011 – 2013 will be tight. Revenues of the regional budget system cannot grow as rapidly as in the pre-crisis period. This dictates the necessitates of a new fiscal relations ideology formation, the basic principles of which should be differentiated approach to increasing the tax burden, the implementation of programs to improve costs efficiency and tight control, including the public one, over the use of budgetary resources.

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Threats to the region's economic security and the ways to overcome them

The paper summarizes the approaches to the definition of the category "economic security of the region", gives its author's interpretation. The main threats to economic security are defined, the characteristic of their manifestation is presented. An analysis of major trends of socio-economic development of the Vologda oblast for the period from 2000 to 2009 is carried out, the most obvious threats to its economic security are revealed. The problems of regional economic policy the solution of which is aimed at ensuring economic security in the region are formulated.

Economic security of the region, threats to economic security, development trends of the region, regional economic policy.

Tamara V.
USKOVA
Doctor of Economics, Deputy Head of the Institute of Socio-Economic Development of Territories of RAS
tvu@vscc.ac.ru

Igor A.
KONDAKOV
Ph.D. in Economics, Research Associate of the Institute of Socio-Economic Development of Territories of RAS
kia-24@mail.ru

The transition of the Russian Federation to market economy in the early 1990's and integration of national economy into the global economy have led to significant changes in all parameters of socio-economic development of the country and its constituent regions. After a sharp decline in output, fall of living standards of much of the population, critical reducing the effectiveness of national economy and the deterioration of the environment since the early 2000's there appeared, and then became steady a positive trend in the development of the Russian economy. According to the Federal state statistics service, for the period of 2000 – 2007 there was a growth in gross domestic product by 63%.

However, the global financial crisis, which seized the Russian economy during the second half of 2008, has become the reason of change of its growth into sharp decline, exacerbation of social problems and uncertainty of prospects. The negative dynamics of major economic indicators was observed in almost all regions of the country. Economic problems affected the wellbeing of the population: the index of consumer and social sentiment trended to be downward [8, 10, 24].

These circumstances require searching for ways to integrated solutions on economic, social and environmental problems and make the task of ensuring the economic security one of the most urgent.

Economic security issues do not lose their acuteness for the past several decades. Theoretical and methodological bases of studying this problem were founded in studies of domestic and foreign scientists, including L. Abalkin, A. Arkhipov, A. Gorodetsky, V. Ivanchenko, D. Lvov, A. Kuklin, P. Minakir, A. Mikhailenko, B. Mikhailov, A. Myzin, V. Tambovtsev, K. Samsonov, V. Senchagov, A. Skopin, A. Tatarkin etc.

Critical analysis of theoretical and methodological approaches to the definition of the category of “economic security” suggests that there are the following levels of economic security: international, national, regional, sectoral, microeconomic, and the level of families and individuals.

The regional level of economic security is one of the most important, as it is here where the goals and objectives of public policy in the sphere of security are realized. At the same time, solving the problem of economic security in the region one should take into account the criteria related to the state as a whole, and considering the specifics of economic security of the territory, separate organizations that operate in the region, and households.

In most studies the essence of “economic security of the region” is interpreted by analogy with the economic security of the national economy.

Thus, according to G.S. Vechkanov [9], the regions is a set of current state, conditions and factors that reflect stability, steadiness and sustainability of the country’s economic development [6].

From the standpoint of researchers N.S. Guskov, V.E. Zenyakin and V.V. Kryukov [11], the essence of economic security in the region can be defined as the possibility of effective control of regional authorities and the management of the efficient use of natural, human, material and financial resources, achieving economic growth, efficiency of regional production, improving the quality of products and services, demonopolization of production, competitive recovery of economic entities.

The author L.Yu. Falinsky [25] believes that the essence of economic security in the region lies in the ability and capacity of its economy to improve quality of life, to resist the influence of internal and external threats, to provide socio-economic and socio-political stability in the region.

Representatives of the Ural economic schools (A.I. Tatarkin, V.A. Chereshnev) [14, 23] suggest that the economic security of a territorial entity (oblast, republic, Federal district) is a set of conditions and factors that characterize the current state of the economy, stability, steadiness and sustainability of its development, the degree of its self-dependence in processes of integration with the economy of the Federation [10].

Critical analysis of the above definition suggests that they regard economic security as a static state of the region. In our view, this economic category should also reflect dynamic characteristics, i.e. the possibility of territory’s development in globalization and volatile external and internal environment.

In this regard, *the economic security of the region is considered as a set of conditions and factors that characterize the stability of the economy, the steadiness and progressiveness of its development, the degree of independence and integration with national economy and the ability of regional authorities to create mechanisms for implementing and protecting the interests of economic entities, maintaining economic and social stability of the territorial community.*

The reasons for the emergence and development of crisis situations, causing threats to the

Table 1. Characteristics of the main threats to economic security

Threat	Characteristic
Decline in production and loss (concession) of the internal market	Destruction of technological capacity, folding progressive restructuring of the productive sector lead to extensive underloading of production capacity, switching separate productions and, consequently, loss of markets
Destruction of scientific and technological capacity and deindustrialization of economy	Cutting down of R&D, disintegration of research teams, reducing orders for high-tech products lead to degradation of scientific and technological capacity, the predominance of primary industries in the economic structure and, consequently, reducing territories' competitiveness
Loss of food self-sufficiency	Aggravation of price distortions between industry and agriculture, full opening of domestic market to imported products with a reasonable rejection of paternalism in relation to the domestic manufacturer's make the territories dependent on food supplies from other regions and countries
Growth of unemployment and a weakening of labor motivation	In view of the sharp decline in living standards and demand for highly skilled labor force there is loss of qualification and skills of the population
Criminalization of economy	Growth of economic crime and racketeering cause people's disbelief in the ability to provide legal protection
Environmental degradation	Increase of technogenic loads and decrease of stability of the natural territorial complexes lead to an increase of diseases and forced-migration

economic security, are the various external and internal factors. A region cannot have a direct impact on environmental factors, and therefore it must adapt to them. Internal environment factors are manageable, and influencing on them, you can manage the security of the regional socio-economic system.

The most significant threats to economic security, which appear due to the action of destabilizing factors, and their characteristics, are presented in *table 1*.

The task of public authorities is monitoring of changes in the region and timely adjustment of the ongoing socio-economic policies. Any factor that has adverse effects on socio-economic processes and which was not settled or controlled in time, can create a threat to economic security.

Based on the foregoing, it follows that the economic security of the region is expressed by:

- ➡ the ability to implement its own economic policy within the federal center policy;
- ➡ the ability to conduct large-scale economic activities addressing the emerging socio-economic issues;
- ➡ the ability to provide assistance to industries, business entities and socially vulnerable population groups in the region;
- ➡ the ability to provide the necessary level and quality of life in accordance with the accepted standards;
- ➡ the ability of authorities to respond to changes in external and internal factors of development adequately.

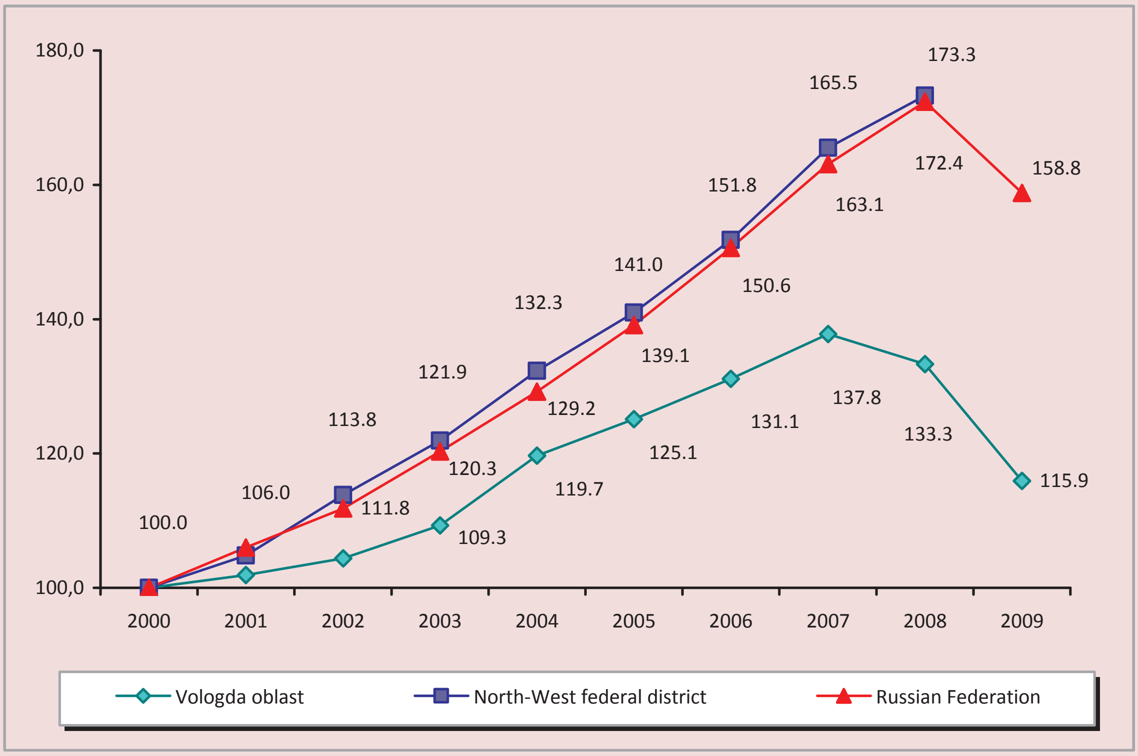
Thus, in order to ensure economic security in the region the authorities' activity should be directed to the following: first, to identify and classify the factors destabilizing the security and control over them; second, to identify threats; third, to develop and implement measures to overcome them.

The Vologda oblast is significantly affected by threats to economic security as it is an export-oriented, industrialized region in the North-West federal district.

Advantageous geographical location, proximity to the regions that are rich in fuel and mining resources, and to the areas with advanced manufacturing industry, good transportation services allow the oblast to establish effective business relationships with regions inside the country and foreign countries. It is conducive to economic development in the region.

However, the growth rate of the Vologda oblast is lower than the average in the Russian Federation. During the period from 2000 to 2007, the gross regional product grew by 38% while the national average – by 63% *(fig. 1)*. The most successful in terms of economic growth for the region was the year of 2004 when the GRP grew by 9.6%, then growth rates were significantly lower (4-5%). In 2009 as a result of the global financial crisis there was a signifi-

Figure 1. Dynamics of GRP volume growth, in % to 2000



cant slowdown in volume of GRP growth in the region – by 13% to the previous year [13].

The Vologda oblast was 4th largest in the magnitude of the gross regional product per capita in 2008 among the subjects of North-West federal district (241.6 thousand rubles). [7]. However, in 2009 this figure dropped and amounted to 175 thousand rubles per person.

The role of productive sector (industry, agriculture, construction; *fig. 2*) is very significant in the creation of the gross regional product. The main share (about 40% of the total GRP) is in industry, and the socio-economic situation of the Vologda oblast mostly depends on the effectiveness of its functioning.

Export-oriented industries associated with the processing of raw materials – ferrous metallurgy and chemical production. In 2009, the share of these sectors in the region's industry was 14 and 54% respectively [7]. Monostructural character of industry and as a consequence, the dependence of the region's development on the state of affairs of several large companies (JSC "Severstal" and a group of companies "FosAgro AG") is a significant threat to the economy of the Vologda Oblast.

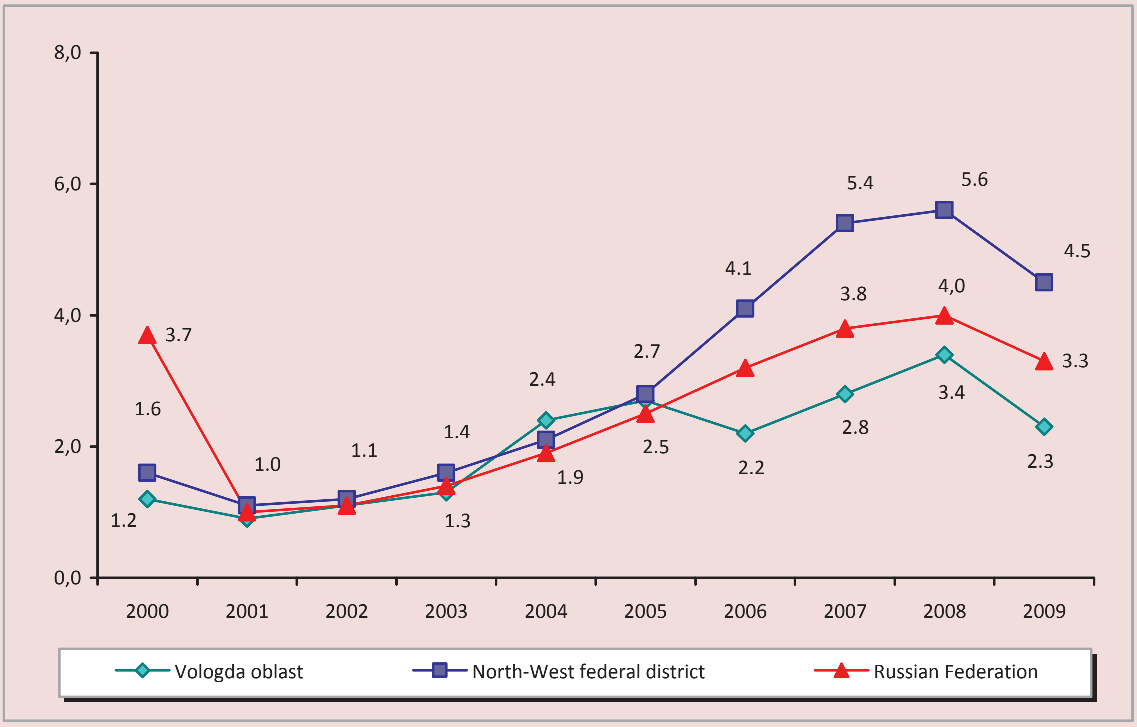
The Vologda oblast consistently has a trade surplus which is achieved through exports. Oblast's foreign trade turnover per capita in 2009 compared with 2000 increased almost twice and amounted to 2.3 thousand dollars per capita, but this is below the national values *(fig. 3)*. As a result of impact of the crisis in 2009 there appeared a significant decline in foreign trade turnover (by 34% per capita). The oblast dropped to 6th place among the regions of NWFD, losing much of St. Petersburg, Leningrad and Kaliningrad oblasts [5].

Furthermore, it should be noted that in the export structure of the Vologda oblast the predominant are chemical industry and ferrous metallurgy (27 and 64% respectively). In the structure of imports, by contrast, a leading position is occupied by engineering products (67%) [7].

Raw materials export orientation, and, as a consequence, the dependence of prices on world markets is another significant threat to the region.

Figure 2. The contribution of goods producing industries to the gross regional product of the Vologda oblast, %

Figure 3. Foreign trade turnover per capita, thous. USA dollars



Narrow specialization of the Vologda oblast in conjunction with the weak performance of economic growth factors is inherent in the regions with the extensive type of economic growth, which on the one hand allows achieving high economic growth rates for short terms, but on the other it weakens the region's resistance to various crisis processes. It was just confirmed by the global economic crisis which begun in autumn of 2008: the Vologda oblast was included in a list of 17 regions which suffered most.

The situation in the industrial sector in the region is still quite complicated. Since 2008,

Table 2. Production indices of the main types of economic activity, %

Type of economic activity	2010 to 2009		2009 to 2008		2010 to 2008	
	RF	VO	RF	VO	RF	VO
Mining operations	103.6	83.0	99.4	66.2	103.0	54.9
Electricity, gas and water production	104.1	108.2	96.1	89.2	100.0	96.3
Manufacturing activity	111.8	110.9	84.8	87.4	94.8	97.0
Including: metallurgical and complete metal products	112.4	116.0	81.9	87.0	95.9	99.9
machinery and equipment	112.2	124.1	71.9	68.7	76.9	85.1
chemical	114.6	103.0	91.5	105.8	106.7	109.7
timber processing and wood production	111.4	113.2	80.5	95.9	88.3	104.4
food	105.4	104.9	99.3	99.1	104.8	103.0

Sources: Socio-economic situation of the Vologda oblast in 2008: report / Vologdastat. – Vologda, 2008. – P. 14; Socio-economic situation of the Vologda oblast in January - November 2009: report / Vologdastat. - Vologda, November 2009. - P. 15; Data of the Federal state statistics service [Electronic resource]. – Available at: http://www.gks.ru

Table 3. Net financial result of large and medium-sized businesses per capita, thous. rubles (in prices 2009)

Territory	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2009 to 2000, %
St. Petersburg	19.0	18.6	11.2	15.8	20.9	21.0	63.4	62.3	62,9	**57.2**	in 3.0 time
Komi Republic	42.3	29.3	14.2	14.1	28.9	38.6	39.1	26.8	30,4	**39.6**	93.6
Murmansk oblast	40.6	7.4	6.5	4.7	32.6	25.9	41.9	53.6	43,6	**37.9**	93.4
Novgorod oblast	11.4	12.3	4.8	5.1	10.1	17.5	40.8	20.5	22,5	**37.2**	in 3.3 time
Leningrad oblast	19.1	13.6	14.8	21.0	19.3	38.3	36.1	37.4	38,1	**27.3**	142.9
Vologda oblast	**61.5**	**21.4**	**20.8**	**43.,0**	**81.7**	**65.0**	**68.1**	**62.4**	**85,1**	**20.8**	**33.8**
Arkhangelsk oblast	15.6	4.7	-1.3	3.4	10.2	15.1	0.1	4.2	-0,4	**19.9**	127.5
Kaliningrad oblast	12.7	11.0	10.0	9.4	10.0	16.9	10.9	8.8	8,4	**5.4**	42.4
Pskov oblast	2.8	2.6	0.0	0.7	1.6	1.3	2.1	2.6	2,3	**1.6**	58.0
Republic of Karelia	11.5	8.3	0.8	0.4	4.2	23.7	14.9	13.1	11,7	**-5.1**	-
NWFD	**23.1**	**14.6**	**9.5**	**14.1**	**23.3**	**26.7**	**40.8**	**39.2**	**45,5**	**33.7**	**145.8**
RF	**23.1**	**18.7**	**13.1**	**18.8**	**28.8**	**33.8**	**37.2**	**34.9**	**33.9**	**30.6**	**132.7**

Source: Regions of Russia. Socio-economic indicators: 2010 stat. coll. / Rosstat. - M.: 2010. - P. 886.

there was observed *a decline in the rate of industrial production* in the Oblast (95.8% to the previous year), in 2009 the situation deteriorated even further (87.6%). Despite the rise of production figures there was a decrease by 15% in category "Mining" in January-November 2010, whereas in the whole of the Russian Federation there was recorded growth *(tab. 2)*.

Among manufacturing industries the most significant growth in 2010 occurred in chemistry (15%) and metallurgy (13%), machinery and wood processing (12%) which are basic in regional specialization. However, indicators growth rates do not provide bringing up to the level of 2008.

The financial results of the Vologda oblast enterprises are indicative of difficult economic environment. As a result of the crisis impact in 2009, their profits in current prices fell almost 4 times and amounted to 20.8 thousand rubles per capita *(tab. 3)*.

Reduction of enterprises' own funds affected the amounts of their investments in production. After steady growth since 2007 there has been a significant reduction in this indicator (by 29%). In 2009 it was 45.7 thousand rubles per capita, while the average for the North-West federal district and the Russian Federation it was 67.8 and 55.9 thousand rubles respectively *(fig. 4)*. This situation negatively affects the process of economic modernization in the region.

Figure 4. Investment in fixed capital per capita, thous. rubles (2009)

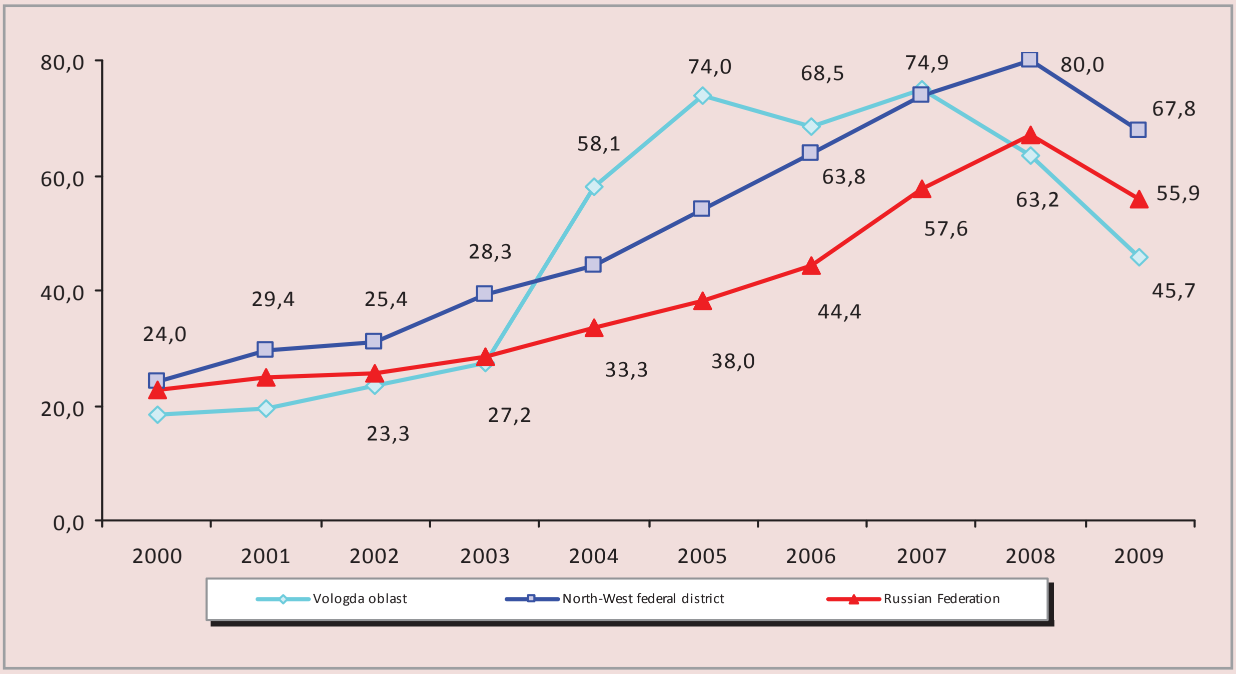


Table 4. Execution of the regional budget per capita, thous. rubles (in prices 2009)

Territory	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2009 to 2000, times
St. Petersburg	24.0	27.9	31.5	32.8	36.0	48.4	67.3	76.5	81.3	**69.8**	2.9
Murmansk oblast	23.7	22.2	27.0	26.8	31.9	30.7	48.3	60.3	61.8	**55.0**	2.3
Komi Republic	30.1	31.3	33.0	30.4	34.7	38.0	42.7	43.6	49.7	**47.3**	1.6
Kaliningrad oblast	13.3	13.6	17.8	18.2	19.7	24.0	30.7	36.7	42.9	**44.9**	3.4
Arkhangelsk oblast	14.1	18.0	19.9	21.8	23.4	26.5	30.1	38.2	44.3	**39.0**	2.8
Leningrad oblast	18.8	22.0	26.0	27.2	29.0	31.8	45.8	37.6	42.7	**38.2**	2.0
Republic of Karelia	23.9	23.8	28.9	26.7	33.1	39.2	40.7	36.2	43.2	**37.5**	1.6
Novgorod oblast	13.7	14.5	15.0	16.5	18.6	25.4	25.2	28.0	36.5	**36.6**	2.7
Vologda Oblast	**20.5**	**19.9**	**21.9**	**25.1**	**33.6**	**32.3**	**36.7**	**42.6**	**44.7**	**32.9**	**1.6**
Pskov oblast	11.3	13.7	17.6	17.3	17.4	18.8	21.5	25.0	28.2	**28.5**	2.5
NWFD	**16.1**	**23.0**	**22.7**	**23.6**	**28.5**	**32.1**	**37.2**	**41.8**	**47.4**	**50.8**	**3.2**
RF	**20.8**	**21.8**	**23.6**	**25.0**	**28.0**	**31.6**	**36.8**	**42.0**	**47.5**	**41.8**	**2.0**
Source: Regions of Russia. Socio-economic indicators: 2010 stat. coll. / Rosstat. – M.: 2010. – Pp. 826-851.											

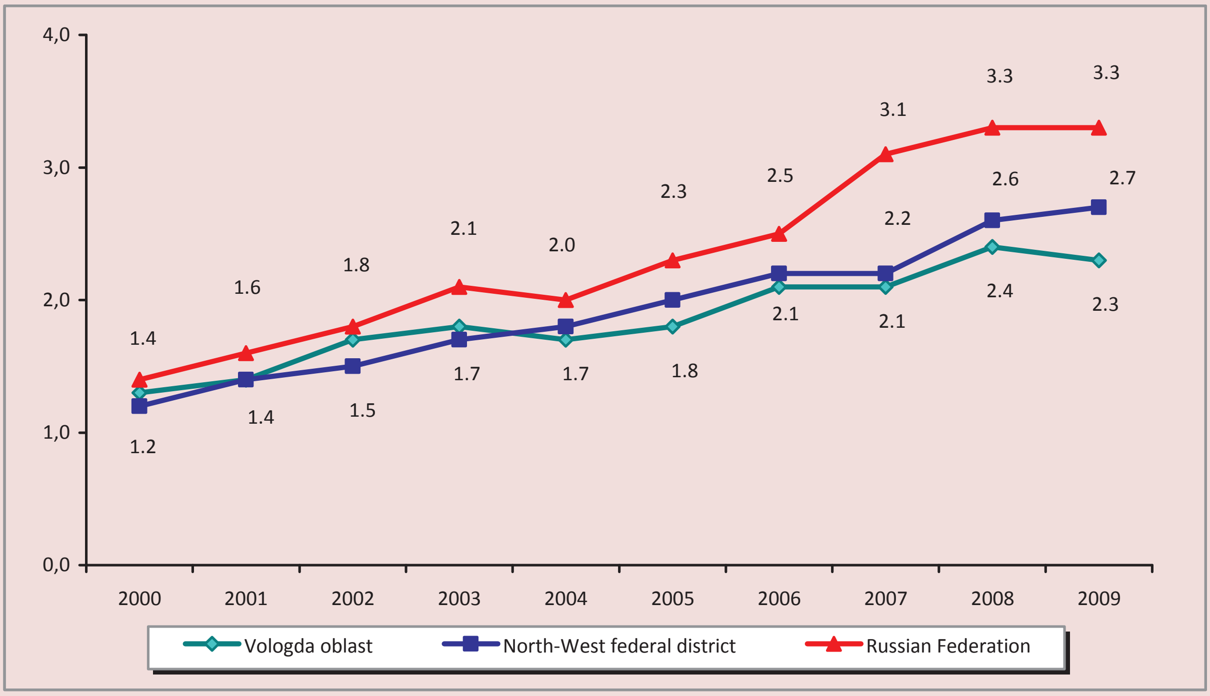
The reduction of budgetary provision also indicates of the increased threat to economic security of the Vologda oblast. The crisis that influenced the industry has undermined one of the main sources of the budget - tax on profits. The volume of this tax fell by more than 20%, and the oblast dropped in terms of fiscal capacity to 9th place among the regions of the NWFD *(tab. 4)*. Since 2011 the Vologda oblast has become subsidized.

Decline in living standards of the population should be also considered as a threat to economic security. In general, for the period from 2000 to 2009 in the Vologda oblast, average per capita income has grown 6 times and amounted to only 12.1 thousand rubles per month, although it is considerably lower than in the NWFD and the country as a whole (17.0 and 16.9 thousand rubles, respectively, *tab. 5*). Such a level of per capita income reduces the

Table 5. Per capita income of the population per month, thous. rubles (in prices 2009)

Territory	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2009 to 2000, times
St. Petersburg	7.59	8.61	9.87	13.36	15.89	19.41	19.88	20.95	19.22	**21.33**	2.8
Murmansk oblast	11.53	12.24	12.74	13.54	14.35	16.02	17.86	19.21	20.76	**21.00**	1.8
Komi Republic	9.56	12.28	13.80	14.04	15.73	17.18	18.63	20.05	20.24	**19.99**	2.1
Arkhangelsk oblast	6.30	7.49	8.40	9.09	10.24	11.99	13.35	14.34	16.09	**16.56**	2.6
Kaliningrad oblast	5.32	5.59	5.92	7.06	7.78	9.64	12.30	14.18	13.93	**14.50**	2.7
Republic of Karelia	6.65	7.13	8.57	9.24	9.78	10.86	12.34	12.52	13.45	**13.51**	2.0
Novgorod oblast	5.29	6.03	6.53	7.06	7.32	8.34	9.94	10.63	12.62	**13.07**	2.5
Leningrad oblast	4.23	4.90	5.52	6.16	7.83	9.11	11.83	13.35	13.22	**12.14**	2.9
Vologda oblast	**5.60**	**6.53**	**7.39**	**8.27**	**8.81**	**9.56**	**11.97**	**12.87**	**13.07**	**12.06**	**2.2**
Pskov oblast	3.78	4.31	5.67	6.53	7.06	7.31	8.78	9.62	11.10	**11.21**	3.0
NWFD	**6.64**	**7.62**	**8.65**	**10.29**	**11.78**	**13.81**	**15.29**	**16.44**	**16.37**	**17.03**	**2.6**
RF	**6.49**	**7.35**	**8.24**	**9.63**	**10.69**	**12.19**	**14.07**	**15.53**	**16.25**	**16.89**	**2.6**
Source: Regions of Russia. Socio-economic indicators: 2010 stat. coll. / Rosstat. – M.: 2010. – P. 164.											

Figure 5. The ratio of per capita income and the value of the minimum of subsistence, times

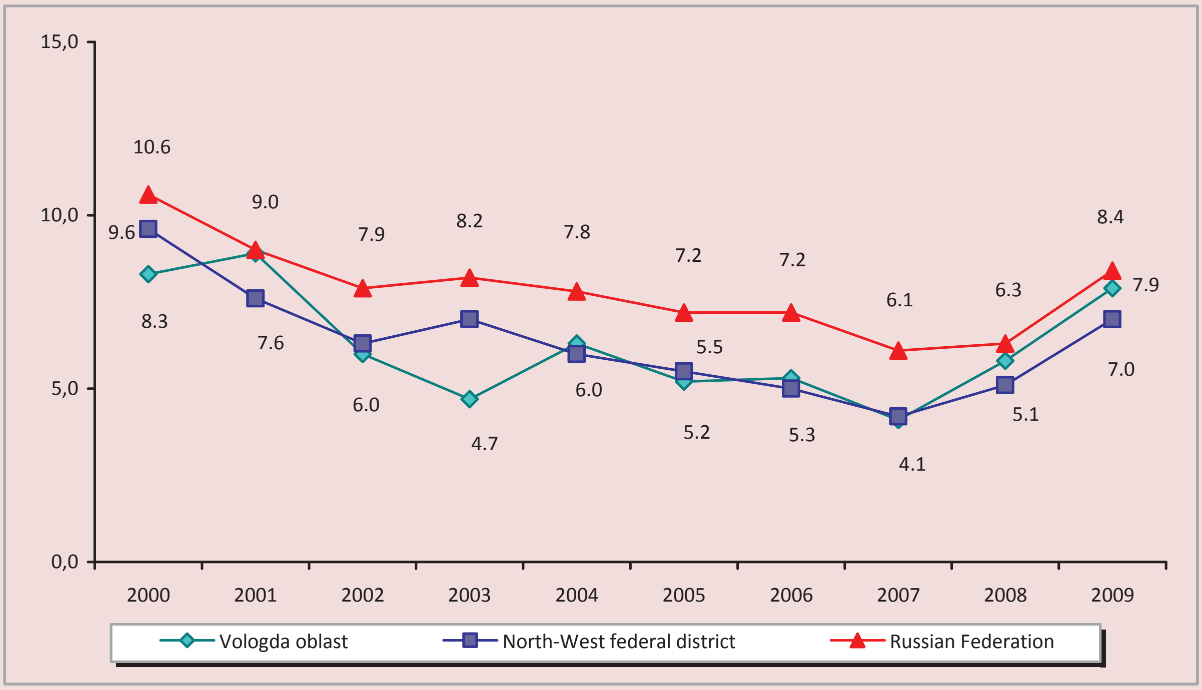


solvent population demand, and without it, it is impossible to increase production of goods and services.

Low level of per capita income in the Vologda oblast is also confirmed by its relation to the value of the minimum of subsistence (the valuation of a minimum set of food, non-food goods and services necessary to maintain person's health and to ensure his/her life activity). In 2009 per capita incomes in the region exceeded the subsistence minimum 2.3 times, while in the North-West federal district and Russia, this ratio reached 2.7 and 3.3 times, respectively *(fig. 5)*.

And at that16% of the region's inhabitants had incomes that were not even enough to buy

Figure 6. Unemployment rate, %



a minimum basket of goods (13%in Russia as a whole) [5]. Public opinion polls show that the situation in the region is even more difficult. In the structure of social self-identification of the population the group of "the poor and needy" is the most numerous (47-49%)[1].

Unemployment increase is also a factor destabilizing the social situation in the region. If before 2008 the unemployment rate in the Vologda oblast was one of the lowest in the North-West federal district, as a consequence of the global financial crisis there has been a significant increase in this index in the region – up to 7.9% (average for Russia – 8.4%, *fig. 6*). An unemployed person, who has no source of income, can only count on the state's support in the form of a benefit, the value of which ranges from 978 to 5 635 rubles with regard to 15% of the northern coefficient [12].

Falling living standards and the difficult economic situation do not favor the reduction of the population morbidity. According to this index the Vologda oblast is at 6th place in the district. And for each one thousand population there are 887 of ill people per year, whereas in the Leningrad oblast there are only 585 people (1st place). There was a significant reduction in morbidity in 2003 – 2005 compared with the year of 2000 *(tab. 6)*.

In general, *the morbidity rate* in the region is still quite *high*.

The present demographic situation both in the Vologda oblast, and in the Russian Federation as a whole is characterized by *a persistent population decline* that began in 1992 *(tab. 7)*. According to the forecast of ISEDT RAS, by the beginning of 2020 the working age population in the Vologda oblast will decrease by 18%. In other words, the aging of the population in the region will continue in the period until 2020, the consequences of which will be significant for the demographic ("base" for low fertility and high mortality rates), economic (slowdown in the process of labor substitution, increase of load on the working-age population) and social (welfare spending increase, load on social infrastructure increase) aspects of social life [26].

[1] According to the public opinion polls regularly conducted by ISEDT RAS

Table 6. Morbidity per 1 thousand of the population, people

Territory	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2009 to 2000, %
Leningrad oblast	543	546	538	548	524	529	541	524	517	**585**	107.7
Pskov oblast	617	601	620	629	606	593	610	621	645	**803**	130.1
Kaliningrad oblast.	598	605	626	640	668	700	747	735	749	**821**	137.2
Novgorod oblast	796	811	809	863	817	835	894	856	817	**905**	113.7
Murmansk oblast	870	873	838	826	817	780	815	818	821	**855**	98.2
Vologda oblast	**850**	**836**	**826**	**810**	**808**	**803**	**869**	**836**	**866**	**887**	**104.3**
St. Petersburg	694	663	678	688	682	742	801	825	873	**916**	132.0
Komi Republic	1092	1008	1063	1043	984	943	940	956	938	**983**	90.0
Arkhangelsk oblast	915	918	926	930	930	921	985	967	957	**1023**	111.8
Republic of Karelia	1002	1006	1027	1083	1057	1001	1009	983	1012	**1052**	105.0
NWFD	**798**	**787**	**795**	**806**	**789**	**785**	**821**	**812**	**820**	**878**	**110.0**
RF	**730**	**719**	**740**	**748**	**744**	**745**	**765**	**771**	**857**	**803**	**110.0**

Source: Regions of Russia. Socio-economic indicators: 2010 stat. coll. / Rosstat. – M., 2010. – P. 322.

Table 7. Population size, thousand people

Territory	1992	2000	2000 to 1992, %	2009	2009 to 2000, %	2009 to 1992, %
St. Petersburg	4986	4715	94.6	**4582**	97.2	91.9
Leningrad oblast	1678	1680	100.1	**1632**	97.1	97.3
Arkhangelsk oblast	1554	1369	88.1	**1262**	92.2	81.2
Vologda oblast	**1353**	**1290**	**95.3**	**1218**	**94.4**	**90.0**
Komi Republic	1222	1043	85.4	**959**	91.9	78.5
Kaliningrad oblast	898	958	106.7	**937**	97.8	104.3
Murmansk oblast	1170	923	78.9	**843**	91.3	72.1
Pskov oblast	837	782	93.4	**696**	89.0	83.2
Republic of Karelia	789	729	92.4	**687**	94.2	87.1
Novgorod oblast	748	710	94.9	**646**	91.0	86.4
NWFD	**15259**	**14199**	**93.1**	**13462**	**94.8**	**88.2**
RF	**148326**	**146304**	**98.6**	**141914**	**97.0**	**95.7**

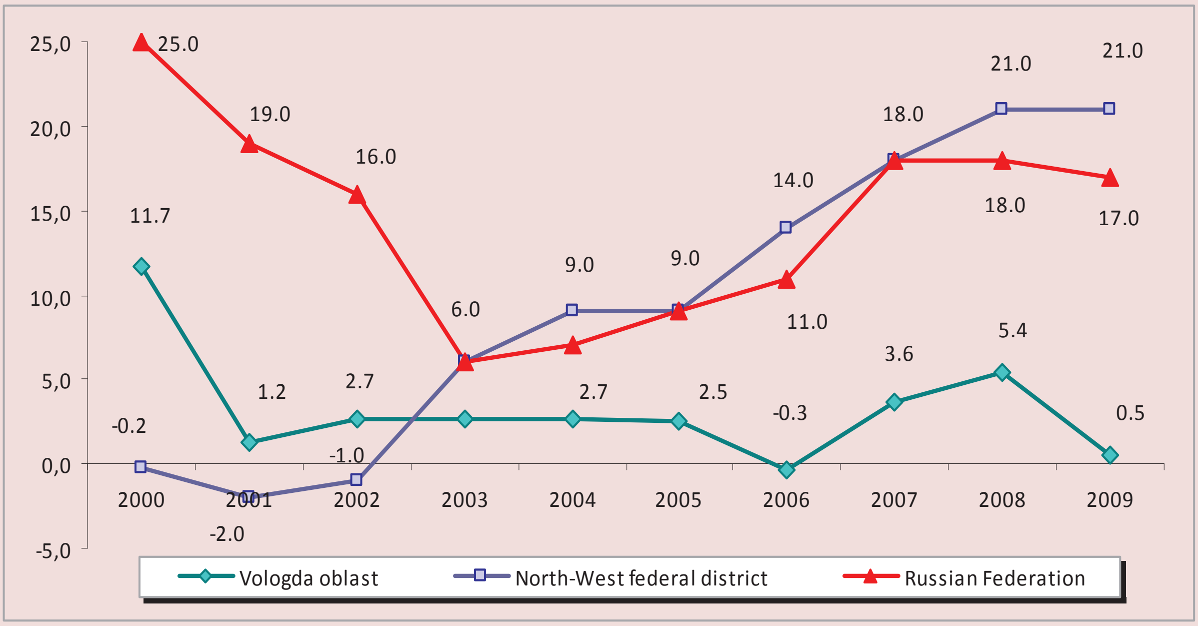
Source: Regions of Russia. Socio-economic indicators: 2010 stat. coll. / Rosstat. – M.: 2010. – P. 56.

Natural decline in the region's population is not compensated by the migration movement. Since 2001, the value index of net migration in the Vologda oblast remains extremely low *(fig. 7)*: in 2009 the level of migration was only 0.5 people per 10 thousand of the population. For comparison: in Russia as a whole (international migration) and the North-West federal district migration rates coefficients are ten times greater (17 and 21 people per 10 thousand population, respectively). In the European Union in 2008 this figure was 29 people per 10 thousand of the population [6]. The presented facts indicate *a low spatial mobility of Vologda inhabitants.*

Besides those mentioned above, a threat to economic security in the region is *a complex environmental situation in the cities of the Vologda oblast* due to the fact that a significant share in the economic structure is occupied with industries related to mining and processing of raw materials.

As you known, the main air pollutants are the enterprises of ferrous metallurgy, chemical and petrochemical industry, construction industry, energy, and pulp and paper industry [18]. The most complex is currently the environmental situation in Cherepovets. Studies of air quality have shown that in the industrial district of contamination above the maximum

Figure 7. Coefficient of migration increase (+), decrease (-), people per 10 thous. of the population



allowable daily concentrations of nitrogen dioxide – to 1.3 times, carbon disulfide – 2.4 times, formaldehyde – 3.3 times, carbon monoxide – to 1.3 times [19].

Drinking water quality does not meet sanitary requirements because of the poor water treatment, poor public water supply system and severe pollution of water sources (the problem is especially urgent in urban areas). Some contribution to this process is made by agro-industrial complex: in agricultural production there is no adequate treatment of wastewater discharged into rivers, mineral fertilizers often excess the standards, and toxic chemicals are stored in open areas. The state lands and forests on the territory of the Vologda oblast continues to worsen [24].

Analysis of major trends in the socio-economic development allowed distinguishing the following most important threats to the economic security of the Vologda oblast:

a) single-industry structure of the economy and high dependence on chemical and metallurgical production, which implies the predominance of raw material orientation of the region and reducing its competitiveness;

b) reduction of the volume and rates of production growth in connection with the consequences of the global financial crisis, which leads to underloading of the existing facilities, effectiveness decline and closure of individual businesses and, consequently, an increase in unemployment;

c) the predominance of commodity exports in contrast to the export of high-tech products, which leads to a reduction in budget revenue and possibility to update the machines and equipment;

d) full opening of the domestic market for imported products at a rejection of reasonable paternalism in relation to domestic producers, which leads to the region's dependence on supplies from other countries, the destruction of production;

e) an increase in anthropogenic loads and decrease in stability of the environment which leads to an increase in morbidity and forced migration of population to other, more prosperous regions and countries;

f) reduction in population size and level of its money income, which leads to deterioration of the quality characteristics of region's the employment potential.

The Vologda oblast Government is implementing a strategy (up to the year of 2020) and a program of the region's social and economic development for the years of 2011 – 2013 developed on its basis. [1, 2], aimed at creating conditions for improving the competitiveness of regional economies, improving quality of population's life, improving the efficiency of public administration system.

The identified threats require revitalization of the regional state authorities' activity, improvement of the ongoing socio-economic policy, formulation and implementation of measures aimed at improving the region's economic security.

In general, there can be the following objectives of regional economic policies, aimed at ensuring economic security:

- restructuring of the economy, supporting the most profitable and promising sectors and industries having advantages in the long run;
- creation of territorial production complexes, which are market oriented and responsive to the market change;
- implementation or activation of own sources of development;
- development of inter-regional infrastructure systems with a worthy representation of the region;
- containment and elimination of the depressive state of some areas, and if necessary giving them the status of "areas of economic distress".

In addition to that they need to be specified taking into account the specific character of the regions and the threats to economic security. However, these are the tasks for another article.

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Assessment and strategy of coal resources development of the Komi Republic*

The article deals with the problems of little-developed and sparsely populated areas of the northern region on the example of the Komi Republic, the typology of regions based on their industrial development is made, regional differences of the state's northern policy are marked, the role of coal in the energy supply of the country is shown, the prospects of forming a new center of coal mining in the north-west Russia based on the Seydinskoyecoal deposit areevaluated.

North, little-developed and sparsely populated areas, regional development, coal resources, diversification of coal production, new centers of coal mining.

Albina A.
KALININA
Ph.D. in Economics
Senior scientific associate, Honored Scientist of the Republic of Komi
kalinina@energy.komisc.ru

Vera P.
LUKANICHEVA
Ph.D. in Economics
lukanicheva@energy.komisc.ru

Irina G.
BURTSEVA
Ph.D. in Economics
burtseva@iespn.komisc.ru

Features of regional policy to support the development of little-developed territories of the North

Northern regions of Russia take more than half of the total area, producing 80% of oil, almost all the gas, half coal and timber, export of which gives 2/3 currency earnings of the country. North refers to the extreme area of industrial development and forced occupation with limited opportunities for agricultural development (about 5% of total Russian production) [1]. In the north the areas of industrial development are combined with traditional territories of indigenous peoples, whose tra-

* The article was prepared within the framework of the Interdisciplinary project of UB RAS "Development of a strategy for integrated socio-economic development of weakly involved and poorly studied in economic circulation areas of the North Ural".

ditional economic activity is herding, hunting, fishing, crafts. The northern territories are characterized by: geographic remoteness, extreme climatic conditions, low population and, consequently, limited manpower with high degree of concentration in the fuel and energy complex as well as uneven distribution of population over the territory and the high concentration of it in large and medium-sized industrial cities (from 70 to 92% of the total population) [2]. These conditions determine the degree of development of the North. In the Komi Republic, almost half the territory belongs to the zone of active economic development of old industrial region of the resource type classification [3]. The rest of the space of the republic is little-developed and sparsely populated with the areas of the following types:

- traditionally developed areas with poor infrastructure, lack of industrial enterprises and low dispersal, but having untapped raw materials, forestry or land potential;
- areas of "deindustrialization" with a partially curtailed industrial production, with well-developed infrastructure;
- areas of new development within the proposed new investment projects and transportation corridors.

In the typology of regions a fourth category can be identified – a territory that will remain undeveloped or abandoned at a certain time period.

The main problem of development of the northern territories is their remoteness from the markets and an underdeveloped or absent infrastructure, which requires high costs. It is because of these factors, large investment projects in the northern regions are on the verge of profitability and they require the participation of the state. Therefore, the main form of realization of northern projects can only be a public-private partnership, especially in the creation of new infrastructure or improve the efficiency of the existing ones. This model of development of new projects is typical for all northern countries such as Norway, Greenland, north-western Canada and the Yukon Territory, Alaska (USA). Their experience shows that it is impossible to solve the problems of development of new areas within a "pure business approach", focused only on commercial viability. New projects in undeveloped northern areas can be successful only with the active support of the state on behalf of local and federal authorities [4].

State participation is expressed primarily in the performance of general geological work destination, as well as environmental, social and economic assessment of future projects. Exploration and preparation of industrial supplies, construction of mining, in this case, the coal companies is implemented on a commercial basis. However, new areas of economic development in the absence of all or part of the infrastructure (transport, energy, social, etc.) require significant capital investments and state aid is needed here.

Primary documents ("On the basis of state regulation of social and economic development of the North of Russia", "The concept of state support for economic and social development of northern areas") defining the development policy of the northern territories of Russia do not fully reflect regional differences. However, the formation of the northern regional policy must take into account socio-economic specifics of individual regions and their role in the economic sphere of the country. These specific areas in Russia are primarily the Khanty-Mansiysk, Yamal-Nenets and Nenets autonomous okrugs, and the Komi Republic, having a sustainable resource base for economic growth. They account for about 80% of profits earned by enterprises of northern Russia. Economic potential of these areas is based on the high export orientation. In these primary areas the implementation of resource extraction and transportation megaprojects "Ural Industrial – Ural Polar" and "Belkomur" is planned, which should give an impetus to engage in the commercialization of natural resources of little-developed areas of the North, including the coal ones.

Northern regions require a comprehensive support, government regulation should be manifested in all its forms: fiscal, investment, institutional, tariff, foreign trade, and others to improve efficiency and reduce the northern costs. You cannot confine compensation of investment uncompetitiveness of enterprises of the northern territories by the use of incentives and guarantees, full integration of the northern regions into a single economic space of Russia is required.

Coal of the North in power supply of Russia

Resource base of coal mining in the North and similar areas (hereinafter the North) are the reserves and probable reserves of the Pechora, Sosva-Salekhard, Ulughemskog, Taimyr, Tunguska, Lena, Zyryansk and South Yakutsk coal-bearing basins and individual districts, areas and fields of Sakhalin, Chukotka, Magadan and Kamchatka. The total coal resource potential of the North is 72.6% of the resource potential of the Russian Federation, and the balance holdings are only 12.8%. Of all the fields in the north the most assimilatedare the Pechora and South Yakutsk basins that make up respectively 24 and 21% shares and 37% favorable and 21 stocks in categories A + B + C1 of the total resources and reserves of coal, accounted state balance of all basins and fields of the Far North [2]. Only these two basins supply coking coal for export and for other regions of Russia. Stocks of Tunguska, Lena, and Ulughemsk and Zyryansk basins are being developed by industry, but the extraction of coal in these basins is carried out mainly in small sections to cover own needs of the regions in the total volume of 4 million tons. All other basins and fields in the north are of the first type of assimilation [2].

The Pechora coal basin is connected with other regions of the country by the railways and has a developed infrastructure. As a result of the coal industry two cities were formed in the basin – Vorkuta and Inta – with dominant coal specialization. All this determined the primacy of the Pechora basin, among other coal basins of the North. The area of the Pechora coal basin includes all three types of little-developed territories.

Thus, **type I** includes the territories of Halmeryusk and Korotaihinsk geological and industrial areas (GIA) of valuable coking coals of grades “K”, “OS”, “T”, Adzvinsk and 10 fields of Inta GIA grades “A” and “B”. These fields are still a glimmer of hope on the prospects for development. However, a possible increase in demand in the steel industry coking coals of the most valuable brands, as well as the construction of the railway Vorkuta – Ust-Kara (in accordance with the Transport Strategy of Russia until 2030), allowing secure access to Halmeryusk and Korotaihinsk GIA, create conditions for possible development in the long run.

Type II of little-developed areas includes Vorkuta and Inta industrial areas. “Deindustrialization” of these areas lies in the fact that as a result of restructuring of coal industry, 65% of mines in these areas were closed, the volume of coal production in the remaining mines fell by more than two times, the auxiliary organization and productions were eliminated. However, recently re-equipment of promising mines and the Pechora concentrator began, planned resettlement of the surplus population is implemented and the release of housing fund of Vorkuta and Inta. These cities preserved the basic infrastructure to use it during the development of promising new deposits.

These priorities include the two fields: Seydinskoye (steam coal) and Usinskoye (coking coal grade “G”). These fields are different from others so that their territories are located within the industrially developed Vorkuta and Inta GIAs, and the existing infrastructure can be used in field development, which undoubtedly is a positive step along with the fact that these deposits are the most large. Their stocks allow building coal mines and sections on modern technologies. Perhaps that is why Seydinskoye field, despite the pending exploration, is classified according to the energy strategy (ES) of Russia for the period up to 2030 to the number of new fields to be developed in the 2020 – 2030 along with fields in Eastern Siberia, Far East and Khanty-Mansiysk autonomous okrug.

Prospects for the development of Usinsk deposit of coking coal is mainly determined by the strategy of development in Russia. Seydinskoye field power coal in confirming the appropriateness of their production is adopted in Russia's energy strategy until 2030 to development [5]. This means that its preparation should begin today. Consider the conditions under which Seydinskoye field of the Pechora power coal (hereinafter – "Seyda") can fit in the ES-2030 and become a real prospect of the Pechora coal basin in the framework of the third type of new development area of little-developed area. To this end, we estimate the degree of readiness of the geological deposits to the development, separate the factors promoting and hindering its development. The main direction of Seyda coal's useis high-quality fuel for power outside of the country (North-West and Ural Industrial), subject to the implementation of two transport projects (West and East).

Formation of a new mining center in the Pechora coal basin

The degree of "Seyda's" geological readiness to the development [6]. Seyda coal mine is located in the southern part of the Vorkuta coal-bearing area of the Pechora basin, 60 km southwest of the city of Vorkuta. In the relative proximity to the mine (194 km) there is another coal town of Inta. Work on the geological exploration of deposits began back in 1955.

Deposit to a depth of 600 m is divided into two parts: the northern with the area of 154 km^2 (22 km to the south with a dip width of 7 km) and the southern with the of area of 380 km^2 (26 km to the south with a width of 20 km in the north to 6 km in the south). Total resources of Seyda coal deposits are now estimated at 31.3 billion tons, of which conditioning are 22.3 billion tons.

In the northern part of the deposit a preliminary exploration is made and reserves of steam coal "D" grade for eight coal-bearing strata in the amount of 3.2 billion tons, mostly of complex structure are estimated. On this area, four field mines with a capacity of up to 9 million tons of coal a year each are separated.

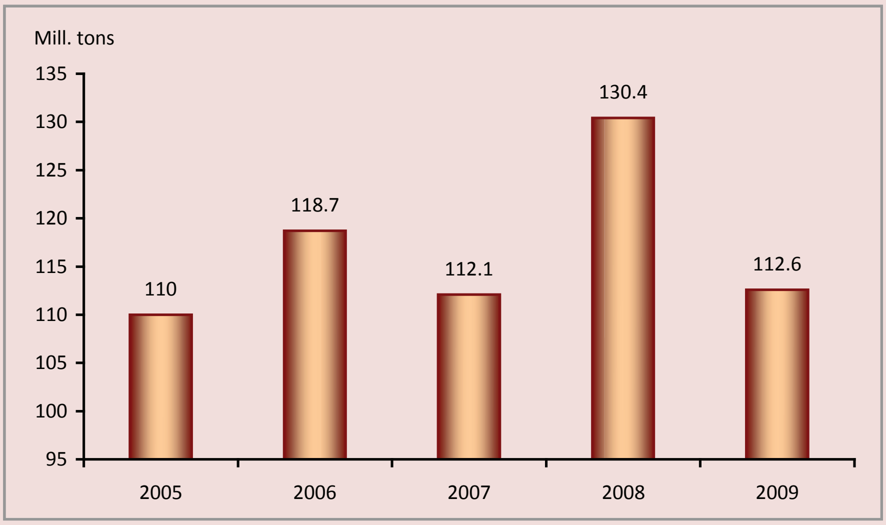
On the southern part of the deposit the exploration is held. This part of the deposit is characterized by simple geological structure, corresponding to the first group of complexity. Characteristics of coal seams are in line with indicators of northern part of the deposit. By volatile and the thickness of the plastic layer coal seams of the southern part of the field belong to the "D" grade and the transition from the "D" to "G". Within the area nine mine fields with capacity up to 9 million tons of coal a year each are allocated. As a top priority mine fields № 5, 6, 7, 8 and 9 are recommended, of which only in the mine field № 5 "Yuzhnoseydinskaya" in 2003 JSC "Polyarnouralgeologiya" completed the exploration work. The possibility of open-pit mining of two coal seams is suggested.

Results of exploration in the field of mine № 5 "Yuzhnoseydinskaya":

- approval of steam coal reserves for underground mining in categories C1 + C2 in the amount of 433 million tons by the State Reserves Committee Rosnedra in 2007;
- plots for open-pit mining within the field of mine № 5 with reserves of categories C1 + C2 92.6 million tons to a depth of 200 m submitted for approval to the SRC were not approved due to lack of mining engineering and economic feasibility;
- SRC suggested considering the open pit reserves and estimating the possibility of progressive geotechnology – a comprehensive open-underground mining development of "Seyda" in carrying out the scoping study exploration of conditions, which hitherto has not been developed.

On quality characteristics steam coal of "Seyda" take precedence over similar coals developed in the Inta field. Seyda coals are low-sulfur (Sdt = 1.3%), high-calorie (Qrj = 20 MJ/kg). After the enrichment coal concentrate output exceeds 70% with ash content 19-22%. Nearly half of stocks (42%) is concentrated in strata capacity of 5 – 8 m, mostly gentle bedding. The majority of the reserves (2/3) are at depths of 300 m, enabling both underground coal mining, and the open development.

Supply of Russian coal to power plants of the country in 2005 – 2009 [7]



Factors of "Seyda's" development. It should be noted that the development of "Seyda" is not determined by the needs of the Komi Republic, but by fuel and energy balance of Russia under the condition of the implementation of the idea laid down in of EC-2030 of increased use of coal in the Russian domestic market with increasing prices for gas in 2-2.5 times. The former expectation that by 2010 there will be a change of "gas-coal" price ratio in favor of coal and then the gap will grow to a value of 2.5:1, is not confirmed yet. On the contrary, the supply of Russian coal to power plants does not grow but decline *(figure)*.

It is necessary to create economic incentives for the expansion of the domestic coal market - for example, to introduce, according to the suggestion of ERI RAS [8], an excise tax on gas flaring in large power plants, especially those working in the "gas-coal".

The following factors contributing to the development of "Seyda" should be marked out:

I. *Geological and geographical*:

Significant resource potential of coal with a predominance of powerful banks in the southern part of the field, their flat and shallow occurrence, better quality parameters compared to the coal of Inta.

The possibility of open mining of part of the stocks.

Availability of infrastructure facilities – main-line railway Moscow – Vorkuta and intertie power transmission line of 220 kV Pechora – Vorkuta, passing directly over the southern part of the deposit;

Proximity to the field to Vorkuta allows make it the base city, while reducing infrastructure costs for development of "Seyda" and to use power concentrators of Inta to enrich Seida coal, taking into account their reconstruction of course. All these features should be taken into account in the projecting of coal enterprises of "Seyda" and infrastructure financing by the owners.

II. *Technological*:

The predominance of high-power coal banks provides the possibility of large-scale application of efficient equipment and high technology during coal mining (mine-lava, a comprehensive open-underground method, etc.).

A comprehensive open and underground mining, combining the open and underground mining, using a common infrastructure, allowing to organize the extraction of coal in a shorter time, because it will be implemented in open-cut mining at the first stage, and only after it pit mining starts.

Experience in developing of the Yunyaginsk coal mine in the Pechora basin suggests the possibility of wider use of coal mines in the

Table 1. Comparison of indicators of the Yunyaginsk coal mine with those of Southern Kuzbass and Yakutia

Indicator	Coal mines		
	Yunyaginsk	Olzherassky (SouthernKuzbass)	Kolmar (Yakutia)
Banks' thickness, m	2.28	2.0	2.4
The volume of production, tons	625.0	1139.0	600.0
Stripping ratio	22.5	10.97	6.5
Ash content of the rock mass, %	30.4	21.8	28.0
Number of staff, people	227.0	461.0	380.0
Labor productivity per 1 worker, thous. tons/person	2.75	2.47	1.58
Cost of raw coal, doll./ton	22.0	31.4	25.0

newly-developed fields, despite the harsh climatic conditions of the Arctic. Comparison of some indicators of the Yunyaginsk coal mine with the indicators of two other comparable by power figures in South Kuzbass and Yakutia shows that the Yunyaginsk mine is quite competitive with them *(tab. 1)*.

As can be seen, the Yunyaginsk coal mine, despite the high stripping ratio and a higher ash content of rock mass, but smaller number of staff (1.7-2.0 times) has a lower cost of coal extracting (1.1-1.4 times).

The effectiveness of a comprehensive open-underground mining can be judged on its broad application at the existing coal mines of Kuzbass [9].

On the qualitative composition Seida coals can be used not only as an energy fuel but also as a basis of coal chemistry when developing appropriate technologies for these coals.

The emergence of a new coal-producing center of "Seyda" creates conditions for more sustainable Pechora coal basin, and reduces its vulnerability in times of crisis due to the deepening of coal production diversification.

Among the factors constraining the development of "Seyda", in our view, should include: a sufficiently high degree of uncertainty about the production of Seida coals in the ES-2030; incomplete exploration to assess the recoverable reserves of coal; insufficient pilot tests to select the areas of non-traditional use of these coals.

Completed "Business plans for the development of Seyda field" (2003, 2004) examined the limited capacity of the mines 2.5-3 mill. tons. According to recent data (2006), the production capacity of the mine № 5 "Yuzhnoseydinskaya" in volume of 8 million tons per year is based on the same stocks of coal. While there is no clarity about the open mining using new geotechnology. At an early stage of development it is necessary to determine the first priority of mine construction or use a combined mine geotechnology.

Directions of Seida coals' using. The main direction of Seida coals is high quality fuel for power plants. One of the possible consumers of these coals in the future may become Industrial Ural[1] (hereinafter – Ural). Relationship expansion of Komi – Ural, rather limited at present, in the long run will be contributedby the implementation of two railway transportation megaprojects:

1) "Belkomur" (from the Finnish border in Karelia, Arkhangelsk oblast and the Komi Republic to Solikamsk in the Urals), which reduces the transportation of Seida coal in the western part of the Urals by 500 km, and to the ports of the White S ea by 800 km;

2) railway "Polunochnoye – Obskaya – Salekhard – Nadym" within the mega-project of "Ural Industrial – Ural Polar". Implementation of these mega projects will help create a new transport frame of Komi – Ural macro-region. Eastern road is the shortest way to the Urals for Seida coal, only 800 – 900 km. The need of the Urals in the steam coal in the long run is conservatively estimated to be 10 million tons per year [1].

[1] Industrial Urals means the region, covering the territory of the Sverdlovsk, Chelyabinsk and Orenburg oblasts, the Perm Krai and the Republic of Bashkortostan.

Using of Seyda coal makes it possible to obtain the effect of consolidation of the assets of coal miners and power engineers "to consider the overall economy" for the Ural coal generation. Another domestic market for Seyda coal can be North-West, provided that the introduction of new generating capacity in the region is dominated by coal-fired power rather than by gas.

As can be seen, North-West and the Urals are most likely to become the zones of energy consumption of Seida coal. The ES-2030 consideres the possibility of development not only of "Seyda", but the North-Sosva deposit of brown coal as an alternative to cessation of coal mining in Kizel coal basin in the Urals. Without considering all aspects of this problem, we make a comparison of some indicators of Seyda and North-Sosva deposits *(tab. 2)*.

Even the given list of indicators shows that Seida coals have a distinct advantage as an energy fuel for the Urals. Moreover, "Seida" already has approved commercial reserves to build the first powerful mine in contrast to the North-Sosva field. This suggests that the development of "Seyda" should be a priority for the Urals.

Possible direction of Seida coals using, except for energy, could be unconventional using, associated with the processing of coal and production of new products from waste coal. The essence of coal processing is in the complex use of both a carbon (organic) and mineral parts of it. In world practice, technologies, which get over five hundred products out of coal are developed: synthesis gas, fuel oil, naphtha for gasoline production, xenon and krypton, ammonia, phenol, ammonium sulphate, carbon dioxide, and various carbon fibers, mineral wax, humic fertilizers, adsorbents, isolated rare metals.

Most developments in Russia involving the processing of coal processing are more prospective experimental-industrial in nature. Processing of coal compared to the alternative oil- and gas processing, has the lower technological and economic indicators. Widespread use of coal fuel chemistry technology in Russia in accordance with the ES-2030 can be expected only by 2030.

One of the most cost-effective is the technology of semi-coking by the method of "Karbonika" in Russia today. This technology is implemented in a pilot plant with a capacity of 30 tons of coal per year. In the past five years all the technical and technological solutions are worked out, research on various coals is conducted and industrial and experimental batches of the product tested on a number of enterprises in Russia and abroad are produced [11].

The aim of this process is to obtain a liquid tar, of which light fuel oil, lubricating oils, as well as paraffin, mineral wax and other products are produced. Semi-coke is characterized by low volatile substances (less than 12%), high caloric (more than 27 MJ/kg or 6449 kcal/kg) and reactivity, low electrical conductivity. Obtained as a by-product, semi-coke is used for power generation, domestic needs, as an additive in the charge for coking, etc. Other products of semi-coking are semi-coke gas and pyroligenous liquor used to produce several chemicals, including phenols, used for plastics industry.

This technology, unlike most known, is characterized by the environmental safety and

Table 2. Comparative indicators of Seyda deposit development (underground) and North-Sosva deposit [10] (open pit), 2006

Indicator	Seyda deposit	North-Sosva deposit	
	Mine № 5	Otorinsk mines	Tolinsk mines
Production capacity of the mine (quarry), mill. t	8.0	8.0	8.5
Net calorific value, kcal/kg	4800.0	4240.0	3005.0-3786.0
Capital expenditures, bill. rub.	26.9	31.6	21.7
Number of personnel, people	1763.0	2750.0	1620.0
Cost of 1 ton of raw coal, rub./t.	400.0	1127.0	737.0

waste-free, ease of technical performance and reliability of equipment, high economic energy efficiency and high export potential of semi-coke. In 2004, the price level of carbon reducing agents in Germany, Norway and Japan amounted to 300 doll./ton with a deficit of these products. At that price for semi-coke all the costs of electricity and heat generation, as well as coal mining are covered.

Pilot studies to yield the final product of Seida coals (grades “D”, “DG”) were conducted only on semi-coking and receiving a molded coke. The use of molded coke permitted the use of coal in the batch grades “DG”, “D” and “GJO” from 10 to 40% without compromising the quality of cokes.

Production of molded coke allows using substantial reserves of Seyda coal deposits grade “D” for metallurgical batches of layered coking. Experimental studies have confirmed the possibility of semi-coke production of Seidacoal with 80-84% yield of semi-coke and tar up to 12%, including light to 23% which are the most valuable raw material for plastics.

Accommodation of coal-chemical product production on the basis of Seida coal can be carried out outside of production, for example, in the Pechora region, where there is power and industrial areas for construction that will reduce the amount of productive investment.

Thus, Seyda coals may be raw materials for their non-traditional use, but to select a specific technology, coal processing requires more detailed study of their qualitative composition and experimental-industrial tests.

Waste products of Seida coals concentration can be used for the production of bricks, tiles, ceramic tiles, silicate concrete, lightweight concrete aggregates and insulating materials.

Unconventional use of Seida coals would increase their value compared with pure energy use and can become a source of development of the basin due to the expansion of commodity production and higher prices on coal-chemistry products (by 50-400%) compared with the energy and technology using of the Pechora coals.

Implementation of the considered and other innovative technologies in the framework of program solutions will ensure the transition of the Pechora basin in a cost-effective way of development. For the republic, it is important that “Seyda” became an effective production of high-energy fuel with a high degree of utilization of waste coal, with a focus on the Russian domestic market (most likely industrial Urals and North-West), as well as a raw materials base of coal-chemical production in prospective. To do this the following things are necessary: the completion of exploration in the southern part of the “Seyda”; assessment of the economic feasibility of opencast and complex open-underground technology; conducting pilot tests of Seida coals for the purpose of development of the most appropriate technologies with the of use coal-chemical, research and production base of Kuzbass .

Conclusion

Thus, little-developed territories of the North are diverse by their possibilities of development and have certain growth points in the future. Thus, the area of the Pechora coal basin is characterized by: priority development of new deposits (Seyda and Usinsk) in existing industrial zones of Vorkuta and Inta, in the future, subject to the construction of the railway Vorkuta – Ust-Kara, the transport prerequisites for development of Halmeryuskand Korotaikhinsk GIA of coking coal of most valuable grades are created.

Their development will depend on the nationwide demand for high-quality coal, the needs of export and further macro-economic spatial development of macro-regions of “Komi – Ural” and “Ural Industrial – Ural Polar”.

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New check points of the region's foreign trade

The article considers the problems of the Russian regions' foreign trade activity, which complicate qualitative transformations in the foreign commerce, are. In many respects these problems are caused by imperfection of the existing mechanism of state regulation. The necessity and the features of the foreign commerce's regulation in a federative state are shown. The conceptual bases of the mechanism of the foreign commerce regulation at the regional level, which will promote a more full realization of the foreign commerce potential of a territory and transformation of the foreign commerce relations into the effective factor of the regional development, are formulated. The key directions of the foreign commerce policy of a region for the immediate prospects, which realization will allow diversifying export structure and expanding its geography, are proved. The means of regulating influence assisting to the activity's coordination between the federal and the regional authorities, and to a region's integration into the world economy's space are argued. The opportunities of the mentioned means' use in the Vologda Area are estimated.

The Vologda oblast, foreign trade, mechanism of the foreign trade regulation.

Tatyana G.
SMIRNOVA
Research engineer of ISEDT RAS
spuntik2003@yandex.ru

Elena S.
GUBANOVA
Doctor of Economics, Professor
Department Head of Vologda State Technical University
gubanova_elena@mail.ru

For many years among the countries there were various forms of economic relations, which in the productive forces' development became complicated and improved. The global practice shows that for the majority of countries the basis for the external economic relations is international goods' trade. Foreign commerce promotes overcoming of resources' limitation and home market's narrowness, creates the opportunities for the mass production's and new workplaces' organization, raises the amount of equipment at enterprises, promotes application of new technical equipment and technologies, increases economic growth opportunities, rationalization of the natural resources' and labor use, that finally leads to the growth of labor productivity and population incomes. It allows approving that the foreign trade relations' presence is the important condition of economic complex's functioning not only in separate countries, but also in their regions.

The experience of many countries shows that the foreign commerce development requires the state regulating influence directed on trade volumes, commodity and geographical structure of export and import transactions. In a federative state such regulation is carried out at two levels (federal and regional).

At a federal level the national safety of a country is provided with the help of measures of obligatory or prohibitive character. It becomes apparent in the form of quantitative export and import limitation, licensing for carrying out foreign commerce operations, controlling the goods' safety and quality. In our country to a regional level a rather wide spectrum of powers (which does not have analogues in any federative states in the world) in the sphere of support of the production export refers:

- negotiations with foreign legal and natural persons, foreign federative states' subjects, administrative-territorial formations of the foreign states, and international financial organizations having economic interests in an area;
- information support of export-import and financial activity of legal and natural persons in an area;
- promotion of investments, goods and services to the countries being trade partners of a region; and also to the world markets;
- edition of reference materials, placing the information about a region in both foreign and Russian mass media on the foreign commerce issues;
- holding multimedia presentations in foreign languages about the socio-economic potential of a region;
- support of realization of the regional projects directed on the development of the foreign commerce relations of a region, with participation of the international financial organizations;
- monitoring of the economic potential of a region in the foreign states' markets;
- data gathering, generalization and preliminary processing, the analysis of condition and development of the export and import activity of organizations and businessmen in a region, foreign investments into the regional economy and the projects realized in its territory with bringing in foreign investments;
- coordination of the statutory acts' projects prepared by the organization departments of the Regional Government, and by the executive power bodies of a region on the foreign commerce issues;
- methodical and consultative help to the executive power bodies of a region, to the local government's institutions and to organizations on the foreign commerce issues;
- business, scientific, technical and other types of translation from and into foreign languages.

The analysis of the foreign commerce regulation in Russia showed that the specified powers' realization is complicated by virtue of the following problems' existence.

First, the majority of the regions in the Russian Federations increases export volumes without the change of their branch and geographical structure, and the goods' nomenclature. At the same time the work on promoting goods' separate kinds to foreign markets and on increasing the regional exporters' quantity is not carried out. It leads to the fact that some of the powers mentioned above, especially the ones of economic character, are not used, and it complicates qualitative transformations in the foreign commerce.

Second, functions' duplication takes place; it results in the activity dissociation of the bodies carrying out regulation of the foreign commerce in a region. For example, for carrying out the function of the foreign commerce interaction of a region with foreign countries in the Russian Federation subjects government bodies, coordinating and regulating the foreign commerce activity, are formed (for example, the Ministry of economics and foreign relations of the Republic of Buryatiya, Committee on Foreign Commerce Activity of the Moscow Government, Ministry of foreign economic relations of the Moscow oblast, etc.). At the government bodies the consultative and advisory bodies on the issues of the foreign commerce relations can be created (for example, the Regional Advisory Council on working with the foreign commerce participants at the Governor of the Yaroslavl oblast). However in their authorized documents the mechanism of regulation in the sphere of a region's Foreign Commerce Activity is not registered.

In the Vologda oblast all functions on regulating foreign economic relations, except the foreign commerce, are carried out by the Department of International, Inter-regional Relations and Tourism of the oblast. Concerning the foreign commerce this body carries out organizing residence in the Vologda oblast for delegations from other countries and regions.

At the same time coordination and determination of the basic directions in the sphere of the area's foreign economic policy is given to the Department of Economy of the Vologda oblast Government. The Chief of the Department supervises the matters of priorities and coordination of the foreign commerce activity of the government bodies and managing subjects, and also the matters of international projects realized with the Vologda oblast's participation. Thus, the powers in the field of the foreign commerce activity are dispersed between two authorities, at the same time in their authorized documents there is no mention of their corresponding activity coordination. In such conditions the functions' duplication is inevitable.

Such difficulties became possible because of the fact that the mechanism of the foreign commerce regulation was formed in 1990-s without taking into account the requirements of structural economic reorganization and the necessity of the increase of the country's and its regions' international competitiveness. Making of the mentioned mechanism was passing in short terms at the experience absence not only in organization of the foreign commerce regulation in regions, but also at the experience absence of the experts, capable to direct the foreign commerce development to the decision of the major social and economic problems.

The analysis of the foreign commerce activity in the Vologda oblast showed that the existing mechanism of the foreign commerce regulation does not allow realizing the foreign commerce potential of the region in full measure. It can be found in the following facts.

First, for the two decades of economic transformations the foreign commerce development has not promoted the improvement of the regional industrial structure in the direction of its equilibration[1]. The narrow export base, the basis of which is made by a small group of the goods with a low degree of processing, became the reason for the Vologda oblast economy's vulnerability for external shocks.

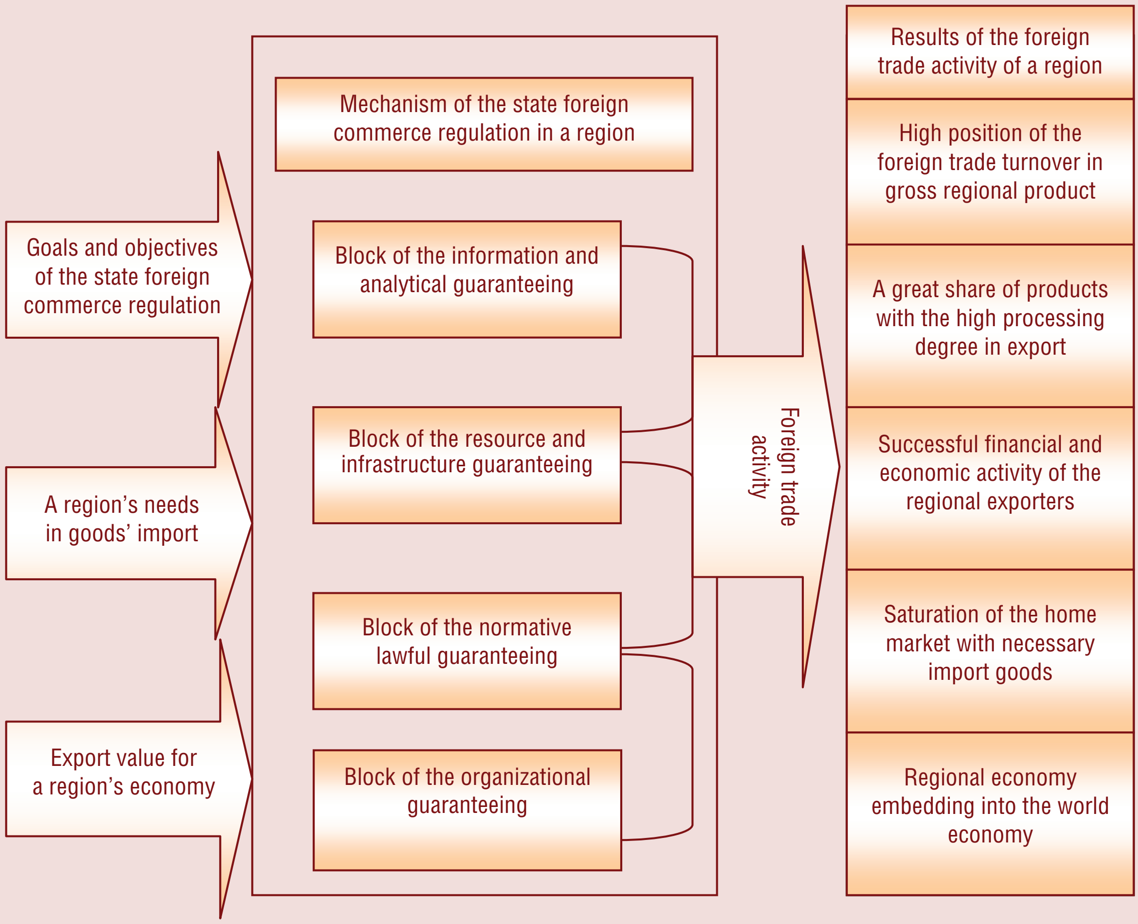
Second, despite of the wide geography of the Vologda export, recently the Vologda oblast's steady foreign commerce relations are observed only with few states in Europe and in the CIS; and a great quantity of agreements with foreign partners covenanted by the Area's Government on continuing basis has not passed into quality. Many of them have exceptionally declarative character and only contain announcements about the general intentions to promote barter expansion. The mechanism and the steps of cooperation, taking into account the partners' features and really being capable to support the regional exporters at their production realization in foreign markets, are not registered in them.

To change the situation in the sphere of the regional foreign trade and to transform the foreign trade relations into the effective factor of the regional development, capable to integrate a region into the world economy, the perfection of the existing mechanism of the foreign trade activity's regulation is necessary. In our opinion, the structure of this mechanism can be represented in the given scheme *(fig. 1)*.

Each of the mechanism's blocks is aimed at the decision of certain problems which in aggregate will allow to overcome the obstacles, impeding the advancing foreign trade development in a region and to balance the activity of all the participants of this process.

[1] In 2009 machines' and equipment production only made 4.7% of the factory shipments, whereas the share of the metal manufacture made 50.6%.

Figure 1. Structure of the foreign trade regulation mechanism in the region



To make the decisions, particularly accepted at the level of the regional government, meeting the requirements on validity and timeliness, first of all it is necessary to support the process of the decisions' preparation by the sufficient, reliable and actual information. From here it follows, that in the structure of mechanism of the foreign commerce regulation the block of the information and analytical guaranteeing should be chosen; to the primary goals of this block the following ones can be referred: monitoring the commodity markets where there is the demand for the production made in a region; revealing the problems arising during the foreign commerce realization; searching the forms and the ways of the problems' solution; monitoring export and import operations in a region.

The block of the resource and infrastructure guaranteeing includes studying all kinds of resources which can be involved into the foreign commerce, conditions, preconditions; the analysis of probable directions of their use, and also infrastructural objects, capable to provide promoting goods to foreign markets.

The block of the normative lawful guaranteeing is called to form institutional frameworks for foreign commerce realization. Its basis is formed by the federal legislation, corresponding statutory acts accepted by the Russian Federation subjects, and methodical regulations and recommendations, according to which the foreign commerce is organized.

All mentioned above blocks of the mechanism of the foreign commerce regulation can function continuously only under the condition of the organized guaranteeing including necessary organizational structures' creation for providing initiation actions, for developing and controlling the objects' achievement in the field of the foreign commerce policy in a region.

While researching the condition and the features of the foreign commerce realization in the region, and also considering the interests of all the participants of this process, we can draw a conclusion that the key directions of the foreign trade policy in the nearest prospects should be the following ones: improvement of export structure and expansion of its (export's) geographical structure. Let's consider them in detail.

1. The export basis of the Vologda oblast is made by ferrous and non-ferrous metals (56.2%) and by chemical production (36.1%); the share of equipment is 1.4%-2%. The Vologda oblast international specialization which has not varied for many years cannot be considered a progressive one that is represented by the prevalence of raw material and products of a low processing degree in export. Therefore it is possible to tell that the region plays a passive role in the international division of labor and shows comparative backwardness in the international specialization.

The economic instability of the Vologda oblast was stressed by the world economic crisis which burst at the end of the year of 2008 and negatively influenced both the foreign commerce activity in the Vologda oblast and the regional economy as a whole. The great drop in prices for some goods, which are the Vologda export's basis, appeared enough for that.

The similar situation was observed in the Russian export-directed regions which end production are the goods with the low processing degree (metals, chemical products, wood materials, etc.). Not only the Vologda oblast, but the Tatarstan, Nizhniy Novgorod, Sverdlovsk, Lipetsk, Omsk, Kemerovo, Chelyabinsk oblasts and also some other regions of Russia experienced abrupt drop in such branches, as metallurgy, chemical production, oil production and processing because of the reduction in demand for their production in foreign markets. At the crisis period in the mentioned regions a considerable reduction of the investment activity was observed, there was an abrupt drop in industrial production (for more than 10%), everywhere organizations' and enterprises' financial position distinctly has worsened, and the share of the retarded bill payable rose sharply. The same thing occurred in the export-directed regions of other countries, particularly in coal-mining and metallurgical areas in Ukraine (the Mariupol, Donetsk, Lugansk, Dnepropetrovsk and Zaporozhye oblasts), in Brazil states, etc. As a result of the industrial production reduction serious problems with providing the effective population employment arose.

For export structure changing the subjects of the foreign commerce regulation should choose the priorities of the foreign commerce development and single out the means of influence which will allow carrying out the transition to a more balanced export structure in a region. The necessity of these measures is also emphasized by the direct participants of the foreign trade activity in a region who have permanently to face with difficulties of its realization. Let's note that regional exporters expect the support from all levels' authorities.

The results of the survey[2], where the regional enterprises' heads, carrying out the foreign commerce activity, speak about the necessity of the regional industrial enterprises' support in foreign markets, confirms it. In the respondents' opinions, the governmental bodies both in the country and in a region can support exporters by realizing such measures as:

- supporting producers in joining the world markets (37.5%);
- formation of an area's favorable image for potential investors and foreign trade partners (35.9%);
- privileged credit conditions for some exporters' categories (34.4%);
- presence of the strategy of the region foreign trade development (31.3%);

[2] The survey was held by ISEDT RAS in March and April 2010. The answers were given by 55 heads of the large-scale and middle-scale enterprises of ferrous metallurgy, power industry, timber industry complex, engineering industry, metal-working industry, food industry, and light industry. Among the respondents there were 22 heads of the Vologda and Cherepovets enterprises and 33 heads of the regional enterprises.

- training experts in the foreign commerce field (25%);
- creation of the program of providing production's quality and certification (17.2%);
- constant monitoring of the world market's economic situation (12.5%).

Thus, the basis of the export structure's change in a region can be made by the corresponding program of the foreign trade development, containing both the substantiation of its priorities and the methods of influencing the commodity composition in the structure of which there can be the following steps:

- export stimulation of the enterprises making deep processing production, by preferential crediting export production, and also providing them with preferential export channels;
- use of tax remissions for exporters by decreasing payments to the regional budget;
- supporting commodity producers in searching foreign markets;
- informational and consulting services concerning potential foreign partners, the markets' conjuncture on the basic nomenclature of a region's export goods.
- providing insurance mechanisms' functioning for the export goods with the local executive authorities' participation;
- providing consulting services to regional exporters;
- providing types of financial support as forfeiting[3], export leasing, dealings on the basis of counter trade;
- creation of the system of the goods' promoting for foreign markets[4] (advertising increase and fair and exhibition activity, especially in the sphere of services' export; organizing of the network of trade missions, foreign trade firms and specialized firms engaged in production's export and import in view of a region's interests);
- development of the foreign trade infrastructure in a region;
- training skilled personnel in the field of foreign commerce for working at the enterprises of all patterns of ownership within the framework of the foreign trade cooperation.

Declaration of the export diversity and work in this direction as paramount tasks of the foreign trade development in a region will promote economic growth stimulation and transition to the innovational type of the economy in an export-directed region. On the contrary, continuation by regional authorities supporting export of the products with a low processing degree to the prejudice of more technological goods complicates qualitative economic growth of a region, cements the structure of its industrial production, deprives a region of stability during global economic cruises, sharply reducing total product volumes, budget filling and a population's standard of living in a region. The declared policy on the Russian economy's enhancement cannot be realized in case of preservation of the existing export structure both in the country as a whole and in its export-directed regions.

While choosing the measures of influence it is necessary to take into account that in many respects the use of the organizational measures of the foreign trade activity regulation in a region depends on the features of the administrative-territorial system of a country and its other features; and while choosing the most effective means of economic character it is necessary to use extensive world experience. One of the main market means in this sphere in advanced countries is export crediting. Through the banking system it is possible to stimulate the development of regional export by granting lax credits for the signed contracts to exporters. Thus it is expedient that the financial support is given not only as short-term (as it is widespread in Russia), but also as middle-term and long-term credits.

Besides lax credits it is necessary to provide attracting private commercial credits under the state guarantees. For this purpose it is necessary

[3] Forfeiting is a form of exporters' crediting, sellers, when a bank (forfeiter) redeems from an exporter (a seller) bill of debt of an importer (purchaser) to pay for purchased goods immediately after delivery of goods and it itself makes a pre-schedule full or partial payment for goods to an exporter.

[4] For instance, in Israel while organizing export-directed business purposeful means are given to market studying, marketing arrangements' holding and even organizing advertising campaigns.

to develop cooperation between the regional authorities and credit organizations. For considerable expansion of the financial support to regional exporters the corresponding governmental body of a region can sign the agreement with a commercial or a state bank about joint exporters' financing on the basis of joining up a bank's and a region's financial resources.

2. If the commodity export diversity can be achieved with the help of the regional authorities' economic means of exporters' stimulation, then the export geography expansion is mainly possible with the help of means of organizational character which only can be realized within the framework of the coordinated efforts between the Federation and its regions. Among such means there is a region's representation abroad.

Opening and keeping economic and commercial representation abroad is a very expensive procedure for any region, even for an advanced region, and this problem's solution, as the world experience shows, is only possible within the framework of the effective cooperation between the regional and the federal authorities. For this purpose a country's representations abroad are used, where a representative from a region can operate as an employee. In case of opening a region's representations abroad for means' saving their personnel is mainly completed with the citizens of a host country. For instance, more than half of the American states' representations abroad are completed with private persons employed under the contract while the rest share represents one of the service divisions of a concrete state.

Some big Russian regions which are actively carrying out foreign commerce are capable to keep representatives in the trade missions of those countries which markets are of interest for regional exporters.

At the absence of such an opportunity there is also another decision of the problem. The Russian legislation provides support to exporters only at the level of direct interaction between the Russian Federation trade mission and a company-exporter [5]. Regions are completely excluded from this circuit. As each of the Russian regions is a component of a certain district, and also of an economic area, it is expedient, that such representation was carried out at meso-level. Its powers should include carrying out corresponding marketing researches, distributing information about region's (federal district's/economic region's) enterprises which they represent, and also rendering assistance into organizing business visits and trips of representatives of the host country's companies to a region.

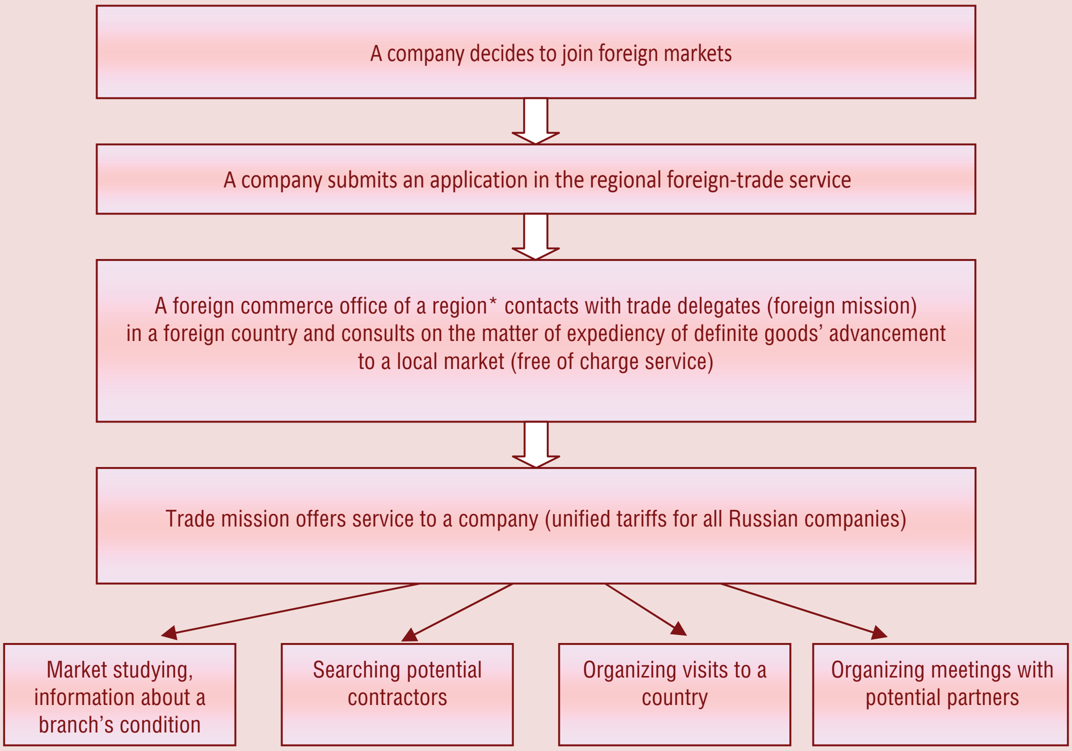
For regional exporters could get real support from the regional authorities, it is necessary to mention in authorized documents the authorities' duty to form corresponding inquiries from regional exporters to the trade missions of the Russian Federation. These inquiries should be based both on the regional commodity producers' interest in production export and on studying available opportunities of goods' production and transportation demanded in the market.

Thus, in case of the trade mission's or embassy's presence in a country at which trade and economic representatives of Russia function, it is possible to offer the algorithm of interaction between exporters and regional and federal authorities for goods' advancement to a foreign market *(fig. 2)*.

Rendering further services on searching potential contractors (selection of several most suitable business partners being given brief characteristics), organizing visits to the country and negotiations' organizing should be envisaged, on the compensational basis, in the obliging form for a representation. In this case successful goods' advancement to foreign markets by the Russian exporters become real since participation of staff at trade missions, embassies, consulates (not diplomats) will favorably affect contractors' attitude towards Russian

[5] Regulations about the Russian Federation trade delegates in a foreign state (resolution of the Russian Federation Government, 25.09.2007 № 609) // The Russian Federation Legislation Collection. – 04.07.2005. – № 27. – Item 2761.

Figure 2. Algorithm of interaction between exporters and regional and federal authorities for goods' advancement to a foreign market



* As a foreign trade service of a region both the specialized body of foreign commerce regulation in a region and Department of economy (or other department which competence is foreign trade regulation in a region) can act.

businessmen; the latter will be informed about the business dealing's specificities in the given country from the persons, obliged to trace the economic situation in a state of stay and to give corresponding data to the interested Russian exporters.

The considerable problem of the Russian exporters is the circumstance that the overwhelming majority of available representations are concentrated in European and other advanced markets, which are extremely difficult to join. At the same time in the countries which are potentially interested in products made in the Russian regions, such establishments are either absent or they are not enough[6]. So, Russia only has trade missions in 42 of more than 200 countries (including in South America – 2 representations, in Africa – 3, the others – in the largest economies of the world)[7]. Thus the embassies working in these countries have the purpose of diplomatic representation, instead of economic interests of Russia and its producers. This problem is only possible to solve at the federal level.

It is also necessary to note that regions should constantly improve their marketing activity. More often international trading exhibitions and fairs are organized in those countries which markets are difficult to join because of their raised appeal to exporters. On the contrary, the countries where regions could deliver their products, as a rule, give insufficient information for decision-making on business

[6] Since January, 1, 2006 52 trade missions have been closed in 52 countries in Asia, Africa, Latin and Central America. At the Soviet period trade missions functioned in the most part of the countries.

[7] Compare: in 2008 in more than 150 USA trade missions covering 96% of USA export markets about 1800 people worked (data Management International Trade USA Department of Commerce [Electronic resource]. – Access mode: http://www.trade.gov).

relations' establishment and signing contracts on products' deliveries that complicates the Russian regions' marketing activity. Choosing the countries and the regions, where the regional bodies' efforts on the export geography expansion should be directed, in the program of the foreign trade development would promote concentration of a region's efforts in corresponding directions.

As the world experience shows, organizing specialized body coordinating the foreign trade activity of a region, in many respects promotes the expansion of export geographical structure. For example, in the export-directed states of the USA the international trade departments are formed. The basic information for realizing these bodies' activity is given by the management service of international trade of the USA Ministry of Trade which promotes as much as possible American producers have the opportunity to get to foreign markets. Similar structures also operate in Belgium, Germany, Mexico and other countries with the federal form of a state system.

The regional export services (bureau), independent departments of international trade at the regional government, etc. are no doubt economically expedient. Thus trade missions and trade and economic departments, regional foreign trade services should be connected in a united information network with organized information exchange (for example, about unprincipled contractors, about interests of local authorities and businessmen in purchasing certain products made in Russia, etc.).

However, now the process of trade missions' transformation into trade and economic departments of embassies is being carried out with the purpose of optimization of charges for their keeping instead of the increase of their activity efficiency from the point of view of the Russian exporters' assistance. In such conditions domestic producers cannot make a worthy competition to other countries' producers which interests are lobbied, both at state and at the regional levels.

For changing the situation, first of all, it is necessary to designate assistance to the Russian exporters as one of the primary goals of the specified establishments' activity in corresponding statutory acts, with giving to them corresponding powers and duties. To coordinate the work of trade missions and trade and economic departments of embassies with regional export services, it is necessary to develop the unified list of free-of-charge and chargeable information services which they will be obliged to give to the Russian exporters on onerous and gratuitous basis. At the present moment it is happening on onerous but illegal basis, under the personal arrangement between the interested potential Russian exporters and the staff of corresponding representations having the necessary information. This list should be a component of statutory acts (charters, positions) on the basis of which the given establishments can carry out their activity.

Thus, the changes in the export structure of a region in many respects are determined by the actions' coordination between federal and regional authorities. Potential and operating exporters should have clear idea about what authorities are responsible for assistance to the Russian exporters in each country. It is very important, that the system of the foreign trade activity's support worked as a single whole: trade missions, regions' representatives at embassies' and consulates' departments, foreign trade services in regions should work as elements of the unified mechanism. Thus these efforts' coordination, which should be shown in mutual argumentability of regional programs on exporters' support by means both regional and federal budgets, is necessary. Realizing general intent to involve in international economic relations plenty of participants, and also open to the limit territories' export potential and its successful achievement by interaction between the subjects of the foreign trade activity's regulation is a summand of successful interaction between the regions and the federation as a whole.

Presence of the target programs of the foreign trade activity's development in regions should reduce the danger of the regional economic policy's mistakes as a result of lobbying political and economic interests of a group of private persons to the prejudice of economic safety of a region. At the same time the program's framework should not be absolutely motionless so as to give the opportunity of efficient and effective reaction to changes both of global and domestic character.

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Modern standards of reproductive behavior of the population and the objectives of pro-family population policy

The paper considers the trends in fertility in recent years and the factors causing them. The authors identify the changes in the standards of the population's reproductive behavior, especially reproductive attitudes of different age cohorts and the impact of family income upon the modern reproductive expectations. The conclusion about the urgent need for enhancing the state pro-family population policy is justified.

Trends in fertility, age structure, birth rate calendar, reproductive attitudes, pro-family population policy.

Larisa A.
POPOVA
Ph.D. in Economics, Associate Professor, Chief Scientific Officer of the Institute of Socio-Economic and Energy Problems of the North of Komi Science Centre of RAS
popova@iespn.komisc.ru

Natalia A.
BUTRIM
senior lecturer of the Department of Social work of Syktyvkar State University
butrim_dom@mail.ru

In modern Russian conditions the main priorities of state population policy, of course, are in the area of reduction of mortality. To solve the problems of low lifetime of the population and a significant gap in the value of male and female indicators, the high mortality among the youth from external causes and among the middle age from heart diseases, significant differentiation of lifetime in different regions and between urban and rural areas it is necessary to implement regularly the measures to rise the standard of living and to reduce social differentiation of our society, to improve the health system and to restore the availability of medical services, to promote the idea of a healthy lifestyle and to revive the children's sports, to fight alcoholism, drug addiction, crime etc. However, this article will focus on the issues related to the need to improve the pro-family population policy, because today Russia is at the critical point that requires an immediate deepening and expansion of activities to promote the increase in the birthrate.

As you know, one of the most important features of the demographic processes – their socio-economic dependence. It was clearly demonstrated by last 15 – 20 years: the crisis in the socio-economic sphere considerably deepened the negative demographic trends existed in Russia before, having caused the unfolding of deep demographic crisis and the depopulation in the explicit form. Meanwhile, the thesis of the substantial inertia of demographic processes was put into question to some extent. The reaction of the population's demographic behavior to some extraordinary events: "shock therapy" in the beginning of the 1990's and hyperinflation in autumn of 1998 – was almost instantaneous and that immediately influenced on the level of demographic indicators.

It should be noted, however, that the level of birthrate indices have an influence upon a number of factors. Firstly, those or other changes in the age structure of reproductive contingents: rejuvenation of the age structure contributes to higher fertility, and its aging – to lowering rates. Secondly, changes in the calendar (timing) of births: birth postponement of the population "to the best of times" or, on the contrary, the realization of deferred births; compaction of the birth calendar, for example, under the influence of incentives pro-family population policy or naturally following it rarefication of the birth field because of premature exhaustion of the final number of children in the family by the generations. Thirdly, the changes in the level in the population's reproductive attitudes: continuation of a long-term trend (such as a smooth evolution of their level in accordance with the historical trend of decreasing in demand for children) or an abrupt change in the population's reproductive expectations, determined by the strong impact of some external factor. Meanwhile, the changes of the age structure and the birth timing have, mainly, occasional fluctuations in the level of fertility, which do not change the generations' final number of children in the family, while changes in the reproductive attitudes lead to stable transformations in the mode of population's birthrate.

The increase in the total fertility rate *(fig. 1)*, observed in Russia since 2000 (from 8.3 births per 1000 people in 1999 to 12.4‰ in 2009) [1], is primarily due to rejuvenation of the age structure of reproductive contingents as a result of attainability of the active childbearing age by relatively numerous generations that were born in early – mid 1980's.

Figure 1. Dynamics of the total fertility rate of population of the Russian Federation, births per 1000 people

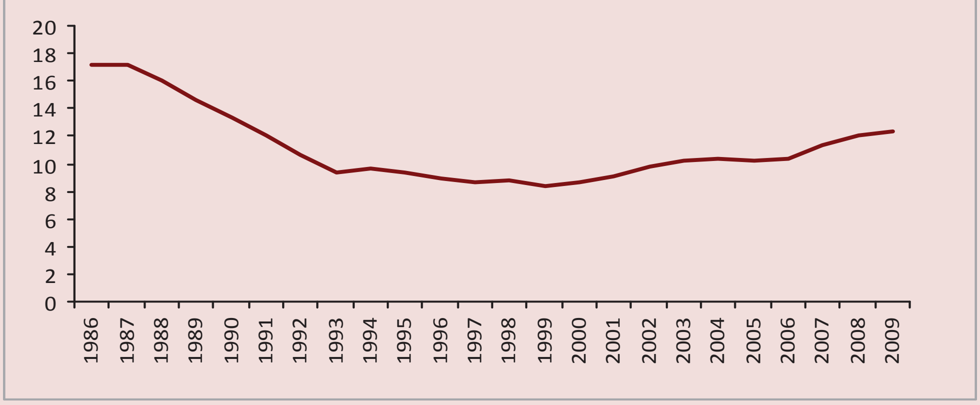
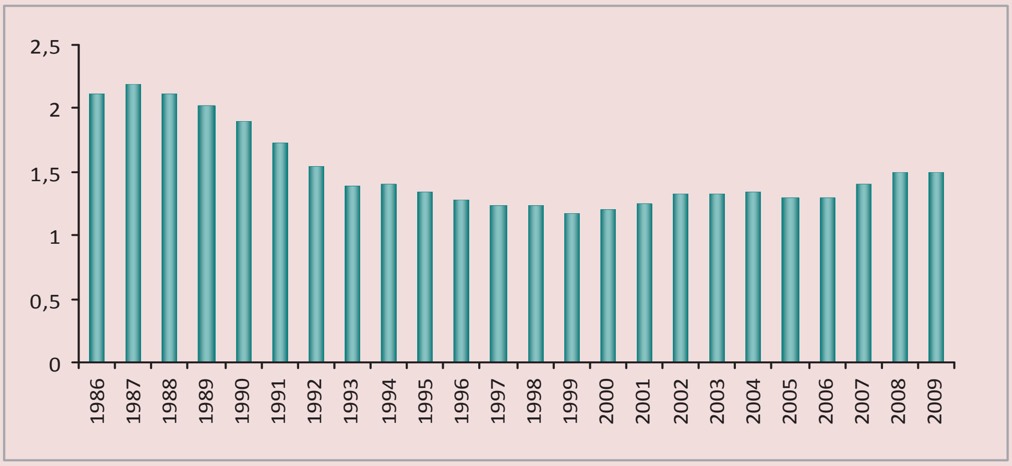


Figure 2. Dynamics of the total fertility rate in the Russian Federation per woman by the end of the childbearing period



In this case the births intensity has also been increased quite appreciably, that is indicated by the increase in the total fertility rate from 1.17 children per woman by the end of childbearing age in 1999 [2] to 1.49 in 2008 – 2009 [3] *(fig. 2)*.

However, such positive dynamics of the total fertility is mainly due to the changes in the birth calendar. While the indices of 1999 completely reflects the birth delay, practiced by people throughout the 1990's years and displayed much after August, 1998, the indices of 2008 – 2009 is under the increasing impact of the realization of the births deferred by older generations and compaction of the birth schedule of younger cohorts under the influence of the new state demographic initiatives. It means the adoption of federal laws "On amending some certain legislative acts of the Russian Federation with regard to state support for people with children" №207-FL of December, 5, 2006 [4], "On ensuring temporary disability allowance, maternity allowance for the citizens who are subjects to compulsory social insurance" №255-FL of December, 29, 2006 [5] and "On additional measures of state support of families with children" №256-FL of the same date [6], according to which since January, 1, 2007 the state certificate for the mother (family) capital has been introduced, as well as the development of "Concept of demographic policy of the Russian Federation until 2025" [7], approved by the decree of the President №1351 of October 9, 2007.

Strengthening of the government's attention to the problems of fertility can help the generations of active childbearing age to implement the previously postponed births and to compact the birth calendar. But it's more important that such attention can help younger generations to form more positive reproductive health standards. Therefore, the new demographic initiatives taken by the government of Russia in 2006 – 2007 not only extended the positive trends of fertility of early 2000's and the signs of stagnation already shown in 2004 – 2006, but they allowed us to hope that the generations of small numbers of the late 1980's – early 1990's would be stimulated when forming their reproductive attitudes. Accordingly, they will not be lower than those of numerous generations of the mid 1980's and it will allow us to level the depth of coming collapse in the birth rate to a certain degree.

The global economic crisis starting in autumn of 2008 and affecting the Russian economy caused the rise in unemployment and drop in living standards. It may again aggravate the demographic problems, negating the state's efforts in overcoming the demographic crisis.

In 2009 the total fertility rate in the country was continuing to grow, although with a lowering rate: it increased from 12.1‰ in 2008 to 12.4 in 2009. The total fertility in 2009 is estimated at 1.49 as it was in 2008. However, the value of these indicators reflects the influence of many factors: the transformation of age structure, those or other changes in the birth calendar of different generations, the effect of completed fertility of some cohorts, declining conditions of the implementation of population's reproductive expectations, changes in the level of reproductive attitudes etc. Some of them contribute to increasing birth rates, others contribute to lowering birth rates. It is obvious that the impact of financial crisis on the dynamics of fertility in Russia, first of all, can manifest itself through deterioration in conditions for the implementation of reproductive attitudes that will lead to postponement of births and reduce in the degree of their realization. But the greatest danger is the probability of negative effects on reproductive standards of young generations that may have lasting consequences for the prospects of fertility.

On the basis of the results of sociological survey conducted in 2008 – 2009 and devoted to the economic and demographic aspects of family life, in comparison with the results of research conducted by one of the authors in 1994 [8] and in 2000 [9], we have analyzed the present patterns of change in the level of population's reproductive expectations by time and by age, estimated their potential implementation and prospects of fertility and revealed the opportunities to influence upon the population's reproductive standards. We emphasize that in no case it is the estimate of the financial crisis's impact on fertility (the majority of respondents were interviewed before the onset of its active phase) – it is rather the analysis of the situation when the crisis may manifest its aggravating impact.

Within the framework of the survey conducted in the territory of 14 municipal formations of the Komi Republic in the form of hand-out questionnaires to a random sample with quoting by the type of inhabited localities and by age, 994 women of childbearing age were interviewed. 76.5% of respondents live in urban areas, 23.5 – in rural areas and it corresponds to the distribution of women by type of inhabited localities. The basic reproductive ages were covered to the greatest extent, i.e. the age structure of the sample is younger a little than the general fertile contingents at the expense of age groups up to 40 years old, who represent the greatest interest in the terms of their contribution to the total fertility. The specific weight of respondents at the age under 30 years old (41.7%), which currently accounts for about 75% of all births, is close enough to the share of these ages in the structure of women of reproductive age. The specific weight of the respondents aged from 30 to 39 years (45.9%) was exceeded by more senior contingents. Now about a quarter of all births fall to the people aged from 30 to 39, and mostly it is due to these age categories that the timing (i.e. determined by the realization of deferred births) part of the increase in fertility of early 2000's occurred. 12.4% of respondents at the age of 40 years and older, who also gave a timing increase to the level of fertility in the current decade, were interviewed. Under the present mode of fertility the reproductive cycle is almost completed by this age (about 1% of all births are after 40 years old), and this part of the sample can be viewed in terms of completed fertility of cohorts of 1959 – 1963 and 1964 – 1968 years of birth. It gives not only the opportunity to estimate the final number of children of these generations. Comparing it with reproductive expectations it also gives the opportunity to analyze the degree of implementation of reproductive expectations by the generations, most active childbearing age of them fell on the very unfavorable conditions of socio-economic decline of 1990's.

As it has been noted, over the period of 1999 – 2009 the total value of the fertility coefficient has increased in Russia from 1.17 children per woman to 1.49. In the Komi Republic the birth rate has been analogous to all-Russian one since the late 1980's. In particular, the corresponding figures are almost identical: 1.18 in 1999 and 1.49 in 2009 [10]. In the rural areas of the republic in the past two years the psychologically important threshold of the population's simple reproduction was overcome: in 2008 – 2009 the total fertility made for 2.23 – 2.28 children, that corresponds to the mode of slightly expanded reproduction. In the urban areas this rate is almost twice lower: 1.27 – 1.31 children. However, even the total fertility rate of 2009 does not mean that modern women will have this average child number by the end of their childbearing age, since the features of this indicator does not allow us to characterize the final number of children of the real generations. The fact is that the overall coefficients were calculated for conventional generations by the year of observation, they bear the burden of reproductive histories of women of thirty five successive years of birth: from those who were 15 in the year of observation up to 49.

Thus, the level of total fertility rate of 2009 is determined by both the starting demographic history of those who were born in 1994 and the life history of those who were born in 1960. In particular, its value reflects not only the increasing impact of the implementation of births delayed in 1990's and the compaction of the birth calendar of younger generations, but also the lowering impact of early implementation as far back as 1980's of the final number of children by the part of generations who were born in 1960 (under the influence of the resolution of Central Committee of the Communist Party, Council of Ministers of the USSR №235 of January, 22, 1981 "On the measures to strengthen the state aid to the families with children" [11]), as well as the lowering effect of irreversible restriction of the extent of reproductive plans implementation by older generations and rethinking the reproductive expectations by the part of population in crisis years of 1990's. So neither the level of the total fertility rate nor even its dynamics provide a reliable analysis of long-term trends in fertility and, especially, an estimation of its future prospects.

The values of population's reproductive plans, the people's ideas after the sociological researches about the number of children desired for the family under the most favorable conditions and about the number of children preferred from the standpoint of public interest provide more valuable information for both analysis and forecasting, especially if there is a possibility of dynamic comparisons. In our survey the levels of population's reproductive attitudes were determined by using the standard questions: "How many children do you plan to have (or did you plan to – if you aren't going to have any more children)?" (the so-called expected number of children), "How many children would you have if you had all the necessary (financial, housing, etc.) conditions?" (the so-called desirable number of children at all necessary conditions) and "How do you think of how many children is it the best to have in family?" (the so-called ideal number of children). In addition, in order to determine the degree of material factors influence on the implementation of the family's reproductive plans we asked "How many children can one have at the present time without infringing upon the financial interests of the family". The "continuity" of the reproductive standards was revealed by the question about the number of children in the family of orientation. And the "stability" of the reproductive attitudes was checked by the question: "How many children have you advised to have your children?"

As you know, under the conditions of deliberate regulation of fertility inside the family the person determines for himself or herself the number of children of her or his future family at the stage of reproductive standards, and later this level (in the absence of a strong perturbing effect of external factors) will not differ significantly from the planned level. Certainly, the level of expected number of children is a certain benchmark to which the family will seek in its life. But the degree of implementation of the reproductive expectations is, as a rule, rather high, and under the favorable conditions it may be exceeded. So in our survey the real fecundity of generation of 1964 – 1969 years of birth, who were from 40 to 45 years old in 2008, was 1.89 children, the real fecundity of generation of 1959 – 1963 years of birth, who were more than 45 years, was 2.00 children – while the average expected number of children in both generations is 2.10 *(tab. 1)*. In other words, the degree of implementation of the reproductive plans of generations, whose most active childbearing age fell on the very bad years of socio-economic crisis, is 90 – 95%. As for older generations, who were over the age of 30 years in 1990s, their reproductive plans were even overfulfiled: according to the survey of 2000, the real fecundity of generations of 1950s years of birth was 2.21, which is somewhat higher than their initial reproductive plans (2.15). Therefore, the index of the average expected number of children for a certain cohort of the population can be regarded as an assessment of its level of completed fertility, i.e. the number of children by the end of the reproductive period.

The average expected number of children in general for all of our respondents is 1.98 children. It is significantly higher than the level of total fertility indices of conventional generations of recent years. Although it should be mentioned that in the rural areas of the republic the average expected number of children (2.01) was less than the real total coefficient of 2008 – 2009 (2.23 – 2.28). It is obvious that under the conditions of low living standard of rural people the new measures of population policy have played a very significant role in rural areas, led to an extraordinary concentration of births. The consequence of this is likely to be much more significant (compared to urban areas) reduce in the total rural coefficient in the coming years (in this connection we note that the survey of 2008-2009 revealed a considerable convergence between rural and urban reproductive standards and that indicates the outlined convergence of models of demographic behavior of urban and rural populations).

Table 1. The level of reproductive attitudes among the women of different ages, according to the survey of 2008 – 2009, the number of children

Reproductive attitudes	Age (years old)							
	All ages	15 – 19 (1989 – 1993 years of birth)	20 – 24 (1984 – 1988 years of birth)	25 – 29 (1979 – 1983 years of birth)	30 – 34 (1974 – 1978 years of birth)	35 – 39 (1969 – 1973 years of birth)	40 – 44 (1964 – 1968 years of birth)	45 – 49 (1959 1963 years of birth)
Real number of children	1.12	0.15	0.40	0.87	1.19	1.71	1.89	2.00
Expected number of children	1.98	1.92	2.07	1.92	1.92	2.01	2.10	2.10
Number of children, desired under all necessary conditions	2.48	2.36	2.65	2.40	2.44	2.49	2.65	2.50
Ideal number of children	2.35	2.25	2.44	2.21	2.36	2.41	2.51	2.33
Number of children one can have without infringing upon your financial interests	1.31	0.47	1.43	1.26	1.35	1.73	1.60	1.51
Number of children in the family of orientation	2.41	1.94	2.23	2.36	2.42	2.44	2.90	3.00
Number of children you have advised to have your children	2.06	2.04	2.22	2.05	2.03	2.05	2.08	2.13

Figure 3. The average level of reproductive expectations, according to the surveys of 1994, 2000 and 2008 – 2009, children

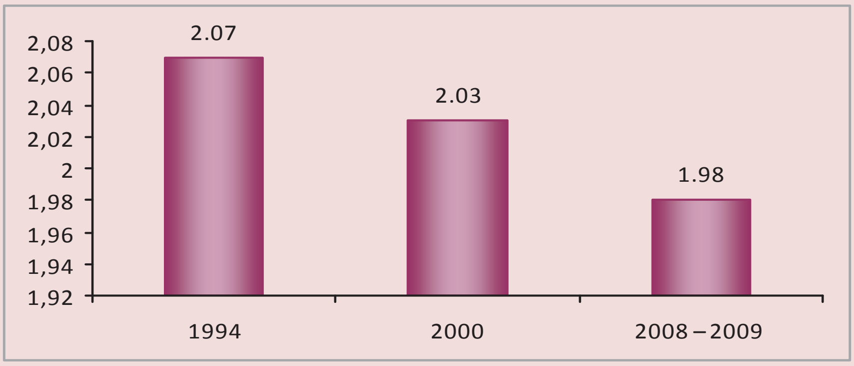
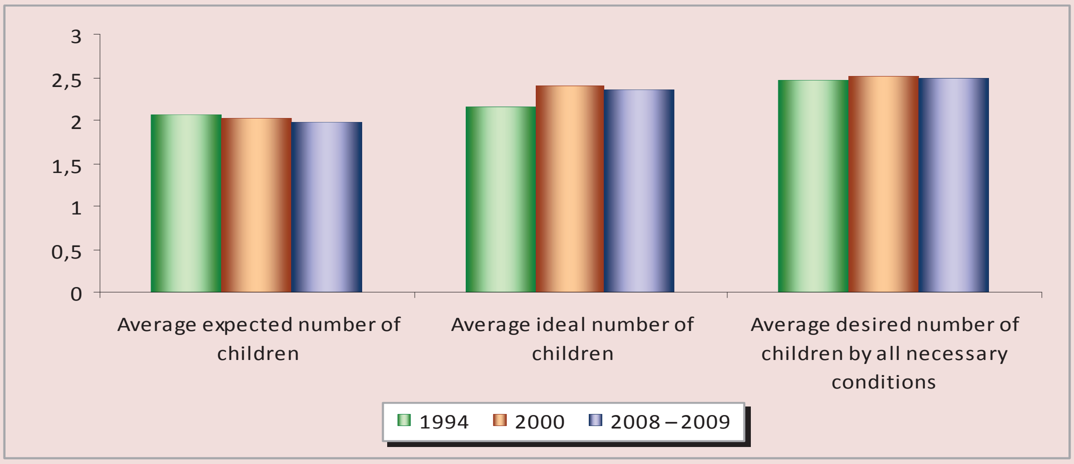


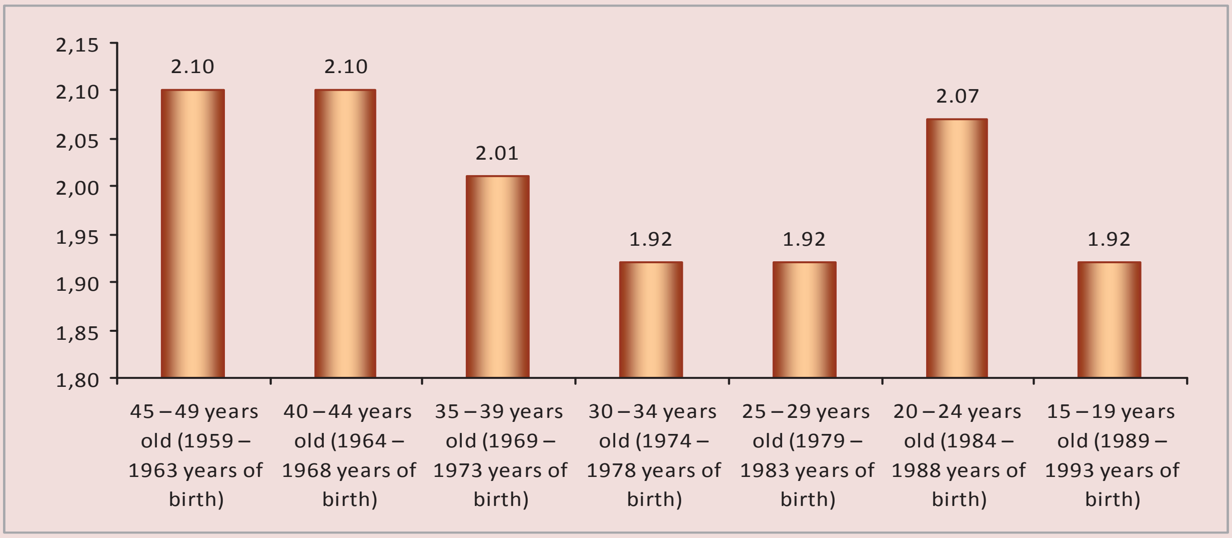
Figure 4. Dynamics of the major reproductive attitudes of the population, children



With similar characteristics of the sample set, the average expected number of children was 2.03 in 2000, 2.07 – in 1994 *(fig. 3)*. At the same time the year of 1994 was the year of the highest inflation for Russia, the year of 2000 marked the beginning of a fairly long period of spontaneous, without any stimulating measures, implementation of delay births, that indicates rather favorable socio-economic environment, the years of 2008 – 2009 were the years when the government strengthened its attention to the problems of fertility. Thus, in 2000s we still observe a smooth downward trend in accordance with the concept of waning demand for children. The concept was formulated by our Russian scientists in the mid of 1970's [12] (by the way, it is perfectly illustrated by the dynamics of the number of children in the parents family, depending on the age of the respondents - see Table 1). In other words, either the improvement in the socio-economic situation or the new demographic initiatives don't have a noticeable positive impact on the level of population's reproductive expectations in whole.

At the same time the average ideal number and the average desired number of children per family by all necessary conditions represent a certain reserve of exceeding of reproductive plans. These indices showed some growth by the year of 2000 *(fig. 4)* in contrast to the stable negative dynamics of the average expected number of children. The level of an ideal number of children has increased more considerably than usual, this fact is probably a consequence

Figure 5. The level of reproductive expectations by the age groups, according to the survey of 2008 – 2009, children



of rather broad discussion in 1990's. Its subject was consequences and potential threats of demographic crisis in Russia. This indicates good opportunities for socio-psychological measures of population policy. But economic measures of 2006-2007 also didn't have a stimulatory effect on the level of reproductive ideals and desires of the population: by 2008-2009 they generally decreased slightly.

However, the analysis of reproductive expectations by the age groups de-demonstrates the opportunity of positive impact on the level of population's reproductive plans. As follows from table 1, one can observe the decrease in reproductive expectations from older to younger age groups with subsequent stabilization: from 2.10 children for women over 40 (i.e. the generations of 1959 – 1963 and 1964 – 1968 years of birth) through 2.01 for the cohort of 1969 – 1973 years of birth – and up to 1.92 for younger generations. There is one deviation: the generation of 1984 – 1988 years of birth, who was from 20 to 24 years in 2008, the average expected number of children is 2.07 *(fig. 5)*. It's obvious that recently this is the most numerous generation who is still in most active childbearing age and received the maximum impulse for the formation of their demographic standards.

In our opinion, the basis of this, above all, is a positive impact of the improved socio-economic situation and the increase in the birth rate of early 2000s: formation of reproductive attitudes rather strongly depends on the nature of socio-economic and demographic situation. Perhaps, the great number of generation of 1984 – 1988 years of birth has played some certain role: its representatives grew in a "lifestyle of relatively many children". In addition, the new measures of population policy are aimed at stimulation of the second child birth (it means mother (family) capital), this generation could have a fairly high probability of success when changing the existing reproductive attitudes toward their rising. The fact is that the representatives of this generation were between 18 and 22 years old by 2007 – this is the age of beginning of active reproductive activity (the parents of 50 – 60% of the firstborn are under 22).

Thus, the numerous generation of those who were born under the effect of the measures of population policy of 1980s had the highest demographic standards (we should note that this does not contradict the conclusions, obtained by us in the survey of 2000, which revealed the increased reproductive expectations among the generation born in first half of 1980s compared with the generations of 1970's). Followed after this generation the smaller generation of 1989 – 1993 will determine the overall level of fertility in most of the nearest time, its reproductive expectations are at the level of 1.92 children, as the people born in the years of 1974 – 1983. It means that the state's demographic initiatives of 2006 – 2007 practically did not find a response from the representatives of the youngest reproductive ages.

The last figure, in fact, most clearly demonstrates in what reproductive background may manifest the long-term impact of the world financial-economic crisis on the prospects for fertility of the Russian population. It should be noted that from the chronological point of view the unfolding of global crisis in 2008 – 2010 is very unfavorable fact from the standpoint of fertility in Russia, since it occurred when the increasing opportunities of the age structure of reproductive contingents being exhausted, i.e. on the eve of the beginning of structurally lowering fertility. Meanwhile the crisis will help to deep the structural decline in fertility by worsening conditions for the implementation of existing reproductive attitudes of the population, thereby reducing the extent of their implementation. The worsening socio-economic context may lead to revision and further decrease in the low level of reproductive expectations of smaller generation of 1989-1993. This is more than likely if one takes into account that financial factor for the number of children is of extraordinary significance for this generation: according to the opinion of 15 – 19-year-old people one can have 0.47 children in the family without infringing upon their financial interests. It is almost three times lower than the average figures for the sample of respondents and it is four times lower than the reproductive expectations of this generation, and it's 5 times lower than its reproductive desires. In addition, the unfavourable conditions of financial and economic crisis will be the background for the formation of the reproductive attitudes of more scanty generation of 1994 – 1998 years of birth. In other words, the crisis may have a casual effect on the birth rate of the Russian population, deepening its structural decline and it may also have a long-term effect.

As a result, after a relatively high fertility rates of 2000's due to several mutually reinforcing factors (the great number of generations of active reproductive age, compaction of the calendar of their births, their higher reproductive attitudes, the implementation of delay births by older generations), we are faced with quite a long period of reduce in the birth rate, it is also due to several mutually reinforcing factors (small number of generations of active reproductive age, rarefaction of the birth field of births because of early implementation in the previous decade, reduced reproductive attitudes of generations that have reached an active reproductive age, reduction in the extent of reproductive attitudes under the influence of negative consequences of the financial crisis). It is obvious that in the next ten to fifteen years instead of some leveling of failure in the birth rate and instead of natural smoothing of demographic wave (which is characterized by a very large amplitude and adverse asymmetry because of peculiarities of its genesis), we should expect even greater increase in its scope.

The survey revealed the material factor had a significant impact on the number of children in the family: in the respondents' opinion, without material infringement of their interests in the family one can have 1.31 children. At the same time in 2008 – 2009 the influence of material factor even intensified, compared with the years of 1994 (1.41) and 2000 (1.48), it is not surprising, if one takes account of the operation of law on the leading growth of demands.

In effect, the same law subordinates the dependence of the definite number of children on income levels: when the well-being of the family being increased its reproductive plans are falling. However, as a result of many studies of both domestic and foreign researchers, it was found that the curve showing the dependence of the number of children on the family

Table 2. The level of reproductive attitudes among women in the families with different income per capita, according to the survey of 2008 – 2009, children

Reproductive attitudes	On the average sample	Average monthly income per a family member, rubles						
		Under 3000	3000-5400	5400- 7000	7000-12000	12000- 17000	17000-25000	Over 25000
Expected number of children	1.98	2.06	2.08	2.03	1.94	1.91	1.72	1.91
Number of children expected by all necessary conditions	2.48	2.55	2.64	2.53	2.44	2.41	2.15	2.52
Ideal number of children	2.35	2.35	2.48	2.38	2.39	2.23	2.13	2.09
Average age of respondents, years old	31.3	28.3	30.7	31.8	31.7	32.1	32.7	33.6
Specific weight, %	100.0	11.1	20.0	18.8	27.7	13.0	7.1	2.3

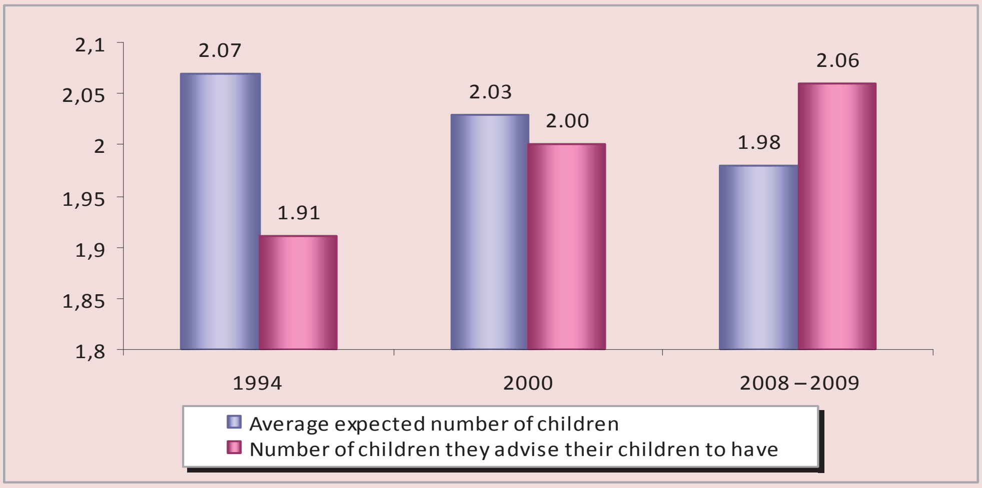
income has not monotonically decreasing but U-shaped character. It was also confirmed in our survey (tab. 2). In this case the living-wage bound serves as a starting point of such parabolic trajectory of dependence of the reproductive attitudes on the income level in the current Russian situation. In the families with the average income below the living-wage which are entitled to certain allowances, benefits and subsidies, when the income level increasing, the reproductive attitudes increase. Further, with increasing prosperity, their quantity is naturally reduced. And only the families with income, providing a decent standard of living (in the Komi Republic the figure in 2008 – 2009 was above 25,000 rubles a month per a family member, and such families in our sample were a few – only 2.3%), are characterized by a quite significant increase in the reproductive expectations and desires. The value of the ideal number of children, in essence, reflects the socially normed need for children regardless of personal preferences and living conditions. The results of our survey show that after the family having achieved the living wage, the value of the ideal number of children is characterized by a steadily decreasing trend. In our opinion, this fact as well as the excess of the average desired number of children typical for post-reform period by all necessary conditions in comparison with the average ideal value (see table 1 and 2) reflect a very skeptical public attitude to the issue on the need to increase fertility in modern Russia. Under the favorable situation in their family, people want more children than it's necessary and possible in the society which does not have necessary conditions for high number of children.

Accordingly, in order to stabilize the birth situation more or less in the country, in fact, one must create the stable favourable environment for the life of families with children. Corresponding to the extended reproduction in all age groups, the values of the ideal and desired number of children by all necessary conditions suggest that there are some reserves to increase the number of children in the families in Russia: as already noted, in favorable conditions the final fecundity of the family may exceed the initial reproductive expectations.

Moreover, in favorable conditions the mothers are going to advise their children to have more children than they plan (planned) themselves (fig. 6). While the average expected number of children steadily decreased from survey to survey, the number of children that women are going to advise their children, on the contrary, increased and in 2008 – 2009 it exceeded the average expected number of children (2.06 vs. 1.98), including those in the youngest age group. It reflects not only the manifested hope, finally, that "our children will live better than us", but also the objective improving the implementation of reproductive attitudes before the global financial crisis.

However, against the backdrop of the crisis the cardinal improvement of living conditions of the Russian family has made it much less likely. So now, at least, it is necessary to update immediately the demographic policy measures.

Figure 6. Dynamics of reproductive expectations and “reproductive instructions”, children



Such improvement was already required by the beginning of a new decade without the crisis, and we have written about it over the past years.

The point is, at least, about the substantial increase in the size of child benefit: all the previous years there was only indexation of child benefits, but it didn’t cover even the official level of inflation [13]. Only in 2010 the state rather appreciably increased the maximum size of maternity benefit and the monthly benefit for child care up to 1.5 years : respectively, from 25,390 rubles up to 34,583 rubles (instead of the planned 27,170 rubles.) and from 7,492 rubles up to 13,833 rubles. However, in our view, the upper limit of the maternity benefits should be cancelled at all. It is in line with quantitative and qualitative goals of population policy. The well-earning woman who has established herself in a professional way puts her future career at risk when giving birth to a child, and in modern Russia it could be reason enough to abandon the birth of the child desired, at least, the woman should be spared from the motivation for refusal because of financial reasons.

Targeting of child benefits only to low-income families should also be excluded from the practice. It refers to a monthly allowance for children. Either we must abandon it completely (the size of this benefit doesn’t make it possible to make anything like a tangible contribution to the family budget), or we must grant it to all children: we can’t focus on the economic failure and inferiority of the families with children.

Moreover, the birth of a child should not appreciably reduce the family’s economic status. Now, on the threshold of the structural reduction of birth rate, the country faces the need to demonstrate, finally, its political will and to equate the mother’s labor to productive work outside the family.

The experience of the U.S. and France proves that the systematic and large-scale financial incentives of motherhood sooner or later reach their results. The value of monthly benefits for child care up to one and a half year, which currently accounts for 40% of the average monthly salary and its maximum size reached 40% of the maximum benefits for pregnancy and childbirth again only in 2010, should also be comparable with the wages. When in 1981 a similar allowance (care of the child under 1 year) first appeared in the country, its value (35 rubles per month) amounted to less than 40% of the average wage. However, in 1980s it was a completely new measure of population policy, and it played a very significant role. But 30 years later such monthly allowance for child care, which is already the usual measure for our population, is considered in a completely different way. On the threshold of population well, no budget savings justify the loss in population policy.

In this case, of course, it is necessary not only to increase the size of child allowances sizeably, but also to facilitate the woman's family and vocational roles, in particular, to solve the question of catastrophic shortage of places in kindergartens and to stop the general commercialization of health and education system and to extend the directions of using of "maternal capital", and other activities.

We should particularly mention the increase in the opportunities to improve housing conditions for families with children, i.e. to provide the available mortgage loans and, more importantly, to introduce the privileges for its repayment with the children's birth. This is a very effective factor in increasing the birth rate: in our survey of 2008 – 2009 more than a third of women (35.8%), wanting to have a child in the nearest time, said about the improved living conditions as a necessary condition. However, while only 9.7% of the respondents were the participants in the programs for housing loans. And under the conditions of mortgage having collapsed at the very beginning of the financial and economic crisis, the people's participation in such programs is even less probable. The possibility of an early use of "maternal capital" to cover the mortgage credit was given to the population in 2009 – 2010, and it, of course, mitigated the situation. But it hasn't solved the acute housing question fundamentally. If young family hasn't any starting conditions such as, at least, a room in the hostel or in the shared apartment, or if they haven't wealthy parents, they cannot afford to purchase flat on mortgage even with the "maternal capital", especially in large cities.

Likewise, voiced in the Federal President's Message for 2010 [14] the instruction to the Government to develop a mechanism for providing the family with land to build the house for the third of the Child is unlikely to make a substantial contribution to solving the housing problems of Russian families. With a marked decrease in the average income per capita with the birth of another child the family with three children is in difficulty to find the necessary funds for more or less rapid construction of house.

At the same time the fact that the President's Message of 2010 focused on the population issues, and especially the issues of fertility is a rather favourable and timely factor. Any strengthening of the government's attention to the problems of fertility, to the needs of ordinary families and to the conditions of socialization of the younger generations can be seen as deepening the social and psychological measures of the pro-family population policy, which, as it has already noted, sometimes have even better opportunities than the economic measures. The demography problems are raised over and over again at the highest levels of government and "the issue on the second baby" raised in 2006 – 2007 gradually develops into "the issue on the third child" so necessary to overcome the restricted mode of reproduction of Russia's population.

These facts inspires us with some hope that the reproductive standards of very small generations of the middle – second half of 1990's years of birth will get some stimulating pulse and will be more positive because they will be formed against the background of the favorable demographic pro-family atmosphere in the society. However, as we have repeatedly emphasized in this article, in order to stabilize the situation with the birth or at least to level the birth failure coming in the near future, it is necessary to improve the state population policy all the time, consistently renewing and expanding the range of its activities. If the state is interested in improving the birth rate in the country, it really should, as the President said, "get to grips with the demographic problem seriously and permanently".

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Migratory processes as mirrored by the transformations: border regions in Russia

The article deals with the migration processes which took place in Russia in the post-Soviet transitional period. The migration processes became particularly intense in the border regions thanks to the active policy of the authorities to establish transboundarycooperationwith the foreign countries. The transformational processes in the economic, political and social spheres of Russian society influenced directly over the dynamics of the migration processes.In addition to a detailed analysis of the theoretical foundations of migration researches the authors use the statistical materials, which indicate the dynamics of the migration processes between Russia and the near and far abroad countries.

Migration, transformation, labour market, labour mobility, migratory exchange, transboundary cooperation.

Egor A.
MIKHEL
PhD in Economics, junior scientific associate of Institute of Economy, KarelianResearch Centre of the RAS
mikhel@mail.ru

Oksana S.
KRUTOVA
PhD in Economics, junior scientific associate ofIEKRS RAS
krutoks@gmail.com

Mankind has become a witness of force majeureof globalization in the XX-XXI centuries. Globalization processes have covered all the spheres of public life and they have created a globalsystem of countries and nations interdependence. These processes combined with rapid changes in the political and economic systemswereconducive toa sharp intensification of the international migration flows and they led to the forming of a fundamentally new migration situation in the world.

The process of population shift in the regions of Russiatook place against the background of the general deterioration of demographic indicators.Migration as a socio-economic phenomenon acquired a dual character.On the one hand, it created a "washout effect"of labour forceas far asthe great body of thequalified staffmigrated to the regions and countries where there were better opportunities for the realization of human capital. The loss of skilled labour force was virtually irreplaceable for the regions exported the migrants. On the other hand, migration created a “substitution effect” of labour force becausethe less-educated workers whoheld unskilled jobs migratedto the exporting regions. Thus, the migration of the Russian working people abroad was replaced by the migration of the low-skilled labor forcefrom the Commonwealth of Independent States (about 270 000 people annually) [21].

The migration processes in Russia are characterized by considerable regional differences. The settlementpolarization is associated with the expansion of migratory outflow and the localization of zones of migratory inflows. The migrants usually choose the regions whose economies are attractive for their labour activities.

The ability of the regional economy to generate theefficient jobs is dependent on its structure.The experience of the last decade shows that Russian economy which is guided by the raw materials does not contribute to these processes. Many Russian scientists(S. Guriev, V.Polterovich, V. Tambovtsev) associatethis problemwith the so-called “resource curse” economy. Government and business demand for the incomegeneration by the high-tech sectors reduce, so increment of the new knowledge and highly skilled human capitalbring down.The process of the further human capital’sdegradation leads to the intensification of the migration processesin the highly-developed regional economic systems.

The social and economic problems which arosefrom theoverall restructuring of the state and economic system of Russiain the nineties of XX century,differentiation of the regions according to their social and economic statuspredetermined the special nature of the labor migration. The process of the labor migrationintensified in the early 1990s due to the collapse of theunited Soviet state. The forced migrations from the former Soviet Unionincreased as well as the Jewish and German repatriation rose. The population shiftin the border regions of the former Soviet Union got a special character.

The international labour migration became the common way to adapt the economically active population of the border regionsto the new social and economic conditions andthe way to enhancethe welfare throughalternative or extra income.Imperfect employmentstructure andlabour market characteristicsat the regional levelstrengthen the shift processes of manpower resources and form the international labour market.Social factors of the labour migration in the border region are also important in stimulating of the population’s migration activity.

Institutional conditions of the transboundarylabour migration in modern Russia were produced by the changes in its political and economic regime. The external borders for free movement of goods, finances, resources and people were opened in the early 1990’s.In connection with that fact, international contacts, different ways of cooperation including the sphere of the labour migrationbegan to form. A wide range of new opportunitiesprovided the population of Russia and foreign countries with various forms ofmutually beneficial cooperation.

The globalization influences over the raising of importance of the social factors in the development of the migratory processes [4, p. 194-196] which are associated with the formation and expansion of various systems of social bondings [28, p. 3-14].Creation and improvement of the information and transportation infrastructure directly affects the nature and dynamics of the migration flows.

The employment conditions abroad allow the people in the border regions to increase their personal incomes at the expense ofoverseas employment. Such types of the labour migration are available for the working population in Russia as long-period permanent wage work,short-term (seasonal) work, frontier migrations (daily crossing the frontier) and episodic work which is associated mostly with the trade and procurement activities.

The labour migration includes different types of migrants. They are highly skilled scientists and specialists,people of the mass professions includingthe second-rate and labour-intensive industries,officials of the international organizations and multinational companies, family members of labour migrants. In addition to elite migrants and unskilled migrants (they are mostly men) researchers have isolated the special group of the migrants which consists of womenemployed in the service sector and housekeeping service. They meet theneeds of the middle-class populationin the developed countries [9, p. 91-101].

The feminization of themigratory flows has been starting since the 1990's. It is a peculiarity of the modern stage of the labour migration'sdevelopment [24]. The governments in different countries have to change the controlling mechanisms for the migration processes because the migration flows expand steadily.

The labour migrationhas a high degree of the migratory behaviorflexibility. It has a flexible infrastructurein whole. Contradictions between supranational economic and social objects,processes and institutions, on the one hand, and the national management concepts of these objects, processes and institutions, on the other hand, are becoming more appreciable.

The international labor migration has recently become a part of the world labour marketand an indispensable link in the functioning of the national economies.The migration policies of the western countries are directed towardthe selective reception of the labour migrants in demand, lessening of the disparities of the immigrationstructure and improvement of the total demographic situation [22]. According to the Global Commission of Migration (UNO) Russiaranks second in the world tothe USA by the number of migrants – 13.3 million people.The legal labour migration, which is ordered by the business entities and defined by the quotas of the Russian government, is declining from year to year.However, the illegal labour migration is enormous. According to various sources, its size ranges from 1.5 to 15 million people per year including the migrants from foreign countries(from a few hundred thousand to two million) [25, p. 44; 27, p. 11].

The Russian Federation is a country in transition.This circumstance influences over the migratory exchange with other countries. Russia has been experiencing economic growth over recent years. The economy of our country is being developed; the rate of production is being increased. Ourcountryis coming nearer to the leaders of the world economy.And in this sensethe labour-scarcity situation may be compensated at the expense of the migrants. The labour migration has allowed Russia to enter the international labour market andbecome its active participant[13, p. 36-48]. It is important to note that the globalization of the world economyhas strengthenedthe mutual cooperation in this field andhas brought both positive and negative aspects of the international migration [10].

The North-West regions of the Russian Federation have the necessary prerequisites for the development of the interregional cooperation because they have a great potential, powerful timber industry complex and rich mineral resources.Geographical location of the North-West District has predetermined the development oftransboundaryrelations. The total area of this region is about 1800 thousand square meters. There are the regions bordering the Baltic Sea here. The only borderwith the country which is a member of the European Union is located here. North-West includes uncoordinated economic subregions, which doesn't create the common free market zone. Enlargement of the European Union in the Baltic Sea region strengthens the EU attention to the issues ofborder cooperation with Russia.

The main role of the Russian border North-WestDistrict in the European system of labor division consists in functioning as a transit in all its diversity.Transboundarytransport and telecommunicationprojectsarepriority in the investment policy both in the Russian Federation and in the European Union.A vast territory of the North-West District is rich in natural resources but it hasn't a developed transport and communication infrastructure. Today it is a deterrent of social and economic development; it isn't an advantage.Objectively, the numbers of regions of the Russian North-West District have the necessary prerequisites for the development of interregional economic cooperation. These prerequisitesinclude the great economic potentials of Saint-Petersburg and the KaliningradOblast as well as the unique mineral deposits in the Murmansk Oblast.

The practice of migration processes also becomes very specific because of the special nature of border relations between the North-West region of Russiaand the CIS and the far abroad countries. The main trends of the migration processes in Russia are the following.

The first tendency is the following: Russia is becoming an active consumer of the migrations from the CIS countries. According to the Federal Migration Service, the total number of foreigners working in Russia in the first half of 2009 amounted to 1770.1 thousand people; this rate decreased by 82.8 thousand people (4,5%) as compared with the rate in 2008. Foreign workers came to the territory of the Russian Federation from 145 countries around the world [17].In general,the number of foreign people working in Russiaincreased 11.4 times as many for the period of 2000 – 2008 (from 213 293 people in 2000 to 2 425 921 people in 2008) [16, 23].The major suppliers of the labor force to Russia from the CIS countries are traditionally Uzbekistan, Tajikistan, Ukraine and Kyrgyzstan. The main foreign suppliers are China, Vietnam, Turkey and North Korea (*tab. 1*).

Among the CIS citizens arriving in Russia there is a category of the labour migrants who go to Russia for a certain period in order to earn and then they go home. These people have a rather weak motivation to be resettled. They work in Russia because the wages are higher here than in their countries.These migrant workers are mainly employed in agriculture,building, transport and timber industries. Theyfillunskilledworkingpositions.

The migration growth in Russia amounted to 242 107 personsin 2008, 129 194 people in the first half of 2009 [19] and 89 574 people in the same period in 2010[20]. In 2008 the migration growth in the North-West Federal Districtamounted to11.4% of total rate of the migration growth in Russia; it amounted to 9.6% in the first half of 2009 and 8.2% in 2010.

Table 1. The number of the foreign workers employed in Russia, thousands people [16, 23]

	1995	2000	2003	2004	2005	2006	2007	2008
Total	281.1	213.3	377.9	460.4	702.5	1014.0	1717.1	2425.9
Fromthe CIS countries:	**134.4**	**106.4**	**180.5**	**221.9**	**343.7**	**537.7**	**1152.8**	**1780.0**
Azerbaijan	1.3	3.3	6.0	9.8	17.3	28.3	57.6	76.3
Armenia	6.1	5.5	10.0	17.0	26.2	39.8	73.4	100.1
Georgia	7.0	5.2	3.2	3.8	4.3	4.9	4.8	4.2
Kazakhstan	2.1	2.9	4.0	4.3	4.1	5.0	7.6	10.4
Kyrgyzstan	0.7	0.9	4.8	8.0	16.2	33.0	109.6	184.6
The Republic of Moldova	6.7	11.9	21.5	22.7	30.6	51.0	93.7	122.0
Tajikistan	1.5	6.2	13.6	23.3	52.6	98.7	250.2	391.4
Uzbekistan	3.6	6.1	14.6	24.1	49.0	105.1	344.6	642.7
The Ukraine	94.2	64.1	102.6	108.6	141.8	171.3	209.3	245.3
From the far abroad countries:	**146.6**	**106.9**	**197.4**	**238.5**	**358.7**	**476.1**	**563.8**	**645.0**
Vietnam	3.2	13.3	35.2	41.8	55.6	69.1	79.8	95.2
China	26.5	26.2	72.8	94.1	160.6	210.8	228.8	281.7
North Korea(DPRK)	15.0	8.7	13.2	14.7	20.1	27.7	32.6	34.9
Turkey	36.2	17.8	37.9	48.0	73.7	101.4	131.2	130.5

It is noteworthy that the trend to increasing of migration growth was fixed in the Vologda Oblast, the Kaliningrad Oblast, the Leningrad Oblast, theNovgorod Oblast and in St. Petersburg.The migration growth was particularly significant in St. Petersburg. It amounted to 13.6% of total migration growth in Russia in 2008. This figure is higher than the same rate in the North-West Federal District (9.9% in 2009).At the same timethere is a tendency to the negative migration balance in some regions. The highest rates ofthe negative migration balance were fixed in the Komi Republic, the Arkhangelsk Oblast and the Murmansk Oblast.

The Russian Federation is a leaderin different areasof cross-country cooperation with themajority ofthe former USSR countries. Economic and social level of the CIS countries is lower than in Russia. Although their economic systems are also developing andwell-being of the people is gradually increasing. The migration exchange with the CIS countrieshas the greatest quantification among the international migration flows in Russia.The peculiarity of the migratory movement between Russia and the CIS countries is the fact that Russia has become thecenter of gravityfor the migrants from the CIS countries including the labour migrants. Most migrant were working in the building organizations in period from 2007 till the first half of 2009 – 41.2% (average rate over three years); 17.6 % migrants were employed in the wholesale and retail trade,vehicles repair, personal and household goods repair; 11.8% migrants were employed in the mining and manufacturing sectors; 6.9% – in agriculture, hunting and forestry; 4.1% – in transport and communications [17, 23].

The migration exchangewith the CIS countriesis the most preferable forRussia because of the following reasons: the common language, culture and education which were inherited from the common past of the unified state. Russia canreceive up to one million migrantsannually and provide them with work and accommodation [3, p. 8]. Although the Russians are more popular in the labour market than the citizens from other countries [2, p. 15-16]. The majority of the labour migrants come to Russia from such CIS countries as the Ukraine, Armenia, Azerbaijan, Tajikistan, and Kyrgyzstan. There is a rather interesting trend in the migration from the near and far abroad countries. As a rule, there is a positive migration balance in the regions receiving the foreign labour force from the CIS countries and the Baltic States. The positive migration balance amounted to 373689 people totally in Russia in the period from 2008 till the first half of 2009 [19, 21] and 89 022 people in the first half of 2010 [20]; the positive migration balance in the North-West FederalDistrict amounted to 9036 people in the period from 2008 till the first half of 2009 [19, 21] and 8 539 peoplein the first half of 2010 [20].

The second tendency is the following: the stable trend to decrease the number of the labour migrants coming from the far abroad countries has formed in recent years.Thanks to globalizationa lot of Russian regions have begun to attract the labour migrants from the near and far abroad countries. They have become the sources of the replenishmentof manpower resources[6]. But there are problemsassociated with receiving of the low-skilled labour force anditsintegrationintothesocialandeconomic-systems [7].It was caused by a sharp increase in the number of the migrants from the former USSR countries,as well as from the far abroad countries such as Vietnam, China, North Korea and Turkey(average proportion of migrants has been increased in 7 times for the period from 2000 till 2008). In addition,the role of the illegal migration and illegal employment of foreign workers has been increased in Russia [12].

The second trend: recentlythere has been formed a stable trend to decrease the number of migrant workers coming from several foreign countries. Thanks to globalization, many Russian regions have started to attract labor migrants from the near and far abroad and they became one of the sources of manpower [6]. But there are problems connected with hiring of low-skilled workers and their integration into the

Table 2. Distribution of Russian citizens who left for work abroad (by countries, people) [23]

	2000	2003	2004	2005	2006	2007	2008
Total	45760	47637	56290	60926	65747	69866	73130
To Europe	**22102**	**16304**	**16940**	**21936**	**19766**	**21071**	**20834**
The United Kingdom (Great Britain)	6771	2056	1792	2428	1630	1571	1406
Germany	4189	2484	3058	3272	3419	3904	3493
Greece	3242	3122	3170	2884	2221	2639	2498
Malta	3063	3258	3517	4424	4416	3752	4487
To Asia:	**17354**	**21340**	**21169**	**19135**	**17038**	**16784**	**17787**
Hong Kong	479	389	166	207	226	262	359
Cambodia	1184	3998	2215	1731	1849	2550	4036
Cyprus	8218	9875	10087	10492	8875	8232	8131
Mongolia	82	181	1108	704	360	466	827
Singapore	1978	1056	2119	839	972	980	1093
Japan	1754	3107	3886	2619	1603	2153	1257
To Africa:	**1516**	**2612**	**5828**	**4455**	**4484**	**4694**	**4807**
AmongthemLiberia	1239	1979	3262	3955	3963	4158	4246
To America:	**4763**	**6888**	**11579**	**14301**	**23081**	**23710**	**26236**
Bahamas	337	437	735	815	1877	2576	2554
Panama	1180	1084	887	1090	1590	1860	2563
The USA	1135	2408	6073	7409	13457	11542	13698
To Australia and Oceania	**25**	**493**	**774**	**1099**	**1378**	**3607**	**3466**

social and economic systems [7]. It was caused by sharp increase in the number of migrants from the former USSR countries as well as from foreign countries: Vietnam, China, Korea and Turkey (over the period of 2000 – 2008 the portion of migrants has increased an average of 7 times). Besides Russia has increased the role of illegal migration and illegal employment of foreign workers [12].

For example, for the period from 2008 tillthe first half of 2009-s the migration decline in aggregate over two years made up 3288 people in Russia and 1210 people in the North-West Federal District. The greatest rate of migration loss was registered in the Republic of Karelia – (-447) people. Here we mean the migratory exchange between Russia and the far abroad.

The migratory increase (per 10000 people) calculated by the Federal State Statistics Service allows us to analyze the trends in migration relations between Russia and the countries of near and far abroad.

For example, in Russia as a whole over the period of 1990 – 2000 there was positive migration balance. The highest rate was recorded in 1995 (44 points). However, in subsequent years it fell to 6 points (in 2003).

It is noteworthy that the lowest negative migration rates were registered in the Komi Republic, Murmansk and Arkhangelsk regions.

At the same time these rates were positive in some regions (Kaliningrad, Leningradskaya region, the city of St. Petersburg) in the period of 1990 – 2007.

The third trend: Russia is an active migration provider for foreign countries. The main flow of migration from Russia goes to the countries of Europe, Asia and America. However, during 2000 - 2008 the scale of migration by the countries of the world has changed significantly. During the eight-year period the number of migrant workers who go to the UK decreased by 4.8 times, while the number of migrants travelling to the USA increased by 12 times and to the Bahamas – by 7.6 times, to Australia and Oceania – by 138.6 times *(tab. 2).*

As a rule, the bulk of the migrants who go abroad to work is workers – from 21643 to 26347 people (sailors, skippers, sub-skippers, boatswains, engine-drivers of all kinds, motor mechanics and their assistants, bakers, cookery experts, cooks), while the number of specialists who go abroad is much less (from 13663 to 19672 people) [23]. The main share of the intellectual workers are experts in the field of techniques, technologies (engineers, technicians, mechanics, laboratory assistants, town planners, transport nodeschedulers), specialists in the field of culture and art (librarians, lecturers, tour guides, interpreters, bibliographers, critics, artists, directors, actors, composers, writers, musicians, singers).

In most cases the Russian immigrants going abroad have secondary vocational education (about 40% of the total migrant population). But the share of migrants with higher professional education is also significant (30%).

The length of migrants'work activities abroad is usually less than 6 months (50281 people in 2008).

In the process of international exchange of labour migrants Russia is characterized by the following trends:

- since the beginning of 1990-s highly skilled migrant workers continue going to the developed countries and this outflow weakens the capacity of development of the domestic economy, but lately the number of such migrants is reduced and there are some cases of the reverse movement of migrants;
- low-skilled Russian workers go abroad to work, their work in secondary and tertiary economy sectors of foreign countries is of seasonal or medium term nature;
- migrant workers from CIS countries and some bounder countries of the Asian regioncome to Russia;guest workers occupy labor market nichesmainly in the construction, timber industry, agriculture and services and they are also engaged in business;
- illegal migration is of particular importance, according to various estimates it makes up several million people annually. They are labor migrants having come to Russia in violation of Russian legislation, illegally staying in the country and working without formal permission [8].

At present the international migration exchange in Russia can be described as uneven because the quality of human resources is declining in the country and highly skilled specialists are replaced by less qualified ones [1, p.44]. However, there is a paradoxical thing: there is a lack of specialists with middle andinitial level of vocational training. They could fill up a growing number of vacancies of this qualification. Today Russia has no longer its own demographic resources to make up sparsely populated areas with people. The problem is aggravated by spontaneous inflow of migrants from neighboring states, and itis fraught with a range of threats without being legally regulated and properly controlled by the state. The migratory flows from the outlying and sparsely populated areas are usually directed to the central and southern areas of the country with favorable natural conditions or to the areas with relatively high social and economic development [5, pp. 75-83].

Recently labour migration has become a widespread phenomenon among the residents of small towns and rural areas [15]. Small Russian city with the population of several tens of thousands of people usually have a single-industry structure of the economy, i.e.an enterprise forming a company town ensures jobs for the most of the working population. During the transition to a market economy many of these enterprises are faced with serious difficulties, as a result of this people actually lost their jobs. In these conditions household members were forced to look for a job in larger cities, where thanks to the development of private business there were new working places.

A grave situation in the labor market has urged people to the commercial migration and the exit trade [18, pp.39-73]. In connection with changes in the economic situation in Russia in the late 1990's the overseas trip of "shuttle traders" were replaced by trips to the major wholesale markets in capital cities for subsequent sale of goods in the regional retail markets. The scale of such migration in the small towns reaches 30% of all households in which at least one family member is engaged in exit trade [26]. Besides the commercial sphere the migrant workers are engaged in construction as blue-collar workers, in various services, in transport, in timber and agricultural enterprises.

There is a similar situation in rural areas where the problem of migration of young people is particularly acute. After completing their studies in big cities young people tend to stay there, not to return to their villages and settlements. Employment difficulties, housing problems andlack of real prospects make young people look for a job in larger settlements. Job search in towns and cities is a striving of not only young people but also another part of able-bodied population dissatisfied with low wages and total lack of work in the rural labour market.

As a rule, the flows of migrant workers are directed from village to city, from small towns to larger centers and capital cities. We observe some kind of redistribution of population in favor of large cities where the employabilities-mentopportunities are extended. The return flows from cities to villages are practically absent and it is fraught with the latent threat for the country's economy due to increased sectoral imbalances in the economy. One of the limiting factors for potential migrants are social costs connected with legal and social vulnerability for migrants, with health problems and deterioration in family relationships [11, pp. 47-56].

Trans-boundary labour migration is determined by social and economic tensions caused by the structural shortcomings of locallabour market,the unemployment of economically active population and the absence of real sources of welfare for certain groups of population.

* * *

Thus, it's obvious that solution of the labour migration problems in the near-boundary Russian regions is of rather strong interest to the authorities and the general public butthe labour migration abroad still needs attention. The main emphasis of the public interests is placed on the arriving migrants, their number, adaptation, employment and other problems. When studying the problem of outflow of migrant workers abroad it becomes clear that there is no systematic statistics about the border regions, there is no regulation of these processes that occur quite spontaneously. There is only a system of mediation for employment abroad, but it does not cover all migrant workers.

The trans-boundary labour migration in the border regions is connected with a deficit of flexible employment forms, especially for such special employment and occupation categories of citizens as students, employees of government-financed organizations, the unemployed etc. Having a relatively small income as well as quite a lot of free time on vacation, they are forced to seek additional sources of income. Regionaloccupation pattern is not always able to respond to such needs of the economically active population. On the one hand, despite the sufficient number of vacancies, the supply of labourforce for the short term doesn't satisfy the employers, and on the other hand, the conditions of the employers don't satisfy potential employees in terms of pay and conditions of short-term work. Educational services to potential migrant workers for employment at home and abroad can help to solve this problem.

A number of Russian regions could use such advantage as a bounder position for cooperation in the labour and employment sphere. Deficiency of flexible forms of employment at the national labour market can be compensated at the expense of such forms of employment in a neighboring state. Territorial nearness, established mechanisms and necessary infrastructure to organize transportation, accommodation and work can expand the regional labour market using trans-boundary linkages. So, certain segments of the labour and employment sphere oftrans-boundary labour market are being formed. At this stage its structure has an imperfect form, since the labourmigration involves workers doingunderpaid and low-skilled jobs. The share of high-skilled migrants does not exceed 10% of their total number.

Economic factors of labour migration in the border region are supplemented with some additional important factors connected with social, cultural and educational opportunities available for labourmigration. In the framework of trans-boundary cooperation there are some prospects for further development of labour exchange. Russia is being involved in the global economic ties more and more, and this fact will help to develop the labour migration of skilled manpower. At the same time the work abroad is a good prospect for students during their holidays, as it allows them to get additional revenue and to meet their needs for educational and cultural development.

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Public opinion concerning the world financial and economic crisis and its consequences for Belarus *

Public opinion concerning feasible directions of the crisis influence on Belarus, attitudes towards the anti crisis programme and more probable consequences of the crisis, ways of reaction to the crisis, possibility of protest actions and personal participation in such events, patience index change as well as trust in social institutions and government bodies were analyzed in the representative random survey.

Sociological researches, financial and economic crisis, public opinion.

Sergey A. SHAVEL
Doctor of Sociology, Professor, Head of innovations sociology department of the Institute of Sociology of the National Academy of Sciences of Belarus

Recently, the question of whether the crisis is over is actively discussed at different levels. Expectations of the population are not difficult to predict – people want to move quickly to normal life, but the views of analysts are not clear. Evaluating the situation in Belarus, some signs of positive dynamics can be identified. They are the GDP growth in the first months of this year, the revival of consumer demand, some wage increases, indexation of pensions and other social payments, the continuing low and stable rate of unemployment (about 1% of total employment), as well as the changing balance of purchase and sale of foreign currency. So, during two months in 2010 the population bought 765.5 million, and sold 933.6 million dollars. Last year everything was the opposite: in January – February the population bought 1512 million and sold 739.4 million dollars. Nevertheless, it is too early to speak of the turn, i.e. the end of the crisis. From the sociological point of view it is important to include indicators of social well-being and mood of people, as they were revealed in August, 2009 on the results of monitoring of public opinion within the Russian and Belarusian project. For this purpose we submit the results of the study.

Introduction

Modern financial and economic crisis above all is characterized by rapid distribution, unprecedented scale and the capture of all countries of the world. This lies on the surface and is available to perception based on the information broadcasted by media from the stock markets and international organizations that monitor the dynamics of world economic indicators. Regarding the internal sources, the origin of the crisis and the mechanisms of its development, aggravation, they remain latent – in any case, most analysts take the view that an accurate diagnosis will be possible only in the post-crisis period. The uncertainty is already visible in the choice of terminology, for example, when the American media for a long time instead of the word "crisis" used the euphemism "recession". Crisis is a profound

* Sociological data were obtained in the course of the joint Grant BRFFR monitoring economic conditions and social well-being of the population of regions of the North-West federal district of Russia and Belarus from 15.04.2009 GO9R-031.

disorganization, runaway economic processes with extremely adverse social consequences (increased unemployment, reduced incomes, increased social tension, etc.), and recession is just a slowdown or a relative decline in activity. The beginning of the current world crisis belongs to the middle of 2007, referring to the first clear signs of the collapse of mortgage lending in the USA. However, the reasons of mass non-payment mortgages are still unclear (while revenues kept or even increased), which caused a sharp fall in property prices and, consequently, the collapse of banks that lend money to purchase.

The mortgage crisis could be caused by the fact that the creditor banks in the pursuit of excess profits willingly went to the termination of mortgage contracts and even provoked it, knowing that in this case, the paid amount is not refundable to the borrower. But psychological factor was unrecorded, that is with a critical mass of forced termination a chain reaction appears which results in a panic in the mortgage market. Borrowers can see that prices, for example, of housing, fall, and perceive that previous conditions of the loan agreement as unfair. Accordingly, some of them require renegotiation, others refused to pay the old fees, undertaking litigation, and others get out of the mortgage, hoping for a more acceptable solution to their problem. This process originated long before 2007, and sociologists could identify it in advance, conducting targeted research. Mortgage ought to be slowed down even when about 20% of respondents expressed doubts about their credibility or lack of confidence in banks. But the mortgage crisis could not be predicted either economists or sociologists, because there was no such an order. Banks considered such studies as superfluous, but the state remained in the side observing liberal principle of laissez faire – non-interference in private affairs.

Critics of the consumer society have been arguing the dangers of overconsumption and its mythologizing. French sociologist Jean Baudrillard wrote: "We expect gross invasions and sudden destruction which not foreseeably and obviously, as in May, 1968, will smash this white mass."[1] A team of authors of the study entitled "Project "Russia" makes clear conclusion: "Easy money in the form of interest provokes the growth of consumption. Nature of the market economy applies on this, existing in a constant growth of consumption. The growing speed and volume transform a man into a sort of tube through which a flow of mostly unnecessary goods flies faster and faster. It is not clear what the maximum capacity of a man as a pipe is, but it is no doubt that it is finite. When consumer activity does not meet production, economy will collapse. Then state structure will collapse" [2]. As far as this conclusion is strategically right, we will know soon. The image of "a man-of-pipe" is not unambiguous, although the "syndrome of consumerism" is a real threat for susceptible individuals, and state covered by it. Unfortunately, world leaders of "G 20" ("Big Twenty"), developing measures to overcome the crisis, has not yet mentioned the need for a change of values, new approaches to the regulation of consumer behavior.

The wave of the global crisis reached Belarus in September, 2008. Strictly speaking, given the above definition, we have no crisis because there are no domestic sources. But in real life there is its influence that in everyday life is often denoted by this word.

1. Influence of the crisis on the living conditions of the population of Belarus

As we can see from *table 1*, the crisis in one way or another affected most of the population.

The most common display of the crisis is called inflation. Thus, 76.4% of respondents said that they felt growth in prices for consumer goods and services. Another 11.7% of respondents acknowledged that although at the time of the survey inflation did not affect them, but it may affect in the future, and 5.1% of respondents are confident that higher prices did not

[1] Baudrillard J. Society of consumption. – M., 2006. – P. 245.

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Table 1. Assessments of the impact of the crisis (in % of respondents)

Have you been affected or not by the following phenomena in the current crisis?	Have you been affected by the crisis?			
	Yes, it affected	No, it did not affect, but it may affect in the future	No, it did not affect, and I think that it will not affect	No answer
Arrears in salary and social payments (pensions, allowances, grants, etc.)	16.2	38.4	34.2	11.2
Decrease (cuts) of wages and social payments	33.3	29.0	25.9	11.8
Reduction, dismissal from the company, which you work at	9.1	30.3	39.3	21.3
Closing (suspension) of an enterprise, which you work at	4.2	26.8	45.5	23.4
Depreciation of ruble savings	30.6	25.9	27.2	16.1
Increase in prices of consumer goods and services	76.4	11.7	5.1	6.8

affect them and will not affect in the future. For a comparative analysis it is useful to introduce an index of significance of impact of inflation, calculated by the formula:

$$Is = A - B,$$

where

A – a number of answers "Yes, affected"

B – a number of answers "Did not affect, and it will not affect".

The average for the sample Is = 73.3 percentage points, less than the average is in the Brest (57.6) and Mogilev (59.3) oblasts, more is in the Gomel oblast (85.2 percentage points) *(tab. 2)*.

Note that these deviations are statistically significant. Thus, the difference between the Gomel oblast, on the one hand, and the Brest and Mogilev oblasts – on the other hand, is, respectively, 28.2 and 26.3 percentage points, which can not be due to random errors. To explain the additional interviews were conducted with those who expressed confidence that rising prices did not affect and will not affect in the future. Every 20-th of the interviewees gave such an answer: a total of 106 people, including 57 women and 49 men, 63 – citizens, 43 – villagers, 33 – under 30 years old, 35 – average age 38 – older age, 68 – with general secondary education and below, 24 – with specialized secondary education, 13 – with higher education. The respondents identified the following reasons for such confidence:

- firstly, the presence of PSP (personal subsidiary plot) (their own or their relatives in the countryside), which gives a measure of independence from the food market, moreover, makes the growth of prices profitable;
- secondly, private enterprise in the field of crafts, manufacturing for sale of certain products, sewing, knitting, coopering;
- thirdly, the additional earnings, rising with the growth of prices;
- fourthly, reliance of small part of students and pupils on parental support.

Thus, it is more or less number of represented categories that explains the difference in responses within regions. For example, in the Gomel oblast only 0.8% are confident that prices will not affect them, whereas in the Brest oblast there are 11.7%.

Table 2. Assessment of the population of inflation effects (in % of respondents)

Have you been affected or not by the growth of prices in the current crisis?	Total	Brest oblast	Vitebsk oblast	Gomel oblast	Grodno oblast	Minsk	Minsk oblast	Mogilev oblast
No answer	6.8	3.1	6.5	6.6	2.8	11.8	4.2	11.9
Yes, affected	76.4	69.3	78.1	86.0	81.4	75.6	78.3	65.1
No, it have not affected, but it may affect in the future	11.7	15.9	12.7	6.6	12.2	8.5	10.6	17.2
No, it have not affected, and I think that it will not affect	5.1	11.7	2.7	0.8	3.7	4.1	6.9	5.8
Index of significance	73.3	57.6	75.4	85.2	77.7	71.5	71.4	59.3

A third of respondents admitted that they had been affected by the crisis-related decrease (cuts) of wages and social payments, almost as many – 26% – expressed confidence that this will not affect them *(tab. 3)*.

This means, that wages at some enterprises decreased due to the forced part-time work. As for social payments (pensions, allowances, grants, etc.), as it is known, they did not reduce and even increased in nominal, but the people evaluate their real purchasing power declined due to price increases, including children's range and back-to-school goods. The highest index of significance is in Minsk (28.2 percentage points), showing that the number of those who were affected by decrease of wages and social payments is 2.6 times higher than the number of those who were not affected and in their opinion, will not be affected. The Brest and Vitebsk oblasts show a different picture: a number of people who trust in their own security is more than the victims of the crisis.

Despite the fact that there had been the devaluation of ruble a number of people who acknowledge themselves as affected by the devaluation of savings was only 30,6%, while 27.2% are confident that this will not happen with them, and 25.9% admit such a possibility in the future *(tab. 4)*.

These data draw the following conclusion: devaluation provoked by the crisis, of course, affected the interests of depositors, but it did not cause panic and massive outflow of savings and shake faith in the credibility of the banking system as well, that is evidenced by the continuing growth of ruble deposits. First of all the banks of the country posted the statement of the President of Belarus on guarantees of deposits and the appeal of the National Bank with an explanation of the situation which favored to this. Nevertheless, it is necessary to take into account a significant difference in sentiments of people on this issue. In Minsk (Is = 21.1) and Grodno (Is = 21.0 percentage points) concerns on the persistence of savings is much higher than the national average (Is = 3.4 percentage points), and on the contrary confidence is higher in Brest, Minsk and Mogilev oblasts.

Arrears in salary and social payments affected at the time of the survey 16.2% of the respondents. This can be attributed to serious signs of crisis in that period, especially given the fact that the system of payments in the second half of 1990-s worked flawlessly, and people used to it.

Not by chance, 34.2% expressed confidence that the problem did not affect them and will not affect. However, 38.4% admit that this can happen with them in the future. Referring to

Table 3. Decrease (cuts) of wages and social payments (in % of respondents)

Have you been affected or not by the decrease (cuts) of wages and social payments in the current crisis?	Total	Brest oblast	Vitebsk oblast	Gomel oblast	Grodno oblast	Minsk	Minsk oblast	Mogilev oblast
No answer	11.8	5.0	9.6	14.4	7.0	14.3	15.1	16.4
Yes, affected	33.3	29.7	18.6	38.7	37.7	45.4	33.9	25.5
No, it have not affected, but it may affect in the future	29.0	28.8	42.7	21.6	35.2	23.1	22.1	33.8
No, it have not affected, and I think that it will not affect	25.9	36.5	29.1	25.3	20.2	17.2	29.0	24.2
Index of significance	7.4	- 6.8	- 10.5	13.4	7.5	28.2	4.9	1.3

Table 4. The depreciation of ruble savings (in % of respondents)

Have you been affected or not by the depreciation of ruble savings in the current crisis?	Total	Brest oblast	Vitebsk oblast	Gomel oblast	Grodno oblast	Minsk	Minsk oblast	Mogilev oblast
No answer	16.3	9.4	14.8	17.0	14.3	20.3	17.2	20.2
Yes, affected	30.6	25.7	33.2	29.8	40.5	39.3	26.6	18.2
No, it have not affected, but it may affect in the future	25.5	24.4	23.6	24.5	25.7	22.2	25.4	37.9
No, it have not affected, and I think that it will not affect	27.2	40.6	28.4	28.7	19.5	18.2	30.8	23.8
Index of significance	3.4	-14.9	4.8	1.1	21.0	21.1	-4.2	-5.6

table 5, we see that in Minsk the arrears in payments are 25%, and 20% in the Minsk oblast. Note that if the national average proportion of those who are convinced that this will not happen is 34.2%, in Minsk this proportion is only 25%. At the same time, in the Vitebsk oblast the arrears in payments were noted only by 8.0%, in the Grodno oblast – 9.6%, in the Mogilev oblast – 12%.

Reduction, dismissal from enterprises called 9.1% of the respondents *(tab. 6)*. Of course, this figure is overstated because some respondents had in mind not only the termination of the contract, i.e. the actual firing, but also so-called forced time off, reducing the work week, etc. But, of course, they are very unfavorable consequences of the crisis to human health and workforce, they disrupt the rhythm of life, reduce the financial security of families, negatively affect people's mood. However, the social orientation of the economy is a term that not everyone can understand, but it has quietly entered the popular consciousness and it became apparent in the fact that nearly 40% of all respondents, and among workers (without a sample of retirees, students, housewives) more than 70% expressed confidence that reduction or dismissal do not threaten them. Such certainty about the conservation of their workplace and, consequently, social status is a decisive factor of confidence in the state, its institutions and authorities, guarantee of the stability of society and a certain potential of post-crisis development. Comparison of the regions (see table 6) shows that the most favorable situation for the respondents in the Vitebsk oblast is only 3.1% of those who were dismissed; the situation is worse in Minsk – 12.4%, in all other regions is at the national average .

Closing (suspension) of companies in the crisis affected only 4.1% of the respondents, while 45.5% of all respondents (85% of employees) do not allow the thought that this could happen in their workforces *(tab. 7)*.

This once again confirms the previous conclusion. A little more this issue concerned

Table 5. Arrears in salary and social payments (pensions, allowances, grants, etc.) (in % of respondents)

Have you been affected or not by arrears in salary and social payments (pensions, allowances, grants, etc.) in the current crisis?	Total	Brest oblast	Vitebsk oblast	Gomel oblast	Grodno oblast	Minsk	Minsk oblast	Mogilev oblast
No answer	11.2	5.6	10.0	15.5	8.1	13.3	9.0	16.8
Yes, affected	16.2	17.2	8.0	17.2	9.6	25.0	20.3	12.0
No, it did not affect, but it may affect in the future	38.4	35.2	46.2	31.7	51.1	36.7	33.5	37.7
No, it did not affect, and I think that it will not affect	34.2	42.1	35.8	35.6	31.1	25.0	37.1	33.4

Table 6. Reduction, dismissal from the company, which you work at (in % of respondents)

Have you been affected or not by reduction, dismissal from the company, which you work at in the current crisis?	Total	Brest oblast	Vitebsk oblast	Gomel oblast	Grodno oblast	Minsk	Minsk oblast	Mogilev oblast
No answer	21.3	14.3	15.0	26.5	17.9	23.4	25.2	25.4
Yes, affected	9.1	10.1	3.1	10.0	10.3	12.4	8.6	8.5
No, it did not affect, but it may affect in the future	30.3	29.	37.4	25.5	37.4	9.5	23.0	33.0
No, it did not affect, and I think that it will not affect	39.3	46.3	44.5	38.0	34.5	34.7	43.3	33.0

Table 7. Closing (suspension) of an enterprise which you work at (in% of respondents)

Have you been affected or not by closing (suspension) of the enterprise which you work at in the current crisis?	Total	Brest oblast	Vitebsk oblast	Gomel oblast	Grodno oblast	Minsk	Minsk oblast	Mogilev oblast
No answer	23.4	16.1	16.4	30.8	19.6	25.9	26.7	26.8
Yes, affected	4.2	4.0	1.3	2.4	5.9	3.5	6.2	7.2
No, it did not affect, but it may affect in the future	26.8	20.8	37.0	23.7	30.8	28.2	19.3	30.0
No, it did not affect, and I think that it will not affect	45.5	59.1	45.2	43.1	43.7	42.4	47.8	36.1

Mogilev (7.2), Minsk (6.2) and Grodno (5.9%) oblasts. In Minsk, only 3.5% faced closure or suspension of enterprises.

Table 1 shows the number of respondents who did not answer. For example, 6.8% did not answer on price increase, and 23.4% – the closure of enterprises, etc. The reasons for this may be random omissions unnoticed by the interviewers, the avoidance by respondents of certain issues. But mostly "no answers" appear due to the fact that the respondent does not consider himself to the category, which the issue addressed to. For example, the respondent is currently retired and does not work, or a student, or an unemployed, or a housewife, and he does not consider that he has the right to answer questions about wages, dismissal, redundancy, etc. Note that the recalculation of the number of respondents in this case meaningless because it does not change the ratio between alternatives, i.e. the trend continues, and that was main in the analysis.

We also give comparative opinion poll in Belarus and the North-West federal district of Russia, received in the course of a joint grant *(tab. 8)*.

As seen from table 8, in some areas the crisis has affected the population of Northwestern Federal District of Russia stronger than Belarusians. 31.5% of Russians and 16.2% of Belarusians told about the arrears in salary and social payments, the decrease of wages and social payments 44.5 and 33.3% respectively, the dismissal from the company – 25.2 and 9.1%, enterprise closings – 13.2 and 4.2%, the increase in prices of consumer goods and services – 84.4 and 76.4%. Russians were less affected by depreciation of ruble savings – 27.9%, in Belarus – 30.6%.

2. Public awareness about the crisis and the anti crisis program

In the first period of crisis phenomena the Belarusian society, including sociologists and others, opposed the discharge of passion, seeing it as information pressure that can lead to alarmist sentiments, create a panic on the consumer market, in savings, etc. Although Belarus has no stock exchanges, stock market, where panic usually begins or is artificially caused, however, such fears were justified. But by the time of the survey it was revealed that much needed explanatory work of the mobilization plan is not enough. The survey showed that the vast majority of the population (87.5%) has heard anything about the global financial and economic crisis which also affected Belarus *(tab. 9)*.

Table 8. Public opinion in RB and NWFD of Russia on the impact of the crisis (in % of respondents)

Have you been affected or not by the following phenomena in the current crisis?	Have you been affected by the crisis?					
	Yes, it affected		No, it did not affect		No answer	
	RB	RF NWFD	RB	RF NWFD	RB	RF NWFD
Arrears in salary and social payments (pensions, allowances, grants, etc.)	16.2	31.5	72.6	60.5	11.2	8.0
Decrease (cuts) of wages and social payments	33.3	44.5	54.9	49.3	11.8	6.2
Reduction, dismissal from the company, which you work at	9.1	25.2	69.6	65.2	21.3	9.2
Closing (suspension) of an enterprise, which you work at	4.2	13.2	72.3	76.5	23.4	10.3
Depreciation of ruble savings	30.6	27.9	53.1	62.3	16.1	9.8
Increase in prices of consumer goods and services	76.4	84.4	16.8	12.5	6.8	3.1

Table 9. Answers to the question "Have you heard anything about the current global financial crisis which also affected Belarus?" (in % of respondents)

Have you heard anything about the current global financial crisis which also affected Belarus	Total
No answer	2.5%
Yes, I heard	87.5%
I heard nothing	2.8%
I find difficulty in replying	7.2%

58 persons said that they had heard nothing about the crisis, which can be explained by a closed way of life or the desire to seem original. In principle, this does not alter the general conclusion: the whole population of Belarus knows that the crisis has come to our country, has affected all spheres of life support and provides for each family and all the society certain threats that must be fought jointly.

The anti crisis program, implemented by the President of Belarus and the Government of the country answered the questions of how to deal – all together and everyone at his position. Unfortunately, only 6.1% of the respondents were familiar with this program. Another 49.2% know something about it *(tab. 10)*.

With education increase awareness significantly increases, but also among specialists with higher education one-third admitted that is generally unfamiliar with the program. That explains why 62.7% did not answer the question "What is your attitude to the anti-crisis program?" *(tab. 11)*.

18.6% of the respondents have a positive attitude to the program, negative – 2.9%, indifferent – 15.8%. Today, when the program is being implemented in many areas such as business support, search of new markets, import substitution, strengthening of financial discipline and others, the need for accessible and well-reasoned information only increases, all the more discussions arise on certain issues among leading economists of the country. All that is necessary for the preservation and strengthening of trust in the society which depends on what extent social expectations of the people are taken into account and implemented. Today a new project "Post-crisis Belarus" must be put on the agenda to generalize the experience of crisis management activities, identify the points at which the crisis hit harder than others, find the causes of vulnerability of individual companies or industries.

3. The public attitudes to more probable consequences of the crisis for Belarus

It is known that the predictive function is not the strongest side of public opinion. It is more accustomed to rely on already available on the cumulative experience of existing phenomena, which are available to everyone, such as the question "Have you been affected by price increase?". Public opinion runs qualitatively and constructively in the selection of empirical alternatives, value orientations, preferences, options and solutions, and much more. Penetration into the future poses a particular respondent's on an expert's position,

Table 10. Public awareness about the anti-crisis program, implemented by the President and the Government of the Republic of Belarus (in % of respondents)

Education	Are you familiar with the anti crisis program?			
	Yes	Know something	No	No answer
All the respondents	6.1	49.2	42.8	1.9
Elementary	2.4	31.4	64.2	2.0
Incomplete high	1.6	47.2	49.6	1.6
General secondary	6.4	50.6	40.9	2.1
Specialized secondary	7.7	51.3	39.4	1.6
Higher	10.5	54.6	32.8	2.0

Table 11. The attitude of population to the anti crisis program (in % of respondents)

What is your attitude to the anti crisis programme implemented by the President and the Government of the RB?	Total	Men	Women	Under 30 years	30 – 49 years	50 years and elder
Mostly positive	18.6	21.5	16.2	15.6	20.2	19.2
Mostly negative	2.9	4.3	1.6	3.1	3.8	1.7
Indifferent	15.8	17.4	14.4	18.4	15.3	14.5
Find difficulty in replying	62.7	56.7	67.7	62.9	60.7	64.6

which requires expertise and such seemingly incompatible qualities such as imagination and a firm sense of reality, rationality of thought and reflection as well. All of this leads to the fact that much of the interviewees when they met with such questions select the position of “no answer”. However studying public opinion on the future is reasonable and justified. It focuses all the diversity of local conditions, which are not available to narrow specialists, it operates factual information and guesses based on logic and intuition as well, including the archetypes of the collective unconscious.

With this in mind, consider the data in *table 12.*

21.6% of the respondents when asked about the most probable impact of the crisis for RB chose the first option: “Country is expecting serious economic shocks”. Strangely enough, but young people in this matter are more pessimistic than the elder generation, and men compared with women. We wish that this pessimism would acquire design-mobilizing form – at least, protect against complacency, unfounded confidence and especially from parasitical attitudes towards the family and the state.

An innovative alternative is in the second place: “the crisis will push to find new solutions in the economy”. 18.4% chose it, the differences between the categories are unimportant.

The assertion “the recession will not be long, but the economy will grow more slowly than before the crisis” is in the third place. This is the opinion of 12.4% of respondents, almost equal in all groups. Indeed, in the last 10 years the development of economy, social sphere and culture as well went at high and sustainable pace. To gain the same pace is not easy, although not so much on internal as for external reasons, such as rising energy prices, complexities of export, etc.

In the fourth place is the forecast of a period of decline, but without major disruptions – 11.2% of respondents. This can be regarded as a counterweight to those who believed that the country is expecting serious political shocks (7.0%). It is obviously that in today’s reality there is no justification for such a conclusion.

Another of the most probable consequences of the crisis is described as follows: “the crisis will force the control over financial institutions”. 9% noticed it without any group differences. Of course, increased control in the financial area is one of the main problems of the world community, especially of the highly developed countries. For Belarus, it is far less relevant, although some issues, such as subsidized housing construction loans, repayment, the proper use of budgetary funds, etc., require constant monitoring, strengthening of fiscal discipline and responsibility.

Table 12. The likely consequences of the crisis for the Republic of Belarus (in % of respondents)*

Do you think what likely consequences of the crisis for Belarus are?	Total	Men	Women	Under 30 years	30 – 49 years	50 years and elder
Country is expecting serious economic shocks	21.6	24.8	19.0	26.8	24.4	15.1
Country is expecting serious political upheavals	7.0	8.4	5.9	8.1	7.9	5.4
Economy is expecting a long recession, but without major shocks	11.2	12.0	10.6	11.9	12.4	9.5
The recession will not be long, but the economy will grow more slowly than before the crisis	12.4	14.4	10.8	11.8	14.2	11.1
Consequences of the crisis are greatly exaggerated, the economy will develop in the same way as it did before	5.8	5.8	5.7	3.6	6.1	6.9
The crisis will push to find new solutions in the economy	18.4	16.9	19.7	18.5	20.9	15.7
The crisis will force the control over financial institutions	9.0	9.1	9.0	8.7	9.5	8.8
Find difficulty in replying	2.3	28.4	39.3	30.2	28.6	42.3

* Total > 100 because a set of two or more options were permitted.

The idea that the effects of the crisis are greatly exaggerated, and the economy will grow as well as before, did not find appreciable support – only 5.8% spoke about it. At first sight, this position may seem optimistic, but in fact – it is pseudooptimizm, unrealistic naive energizing that can only make the elements of disorganization and demotivation when high-discipline and responsibility are needed.

As noted above, almost one third (32.3%) found difficulty in replying. But if men are 28.4%, women are 39.3%; the average age is 28.6%, young people are 30.2%, and elder – 42.3%. That is why forecasting methods involve multiple procedures with the provision of results in the previous stages and the exclusion of incompetent experts. But our task is not to obtain quantitative assessment of options but in identifying the mood of the population of Belarus concerning the possible effects of the crisis for our country. We believe that these data indicate the predominance of constructability and realism in public opinion. Calming mood ("everything will be as it was before") and apocalyptic one – waiting for political upheaval are much less noticeable.

We pay attention to the fact that recently in the media, especially Russian, journalists, politicians, businessmen increasingly praise the crisis: "If there had never been a crisis, I would not have succeeded, "we would not have done that, "we would have never thought of it" – such statements increase. Perhaps this is a belated reaction to the events in Pikalevo and elsewhere, but it is not very appropriate. Whatever was said by individual analysts, the crisis is objectively by its nature is a phenomenon with a predominance of negative modality, and the fact it may encourage in some cases to positive changes – but at what price – does not change its nature. Most of the population of Belarus considers the crisis as a natural disaster. The data presented in table 13 shows that 55% respondents believe that the crisis has a negative effect on the economy, while 13.3% of them predict the unconditional negative impact, and another 41.7% – rather negative. At the same time, 5.1% admit the possibility of positive results of the crisis on the economy, including 1.6% who firmly believe in this, and 3.9% are more likely yes than no. The fact that there are people, may be they are few, who see the positive in this difficult situation – on their jobs, in the workforce, small business, etc, is very important for capacity of building of post-crisis development. Perhaps at such sites innovative points of growth will appear. We can only state the results of the survey that they exist, – as the people themselves consider. Local authorities should pay special attention to them as possible to support and help to gain perspective.

To a similar question concerning the welfare of the family, only 2.4% of respondents said that the crisis will be positive. Much more respondents than in the previous question expect a negative impact – 60.2%. Every 11th of the respondents believe that the crisis will not affect welfare of the family. Although this figure is relatively small it points to the existence of a certain safety margin of households. In general, there is also a realistic approach, the lack of "zigzagging" in the extreme. Note that, again, a third of respondents did not answer, and it is typical for future issues.

To the question: "How has your family's financial situation changed compared to the previous year?", the following answers were received *(tab. 14)*.

Table 13. Public forecast of the crisis impact on the economy and welfare of the family (in % of respondents)

Answer	Do you think the crisis will affect the state:	
	economy of Belarus	welfare of your family
Positively	1.6	0.9
Rather positively	3.5	1.5
Will not affect	5.9	9.1
Rather negatively	41.7	46.9
Utterly negative	13.3	13.3
Find difficulty in replying	33.9	28.3

9.3% acknowledged that the situation had improved, unchanged – 24.0%, worsened a little – 40.3%, significantly worsened – 16.0%. The data by age categories showed significantly greater improvement with young people (14.2%), compared with the middle age – 9.9% and the elder one – 5.4%. The positive side is the fact that the elder age group more than the average in the sample admitted that their financial situation has not changed (30.4%) and fewer of those who noted a significant worsening – 13.0%. In the North-West federal district of Russia 1.1% noted the improvement of material conditions, 29.2% – has not changed, 61.7% – has worsened.

To assess the psychological aspect of this process, we present comparative data of monitoring in 2002 and 2005 of the Institute of Sociology of NAS of Belarus *(tab. 15)*.

In previous years along with the economic growth the material situation of the population raises. Comparing the data in 2002 and 2005, we note the trend of growth: the number of positive responses increased from 18.7 to 27.3%, negative – decreased from 39.8 to 21.1%. In 2005 only 5.3% acknowledged the significant deterioration of their financial position, at the same time 72.7% estimated financial position as good and average. Today, this trend was broken. Certainly, the decrease of existing levels causes psychological pain, even if funds are sufficient to maintain their traditional way of life.

4. Ways of reaction to the crisis at the individual level

Now we consider how the respondents intend to act in such a situation. Table 16 presents the answers to the question: "If your (your family's) material conditions worsened or worsens, what do you plan to do?"

The majority (59.3%) first of all consider the possibility of reducing costs, economical housekeeping, excluding not obligatory and less important costs for the family or its individual members. Women (65.4%) and elder generation (66.6%) are ready to meet such a plan actively. At the same time, men, young and middle-aged people are prepared to pay more attention to searching for additional sources of income. Thus, if the average for the sample 47.9% of respondents plan to seek additional sources of income, among men there are 55.4%, women – 41.4%; youth – 60.3%, the average age – 58.7% and elder – 25.2%.

Every tenth is ready to rely on – and, therefore, expects – to be cared for by other family members, relatives, and among them there are women (more than the others) – 12.1%, youth – 10.8% and pensioners – 11.2%.

Table 14. Changing of the material conditions of a family compared to the previous year (% of respondents)

How have your family's material conditions changed compared to the previous year?	Total		RB		
	NWFD RF	RB	Under 30 years	30 – 49 years	50 years and elder
Have improved substantially	-	1.5	2.7	1.7	0.5
Have improved a little	1.1	7.8	11.5	8.2	4.9
Have not changed	29.2	24.0	19.2	21.2	30.4
Have worsened a little	41.7	40.3	39.5	40.1	41.2
Have worsened substantially	20.0	16.0	13.3	20.7	13.0
Find difficulty in replying	8.0	10.3	13.8	8.1	10.1

Table 15. Comparative data on the dynamics of the material conditions of the population of Belarus (in % of respondents)

How have your family's material conditions changed compared with the previous year?	Year of 2002	Year of 2005	Year of 2009
Have improved substantially	1.9	3.2	1.5
Have improved a little	16.8	24.1	7.8
Have not changed	44.9	46.8	24.0
Have worsened a little	26.3	15.8	40.3
Have worsened substantially	13.5	5.3	16.0
Find difficulty in replying	6.5	4.6	10.3

Table 16. Ways of reaction to the crisis at the individual level (in % of respondents)

If your (your family's) material conditions worsened or worsens, what do you plan to do first of all?	Total		RB				
	NWFD RF	RB	Men	Women	Under 30 years	30 – 49 years	50 years and elder
No answer	11.3	3.0					
Try to find additional sources of revenue	53.4	47.9	55.4	41.4	60.3	61.0	25.2
Reduce costs, will economize	28.4	59.4	52.1	65.4	50.1	58.7	66.6
Depend on the care of other family members, relatives	6.1	10.0	7.5	12.1	10.8	8.3	11.2
Take out a bank loan or loans from relatives, friends	2.2	5.6	4.9	6.1	6.0	6.5	4.3
Ask for a monetary support from my employer	1.4	2.1	2.9	1.5	3.0	2.1	1.5
Ask for assistance from the system of state social insurance	2.6	2.7	2.8	2.6	1.9	2.8	3.2
Spend savings	3.1	5.8	6.3	5.4	4.1	4.9	8.0
Sell a part of assets	2.7	2.9	3.3	2.6	1.4	3.6	3.3
Use my own property to get additional income	1.8	1.8	2.3	1.3	1.8	2.2	1.3
Try to get compensation for personal insurance	0.3	0.3	0.3	0.2	0.6	0.1	0.3
Pawn any valuables	1.1	1.6	1.6	1.7	0.7	2.2	1.7
Defend my rights	No	6.9	8.1	5.9	7.4	7.1	6.4

5.8% of respondents think of spending savings: youth – 4.1%, pensioners – 8.0%. 5.6% hope to obtain bank credit or loans from relatives, friends. 2.9% plan to sell some assets if it is absolutely necessary, 1.8% – to use their property for additional income. 2.7% rely on assistance from social insurance systems, 2.1% – monetary support of their employers, 0.3% – compensation for personal insurance, 1.6% of the respondents – to pledge any valuables in a pawnshop. And, finally, 6.9% intend to defend their rights. The greatest discrepancy between the Russians (the North-West federal district of Russia) and the Belarusians concerns plans of reducing costs, economizing. If this measure is in the first place for the Belarusians – 59.4%, only half of the Russians called it – 28.4%. This difference is statistically significant and substantial, but it is not easy to be explained. The archetype "Homo patiens – patient man" can be gently suggested that is more rooted in the mentality of the population of Belarus, because of the historical features of many war hard times, the post-war reconstruction challenges, as well as the traditions of the rural world, accustomed not to complain, endure hardship, etc. But perhaps it is explained by some economic safety margin of the Belarusian households, because the Russians are slightly more ready (53.4) than the Belarusians (47.9%) are to search for additional sources of income.

5. Possibility of protest actions and personal participation in them

Crisis deformations of life support (prices, decline in material welfare, savings and real estate depreciation, etc.) objectively lead to psychological frustration (feelings of inability to meet the needs), increasing social tensions, and threaten mass protests. Many times history reaffirmed that this development is likely to be in crisis situations. The forms of protest may be different – today, for example, farmers in Belgium, France, Germany and other countries poured millions of liters of milk to protest against the reduction of purchasing prices, which make this production unprofitable. Protest sentiments tend to arise spontaneously, but there are always forces which are ready to give them an organized form and make a profit for themselves.

What is the degree of such sentiments in Belarus? The task was impossible when studying public opinion about the crisis consequences. We pay attention to the fact that the Belarusians are steady people, avoiding excesses and so on, is generally true, but only within reasonable limits. In April, 1991, in Minsk and other cities of Belarus there were massive actions in connection with a sudden price increase. Then Gorbachev M.S. said: "I have never expected this from Belarus".

The study showed that currently there is no such a situation. Only 6.9% of the respondents *(tab. 17)* believe that mass demonstrations can be held against rising prices and falling living standards in their village.

The majority (50.1%) does not allow such developments, and 43.0% did not answer. Today, in comparison with 1991, the situation is fundamentally different: there is no exhausting people trade deficit, a sharp fall in real wages, confusion in thoughts, the uncertainty of the course and direction of perestroika, etc. On the contrary, the population understands that the current crisis is a temporary phenomenon, which causes have nothing to do with our conditions, and the main thing is that the state controls the situation and does its best to moderate the effects of the crisis for the people. The high indices of confidence in the President, the Government and other authorities and institutions eloquently illustrate it, the data of which will be considered separately. All this explains the relatively low level of protest sentiments in the Belarusian society – 6.9%, which is far from the critical point (30-35%), while getting it there are self-sustaining effects due to irradiation and contamination. Meanwhile, in a regional perspective there are notable differences. Thus, if in the average of the sample only 6.9% of the respondents admit the possibility of protest mass actions relating to the consequences of the crisis, in two regions the figures are larger than average: in Minsk – 13.7%, in the Mogilev oblast – 9.6%; in the Gomel and Grodno oblasts – close to the average, and in the Vitebsk, Brest and Minsk oblasts – below the average, respectively 1.4, 4.2 and 5.4%. Thus, the difference between Minsk and the Vitebsk oblast is statistically significant, but the critical level in Minsk is not even mentioned.

It is also important to take into account the personal readiness of people to participate in protest actions. This question is answered positively only by 3.9%, and in Minsk – 3.7%, in the Grodno oblast – 5.2% of the respondents. Another 3.5% expressed situational readiness:

Table 17. The possibility of protest actions and personal involvement in them (in % of respondents)

Do you think mass demonstrations can be held against rising prices and falling living standards in your village?	Total	Brest oblast	Vitebsk oblast	Gomel oblast	Grodno oblast	Minsk	Minsk oblast	Mogilev oblast
Yes, they can	6.9	4.2	1.4	6.5	6.5	13.7	5.4	9.6%
No, they cannot	50.1	53.7	55.7	56.9	50.8	37.6	51.7	45.8%
Find difficulty in replying	43.0	42.1	42.9	36.7	42.7	48.7	42.9	44.6%
Will you participate in them?								
Yes	3.9	2.5	4.4	5.1	5.2	3.7	2.9	4.2%
Most likely, yes	3.5	2.3	1.4	3.0	4.8	4.2	4.1	4.5%
Probably no	12.1	10.6	8.8	9.7	19.8	13.6	11.3	12.0%
No	59.5	63.9	65.5	61.6	51.7	55.1	59.9	58.1%
Find difficulty in replying	21.0	20.7	20.0	20.6	24.5	23.4	21.8	21.2%

Table 18. Supposed ways of protecting the interests (in % of respondents)

Ways of protecting interests	Total	Men	Women	Under 30 years	30 – 49 years	50 years and elder
Join any party to protect my interests	1.2	1.0	1.4	2.2	1.0	0.8
Defend my interests through trade union organizations	9.6	10.7	8.7	9.6	12.5	6.7
Make the decision to move to another region of the country	3.0	4.1	2.2	5.1	3.8	0.7
Take part in meetings, demonstrations, hunger strikes	1.6	2.0	1.3	1.6	1.7	1.6
Make decision to leave Belarus for another country	7.6	10.0	5.5	12.1	9.0	2.9
Use every opportunity to defend my interests, including the extreme ones	13.5	16.5	11.0	18.9	14.4	8.8
Take nothing	51.1	43.2	57.6	35.8	44.3	68.9
Other	5.9	5.9	5.8	6.0	8.1	3.4

"Most likely admit". The total number of people who are ready to participate in mass protest actions are 7.4%, including the Brest oblast – 4.8%, the Vitebsk oblast – 5.8%, the Gomel oblast – 8.1%, the Grodno oblast – 10.0%, the Minsk oblast – 7.0%, the Mogilev oblast – 8.7% and Minsk – 7.9%.

As we saw earlier (see tab. 16) 6.9% of the respondents expressed their intention to defend their rights under the deterioration of financial situation. What respondents mean is represented in *table 18.*

The majority (51.1%) will not do anything; 13.5% try to use every possible opportunity, including the extreme ones; 9.6% are going to react through the trade union organizations; 7.6% will leave Belarus for another country; 3.0% will move to another region of Belarus; 1.2% are ready to join a political party to protect their interests; 1.6% will take part in meetings, demonstrations, hunger strikes. The meaning of this question was as it is possible to provide a palette of moods, and to affect what might be on a subconscious level and is not submitted for public discussion. We see that the number of the means of protecting the interests is perfectly legal and realizable: to join a party, work in trade unions, leaving for another region of the country, participation in meetings, although they were supported by a small number of respondents. As for emigration and the so-called "extreme measures", they are rather virtual options and designed to impress. The crisis has forced developed countries to tighten migration policy and reception of migrants today is severely restricted. "Extreme measures" could mean anything: from changes in lifestyle and parting with the habits, hobbies and so on up to a certain rebellion, vandalism, etc. However, these options must be taken carefully, especially because of their greater support by young people. Prevention of such sentiments among the young people must be the educational work in educational institutions and workplaces, and material assistance, support of youth initiatives, opening up of prospects for self-realization and, of course, simple communication of representatives from all levels of government with the youth as well.

The level of preparedness to participate in meetings and demonstrations is slightly higher in the Gomel and Grodno oblasts, which are associated with higher public concerns on increasing prices for consumer goods and services, as noted above (see table 2). It is reasonable for supervisory bodies to verify this information and, if it is true, to take the necessary measures.

6. Patience index of population of Belarus

To generalize characteristics of the state of mass consciousness the patience index is used. It is the most important integral sociological indicator of the cumulative type, reflecting the personal dispositions in terms of man's perception of his present life situation, based on experience and in comparison with what he has and what he had and what he would like to have, taking into account his own capabilities and objective conditions. The relatively high patience index means that the existing conditions, the social order in society is rather favorable from a psychological standpoint, that allows the subject of management calmly and consistently to implement the planned course. Special attention should be given to those families who find themselves in a quandary. This refers not only to ascertain the reasons for this, but also to provide targeted support. In turn, the low patience index demonstrates a deterioration of many categories of the population, and close to the critical point – about the maturing of a revolutionary situation.

Table 19 shows the results of monitoring of the Institute of Sociology on the issue for 2002, 2005, as well as comparative data in 2009 for Belarus and the North-West District of the Russian Federation. Note that the patience index is calculated by the formula:

$$Ip = B + (A-C)/100,$$

where

A – the number of responses "It's not so bad and I can live"

B – the number of responses "Life is difficult, but I can tolerate"

C – the number of responses "I can not stand our plight any more".

Table 19. The patience index of the population of Belarus (in % of respondents)

How do you think what of the following statements best corresponds to the situation?	2002	2005	2009	
			RB	NWFD RF
It's not so bad and I can live	29.0	47.9	28.3	25.6
Life is difficult, but I can tolerate	56.7	41.2	50.2	50.4
I can not stand our plight any more	8.7	3.0	8.3	14.9
Find difficulty in replying	5.6	7.9	13.2	10.1
The patience index	0.77	0.86	0.70	0.62

Table 20. Patience index in the regions of Belarus (in % of respondents)

How do you think what of the following statements best corresponds to the situation?	Total	Brest oblast	Vitebsk oblast	Gomel oblast	Grodno oblast	Minsk	Minsk oblast	Mogilev oblast
It's not so bad and I can live	28.3	41.6	27.6	28.3	19.0	22.7	25.8	24.6
Life is difficult, but I can tolerate	50.2	42.0	46.6	53.2	51.2	51.2	57.4	48.6
I can not stand our plight any more	8.3	4.5	13.5	9.0	13.5	7.3	4.3	7.3
Find difficulty in replying	13.2	11.9	12.3	9.5	16.3	18.7	12.5	19.5
The patience index	0.70	0.79	0.70	0.72	0.56	0.71	0.79	0.66

The patience index varies from 0 to 1. An alternative B is central to this formula, but if you stay on it, you can reach the wrong conclusion that in 2005 the patience index was less than in 2002 and remained lower in 2009. Therefore it is necessary to take into account the difference between alternatives A and C. In the polls, as a rule, there is some proportion of respondents who did not answer, i.e. dodged questions. It is impossible to determine their position, but their share should be taken into account in calculating the patience index. To do this, the denominator should be the total number of respondents, and not responding, i.e. 100%.

Table 19 shows that Ip in Belarus increased from 2002 to 2005 by 9 percentage points, but by 2009 dropped by 16 percentage points, although is still at a fairly high level. In the North-West federal district of Russia the patience index in 2009 was 0.62 percentage points, that is below 8 percentage points than in RB.

Turning to the regional data in Belarus, it should be noted that in the Mogilev and Grodno oblasts it is slightly below the national average *(tab. 20)*.

The main conclusion of the analysis is that the patience index in Belarus and in the North-West federal district of Russia, despite some differences, currently is significantly above the critical zone. This allows to hope and to be sure as well that any social upheaval will not happen that could hamper success in overcoming crisis impacts and the transition to a sustainable post-crisis development.

7. The confidence of the population of Belarus to the public authorities, social institutions and social structures

The crisis is a serious challenge for the authorities, social institutions and social structures. Without the need to address complex economic, technical, technological and other issues there are psychological contradictions before them. On the one hand, to overcome the effects of the crisis the support of the public, favorable socio-psychological climate are needed, on the other – the objectively deteriorating financial situation, the inevitability of the adoption of unpopular measures endanger the growth of social tension. Successful resolution of these contradictions is possible only through the atmosphere of public trust, which was created in the pre-crisis period and is maintained during the crisis by the fact that the taken crisis management decisions are endorsed by the population. Erosion of trust hinders optimization of social relations, creates suspicion (rumors, conjectures, etc.), and dramatically increases transaction costs.

Pay attention to the fact that in the pre-crisis time, the overall level of confidence in Belarus was one of the highest. Thus, according to the European values survey (EVS), the average level of confidence in European countries amounted to 30.5%, while in Belarus – 41.9%, and in Ukraine – 27.2%, Lithuania – 24.9%, Russia – 23.7%, Poland – 18.9%. It is noteworthy that the "Eurobarometer" (sociological service of the EU) refused to cooperate with the Institute of Sociology because of its public status and conducted surveys in the Republic of Belarus on its own.

In the present study people's trust in each other has not been studied, since task was to measure the level of institutional trust, i.e. public confidence in authorities, public entities and institutions. For the first time the Belarusian science is included in the list of institutions, but the army and church are excluded, that traditionally occupied the highest places in all previous monitoring studies. *Table 21* shows the results of the survey. The calculating of confidence index was produced by the formula:

$$Ic = (A\text{-}B)/100,$$

where

A – the number of replies "Yes, I trust";

B – the number of replies "No, I do not trust".

In cases where A is less than B, the index is specified with the sign "-".

The President of the country has a high index of confidence: 65.2% of the respondents expressed confidence, and only 12.9% – mistrust. The Belarusian science is in the second place –50.9 and 8.4% respectively. In the third place – the system of education: 55.2 and 13.2%. In general, the group with high ratings can include those authorities, institutions and social structures which index of confidence is more than 0.28. This group also include: Council of Ministers of Belarus – 47.9% of the respondents expressed confidence in it, and 16.0% – mistrust; the National Assembly

Table 21. Public trust to the public structures and authorities

№	The institutions of government and social structures	Do you trust?				
		I trust	I do not trust	Find diff. in replying	Index	Rating
1.	President of Belarus	65.2	12.9	21.9	0.53	1
2.	Council of Ministers of Belarus	47.9	16.0	36.1	0.32	4
3.	National Assembly of Belarus	44.6	15.1	40.3	0.29	6
4.	Local authorities	43.3	25.9	30.8	0.17	13
5.	Administration of your enterprise	42.4	16.8	40.8	0.25	9
6.	Official trade unions	31.4	22.6	46.0	0.08	16
7.	Independent trade unions	20.7	23.6	55.7	-0.03	18
8.	Constitutional Court	44.0	13.6	42.4	0.31	5
9.	State mass media	36.4	27.2	36.4	0.09	15
10.	Independent mass media	22.5	30.4	47.1	-0.08	19
11.	State Securities	45.6	16.9	37.5	0.28	7
12.	Police	46.9	26.7	26.4	0.20	11
13.	Court authorities	45.8	20.2	34.0	0.26	8
14.	Tax authorities	38.1	19.4	42.5	0.19	12
15.	Political parties, movements	12.5	32.5	55.0	-0.20	21
16.	Opposition	8.8	43.1	48.1	-0.34	22
17.	Representative offices of foreign organizations, funds in RB	14.0	25.6	60.4	-0.12	20
18.	Banks	37.9	25.5	36.6	0.12	14
19.	Entrepreneurs, private businesses	30.6	25.9	43.5	0.05	17
20.	Health system	48.5	24.4	27.1	0.24	10
21.	Education system	55.2	13.2	31.6	0.42	3
22.	Belarusian Science	50.9	8.4	40.7	0.43	2

of Belarus – 44.6 and 15.1%; the State Securities – 45.6 and 16.9%. The second group, with an average index of confidence, included: the Court authorities – 45.8 and 20.2%; administration of the company – 42.4 and 24.4%; health system – 48.5 and 24.4%; police – 46.9 and 26.7%; tax authorities – 38.1 and 19.4%; local authorities – 43.3 and 25.9%; banks – 37.9 and 25.5%; state mass media – 36.4 and 27.2%, the official trade unions – 31.4 and 22.6%.

The third group, with the confidence index of close to "0" or negative, consisted of the following structures: entrepreneurs, private business – 30.6 and 25.9%; independent trade unions – 20.7 and 23.6%; independent mass media – 22.5 and 30.4%, representative offices of foreign organizations and founds in the Republic of Belarus – 14.0 and 20.6%, political parties, movements – 12.5 and 32.5%; opposition – 8.8 and 43.1%.

Thus, the number of institutions and social structures have lost confidence index due to the relatively large number of respondents expressing their distrust. These include: health system, police, banks, local authorities, official trade unions, the state mass media, tax authorities, entrepreneurs and private business. This means that they can raise the index of confidence at the expense of those who today, for now, dissatisfied with their work. As for foreign representatives in Belarus and the political parties, in respect to them, apparently, there are some old stereotypes. Currently, many of these structures have considerably changed and earn more confidence.

For comparison, consider the results of the survey of Russian sociologists in the Northwestern federal district of Russia *(tab. 22)*.

We stipulate that these data can not be considered representative for the whole country, at least in relation to those institutions that operate in the regions. In analytical terms, we note, firstly, a marked separation of the first three places – the RF President, the RF Government and the Church – from the fourth and subsequent ones. In Belarus, such a situation was observed in the 90-ies. But now the structure of institutions, including the first 10 places, is more balanced, as evidenced by indices of confidence. Secondly, there is a large number of negative indices of trust, including local authorities, police, trade unions, companies' management and others. Perhaps this is due to the diversity of territorial sampling, representing a number of major regions, including St. Petersburg.

Table 22. Confidence indices in the North-West federal district of Russia

№	The institutions of government and social structures	Do you trust?				
		I trust	I do not trust	Find diff. in replying	Index	Rating
1	President of Russia	62.3	13.4	24.1	0.49	1
2	Government of Russia	56.0	17.3	26.7	0.39	2
3	Council of the Federation	32.4	22.0	45.6	0.10	6
4	State Duma	29.4	29.0	41.6	0.04	8
5	Local authorities	24.5	37.4	38.1	-0.13	13
6	Police	27.1	42.2	30.7	-0.15	14
7	Federal Securities	35.4	22.5	42.1	0.13	4
8	Court	33.1	30.8	36.1	0.03	10
9	Public prosecutor's office	33.1	28.1	38.8	0.05	7
10	Trade unions	25.3	30.6	44.1	-0.05	11
11	Political parties	14.9	42.6	42.5	-0.30	17
12	Mass media	28.1	38.6	33.3	-0.10	12
13	Directors, business managers	21.2	37.9	40.9	-0.16	15
14	Bank circles, entrepreneurs	18.2	39.0	42.8	-0.19	16
15	Church	49.6	13.5	36.9	0.36	3
16	Army	37.8	27.5	34.7	0.11	5
17	Governing body of the region	30.4	30.1	39.5	0.03	9

The confidence in President of RB is above the average for the sample in the Brest, Minsk, Grodno and Vitebsk oblasts, at the average level – in the Gomel and Mogilev oblasts, slightly below the average is in Minsk.

Thus, this study helped make the following conclusions.

1. The crisis affected, – it could not touch because of its global nature and scale – the majority of the population of Belarus and Russia. For Belarus, the most sensitive to the respondents, were such manifestations of the crisis, as inflation – 76.4% suffered from increasing prices, falling real wages – 33.3%, the devaluation of the Belarusian ruble – 30.6%. For other essential items the impact of the crisis is recognized less or even negligible – arrears of wages and social payments – 16.2%, dismissal – 9.1%, plant closures – 4.2%.

2. By way of devaluation example the psychological effect of competent working with a population of the country's leadership and the National Bank can be estimated. At the request of the IMF Belarusian ruble rate was reduced by 20% against a basket of currencies – dollar, Euro, Russian ruble. In order to prevent panic and the massive outflow of savings the country's presidential statement on guarantees of deposits and circulation of the National Bank with the explanation of the situation have been posted in all banks. Therefore, devaluation does not shake faith in the banking system and the growth of ruble deposits soon continued. For comparison: in the early 1990-es a similar operation (so-called reform of Pavlov) was carried out secretly and provoked a wave of protest actions. Tens of thousands of people took part in strikes and meetings in Minsk and other cities of Belarus. That is why when Mikhail Gorbachev said: "I have never expected it from Belarus".

3. Despite the compactness of the republic, the unity of the natural conditions, the presence of total vertical of power, it was found marked regional differences in the estimates of the effects of the crisis. They are mostly linked to two factors: a) the fact that cross-border regions (the Brest and the Grodno) earlier than others to felt the motion of the crisis from the West to the East and was better prepared for it; b) Minsk because of the concentration of the major industrial and infrastructure facilities was more vulnerable.

4. Comparative analysis of Belarusian and Russian data sets showed that in July 2009 the population of the North-West federal district of Russia was in some ways more affected by the crisis than Belarusians. Dismissals and plant closures were particularly sensitive that led to increased unemployment. But on the other hand the end of 2009 Belarus became a danger zone of overstocking and falling exports of its products. A gradual withdrawal from this area in 2010 is the main indicator of the real effects of overcoming the crisis. This problem affected less Russia due to the specifics of its exports.

5. In general, the anti crisis program of Belarus and Russia, with their substantial methodological differences, were sufficiently effective, able to compensate for the loss and prevent the slide into depression. This is evidenced, firstly, by relatively high indices of trust management in both countries, and secondly, the low level of readiness for protest actions (in Belarus – 4.6%, in Russia – 6.1%). In turn, people do not trust more on state paternalism, seek way out themselves: extra work (in Belarus – 53.4%, in Russia – 47.9%); reducing of costs and more economical housekeeping (28.4 and 59.4% respectively).

6. A key lesson of the crisis lies in the fact that it has discovered weaknesses in the economy and social sphere, "the pointing" of which requires the modernization of production of goods and services, infrastructure and social services. To find out what the human potential and institutional capacity of the post-crisis development of Belarus and Russia, to identify it a new joint project can be carried out.

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Significance of the North's agricultural sector in the food security provision and in the social and economic development of rural areas

The article deals with the problem of food security provision in the regions of the European North of Russia, stresses the capacity of local agriculture and the necessity of its maintaining, preserving and increasing of the production of organic agricultural output. Thereupon we have substantiated the necessity of consistent implementation of the budget subsidy expenses to maintain profitable industries which produce ecological foodstuffs and we've pointed out the criteria for classifying of agricultural products to the category of agricultural organic output. The article deals with the conditions and factors of production and realization of organic crop products in the Komi Republic.

Agriculture, North zone, food safety, organic agriculture.

Valentin A.
IVANOV
Doctor of Economics, Professor, Head of Laboratory of Institute for Socio-Economic and Energy Problems of the Komi SC of the Ural RAS department
ivanov@iespn.komisc.ru

Modern scientists researching the North have not developed a single scientifically substantiated economic and geographical concept of "the North"; it can be explained by different approaches of the researchers and the lack of common criteria. But all scientists agree that the North is a general geographic area of the earth covering the Arctic, tundra and a part of forest zone with the severe climate and difficult landscape conditions.

Heterogeneity of the North Zone's nature has allowed scientists to identify the internal economic and geographic subareas of the Far (Extreme), Middle and Near North. According to the approaches and principles of geographic division into taxons the Russian North is divided into three macroeconomic regions – the European North, the Siberian North and the Far-Eastern North. Currently in accordance with the existing legislation the northern territories are included as components of the Far North regions and its similar areas, covering an area of 11.9 million square kilometers (69.6% in Russia) [1, p. 8, 14,16].

They are composed of 25 subjects. They are five republics, six krais, ten oblasts and four autonomous okrugs. The territories of the Republic of Karelia, the Komi Republic, the Sakha Republic (Yakutia), the Tuva Republic, the Kamchatka Krai, the Arkhangelsk Oblast, the Magadan Oblast, the Murmansk Oblast, the Sakhalin Oblast, the Nenetsia Autonomous Okrug, the Khantia-Mansia Autonomous Okrug, the Chukotka Autonomous Okrug and Yamalia Autonomous Okrug are rated as the Far North regions and similar areas.

The northern territories are important for the economy of our country. 74% of Russian oil, 92% of natural gas, 10% of coal, 100% of apatite and nepheline concentrates, 19% of electricity, 38% of industrial wood, 30% of timber, 25% of plywood, 81% of cellulose, 47% of papers and 46% cardboard are produced in the Far North and its similar areas. In addition, the zone of the North is the unchallenged leader in the mining of gold, diamonds, vein quartz, mica, nickel, tin, cobalt, platinum group metals, in furs stocking and catching of fish and other seafood, in the production of fish products and canned fish [1, p.54].

At the same time, the area of farmland in the region accounts for 4,123 thousand hectares (2.5% of Russia), the cattle population accounts for 919.3 thousand head (3.9% of Russia). The share of the North in foxes and blue foxes population accounts for 13%. There are 1664.3 thousand head of reindeer (about 2/3 of world population) in the northern territories.

4.1% of potatoes, 3.3% of vegetable, 2.6% of milk and 2.2% of meat unto the total Russian agricultural output are produced in the north zone. The share of fish and seafood is 60.5%.

Enhancement of the role of the Arctic regions and their adjacent areas in the social and economic development of the country is directly related to the participation of northern indigenous people, whose lifestyles, traditions and culture are based on traditional forms of management – reindeer breeding, sea trapping, hunting and fishing. Small nationalities of the North are engaged in agricultural economy mostly.

Over 62% of the smaller peoples were engaged in agriculture and fishery sector during the pre-reforming period [2, p. 32]. Their employment share ranged from 79 to 90% in some rural municipalities of the Nenetsia Autonomous Okrug [3, p.7].

Geographical location of the territory and its large extent in the latitudinal direction determine, on the one hand, the considerable severity and, on the other hand, essential distinctions in the bio-climatic and economic conditions of agricultural development. A significant part of the territory is located within the Polar circle and within the permafrost. It occupies the tundra and forest tundra; its central and southern parts are located in the northern and middle taiga.

Natural conditions, climate, soil's quality and growing season hold back the efficient development of agricultural production. There are the most adverse conditions for agriculture in the Far North where tundra soils dominate and the thermal resources are extremely limited. Light frosts are possible during the whole growing season. The Arctic regions are characterized by short growing season, low temperatures of air and soil, poor soil development processes, scanty activities of soil microorganisms, increased acid medium reaction, low humus content, low content of phosphorus and other nutrients for the plants, low water permeability of the underlying rocks and, consequently, extensive bogs. Agriculture has a local character here due to the severe climatic conditions. It is possible to grow vegetables in hothouses in the tundra and produce dairy cattle food by meadow formation of mainland tundra and creation of thermokarst lakes at the bottoms.

Agriculture of the North has a long history. It was being progressed while the territory was being developed. Its specialty was formed under the influence of natural conditions, geographical location, historical, social and economic factors of production of such untransportable perishables as milk, meat, eggs, potatoes and vegetables as well as the products of traditional industries.

The fact that northern farming was possible was proved by the founder of agricultural science in the European North of Russia A.V. Zhuravskiy in the early twentieth. The Pechora Agricultural Experimental Station was opened by the Department of Agriculture of Russia in Ust-Tzilma in 1911. A.V. Zhuravskiy became a founder and first director of the station.

He outlined a broad range of questions for experimental solution developing the station. They included study of crop rotations; tillage with the rise of land ploughed in autumn for spring sowing and without it, tillage with shelling and spring plowing, tillage related to the various terms of fertilizer application; potato culture including selection for early maturation and grafting experiments; tobacco culture; experiments in the sphere of floriculture and fruit farming; bogs culture; study of mixed grass crops and experiments on the fertilizers' effect to botanical composition of natural grass canopy. They planned to build a model farmyard and study the methods of feeding and care of cattle, sheep, pigs and chickens.

A.V. Zhuravskiy believed that "the North can and must become the breadbasket of Russia". The main prerequisites for this were the following facts: the Arctic Ocean's retreat to the North; small and surface depth of the marshes that allows to turn them into the fertile land; long daylight hours; good supply of moisture [4, p.12].

A.V. Zhuravskiy proved that "Pechora agriculture was developed not due to climate but thanks to other conditions". And he hoped that Russia would use circumpolar abundance of light soon [5, p.64].

N.I. Vavilov, D.N. Pryanishnikov and other scientists proved that northern agriculture was rational.

The products[1] of the northern factory-farm enterprises were more expansive because of the severe climatic conditions and dilapidated technical manufacturing base. They couldn't compete with similar products imported from abroad or produced in more southern regions of Russia. That's why economic bloc of the Government and several local administrators pursued a course to curtail agricultural production in the northern territories. However, such approach to the development of local agriculture as "Everything that makes a profit is good, but you should get rid of unprofitable business" isn't legitimate.

Heavy costs of agricultural activity shouldn't be an argument for the government to put obstacles in local production's way of its development because of the following reasons. Local foodstuffs could be categorized as strategic goods because they directly support life activity of more than 10.5 million people living in the Far North and its similar areas and determine the level of their food security.

Of course, agricultural production in the North is expensive and highly venturesome. There are substantial northern redundancy pays to wages here. Costs for heating of workrooms and the struggle with the early frosts, for cattle hibernation and caring for cultivated plants are higher here. It is the main reason for higher costs of manufacture here than in other regions. And costs of plant growing and livestock farming are higher at the producers living in more northern territories.

It is impossible to judge the competitiveness of agriculture in the North by one criterion which is cost of production. The competitive advantages of the northern farming include the duration of daylight hours during the growing season, good moisture supply, huge tracts of native meadows in the high-water beds and possibility to manufacture the ecological products. Scandinavian farmers successfully use the advantages of the northern agricultural production.

The chairman of the Central Council of the Entrepreneurs Union of Agriculture and Forestry in Finland Es Hyarmel says: "Finland has its "arctic" features in the agriculture as a northern European country. Cold snowy winters and short summer with long light days

[1] As for deer farming, fishing, hunting, wild herbing and berrying, their production is competitive not only in the regional but in the national and international markets.

restrict farming and food production. Winter is a kind of obstacle for increasing of this industry’s competitiveness: only one harvest is gathered in from the fields, livestock needs fodder and warm housing, time of sowing and harvesting is short and it requires high efficiency of the machines and grain dryers”.

High-quality food production is possible under such severe conditions of nature only in the country where soil, air and water are the most ecological in Europe, domestic animals are healthy and there is no salmonella. The nature is preserved in Finland because its territory is rarely populated. In winter the fields get rid of the pests and the microbes which are the cause of plant diseases. Delicious vegetables, greens and berries have time to ripen during the short summer with long daylight hours.

Northern people choose the ways to run their households themselves. As the members of the European Union they want to preserve their food culture, cultivated plants adapted to the northern conditions, healthy livestock and highly developed production technologies contributing to the world agricultural production.

Finnish farmer strives to produce ecological foodstuffs. They use methods that protect the environment [quote: 6, p. 201-202].

About 90% of Finnish farmers are blanketed into the ecological programs; 7% of households are fully engaged in the production of ecological products [6, p.79].

Russia has more opportunities to increase production of ecological products in the North and develop technology of organic farming than Scandinavian countries. Manufacturing of ecological products in the vast northern territories is becoming the main competitive advantage. Here you can expect to receive some kind of rental income from the realization of environmental products. That’s why organic agriculture is one of the main long-range goals of agricultural development in the northern areas.

Organic agriculture is an agricultural practice of production; it is more ecological for a human organism for its sanitary characteristics than the products of traditional agriculture that is confirmed by a certificate which is drawn up in accordance with the requirements of the International Federation Organic Agriculture Movements (IFOAM).

Organic agriculture is an opportunity for sustainable development of the industry, because it satisfies three interfacing components of sustainable development: economic, social and ecological. Economic sustainability of agriculture is achieved by meeting the needs of the population for ecological foodstuffs and ensuring of economic efficiency allowing to expand reproduction.

Social stability is provided for the consumers of organic products by increasing of its customer value due to reduction of unhealthy substances in the production and substances whose influence over a human organism is little-studied. It improves the quality of life notably due to better nutrition.

Social stability is also ensured by maintaining of manufacturing employment and improving of peasants’ life. Environmental sustainability of agro-ecosystems is achieved by the implementation of protecting technologies and improvement of the natural resources base of agricultural production. Ecological safety of food is determined by the reduction of applied chemical fertilizers and chemical treatments of foodstuffs.

There are the following criteria for classifying of agricultural farming practices to the category of organic agriculture:

- mineral fertilizers are used in such amounts which are necessary to restore nutrients in the soil, which are handed down during the cropping and due to other factors;
- synthetic pesticides are replaced for biological methods of pest control and weed control;
- hormonal agents aren’t used to stimulate growth and increase the quantum of output;
- genetically modified organisms, antibiotics, sewage sludge and foodstuffs exposed to radioactive irradiation aren’t applied;
- there are no degraded agro-ecosystems (e.g., soil erosion and soil depletion);

Table 1. Conditions and Factors for Organic Crop Production and Realization in the Komi Republic

Conditions	
Positive	**Negative**
• Climatic conditions and the economic potential of the republic allow produce efficiently potatoes, local field vegetables in the southern and central municipal formations where the main arable lands are located • In general, there is a smaller range of pests and plant diseases in the open ground than in the southern regions of Russia because of the cool climate	• The share of the most productive agricultural arable land accounts for only 0.24% of the republic's area • Low natural soil fertility in the Republic, low humus content, high acidity, the reduction of reclamation building • Significant decline in the agricultural sector's investments • Minimal state support for agricultural producers
Factors	
Positive	**Negative**
• There is a minimal number of anthropogenic impact sources to the ground in the southern and central agricultural municipalities in the Komi Republic so it is the most suitable territory for organic agriculture from the ecological point of view • Public demand for organic crop products • 56% of residents of Syktyvkar agree to buy ecological products by market prices • There are elements of organic crop production technology in the Komi Republic and researches in this field • The administrators of the agricultural organizations are interested in producing of organic output if the Russian standard is developed	• There is no standard of the Russian Federation "Production and realization of the organic products" • The most agricultural enterprises are unprofitable • Reduction of the number and qualified level of the managers and specialists in agricultural enterprises • Reduction of organic fertilizers • Lack of storage and implementation of organic production technology • Lack of information about opportunities of organic production • The access of agricultural producers to the financial markets is restricted

- approaches of adaptive agriculture are used to the limit;
- production of organic agriculture is subject to voluntary certification, which ensures more safety for human organism in its hygienic characteristics than the products of traditional agriculture [7, p. 36].

Study of the conditions and factors of organic farming by way of example of the Komi Republic has revealed that the region has opportunities to produce ecological products *(tab. 1)*.

It is necessary to realize the following measures for production and distribution of organic products:

- transition of a certain territory into a state that is suitable for organic production; continual investments to conditioning of soil quality;
- improving of the system of information exchange about technologies for organic agriculture, training of managers and specialists of agricultural enterprises and farms, their constant consulting in the field of ecological production;
- certification of organic products;
- formation of the public opinion as to the consumption of ecological foodstuffs;
- examining of pricing issues, choice of distribution channels for realization of organic products;
- ability to ensure the ecological safety of agricultural products throughout the whole chain – from a producer to a final consumer, development of nationwide organic logo;
- providing the consumers with the organic products during the whole year round;
- continued researches in the field of technologies' production for organic agriculture and organic production distribution.

Agro-industrial potential of the southern and central areas of the North zone allows to produce efficiently potatoes, local vegetables and cattle-breeding products. There are more suitable natural conditions for agricultural development in the European North. The analysis of dynamics of agricultural production efficiency for a 25-year period which was conducted by the regression equations showed that the average annual growth rates of gross production per unit of land area amounted to 4.4%, growth rates of working efficiency amounted to 5.7%. Moreover, these figures were higher by 1.3 and 1.1 percentage points than in the North-Western economic region, but average annual change of production price did not differ virtually [8, p. 94, 96].

The Komi Republic gained a lead in the yield of potato, it was the fourth by the yield of open ground vegetables, it was the eighth by the yield of milk and the third by the hens' egg production among 71 regions of the RSFSR in the late 1970's and early 1980's. These figures were 1.3 – 1.5 times higher than in the regions where foodstuffs are being imported from to the republic now. It is feasible to get in the republic 200 – 300 quintals of potatoes from a hectare, 300 – 400 quintals of vegetables, 20 – 30 quintals of winter rye, barley and oats (in the southern regions), 40 – 50 quintals of permanent grasses using modern technology.

Favourable prospects to promote agriculture in the Far North will open in terms of global warming. The area of land which is suitable for agriculture will increase by 1.5 times and the biological potential of land resources will increase by 30% as a result of warming in Russia [9]. It is necessary to take into account not only the advantages of climate changes, but such disadvantages as the growth of crop pests and diseases during the recent years.

Need for agricultural production in the North is made conditional on the solution of the food security problem[2]. Now the share of imported foodstuffs accounts for 40% of total consumption in the Russian Federation. According to the UNO the maximum allowable rate for food security is 20%.

Import of food products increased from 7.4 to 35.2 billion dollars in 2000 – 2008. The import volume of meat and meat products increased from 1.5 million in 1990 to 3.2 million tons in 2008 *(figure)*.

It should be noted that the share of domestic food products in total commodity resources of the domestic market will be in the Doctrine of the food security of the Russian Federation in 2020: grains and potatoes – at least 95%, sugar, vegetable oil and fish products – not less than 80%; meat and meat products – at least 85%; milk and dairy products – not less than 90%, dietary salt – not less than 85% [11]. Our country will have not reached food self-sufficiency even in the long term (in 10 years) *(tabl. 2)*.

Great agricultural potential of the North and expected food self-sufficiency of Russia

[2] The materials of the World Food Conference (Rome, November 1996), which adopted the Rome Declaration on World Food Security mention that food security is ensuring of physical and economic access for population to sufficient, safe and high-calorie food in order to meet the nutritional needs of a certain quality and quantity giving people the opportunity to conduct an active and healthy lifestyle [10].

Import of livestock products to Russia in 1990 – 2008, thous. tons

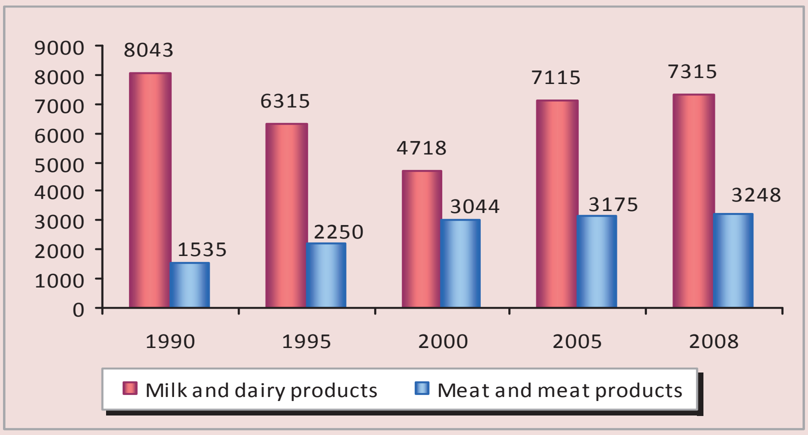

Table 2. Consumption of the main foodstuffs per capita in Russia, kg

Foodstuffs	Science-based quota	1990	1995	2000	2005	2007	2008
Meat and meat products	88	75	55	45	55	61	66
Milk and dairy products	440	387	254	215	235	242	243
Egg, pieces.	290	297	216	228	250	254	254
Potato	110	106	124	118	133	132	132
Vegetables, watermelons, melons and gourds	140	89	68	86	103	110	111
Fish and fish products	23	20	10	10	13	14	15
Sugar	43	47	32	35	38	39	40
Vegetable oils	8.8	10.2	7.5	9.9	12.2	12.8	12.7
Bread products	110	120	122	117	121	121	120
Source: Regions of Russia. Social and economic indicators. 2008: st.coll. / Russtat. – M., 2008. – Pp. 198, 200; Regions of Russia. Social and economic indicators. 2009: st.coll. / Russtat. – M., 2009. – Pp. 204-209. Russian Statistical Yearbook. 2009: st.coll. / Russtat. – M., 2009. – P. 441. Agro-industrial complex of Russia in 2008. – M.: Ministry of Agriculture of the RF, 2009. – P. 476, 478.							

can be used in future for provision of growing world population with food. According to the UNO one billion people go hungry in the world now and 17 thousand children starve every day. Depletion of natural resources, increasing of non-agricultural land using, population growth lead to the reduction of arable land area per a person. 2.4 hectares of grain crops accounted for one person in 1950; but only 1.2 hectares accounted for a person in 2007. According to forecasts this figure could drop to 0.8 hectares if we maintain the current rate of population growth [12, p.26].

The particular importance of agriculture lies in the fact that this industry is a basis for rural development. According to the results of the All-Russian agricultural census in 2006 near 100.6 thousand people are employed in the agricultural enterprises, farms and individual entrepreneurship in the Far North. In addition, a lot of people were employed in 1134 thousand of individual households [13].

Growth of agricultural production is closely linked with social development of the northern villages. Northern agriculture only provides people with fresh biological valuable food, but also stimulates the development of food industry, stabilizes employment, prevents the monopolization of local food markets by individual suppliers of products, controls food prices imported from other regions. It serves as a traditional way of life of rural population, contributes to maintaining of spirituality, culture, traditions, morals by native people, improves the demographic situation and system of people settlement, it conserves the environment natural landscape. Agriculture is both industry of the essential material goods and the sphere of human activity. Elimination of agricultural production means a change of residence or even a way of life.

Agriculture gravitates towards social issues because of its specificity and features of market relations in the industry; it can be developed only with public support. The budget support of the northern agriculture is too important. Agricultural enterprises and farms will have to phase out production of untransportable and perishable products without government support. Then the state will need more funds to employ indigenous ethnic groups in other spheres than to maintain the agricultural sector formed over a long historical period in the north.

Agricultural development of the northern territories was the most favorable in 1970-1980. The dynamics of crop production and livestock in 13 subjects whose territories are fully included in the Far North and similar areas, showed that the average amount of vegetables was increased by 19%, milk production was increased by 25%, meat production was doubled, eggs amount was raised by 2,6 times in 1986 – 1990 in comparison with a period of 1971 – 1975. The share of the European North’s production accounted for 54% of agricultural production in the Northern territories in 1990.

Crop rotations, new crop varieties, new technologies of their cultivation, measures to improve soil fertility, science-based farming systems, intensive forage production systems, advanced fodder technologies, mechanized seed and herbs technologies were implemented in the agricultural sector of the North during the pre-reform period. Livestock farms and poultry farms were built and developed near the towns. Population of several regions was fully provided with eggs. Transition of the agricultural sector into industrial basis contributed to that fact.

There were positive changes in the convergence of conditions and living standards of urban and rural populations, as well as in pricing by rising of purchasing price for agricultural products and in the financial performance of farms. All state and collective farms were profitable in 1990. The level of profitability conformed to optimal rate (40 – 50%), allowing to carry out the process of expanded reproduction. In addition, budgetary allocations influenced greatly over the sources of the expanded reproduction.

Food consumption rates by the residents of the northern territories approached to the national average level and they exceeded it in some subjects. Northern population had been producing own meat, dairy products and potatoes, the third part of eggs and 18% of vegetables till 1993[2, p.34]. The share of local resources in creating of the food fund reached 94% of potatoes, 21% of vegetables, 48% of milk, 40% of meat and 91% of eggs in the Komi Republic in 1991.

Market reforms of 1990 were accompanied by the decline of agricultural production and degradation not only of the productive capacity of the industry, but of the peasant community.

Thus, the need for agricultural development in the North is accounted for the following reasons.

1. It is impossible to judge the competitiveness of agriculture in the North by one criterion which is cost of production. The competitive advantages of the northern farming include the duration of daylight hours during the growing season, good moisture supply, huge tracts of native meadows in the high-water beds and manufacturing of organic production allowing to get rental income.

2. Speculations about the lack of competitiveness and minimizing of agricultural production in the North can turn into inability to solve the problem of food security in the country and providing the population with ecological products; they can become the reason for huge public expenditures on employment of the indigenous people in non-agricultural activities. Elimination of the northern village is painful and costly process, and it can also weaken national security.

3. The state should not curtail agricultural production in the Northern territories. On the contrary, it is necessary to devise a state program of development of the agricultural and food sector and rural northern areas. The Northern areas can become a major reserve center of food production, especially of livestock production in future. When our domestic market is filled with the domestic foodstuffs Russia with its vast northern territories would become a major exporter of ecological food products.

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Opportunities for the development of small business in the northern municipalities of the Karelian Republic

The article indicates socio-economic problems of the northern territories of the Karelian Republic. Now in the north of the area one can observe population reduction, closure of the industrial enterprises and high unemployment. On the basis of program-target method to manage territorial development the author proposes some ways of overcoming the situation. The sector of small business is considered as an important factor of territorial development, which gives us the opportunity to increase self-employment, to preserve and to improve the social and economic system of the region. The article has been prepared on the basis of researches conducted by the order of the Republic's government and according to the data of municipal districts.

Small business, regional economy, territorial development

Anna E.
KURILO
PhD in Economics, senior scientific associate of the Institute of Economics of the Karelian Scientific Centre of RAS

Today there is asymmetry in the socio-economic development of the Russia's regions. The Republic of Karelia is the northern resource-oriented border region, and about a third of its territory is situated in the northern agro-climatic zone and within the Polar circle. The northern territories of Karelia are situated above 64°30' north latitude and include the territories of six municipalities of the republic: Kostomukshskiy urban district, Louhi, Kalevala, Kem municipal districts, the northern part of the White Sea district and very little part of the Segezha municipal district. The total area of the northern territories of the republic is 60.7 thousand sq km, which have 111 settlements, including 3 towns, 4 urban-type communities and 104 rural communities.

Here 96.3 thousand people live (14% of the population of the Republic of Karelia), among them 53.8 thousand people are economically active population. According to the Integrated State Register there are 2034 enterprises and organizations and 2515 individual entrepreneurs, operating 29 enterprises with foreign investments in the North Karelia.

The crisis processes painfully affected the socio-economic situation in the northern areas of the republic. After researching the problems of the north of the republic one can mark out the main problems:

1. constant decrease in population;
2. reduction in the number of enterprises, including those that work successfully;
3. high unemployment.

The northern areas of the republic deprived of infrastructure and their life activity is limited by transport, infrastructure, social and other factors. In general, the economic development of northern areas of the republic is connected with the energy, mining, forestry and woodworking industries. Provided the deep processing of all local resources, the northern territories of the Republic can be developed on the basis of the cluster approach to production. From the viewpoint of the cluster approach to the development of the territory of Karelia there appeared opportunities to form the production clusters with the participation of small businesses.

The cluster means a geographically concentrated group of interconnected companies and organizations operating in a certain area, and thus they are characterized by common activities and complement each other [1].

Clustering is the most important and most promising tool for the complex integration of small and medium-sized businesses. In many cases it determines the effectiveness of measures of inter-firm, inter-sectoral, inter-regional and international integration [2].

As a result of interaction of the organizations participating in the cluster, due to emerging regional connection we have a synergistic effect. The cluster operates as a self-organizing system. Interacting with each other the enterprises of the region seek to achieve a common goal, which is expressed in the development of the region as a cluster in whole. Moreover, all business entities are on an equal footing when carrying out their activities – they are operating in the same area, being subordinate to the same laws.

The participation in the cluster and getting some comprehensive support allow the subjects of small and medium-sized businesses to increase the competitiveness more substantially than if they would develop on their own. Many elements of support for cluster projects have been successfully tested towards some individual small and medium-sized businesses, and in some cases - towards the interests of groups of complementary sector of small entrepreneurship. At the same time the measures for the clustering of small and medium-sized businesses should be comprehensive and involve coordinated actions on a wide range of areas. Such approach offers great potential for development of small and individual entrepreneurship. But it is necessary to focus on small innovation enterprises as the most flexible and cost-effective mechanisms for the formation of clusters [3]. In this connection the question arises about the prospects of development of population self-employment, especially in rural areas, where socio-economic problems are more acute on the background of infrastructure degradation of the territory.

The situation in the northern districts of the republic, the long-term interests of the republic's population, the nature of the problems of these areas require active influence of the government of the Republic of Karelia on the processes occurring in the north of the territory. It is important to stop the decline in real income of the population, the decline in production in the key industries and in the city-forming enterprises of the northern districts of the republic, and in the future to ensure the dynamic development of municipalities.

There are 3105 small and medium-sized businesses, including 454 microenterprises, 122 small enterprises, 14 medium-sized enterprises in the northern municipalities *(tab. 1)*. 2515 registered individual entrepreneurs work in these areas. The amount of tax revenue from the activities of small businesses is about 117.6 million rubles per year. But business is not developed evenly. The leader is Kostomukshskiy urban district where 1555 small businesses are registered. However, the small entrepreneurship is developed less in Kalevala national district, where only 235 small businesses operate.

In the branch structure of small and medium-size business of the northern territories such activities as trading-purchasing (31%), logging and timber selling (16%), passenger and cargo transportation (16%), agriculture (5%), tourism (3%) prevail.

In all northern territories of the republic the municipal programs of small business development for the period till 2014 are developed and realized.

Within the bounds of implementation of the Federal Law «On the features of alienation of

Table 1. The indicators of development of small entrepreneurship in the North of Karelia over the 1st half year of 2010

	Territory	Number of small businesses	Microenterprises	Small enterprises	Medium-size enterprises	Individual entrepreneurs	Budgetary income, mln. rubles
1	Kostomukshskiy urban district	1555	233	54	4	1264	34,1
2	Louhi municipal district	387	72	21	2	292	3,9
3	Kalevala national district	235	55	9	1	170	4,5
4	Kem municipal district	401	45	15	3	338	11,1
5	The White Sea municipal district	527	49	23	4	451	5,3
	Total	3105	454	122	14	2515	58,8

real estate being the state ownership of the Russian Federation subjects or the municipal property and being rented by the subjects of small and medium businesses, and on the modification of separate legislative acts of the Russian Federation» № 159-FL from 22.07.2008 all areas exercise the preemptive right of the repayment of nonresidential premises rented by the subjects of small and medium businesses. The lists of the municipal property intended for rendering the property support to the subjects of small and medium businesses are approved.

The administrations of the municipalities try as much as possible to create favorable conditions for small and medium entrepreneurship, to create the infrastructure for supporting the small and medium entrepreneurship and carry consulting activity.

In 2009 all northern municipalities organized training courses for the subjects of small and medium-sized businesses. The entrepreneurs who have successfully passed the exam obtained a certificate of professional development of the Petrozavodsk State University. Taking into account this positive experience of cooperation with the PSU on training the entrepreneurs, it is necessary to continue to improve the mechanism for the participation of small and medium-sized enterprises in the activities carried out by scientific organizations and higher educational establishments of the republic.

In addition, we can extend the information services of the population through the establishment of information and consultation points - stationary or mobile ones. The organization of this office will make it possible to consult the local population on the issues related to the organization of business, the solution of disputes with the administrations of municipal districts and settlements, and by-turn these measures will have a positive impact on enhancing the entrepreneurship initiative of the residents of the North and can help to identify and to implement alternative sources of local incomes, such as side-forestry, tourism, etc.

Under the influence of real organizational and economic factors the development of entrepreneurial activity is gradually starting to shift from the small and medium enterprises to the micro-business and individual entrepreneurship. The number of microenterprises is 3.7 times more than the small businesses, and the number of registered individual entrepreneurs is 5.5 times more than the number of microenterprises. This phenomenon is explained by the increasing development of self-employment of the population with using the most effective and simplest forms of entrepreneurship on the registration, organization and implementation of activities.

The small business sector in the north of the republic is characterized by narrow specialization of activity. For each of the entrepreneurs in a specific context it is formed on the basis of historical background, local opportunities and resources, their level of skills, education and geographic location. The specific features of the northern territories of Karelia leave traces on it too (the special way of life, the risks of agriculture, the unique natural resources, the information about the age-old occupations, crafts, unique identity of the territory, etc.). All these things have an effect on the development of various forms of self-employment in the outlying settlements of the northern territories.

Difficult climatic conditions require special approaches to the selection and zoning of the plants and animals. These areas have a possibility to develop small businesses in this sphere. It may be connected with the revival of mussel farms on the coast and algae harvesting in the White Sea, breeding of valuable fish species, the revival of fisheries on the external and internal reservoirs, long-term lease of forests, rivers and lakes by the local community. These trends become stronger. For example, in the Republic of Karelia the trout-breeding is developing rather dynamically, and this activity is mainly represented by the small enterprises. In Karelia the scientific developments on the technology of growing trout were worked out still in the 1970s by the scientists of the Northern Research Institute of Fisheries, and the commodity production started 20 years late. The trout-breeding has the highest profitability in the food sector – up to 30-50% [5]. And today, Karelia is the Russian leader in this kind of activity because about 70% of all trout in Russia are produced here.

Today the agriculture of the northern areas is represented primarily by the small forms of economy. Their main direction of development has been determined by the increased financial stability of small-scale entities in rural areas, the increased availability of credit resources for the private plots, farms and agricultural consumer cooperatives.

Within the framework of municipal programs on support and development of small entrepreneurship in the districts and the area for 2006 – 2010 the following activities were done:

- monitoring of law relating to business activities;
- the activity of the councils for support and development of small and medium-sized businesses under the Heads of the administration;
- there was created an information bank of unused space municipal property and it was located on the websites of the district administrations;
- the fairs with the participation of small businesses were held;
- rent discounts on socially significant forms of activity were granted;
- there was approved a list of municipal property intended for the transfer into the ownership and (or) using of small businesses and organizations that form the infrastructure to support the small and medium enterprises, as well as there was determined the order for granting the property included in the list to the small business.
- the local authorities negotiated contracts with small enterprises and individual entrepreneurs registered and carrying out their activities on their territories to do the municipal orders (in accordance with the Federal Law № 94-FL);
- the territorial planning documents included the provisions on allocation of land to build the houses for small businesses, according to the List of orders following the meeting of the State Council Presidium of the RF from 27.03.2008 and from 08.04.2008.

However, those set of measures which has been put into practice, including the decisions within the framework of crisis management measures of the Government of the Republic of Karelia, has not created any incentives for the development of small innovative business yet.

Although all municipalities of the North are investing to support the small and medium-sized businesses, but these measures are not enough to change the situation for the better. We observe just selective funding of one sector of the economy. The programs of supporting the small and medium-sized businesses implemented in the districts are uncoordinated and cannot replace the common comprehensive program of business development in the northern territories. In this connection it is necessary to have inter-district programs on the development of the small and medium-sized businesses in the North of the republic. It must be coordinated and implemented in a complex way, linking the actions and work of all local authorities, ministries and departments of the republic. Without this approach we cannot change the negative trends that have emerged in the northern territories of the republic.

In our opinion, the effective modernization of the Russian economy will be possible, if the small and medium businesses become one of the supporting structures of modernization. The potential of small and medium enterprises poorly used in modernizing of the economy of the northern territories of the republic. In this connection the trend in reduction of administrative barriers hindering the development of small business and in prevent of new barriers should be a priority in the administrative activity [6].

To reduce the administrative burden in each municipality the authority and the business community together should work out a municipal program for the development of small and medium-sized businesses in the area over the next 5, 10 and 20 years. The program should provide a system of measures of administrative support to this sector of economy. In the program the unconditional primacy should belong to the measures aimed at the accelerating development of industrial and innovation-oriented entrepreneurship.

The dynamically developed micro-enterprises need for short-term and small in total lending (100 – 400 thousand rubles). Most banks do not provide this category of borrowers with such loans. It is necessary to pay special attention to the development of the institution of microfinance. In this regard we have already had some experience on creating the credit cooperatives in the Kalevala district.

Almost all cities, towns and villages in the northern districts and in the area are single-industry settlements. Their life activity depends on one enterprise or its affiliate. The economic problems of single-industry settlements are long-standing problems. However, due to the crisis this problem has increased in the northern areas. “From the standpoint of economic reasonability there is no and cannot be a unique set of measures to support each single-industry settlement, but there is one necessary and indispensable measure – the support for the small and medium businesses in these settlements” [7].

The government of the Republic of Karelia tries to create a comfortable environment for business, to promote the development of competition and to eliminate some unnecessary administrative barriers. In addition to these measures in accordance with the new “Concept of socio-economic development for 2011 – 2015” the government of the Republic of Karelia will conduct a policy of creating the most favorable conditions for small and medium-sized businesses through the activities of the republican program “Development of Small and Medium Enterprises in the Republic of Karelia for the period up to 2014.

In order to provide the rapid growth of small and medium-sized businesses the following problems will be solved [8]:

1) forming a favorable external environment for the development of entrepreneurship by the ways of:

- improving the mechanisms of economic and legal regulation of business activity that aims at providing a favourable environment for the development of small and medium businesses, taking into account the views of entrepreneurs;
- providing the activity of integrated system of information and consulting services for small and medium enterprises and the development of infrastructure to support the small and medium enterprises;
- assistance to the small and medium-sized businesses and organizations forming the infrastructure to support the small and medium enterprises in retraining and further training of personnel;

2) Strengthening the market position of small and medium-sized enterprises of the Republic of Karelia, including those engaged in foreign trade, in innovation sphere and craft activities by the ways of:

- reducing the costs for small and medium enterprises, arising from the attraction of financial resources and promotion of the credit system;
- providing the property support to the subjects of small and medium-sized entrepreneurship and exercising the preemptive right of tenants to purchase the leased property by the subjects of small and medium businesses in accordance with the laws of the Russian Federation and the Republic of Karelia;
- development of entrepreneurship in the craft activity;
- assistance in promoting the products, goods and services produced by small and medium enterprises to the Russian and international markets;
- creating the conditions for innovative projects.

The tasks for the development of small and medium-sized enterprises will be implemented in the following areas:

- activity of the Guarantee Fund of the Republic of Karelia (the Fund of guarantees) on the obligations of small and medium enterprises;
- providing the grants to small and medium-sized businesses to start their own businesses, including the creation of innovative companies;
- subsidizing the interest on the investment loans for small and medium enterprises;
- provision of grants to the operating innovative companies to compensate the costs of developing some new products, services and methods for their production (transfer), new production processes, purchase of machinery and equipment connected with technological innovation, purchase of new technologies (including rights to patents , licenses to use inventions, industrial designs, utility models) etc.;
- operation of the Business Incubator of the Republic of Karelia;
- measures to ensure the access of small and medium-sized businesses to the state and municipal property resources, including providing the pre-emptive right of repayment of the leased premises;
- carrying out some information and consulting activities, as well as activities for retraining and advanced training of the persons employed in small and medium businesses;
- ensuring the maximum transparency of the implemented measures of state support for small and medium-sized businesses by placing such information on the Internet portal "Small and medium enterprises of the Republic of Karelia".

The measures will be implemented in some new areas: the provision of financial support to the municipal development programs for small and medium-sized enterprises, expansion of support for the export-oriented small and medium-sized enterprises, as it is these companies that produce competitive products.

In addition, the government of the Republic of Karelia will prepare an annual application to participate in the contest held by the Ministry of Economic Development of the RF, to provide subsidies to the budgets of the Russian Federation to finance the activities carried out within the framework of state support for small business.

The concerned proposals and measures to improve the efficiency of the small business sector will make it possible to reduce unemployment and to get involved 60-70% of the population of the northern territories in the work in the field of small and medium-sized businesses [2].

A necessary condition for the orderly movement of the North of the republic on the path of development is that the local authorities and the population living in these areas realize the necessity to develop the small business. The development of certain areas of the Karelia Republic is connected with the activities of large industrial enterprises and the available tourism potential. But the majority of municipalities of the North of the republic have no large enterprises, and their establishment is currently impossible due to lack of investment resources. Under these conditions only the small business sector can promote the development of the northern territories.

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Outsourcing as a specific form of inter-firm cooperation

The present paper contains an analysis of organizational and economical nature of outsourcing. A classification of outsourcing types based on economic criteria is proposed. It is demonstrated that financial leasing may be considered as a particular case of outsourcing operation. An analysis of terminology used for description of outsourcing is made and amendments to this terminology are proposed. A list of criteria of differentiation between outsourcing and other forms of cooperation is described.

Outsourcing, types of outsourcing.

Ivan D.
KOTLIAROV
Ph.D. in Economics
St. Petersburg Branch of the State University – High School of Economics
ivan.kotliarov@mail.ru

Introduction

Despite the widespread adoption of outsourcing in enterprises' economic activity (which is due to the efficiency of outsourcing as a tool to reduce companies' costs and improve profitability), the theoretical understanding of the phenomenon of outsourcing is significantly behind its implementation.

Specialists focus primarily on studying the effectiveness of its use for optimization of various company's functions – it can be easily seen from both the topics of articles devoted to it [1, 2], and from the direction of Ph.D. theses on outsourcing [3, 4, 5]. Such studies are distinctly practical in nature. Even the works applying for a theoretical understanding of the essence of outsourcing, either focus on its practical aspects, or reduce it to labor division, without specifying the differences of outsourcing from other forms of labor division and inter-firm cooperation [6, 7].

Because of this, there is still no unambiguous definition of outsourcing as well as understanding of economic nature of this phenomenon. In this regard, a number of disadvantages appear. In particular, there is no formulated list of differences between outsourcing and procurement of goods and services for industrial needs and the contract [8 – 12], although there were some attempts to characterize these differences [1]. For this reason, some experts equate outsourcing and production cooperation or contract and refuse to single it out as a distinct economic phenomenon, while other researchers believe that any form of cooperation between enterprises on production of the final product to the consumer can be attributed to outsourcing. It is obvious that such extremes in the study of outsourcing are not acceptable.

The purpose of this article is to clarify the economic substance of outsourcing transaction, to formulate a list of criteria to differentiate outsourcing and other methods of cooperation between firms and analyze the mechanism of companies' financial cooperation in outsourcing.

Management and economic content of outsourcing

As mentioned above, outsourcing is seen primarily as an administrative rather than economic phenomenon [8]. But it is clear that outsourcing contains both managerial and economic [9, 11, 12] component *(tab. 1)*.

Table 1. Managerial and economic aspects of outsourcing

The essence of outsourcing	Failure of the independent fulfillment of certain functions and focus on core processes for the purpose of effectiveness enhancing
Managerial aspect	Transfer of tasks or processes to external operators
Economic aspect	The of the use of external resources to perform the enterprise's functions, that is attraction of factors of production, controlled and organized by other firms in the interests of the client company by an enterprise to conduct its business

From a managerial point of view it is convenient to classify the types of outsourcing by the criterion of processes types sent to contractors.

There are three basic approaches to this classification, presented in *table 2.* Of course, there is more to it than these approaches, but they are most often found in scientific, practical and academic literature.

Table 2. The most common approaches to the classification of outsourcing

Classification criteria	Types of outsourcing
Relation to the core activity of an enterprises	Outsourcing of key processes Outsourcing of support processes
Activities	Outsourcing of information technology (IT outsourcing) Manufacturing outsourcing Logistics outsourcing Outsourcing of personnel Accounting outsourcing, etc.
Contents of transferred functions	Outsourcing of tasks (one-time projects are passed to execution, and the term of their implementation is clearly stated) Example: designing a new product. Sometimes, this type of outsourcing is called "outtasking" (from the English 'task') Business process outsourcing (in this case we are talking about long-term cooperation between enterprises, where the contractor takes the carrying out of any functions entrusted to him by a customer on a regular basis) Example: production outsourcing or factoring

As can be seen from table 2, the natural classification of outsourcing from an economic point of view should be made according to the criterion of the form of resources (factors of productions) needed to perform the corresponding functions. In this case, we can distinguish the following types of outsourcing (the list of factors of production is given in accordance with the classification most common at present):

1. Outsourcing capital, where the customer enterprise uses capital (physical or monetary), organized by an operator enterprise in its interests, but at its own risk. A classic example of outsourcing capital is manufacturing outsourcing, when a company places orders for the manufacture of products under its brand with a foreign executor. Another example is leasing, where for the production they use equipment owned by another company (lessor). We should note that the interpretation of leasing as a form of outsourcing is not a new one, and some sources say it refers to a manufacturing outsourcing [10]. However, in our view, this approach is incorrect; the function of leasing in its content is radically different from the functions of manufacturing outsourcing. Manufacturing outsourcing represents a transfer to an external operator of the whole technological process of product manufacturing (or any element of this process). Obviously, it does not occur at lease [13]. Lessor is not engaged in production for the lessee, but he performs the tasks of financing and acquisition of fixed assets in the lessee's interest and assumes the function of ownership. Since the implementation of these tasks and responsibilities is associated with raising capital, we believe it is logical to include leasing to capital outsourcing.

2. Outsourcing of land (natural resources). To our knowledge, outsourcing in the field of agriculture and natural resources is not considered in the existing literature (except outsourcing of service extractive industries - but in this case, the operator is a service company, not a nature management company, i.e. it is a fundamentally different phenomenon). The idea

is that an enterprise of agriculture (or nature management) intentionally manufactures products for a customer under the terms of compulsory acquisition. The program "Milk rivers" sold by the company Wimm-Bill-Dann may serve as an example [14].

3. Outsourcing of work – it applies to outsourcing of staff. It is important to note that the usual involvement of non staff employees (when the company itself concludes an employment contract directly with the employee) which the practices often interpret as outsourcing of personnel, in fact, it is not – this is just another form of employment relationship between employer and employee. Only legal entities can be participants of the outsourcing transaction.

4. Outsourcing of information – in this case, the corporate customer requests the information gathering and processing to a third-party company; accounting outsourcing can be referred to this type of outsourcing, in our view.

5. Outsourcing of entrepreneurial skills – corporate customer uses entrepreneurial skills, focused in other companies to conduct its own business. This type of outsourcing includes franchising (in which an independent entrepreneur – franchisee – outsources the management of the brand name under which he or she conducts the business [15]).

6. Expertise outsourcing – corporate customer attracts a company having certain skills and experience (first of all management) to perform some functions. An example could be attracting foreign companies to manage real estate;

7. Mixed outsourcing – when the corporate customer sends to a third party contractor a function that requires multiple types of resources; this form of outsourcing includes factoring, where the company factor, on the one hand, provides vendor resources (capital outsourcing), but on the other – it is engaged in collecting and processing information about current and potential customers of the supplier to determine their ability to pay (outsourcing of information). Obviously, in real economic activity any enterprise, including outsourcers, uses more than one resource, which, however, does not mean that mixed outsourcing can include all types of outsourcing. The idea is that in mixed outsource all resources mobilized by the operator for the customer are equally important for successful implementation of the functions transferred to him, whereas in the "pure" ("one-resource") outsourcing (e.g., outsourcing of labor or capital), the emphasis is in primarily on one resource.

In our opinion, the classification proposed above can adequately describe the economic nature of different types of outsourcing.

Outsourcing and procurement of goods and services: differences analysis

An important task of outsourcing analysis is to provide a distinction between the business process outsourcing and procurement of goods and services. The solution of the task is complicated by a high degree of similarity between these phenomena. In both cases, the customer purchases from the executive (supplier) a finished product (or service). Very often, outsourcing is described as a special case of a contract under which goods or services are produced in accordance with specific customer requirements. The situation is furthermore complicated by the fact that Russian law does not provide the concept of "outsourcing".

It should be also noted that the Russian terminology of outsourcing is not standardized yet. A company that provides outsourcing services, may be called an "operator", an "outsourcer", and in some cases a "contractor". A company, which transmits the function to execute to an external operator, has no special designation and is usually called just a "customer". According to the author, a provider of outsourcing services should be called the outsourcer; the term "operator" is also possible. In turn, a company ordering services outsourcing should be called "outsourcee". This corresponds to the English terminology and allows using special terms for the parties of the outsourcing transaction (as it occurs, for example, with the lease transaction where the parties also have special designations, which greatly simplifies the description and analysis of this transaction).

Significant characteristics of outsourcing, frequently cited in the literature are [8 – 12]:

1. Goods and services (which are the end product of performance functions transferred to the outsourcer) are intended solely for outsourcing, i.e., they are not standardized, manufactured in accordance with the requirements of the outsourcee, and should not be sold on the open market;
2. Goods and services delivered by the outsourcer are produced in terms of their guaranteed payment by the outsourcee (of course, if they fully comply with specifications). This minimizes outsourcer's risks.

According to the author, is also rightfully to assume that only legal entities can be the parties in the outsourcing transaction and the goods and services supplied by outsourcer and being the end result of the execution function passed to it can be used only for commercial purposes (i.e. for later resale, for the production of final products or for business activities). Previously, to our knowledge, it was not mentioned about the necessity of compliance with these conditions in studies on outsourcing.

In our view, taking into account the above, outsourcing can be defined as a form of cooperation between enterprises, in which independent external executive (outsourcer) attracts, organizes and uses on his behalf and on his own responsibility, but in the interest of the client (outsourcee), the factors of production for execution of task or function in accordance with the outsourcee's requirements on the risk-free cost-recovery basis.

This definition, as can be easily seen, takes into account all the distinctive features of outsourcing identified above and means that the outsourcer serves as a legally independent external unit of the outsourcee for the period of cooperation.

It is important to note that the attempts to interpret outsourcing theoretically faced with an important task – the complexity of the formalization of the submission that the outsourcer is an external unit of the outsourcee, being independent (a contradiction between these attributes is obvious, because it does not fit the traditional approach to enterprise). As a rule, the authors have to say this, as givens, trying to clarify the content and specificity of this phenomenon. Below we will attempt to solve this problem.

Based on the analysis of the literature and our own research it seems legitimate to assume that the main differences between the procurement and outsourcing are in different values of the five basic and four secondary attributes. These signs and their meanings are listed in *table 3*. Secondary requirements can be fulfilled not always; the more secondary criteria are satisfied, the more closely the outsourcer and the outsourcee are integrated.

The author believes that right-hand column of *table 3* can serve as a formal description of a situation in which a legally independent company (outsourcer) serves as an external unit of another independent company (outsourcee). In other words, we can talk about the solving of the above problem of formalization of outsourcing signs.

Mechanisms of outsourcer's services payment

Above it was shown that an important characteristic of outsourcing is its risk-free for the operator – it is guaranteed to receive payment for services rendered for the implementation of the process or task transferred to it (assuming that the quality of performance meets the customer requirements). However, this condition, at first glance, is not always met.

Factoring can be considered as an example. According to a number of sources factoring is a receivables management outsourcing (in our opinion, it would be more correct to speak about outsourcing of management of financial relationships with the buyer, however, in any case we are talking about outsourcing). Formally, in the case of factoring the requirement of guaranteed payment factor is satisfied because

Table 3. Comparative characteristics of the procurement of goods and services and business process outsourcing

Compared signs	Procurement of goods (services)	Business process (tasks) outsourcing
Basic signs		
The essence of the supplier's (operator's) activity	The provider produces goods for sale on the open market on own initiative without a firm order on it	The operator produces a product (provides a service) having an order from the outsourcee
Guarantee of proceeds receipt by the supplier (operator)	No guarantee of goods and receiving sale and proceeds receipt (as determined by market conditions and customer requirements)	The outsourcee guarantees repayment of manufactured goods (services rendered) and its timely payment
Type of goods (services)	Goods (services) are made in accordance with the specifications of the supplier and are standardized for all customers	Goods (services) are made according to customer's technical specifications
Designation of goods (services)	Goods (services) can be used for personal needs or for commercial purposes	Goods (services) are designed for outsourcee's use for commercial purposes
Participants in the transaction	The participants of the transaction may be physical or juridical persons	The participants of the transaction can be only legal entities. If an enterprise transfers a task to an individual, then it is not about outsourcing, but labor relations
Secondary signs		
Pricing mechanism	The seller sets the price for the goods (services), and, if necessary, gives the buyer a discount	The operator discloses to the customer the structure and size of the costs, then the customer and the operator set the normative value of markups on operator's goods (services)
Nature of the production capacities of the supplier (operator)	Manufacturer (supplier) independently forms the production capacities based on the specifics of the produced (supplied) goods	The operator forms production capacities (number, structure, nomenclature, geographic location), based on customer requirements
The mechanism of the buyer's (customer's) work	The buyer uses a purchased goods (services) according to the set internal regulations	In order to ensure optimum quality of services the outsourcer makes changes to those procedures of the customer, which are associated with the process referred for execution
Getting authorities from the customer	No	If necessary the outsourcee transmits to the operator the core authorities needed to perform the process or task (technologies, equipment, etc.)

the supplier pays it a commission. But this commission is negligible compared to the amount provided by factoring financing, and the factor assumes the risk of the buyer's default, and is able to fully get its money back only when (and if) the buyer transfers it the payments for goods supplied by the seller. If the buyer behaves improperly and it is impossible to recover the amount due to him, then the factor would be at a loss, although it will receive a commission from the seller (it is often paid when the factor transfers the first payment). Thus, if there is a formal fact of payment for services, the risk-free for the factor is out of the question (which, incidentally, is evident from the contents of factoring: we should repeat once again that the factor assumes the risk of default).

It would be possible to resolve this contradiction (factoring refers to outsourcing, but it is not risk-free for the operator), assuming that factoring in fact cannot be considered a kind of outsourcing. However, the actual content of the factor's activity shows that it still goes on outsourcing [16]. Thus, it is necessary to carefully analyze the mechanism of factor's services payment and determine whether there are guarantees for the factor from the supplier (except, of course, the recourse which will not be explored in this article). In other words, it is necessary to determine whether the factor's services payment can be considered as risk-free.

Let us consider the similar moments in other forms of business in detail.

In the case of franchising the franchisee, executing the trade of goods and services for the benefit of franchisor under its brand name (that is why, in author's opinion, franchising for the franchisor should be considered as outsourcing services for conducting sales activities), receives income only from the actual sale the above-mentioned goods and services to end consumers. However, when opening a new franchise outlet the franchisor and the prospective franchisee make up business plan together, which records the expected sales volumes. These amounts are established based on the capacity of the local market and an analysis of previous experience of other franchisees, which the franchisor has. Franchisee's using a well-known brand is a guarantee that local consumers may wish to use its services, and the planned sales will be made (and, accordingly, the franchisee will receive the planned revenue and profit). In other words, unlike the beginning independent entrepreneurs who are trying to operate under their own brand name, and do not have any guarantee that they will reach the planned level of sales, the franchisee possesses an effective tool to attract consumers – it is a well-known brand.

Thus, in case of franchising, the franchiser does not pay to the franchisee for goods distribution services, but the demand for riskless is met through the two following conditions:

- adequate assessment of market potential, where the franchisee will operate;
- providing the franchisee with an important asset in use – the brand (i.e., essentially giving him a guaranteed source of income by the franchisor).

In case of factoring the situation is largely similar – the supplier gives the factor the rights of requirements recognized by the buyer (i.e., payment of which the buyer agrees to receive in the future). This means that the supplier gives the factor a guaranteed source of future cash flows.

Thus, in all forms of business considered above the customer does not make direct payments to the outsourcer, but provides him with tools for guaranteed income.

All the above suggests that the risk-free of outsourcing is provided by one of the following mechanisms:

- full payment for outsourcer's services by the customer;
- providing the customer a guaranteed source of income by the outsourcer (or an instrument to attract a guaranteed number of consumers or the obligations of third parties on the commission payment, of course, within the statistical error).

We should note that the second point should not be interpreted broadly and, for example, retailers cannot be regarded as outsourcers for their suppliers, because they do not give the commercial networks any guarantees in terms of sales.

Conclusion

The classification proposed in this paper allowed us to refer certain activities that previously were not included, but were considered as independent to outsourcing. In author's opinion, it was possible, on the one hand, due to a better understanding of both the economic nature of the outsourcing phenomenon and the mechanisms of interaction between enterprises in the framework of outsourcing, but on the other hand it allowed to consider a number of today's popular business forms (such as leasing and franchising) as special case of a more general phenomenon of external companies resource use (i.e., outsourcing).

In addition, the author believes that the proposed refinement of the concept of "outsourcing" and the formalization of the criteria which should be met by outsourcing interaction between enterprises, can serve as a basis for further theoretical understanding of the phenomenon of outsourcing.

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NATURE MANAGEMENT

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Socio-economic estimation of the particularly protected natural territories (by the example of the Komi Republic preserves)

Complex socio-economic estimation of the seven preserves of the regional importance situated in the Komi Republic, including consideration of the three components (ecological, social and economic) is carried out. While analyzing the condition and the features of the particularly protected natural territories their influence on the reserves' efficiency has been revealed. The socio- economic problems of the preserves' territories are also revealed. The list of the territories' ecological services is represented, and these services' economic estimation is carried out. The alternativeness of approaches for the time factor's account (the problem of discounting) is noted.

Ecological services, traditional life support, recreational value, water-regulation, general economic value.

Tatyana V.
TIKHONOVA
Ph.D. in Economics, Head bioresursnoy Laboratory of Economics and Social Ecology of Institute of Socio-Economic and Energy Problems of the North Komi SC of the Ural RAS department
tikhonova@iespn.komisc.ru

There exist a lot of reasons to preserve biological resources; nevertheless, the economic ones play an important role in elaborating the plans for the territorial economic activities' development. The mankind has already realized that the quality of life is determined not by the prices, but by the values, including the ones given with by the healthy environment. The economists-ecologists try to estimate natural resources and ecological functions, to raise "the nature competitiveness" in its "struggle" with techno genesis' decisions.

There are a lot of ways for estimating natural resources. The protected objects (rare bio-resources put on the list in "The Red book") by virtue of their "invaluableness" have no regulated methods of their estimation. The modern approaches' lawfulness based on the ecological goods' accent, has disputable character to this day. As a rule, bio-resource and recreational reserves' functions are estimated. These estimations have been carried out by S.N. Bobylev, G.A. Fomenko, I.P. Glazyrina, S.N. Stetsenko and J.V. Panasovsky. Great contribution to the ecosystem services' estimation was made by A.A. Tishkov who showed new cost representation of the PPNT services (climate-regulating, water-regulating, soil-protective, assimilation, bio-productive, bio-resource, etc).

The research is devoted to the complex socio-economic estimation of various particarly protected natural territories of the republican value. Among the problems alternativeness of approaches for the time factor's account (the problem of discounting) is noted.

Particularly protected natural territories' distinctive features. There are 240 particularly protected natural territories (PPNT) In the Komi Republic, among them are: 2 PPNT of federal value (Pechora-Ilych State Natural Bio-sphere Reserve and National Park "Ugyd va") and 238 PPNT of regional value (165 natural reserves of various types and 73 nature sanctuaries). The total area occupied by the particularly protected natural territories (both of federal and of republican value), makes more than 6 million hectares, or about 14.6 % of the general the Komi Republic area of that exceeds the worldwide parameters.

All reserves and nature sanctuaries have the character of regional importance. If the importance of the reserves and the national parks of federal value raises doubt, there is less information about the reserves of regional value in spite of the fact that their share prevails. As a rule, the reserve's status is term-less. Recently, however, the question from the nature management officials on re-structuring protected objects has been raised rather often. In this connection this research gives the representation not only on the resources' value, but also on the rendered ecological services in various PPNT territories.

The research includes estimation of seven particularly protected objects of regional value. Among them are complex and ichthyologic preserves, cedar and marsh reserves. Despite of their status their functions are various, as well as the occupied area, the anthropogenic load level and the allowed actions' degree. The complex socio-economic estimation of territories includes consideration of three components: ecological, social and economic ones.

Biological importance. Territories differ with the extensive biological variety and representativeness of the existing kinds of plants, animals and organisms *(tab. 1)*. The volume of ecological services, including bio-resources consumed by a person, depends on his/her way of life. They are used in a greater degree by hunters, fishermen, and reindeer breeders, especially belonging to aboriginal population. In this connection, the importance of ecological services is extremely high for inhabitants of the settlements which are situated in the zone of PPNT availability.

Besides valuable organisms, the preserves are rich with various resources. In 2009 during field studies in the territory of the swamp reserve "Ocean" 240 plants' species, 76 birds' species, 10 mammals' species (elk, bear, muskrat, otter, fox, marten, squirrel, rodents), frog and lizard. Also single deer traces were met.

The flora of the "Udorsky" preserve is presented by vascular spore, gymnosperms and flowering plants (341 plants' species). On the preserve's flat part 96 leafy mosses' species and 170 lichens' species were found. The list of the birds' species found in the "Udorsky" preserve includes 82 species. This preserve is the place of dwelling for 36 mammals' species, 15 species of them are valuable animals.

Thus, practically all the studied PPNT proved their high ecological value from the positions of ground and water ecosystems' safety.

Social status. The social parameters (employment, income per capita, salary) in the areas of PPNT arrangement are worse than in other republic's areas. The majority of areas, where the preserves are situated, have lumbering and agricultural specialization. Initially low profitableness of these branches, reduction of production volumes, and ineffective activity do not allow the territory to provide growth of the financial incomes of the population[1].

Liquidation of state farms and lumbering enterprises made villagers to be engaged with the traditional ways of life-support: personal subsistence farming, hunting, fishery and collecting. The rising unemployment leads to the growth of the traditional life-support role food provision and incomes of the population *(tab. 2)*.

[1] Dmitrieva, T.E, Maksimov A.A, Khokhlov, N.A. Fungi-berry industry can become a new sector of the Komi Republic economy / Region. – 2007. – № 1. – Pp. 34-37.

Table 1. PPNT values' features and authorizing actions in such territories

Preserve / Area, hectares	Valuable resources (put on the list in "The Red book")	Ecological services and their functions	Authorizing actions
Ichthyologic preserve *"Ilychsky"* *(532,400 h)*	Lamprey Peled Bullhead Grayling Salmon	Water regulation Carbon sequestration Bio-production Assimilation	Picking berries and mushrooms Haying Hunting Tourism
Swamp reserve *"Ocean"* *(179,000 h)*	6 birds' species 1 rare lichen species	Carbon sequestration Waterfowl breeding Birds' rest at migration Water regulation	**There is no provision**
Swamp *"Pechorsky"* *(6,392 h)*		Carbon sequestration Water regulation	Hunting Plucking
Complex preserve *"Udorsky" (42,422 h)*	9 plant species 11 lichen species Rare leafy mosses 4 amphibians' species 9 birds' species 2 mammals' species	Carbon sequestration Water regulation Assimilation	Hunting Fishing Haying Picking berries and mushrooms Tourism
Complex preserve *"Verhne-Lokchimsky" (242,000 h)*	15 plant species	Carbon sequestration The river Lokchim is the place of fish spawning Water regulation Assimilation	Recreation Tourism
Cedar Preserve *"Podcheremsky" (1,300 h)*	Cedar	Carbon sequestration Water regulation Assimilation Soil conservation The place of deer migration	Hunting Fishing Gathering mushrooms and berries Haying
Cedar Preserve *"Soplyassky" (600 h)*	Cedar	Carbon sequestration Assimilation, soil conservation	**There is no provision**

Table 2. The role of traditional life support

Features		Udorsky Region	Troitsko-Pechorsky Region	Kortkerossky Region
Actual unemployment, %		42	30	27
Activities, important for self-support, %	Growing food	100	85	100
	Cattle	40	29	10
	Hunting, Fishing	70	40	20
	Mushroom and berries picking	50	69	60
Source of income, %	Growing food	10	3	10
	Cattle	5	3	0
	Hunting, Fishing	15	6	0
	Mushroom and berries picking	5	10	0

In the settlements which are situated close to the PPNT areas, the high level of unemployment is marked. The demoralizing status of the unemployed causes theft which was not traditional in villages before. Low level of education, skills, technical experience; social and economic apathy, alcoholism, suicide are the consequences of the long-lasting asocial economy of the Soviet and Post-Soviet period. Drunkenness does not allow realizing available human potential[2].

The change in the employment structure is connected to labor moving from the fields of activity with low efficiency parameters (agriculture, lumbering, housing and communal

[2] Maksimov A.A. Problems of the traditional livelihoods' revitalization of. (In the book: North: the problem of peripheral areas). – Syktyvkar, 2007. – Pp. 301-316.

services) to the dynamically developing ones (trade, communication, construction). In the majority of areas the share of the employees in the non-productive sphere makes more than 60 % by virtue of the industrial sphere absence.

The transport network plays a great role in the socio-economic development of the territory. Very often the places of recreation, hunting and fishing can be reached not due to motorways, but either by means of the rivers, or winter roads.

Nowadays hunting and fishery are the important occupations for many rural families. In the structure of the average income per head the importance of hunting and fishery as the incomes' source is insignificant, though there are some families in villages for which these kinds of activity give the basic means, allowing to improve their living conditions and to send children to get higher education in cities[3].

According to the survey data, the percentage of local population's self-providing with fish practically in all rural settlements, belonging to preserves (except "Pechora", "Ocean" and cedar preserves) is approximately identical and makes about 20%. The high importance of hunting and fishing is characteristic not only for villagers' self-providing, but also as an integral part of their way of life and as a source of incomes. Families with low level of incomes are more active in holding subsistence farming, fishing, hunting and gathering of mushrooms and berries. But, despite of the stably hard socio-economic conditions in the majority of agricultural areas, very few people live their home places. The only way out from such situation can be employment in the field of traditional wildlife management.

In the territory of the Udorsky region the group of indigenous people legally declared their existence and lead active use of the preserve's territory, according to the principle of traditional wildlife management. Practically 95 % of all the results from collecting, hunting and fishing are used for self-providing. The local population very actively (40-50 % of the male population) participates in wildlife management, still following the principles of careful use of forest resources.

Villagers who live in the surveyed areas consider that they have the prior rights for fishing and hunting there. It can be shown in fastening the rivers sites and hunting areas with a view of traditional life-support. Low standard of living of the local population in practically all the settlements, belonging to the PPNT, the weak control and supervision over nature by the protection bodies and the absence of protective landmarks allow supposing poaching not only from the part of the locals, but also from the part of visitors hunters. Very often locals do not even guess, that nearby there are preserve's territories of regional value. And as the restriction of anthropogenic load on PPNT are not the positions and restrictive landmarks with the information, and but locals' well-being, bio-efficiency of the area and availability to potential buyers.

Economic estimation. The socio-economic estimation includes monetary estimation of *resources and services*. The resources for all studied PPNT are: tourism; fish resources; hunting resources – forest game, waterfowl; animals; mushrooms, berries and nuts.

The market estimation of the renewable natural resources is based on use of the market's data. The capitalized income at volumes of consumption which do not change calculates as the ratio of the profit from operations with resources (a year) to the rate of discounting. The profit from operations with resources a year is found by subtraction from the general gross proceeds of preparation costs.

As a rule, the value of a recreational object is determined by the number of visitors per year as the function of visitors' incomes, the prices, and some social and economic characteristics.

Generalizing the data on the studied preserves, it is possible to note, that in practically all preserves hunting for forest game, catching rare fish species, gathering mushrooms and berries is carried out. Anthropogenic loading is the most appreciable in complex preserves

[3] Maksimov A.A. Problems of the traditional livelihoods' revitalization of. (In the book: North: the problem of peripheral areas). – Syktyvkar, 2007. – Pp. 301-316.

"Udorsky" and "Verhne-Lokchimsky" and in ichthyologic preserve "Ilychsky" at though the resolved level of loading in all these territories is different.

As it is impossible to separate the volumes of legal and illegal fishing and hunting, the volumes of exemption are used for calculations in total.

Estimation of ecological services. Estimated services include water-regulation, absorption carbonic gas by the territory, biodiversity.

For calculations it is necessary to take into account that the wood environment and the marsh one differ in absorption of carbonic gas. Calculations of native researchers showed that the wood environment deposits carbon differently. For a steppe zone and a for a zone of deciduous forests the value makes 1 ton of carbon per hectare a year[4]; the woods located in the zone of middle and northern taiga have the values of 0.8 ton of carbon per hectare a year; marshes and river systems have the values of 0.6 ton of carbon per hectare a year[5].

The researches carried out by the scientists from Saint-Petersburg and Syktyvkar showed that the assimilation potential of woods in the northwest part of Russia is equal to 0.81 tons CO_2 for 1 hectare for deciduous species and 0.86 tons CO_2 for 1 hectare for coniferous ones[6]. In the Komi Republic the change of the mentioned parameter is observed: on the average it is 0.77 tons CO_2 for 1 hectare for deciduous species and 0.95 tons CO_2 for 1 hectare for coniferous ones[7].

While calculating the absorbing ability of vegetation we shall omit the age structure of forest stands and species' structure, basing on the researches of zone distribution in the region.

According to the official data, possible cost of 1 t of fixed carbon is estimated from 5 to 50 US dollars[8]. The difference can be explained by many factors: trade mechanisms differ in the rates; in demand dynamics (for the recent four or five years), or in popularity of the mentioned demand (some countries getting quotas, hope to resell them further). In the present calculations we shall take the minimal rates of 5 dollars (150 rubles) for a ton of deposited carbon in view of actual absence of such "market" in Russia.

The specificity of the water resources' security in the territory of the republic consists in a great number of the rivers, but in their small volume of the drain. Swamps and lakes play an important role for formation and regulations of the drain. Water-regulation gives preservation of the natural cycle in maintenance with water, river drain, its quality and volumes. Its estimation occurs according to calculations of the losses reduction of the drain at deforestation, drainage of swamps, by means of compensational expenses. The Russian and foreign experts[9] designate these expenses from 3 to 5.5 dollars per one hectare depending on the environmental type – a swamp, a lake, a river, or a wood. That is, the given service is estimated 150 rubles per 1 hectare for swamps; 90 rubles per 1 hectare for rivers; 90 rubles per 1 hectare for woods.

Preservation and maintenance of the natural genetic and biochemical variety local biota, especially the selection resources is one of the main tasks on creation PPNT. Hence, it is necessary attract attention to the given service. The special role is allocated to the estimation of rare, put on the list in the "Red Book", resources.

[4] Ilinsky A., Cherepovitsyn A. Conceptual approaches to Kyoto protocol market mechanism implementation // Proceedings of the Nordic Minisymposium on Carbon Dioxide Capture and Storage, Finland, Espoo, September 8 – 9, 2005.

[5] Cheremisina A.V., Karakchieva I.V. The prospect of organizing the carbon credit market in Komi Republic / Management of Economic Systems, 2010 (http://uecs.mcnip.ru/modules date of access 09/20/2010).

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[8] Tishkov A.A. Biospheric functions and ecosystem services: the methodology of ecological and economic evaluations of the PPNT (www.biodiversity.ru/programs/international/teeb/ ... date of access 05/06/2010).

[9] Constanza R., et al. The value of the world's ecosystem services and natural capital // Nature. – 1997. – Vol. 387. – Pp. 253-260.

Table 3. Economic value of ecological services

PPNT	PPNT services' value, million ruble			
	CO_2 absorption	Water Regulation	Biodiversity	Total
Ichthyologic preserve "Ilychsky"	47.90	47.92	5.32	101.1
Swamp reserve "Ocean"	16.10	26.85	1.79	44.8
Swamp "Pechorsky"	0.54	0.96	0.06	1.56
Complex preserve "Verhne-Lokchimsky"	5.06	3.82	0.42	9.3
Complex preserve "Udorsky"	29.00	21.78	2.42	53.2
Cedar Preserve "Podcheremsky"	0.15	0.12	1.00	1.27
Cedar Preserve "Soplyassky"	0.05	0.05	1.00	1.1

The monetary estimation of the biodiversity service (the account of rare resources) is carried out through the parameters of the specific preserves' charges. For existence of rare resources is necessary to protect them and to restrict their exemption.

The data found by foreign researchers considerably differ from the data found by the native scientists to the position of reduction. R. Costanza estimates this service in 16 dollars per one hectare of the territory for maintenance of the genetic resources[10]. The Russian researchers set the lower limit of dollars per one hectare[11]. Kamchatka's experience fixes budget funds financing for the functioning of protected areas at a rate of 10-30 mill. rubles per year in an area of about 4 million hectares. Kamchatka's protected areas are supported by UNDP/GEF and WWF, which make about 25% of the cost of investments. Thus, for 1 ha of protected areas of regional importance the funding for their existence accounts for 10 rubles per hectare.

There is an illustrative example of the Krasnoyarsk region, where in 2008 the regional budget allocated more than 80 million rubles for 88 protected areas of regional significance with total area of 5.3 million hectares. That is the specific rate of Pas maintenance is determined in 16 rubles per hectare[12].

[10] Constanza R., et al. The value of the world's ecosystem services and natural capital // Nature. – 1997. – Vol. 387. – Pp. 253-260.

[11] Tishkov A.A. Biospheric functions and ecosystem services: the methodology of ecological and economic evaluations of the PPNT (www.biodiversity.ru/programs/international/teeb/ ... date of access 05/06/2010).

[12] Simanovsky A.A., Shakhmatov S.A. Integration of protected areas and the socio-economic development of regions of the Krasnoyarsk Krai / Wildness protection (http://www.uralgosnadzor.ru/article/tn_38_10_40.php date of address 09/26/2010)

Of course, these figures may be only a guide; however, they differ in their values, which captures not only the different financial capabilities, but also the relation to those issues of the management at all levels of government.

Explanation of such divergences in financing is the position of management of natural resources, unwillingness of a management to perceive importance of the given problem – preservation of bio-resources. Now there is the restriction in human and financial resources in the sphere of wildlife management (supervision, control and protection). Nowadays in Komi Republic there is no management in any of the preserves of regional value.

For territories with the small area of protection the following calculations should be done: charges are formed due to the sum on wages for minimum of three employees. According to the expert data this sum is set as 1 million rubles a year.

The estimation of ecological services in the preserves' territories is determined by their sum *(tab. 3)*.

Value of forest resources. Mushroom and berry production is estimated on the basic the regional enterprise "Matreko". The prices qaccording to which in 2010 "Matreko" bought forest products: white mushrooms 70 rubles/kg; berries – 50 rubles/kg. To estimate the volumes of mushrooms gathering is not obviously possible. The average price for mushroom is accepted at the rate of 40 rubles/kg.

The direct cost of fish catch is determined according to market prices. The expenses on fish catch are developed according to the charges for transportation, gasoline, tackles and equipment.

Table 4. Money value of the preserves' resources

PPNT	Money value of the preserves' resources				
	Mushrooms and berries	Fish	Hunting	Nuts	Total
Ichtyological preserve "Ilychsky"	8055	15120	209	-	23 384
Swamp reserve "Ocean"	121.5	252	152	-	523
Swamp "Pechorsky"	225	-	12	-	237
Complex preserve "Verhne-Lokchimsky"	630	75.3	290	-	995.3
Complex preserve "Udorsky"	2538	35	460	-	3 033
Cedar Preserve "Podcheremsky"	144	no data	76	144	364
Cedar Preserve "Soplyassky"	50	no data	48	68	166

Table 5. Travel costs of the tourists visiting Ilych on tours (thousand rubles a year) 2010

Tours	Tourists' expenses, thousand rubles			
	Transport	Tour expenses	Other expenses	Total expenses
Hunting calendar's mysteries	30	75	12	117
Manpupuner – stone idols	650	1 073	260	1 983
Manpupuner – Torre-Porre-Iz	320	813	128	1 261
Giants of the Manpupuner plateau	480	1 309	192	1 981
Down the rivers Podcherye and Ilych	-	1 001	72	1 073
Expenses in total	1 480	4 271	664	6 415

The direct cost of the hunting resources' use is also determined according to the market prices. Expenses for hunting are very high; they develop from the expenses for permits, licenses, expenses for equipment, including the weapon cost and transport charges. According to the expert data[13] of hunters, the cost's size lies within the limits of 50-60% from the received income.

Estimation of the income of gathering pine nuts follows the market price 500 rubles/kg. The monetary estimation of resources in the preserves' territories is determined by the sum of concrete resources' estimations; it is submitted in a tabulated format *(tab. 4)*.

Preserves' recreational value. In this research the estimation of PPNT economic value includes recreational component (ecological tourism). For its calculation the method of transport and traveling expenses which is the method of preferences' detection is used. This method is simple enough; the expenses for visiting natural object interesting to the population (for example, accommodation costs, food, cost of tickets, and cost of services) reflect the recreational value of this place. In this case the existing average tourists' expenses for visiting preserves are estimated.

Summer is the usual season for visiting such places. Tours pass in two preserves – ichthyologic "Ilychsky" and complex "Udorsky".

The participants of ecological tourism (about 99% of tourists) are visitors from big cities: Moscow, Saint-Petersburg, Yekaterinburg, Saratov and Perm. The data received from the tour operators testify to growth of interest of these routes by native tourists. Foreign tourists from Germany, Norway and Finland are also invited. Nevertheless, tourists from Russia's cities demonstrate the greatest interest to such territories.

The number of tourists from different cities is the following: Moscow (67%), Saint-Petersburg (5%), Kaliningrad (2%), Yekaterinburg (17%), Saratov (3%) and Perm (6%). The experience of the organized tourism is still very small, but, nevertheless, in 2008 38 people visited the place, in 2009 about hundred people did it, and in 2010 two hundred tourists visited the

[13] Bobylev S.N., Kasyanov P.V., Solov'eva S.V., Stetsenko A.V. Complex economic evaluation of salmon in Kamchatka – Moscow: Human Rights, 2008. – 64 p.

Table 6. Economic value of PPNT

PPNT	PPNT value, million rubles			
	Ecological Services	Resources' value	Recreation value	Total
Ichtyological preserve "Ilychsky"	101.1	23.4	6.4	130.9
Swamp reserve "Ocean"	44.8	0.5	-	45.3
Swamp "Pechorsky"	1.6	0.2	-	1.8
Complex preserve "Verhne-Lokchimsky"	9.3	0.9	-	10.2
Complex preserve "Udorsky"	53.2	3.0	0.5	56.7
Cedar Preserve "Podcheremsky"	1.3	0.4	-	1.7
Cedar Preserve "Soplyassky"	1.1	0.2	-	1.3

place. The tendency of tourist appeal's growth is obvious. Maintenance of infrastructure, transport availability and information appeal should be the main tasks for tourist business' development in the mtntioned territory.

The total average expenses of tourists in the structure of the general economic value for the preserve "Ilychsky" make 6.4 million rubles. The given figures are the bottom border of expenses. Real figures, according to the tourists' stream (who do not get tourist permits) are 2 – 3 times higher.

The recreational value of the complex preserve "Udorsky" exists though it is not supported with the official data of travel agencies. Therefore, it is possible to estimate this value due to visiting tourists and their minimal expenses for transport and their purchase of mushrooms, berries, and fish. Taking into account a stream of tourists of 100 people, the average recreational value of the preserve does not exceed 500 thousand rubles.

Growing interest to the question of tourism in territory of the region by all means will raise only the value of the preserves in the region.

PPNT value estimation. PPNT economic value is developed on the basis of the monetary estimation of the resources of hunting, fishing, berries', mushrooms' and nuts' gathering, recreational component and ecological services *(tab. 6)*.

The data confirm the importance of ecological services. The larger is the object, the more is its role. The resources' use, as a rule, occurs in the limited area; therefore in value it is much characterized by smaller parameters, than ecological services. The monetary estimation of the resources which participate in the turnover of using in the preserves' territories is determined by many factors. The major factor is demand (market prices).

Recreational value also does not dominate over the full PPNT economic value. The reason is the low level of availability of the site of rest and of infrastructural component. The low level of local population's culture, their weak interest prevents development of the tourists' stream.

The most difficult problem at definition of PPNT economic estimation is definition of discount norm at the account of the factor of time.

The features of discounting at estimation of natural systems are the following:

- First, their viability is supported due to the natural forces (solar energy, oxygen, carbonic gas, mineral substances, water);
- Second, natural systems do not become outdated morally and physically;
- Thirdly, at the general tendency of quantitative and economic growth natural resources become more scarce and, hence, finally, more expensive.

Three variants of norm of discount for calculations of the general economic value are offered:

1) Norm of discount of 2%. This norm can be named ecological and corresponding the concept of steady development, long-term interests of the future generations.

2) Norm of discount of 6%. To this norm there corresponds the policy of the state aspir-

Table 7. Capitalized general economic value of PPNT (million rubles)

PPNT	Total value parameter	Discount norm		
		2%	6%	10%
Ichthyologic preserve "Ilychsky"	130.9	6 545	2 182	1 309
Swamp reserve "Ocean"	45.3	2 265	755	453
Swamp "Pechorsky"	1.8	90	30	18
Complex preserve "Verhne-Lokchimsky"	10.2	510	170	102
Complex preserve "Udorsky"	56.7	2 835	945	567
Cedar Preserve "Podcheremsky"	1.7	85	28	17
Cedar Preserve "Soplyassky"	1.3	65	22	13

ing to take into account the ecological factor in market economy, to raise competitiveness of ecological projects. It is applied in programs / projects with the state participation, to the state investments in ecological and social spheres;

3) Norm of discount of 10%. This norm corresponds to the market realities in economy most. In this case the future value of the natural goods, ecological damages and benefits are to the greatest degree leveled and minimized from the positions of modern choice. The priority is given to the modern goods and fast benefits.

The generalized data on the capitalized total economic value (TEV) are designed on the basis of the following formula:

$$TEV = (DV + IV)/D, \quad (1)$$

where:

DV – investment income from the resources' use and tourism,

IV – ecological services' estimation,

D – norm of discount.

In Table 7 the generalized calculated data on capitalized modern estimation of economic value of PPNT are represented.

For the decision of environmental problems it is necessary to aspire to achievement of the rational distribution of industrial resources. For this purpose the structure of supply and demand should be formed with the account of maximum full reflection in the structure of production costs of any goods' kinds in objective economic estimations of natural resources.

Conclusion

The following results were got after having carried out the research:

- Territories of practically all PPNT differ with extensive biological variety and representativeness of the existing plants', animals' and organisms' species owing to the preserves' high ecological value was confirmed from the positions of protecting ground and water ecosystems.
- PPNT natural capital includes not only resources forests with a complex of its hunting resources, mushrooms, berries, nuts, etc., but also the ecological goods, among them are water-regulation, a biodiversity, assimilation ability of a forest to absorb carbonic gas, etc.
- Low standards of living of the local population in practically all the settlements, belonging to particularly protected territories, weak control and supervision over nature by the protection bodies and absence of protective landmarks allow to suppose poaching not only from the part of locals, but also from the part of visitors.
- The activity of a person in the territories of the studied PPNT, practically everywhere is identical - hunting, fishery, gathering of mushrooms and berries. The level of poaching is limited only by the availability of getting to places of hunting and fishing.
- The complex socio-economic estimation took into account the resources used by people which are the most significant for the region.
- For the economic estimation market and non-market methods of estimation were used,

the volumes of resources' withdrawal were estimated as a result of expert data.

- For modern economic value's estimation the parameters reflecting the developed economic and social situation in the region are basically taken. These figures can be considered as the bottom border of PPNT value as the use of resources, tourism and other components reflect low level of the areas' economy, and low level of the population's well-being not only in the Komi republic, but also across Russia that has a negative effect on trips, tourism and recreation which essentially determine the direct cost of the resources' use.
- The investment income from the resources' use is calculated, proceeding from their cost in the potential market (Syktyvkar) minus the expenses for organizing hunting, fishing, gathering of mushrooms, berries and nuts. The expenses' part on hunting, fishing, gathering of mushrooms, berries and nuts was accepted on the basis of international, Russian and expert sources and made accordingly 60 %, 30 %, 10 %.
- Recreational component is included into the structure of PPNT estimation. For its calculation the method of transport expenses is used. This method is based on the expenses for visiting natural object interesting to the population which reflect recreational value of a place. Summer is the usual season for visiting such places. Tours pass in two preserves – ichthyologic "Ilychsky" and complex "Udorsky".
- The basic part of economic value of many PPNT is made with the indirect cost of use connected to the role of ecological regulation PPNT. Value of ecological services even at the minimal specific sizes gets the huge importance for preservation of the mentioned territories. So, in practically all PPNT the importance of ecological services makes more than 50 %, and for larger preserves this size can be more than 90 %.
- The high level of ecological services' value proves the necessity of their reservation. The biological resources' presence in the PPNT territories and the sanction for their use attracts introduction of mushroom and berry picking, hunting, fishing and ecological tourism as the alternative ways of forest management.
- The method of PPNT estimation including the account and the importance of ecological services serves for acceptance of the timely administrative decisions on re-structuring such territories.

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Theoretical aspects of application of temporal relational DB to store the social and economic information

This article deals with the theoretical aspects of temporal databases. There is one of the definitions of temporal databases in the first part of the article which reflects the essence of temporal databases exactly. The existing approaches to temporal databases are also described in the article as well as three approaches to create such databases are highlighted. The article proposes a way to implement temporal extension for existing relational databases. Therefore new data types and new operations with them are proposed. All descriptions are given through the abstract data types. The final part of the article deals with the application of temporal database to store the social and economic information and creating of DB to keep the results of monitoring studies.

Relation database, temporal database, ADT, PostgreSQL, operation.

Vadim S.
SAFONOV
Junior scientific researcher of Institute of Socio-Economic Development of Territories RAS
VadimSafonov@gmail.com

All information which we have to work with has a temporal component in a varying degree. The only difference is the following: a temporal component can be stored in the information system or it can't be stored.

Several years ago the temporal component was stored only in those systems where its absence led to information distortion or inability to restore proper sequence of events. Such systems included financial databases, data storage system for scientific experiments, i.e. all the systems where time was an integral part of information, such as the status of the researching system or object at a certain time and the time of financial transactions.

Such systems that accumulate historical information are not widespread because the tasks can be solved successfully without saving any time in the majority of cases. In addition, these systems are demanding to hardware resources such as information carriers' capacity primarily which were actual recently. Therefore, even the systems storing information with temporal attributes had only those objects marked as temporal which lost their properties without the temporal qualities. For example, as for accounting systems, information about financial transactions would have a temporary marking while information about the person who committed the operation would be stored only in its current state.

Interest in systems that store time reference information has increased recently. Such systems are called temporal. Temporal databases are the databases which store data related to the time and have controlling means of such information.

The main difference between temporal database management systems (DBMS) and the conventional relational database systems is the following: any object that is created at time t1 and is removed at time t2 retains all of its state in this time interval [t1, t2], whereas there is only current state of an object at the particular time in the conventional DBMS.

Thus, the temporal database stores the history of changes of object states and the user can obtain information about the status of records in the database at any time of the specified period.

There are several approaches to implement the temporal properties of DBMS at present. The first approach is the creation of temporal DBMS from scratch. In this case all temporal properties will be founded in the core of database management system.

Although such developments exist, but we can't talk about their mass using because non-temporal relational DBMS dominate in the up-to-date market and existing temporal databases are inferior to them in functionality. There are also works that invite you to query temporal databases in natural language, but such approach is not promising because lexical analyzers are not perfect and they can recognize only a limited number of lexical structures. Whereas a natural language query can be formulated in different ways.

The third approach is the most rational. It is an extension of the existing DBMS functionality through the creation of some additional functional block which is responsible for transformation of temporal queries into the relational form and transformation of data from the storage format into the structure that is convenient to the user. The location of this functional block is the main problem in such approach.

There are three main options: the DBMS's core, the user's application and the form of an intermediate module.

The first way is bad because it is available only to developers of DBMS, but it provides maximum data transparency in applications and great potential for optimizing of queries.

The second way is more available to developers of applications. Temporal properties are available for your application without reference to the chosen DBMS. At the same time such properties can be laid only in the newer versions of programs. Currently this method is used more often.

The third approach creates the transparent extension both for front end and back-end. But you can easily see that the intensity of data exchange between the module and the application is less than between the module and DBMS. That's why it is reasonable to place this intermediate module as close to the DBMS's core as possible.

In our opinion it is more rational to combine the first and the third approaches. It is reasonable to introduce a part of the module into the DBMS's core and use the middleware. In this case you can get support for temporary data integrity at the level of DBMS, and it is possible to transform the queries in the independent module.

Thus, it is necessary to use two additional fields in the temporal tables as opposed to the conventional relational tables to store the beginning-of-period and end-of-period timestamps. In this case it is necessary to use composite primary keys, i.e. you have to unite the tables in three or more fields. In our opinion, it is more rational to define a new composite data type that contains a unique identifier and two timestamps. A new temporal data type for working with the urgency time can be described as an abstract data type (ADT) [2] in the following way:

```
DATA_TYPE ValidTimeKey IS
OPERATIONS:
CONS: → ValidTimeKey(Key, Time_Begin, Time_End=NULL)
CLOSE: ValidTimeKey(Key,Time_Begin,NULL) →
ValidTimeKey(Key,Time_Begin, Time_End)
IS_OPEN: ValidTimeKey → bool
IS_LINKED: ValidTimeKey → bool
IS_INTERSECT: ValidTimeKey → bool
LESS_THAN: ValidTimeKey < ValidTimeKey → bool
LESS_THAN_EQ: ValidTimeKey <= ValidTimeKey → bool
LESS_EQ: ValidTimeKey == ValidTimeKey → bool
GREATER_THEN_EQ: ValidTimeKey >= ValidTimeKey → bool
GREATER_THEN: ValidTimeKey > ValidTimeKey → bool
GET_KEY: ValidTimeKey (Key,Time_Begin, Time_End) → Key
END ValidTimeKey
```

There are the following operations for this type. IS_OPEN – it allows to determine whether the period is open, IS_LINKED – determines the presence of pointers to the column from other tables, CONS – a constructor of the type, CLOSE – it closes the open period, IS_INTERSECT – it checks whether the actual periods of the same object intersect, GET_KEY – it gets the numeric part of the type.

It should be noted that the possibility of defining of the new types is laid in the current version of SQL standard, and if you use ADT to describe a new type it allows you to implement a new data type to any modern relational database management system that supports the addition of the new types.

We used PostgreSQL database version 8.2 [3] as an experiment in the current work. This system was chosen for several reasons.

First of all, it has free and open source code. Secondly, functional capabilities of the system are wide.

Thirdly, there are detailed documents here. The implementation is regarded in this article later in respect to this DBMS.

New data type for PostgreSQL database was defined as the following:

```
CREATE TYPE validtime (
INPUT = valid_time_in,
OUTPUT = valid_time_out,
internallength = 24,
alignment = double
);
```

In this example, the function valid_time_in() converts the data which are sent to its entrance into the internal structure of the following form:

```
valid_time_in ()
typedef struct ValidTime {
int ValidBegin;
int ValidEnd;
int key;
}
```

This structure stores the information about beginning-of-period timestamp and end-of-period timestamp, as well as the unique identifier; a combination of these three values provides the uniqueness of each tuple. A function valid_time_out () performs the reverse action. These functions have been implemented in the language C.

The type is represented for the user of database as a string of the following form:

(key, validbegin, validend)

type is:
(Key, validbegin, validend)

where the key – a unique numeric identifier, validbegin and validend – beginning-of-period and end-of-period timestamps.

Element key must be an integer. A timestamp in the format Unix Timestamp date in YYYY-MM-DD or YYYY-MM-DD HH: MM: SS can be specified as the timestamps. The function valid_time_in () converts automatically the indicated dates into the timestamp. All dates are stored as the timestamps regardless of format specified by the user.

The developing type should be able to be used as a key because one of the objectives pursued by the creation of a new type is flight from composite primary keys. Thereto it was necessary to determine the class of operators in respect to PostgreSQL database which were responsible for the construction of the index tree. B-tree was used as the index.

Five operators were identified to create the B-tree: less, less or equal, equal, more or equal and more. Each operator was implemented as a function of the C language that compared two values of the new type and returned value of the type of Boolean. Here is an example of implementation of the operator "less" into the database.

```
    CREATE OPERATOR < (
    leftarg = validtime, rightarg = validtime,
procedure = valid_time_less_than,
    commutator = > , negator = >= ,
    restrict = scalarltsel, join = scalarltjoinsel
    );
```

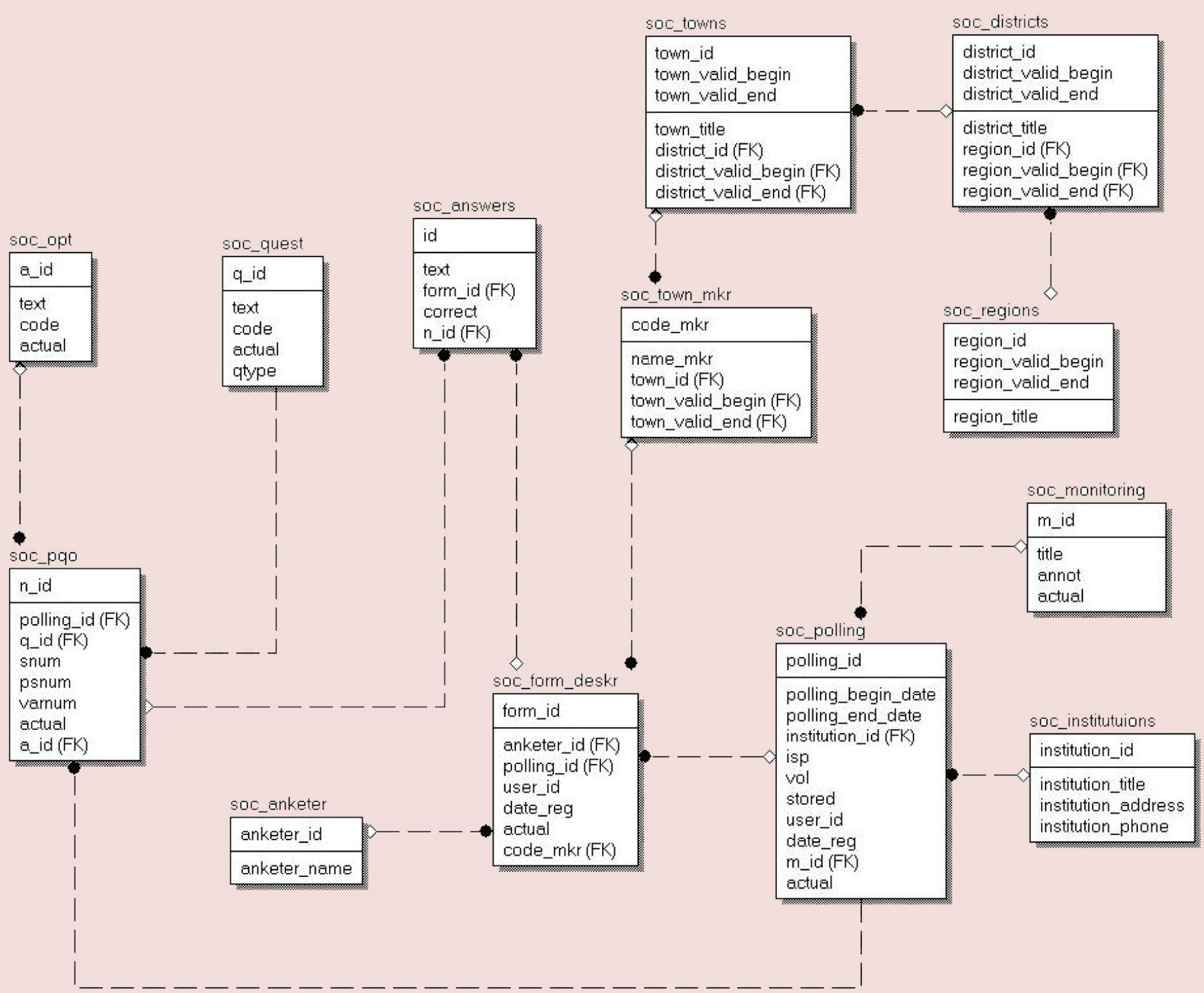
Then we defined an operational class using those operators. It allowed using a new type in the primary key.

```
    CREATE OPERATOR CLASS valid_
time_abs_ops
    DEFAULT FOR TYPE validtime
USING btree AS
    OPERATOR   1 < ,
    OPERATOR   2 <= ,
    OPERATOR   3 = ,
    OPERATOR   4 >= ,
    OPERATOR   5 > ,
    FUNCTION   1 valid_time_abs_
cmp(validtime, validtime);
```

The steps described above allowed to use not a group of three fields but one field of a new type as the primary keys and simplify writing queries. However, creation of a new type does not convert the relational database into the temporal database; it is only the first step towards such a transformation. In addition, it is necessary to transform queries from the temporal form into the format specified SQL standard. It is reasonable to perform all these transformations in some intermediate module. And queries to the temporal database that uses the new types of data should not differ from queries in the classical language for the users. Simple queries to the temporal databases should not vary from queries to the conventional relational database. In other words, the query SELECT * FROM table1; in both cases must return the same result (as applied to the temporal databases – all current at the time of writing).

Let's consider the task of forming a common database of public opinion polls. In spite of the fact that it is more correct to refer such data to the information contained in the time series rather than to temporal information, temporal attributes would be useful for some aspects of these databases because questions and answers may change with the lapse of time. It should be taken notice of the fact that some parts of the forms are identical although the polls may pursue different goals or they can be focused on different population groups (for example, groups which differ in their places of residence or social status, etc.). Such data com-

The proposed structure of the temporal DBMS



bined into a single database will expand greatly the background information for analysis.

Thus, the creation of a single normalized relational database is an important task, and the addition of temporal attributes in those tables, where it is necessary, will expand its capabilities.

The results of all periods of measurements are generated in the form of files of SPSS program. They represent a table where each row stores the data of one survey. It is difficult to combine the data of polls carrying out in different time, although this type of representation is useful for the analysis of individual results.

Although the polls are not temporary data, but logic circuit shows that some tables may be added by the time aspect: for example, a group of tables that describe the place of filling in of the questionnaire. In spite of the fact that administrative and territorial division is constant, it is necessary to take into account the recent trend to merger of administrative and territorial areas when we develop the database. It would be difficult to maintain the integrity of the data without introducing a temporary component to them.

In addition, the temporal aspect is required in the tables which contain questions and their answers because they can change in the course of time. The keys for all tables which are proposed to be converted into the temporal form are simple in the scheme of the database and they represent a unique identifier that satisfies the normal forms and ensures the tuple's unrepeatability. It is impossible to use the simple primary keys for these tables when the database is converted into a temporal form because it can't ensure uniqueness of records. So it is necessary to use compound primary keys of the following type: [record identifier, the beginning of the urgency period and the end of it]. And then the database schema will have the following form (figure).

This scheme can easily be represented in the non-temporal form; it is just enough to remove the fields which are responsible for the time component, therefore it isn't given in this article. Although the transformation into the temporal form expands the database's opportunities, but it can complicate the queries. But in this case the information for the temporal database will be more detailed and reliable. So, if we change the answers to any closed question (for example, add a new answer) in the non-temporal database, the changes will affect all existing data. If we turn to the temporal database, the temporal fields which are added can solve this problem: they point out the period when one or another variant of the answer exists although the query itself does not change.

Thus, we can draw some conclusions. Firstly, the definition of relevant periods for all elements of the questionnaire can remove ambiguity in question formulations, questionnaire venues, etc. Secondly, addition of the extra information to the database can extend the analysis allowing to retrieve and analyze data in dynamics. Thirdly, it is easier to link the temporal database to events which are not directly reflected in it, but which are connected with specific time intervals.

In general we can say that nowadays the temporal databases are the promising area of researches. And, in our opinion, the creation of special extensions of temporal data management for existing DBMS is the most optimal.

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Rising in labour potential: the role of wages

The article deals with the identification of empirical interrelations between wages and rising in realization of labour potential. Theoretical and methodological research base includes copyright developments in the field of sociological evaluation of the implementation of labor potential. The study revealed a motivational function of wages. The author substantiated the role of wages in increasing the implementation of labour potential of the population in our time. It is shown that the current practice of pay and its institutional features are such that wages are not an effective tool for enhancing the implementation of the population's employment potential. The results will be helpful to employees of regional authorities, managers of enterprises and organizations.

Labor potential, wages, realization of labour potential, work motivation.

Elena A.
CHEKMARYOVA
Junior scientific researcher of Institute of Social and Economic Development of Territories of RAS
miteneva@inbox.ru

Introduction

Wages and salaries is one of the key concepts of labor economics. Such great economists like D. Ricardo, J. Mill, J.B. Say, A. Marshall, K. Marx, John Maynard Keynes and many others researched the development of the theory of wages in due course. High scientific interest in the issues of wages is determined by a variety of functions performed by the wages in the socio-economic development of territories. These are the following functions: a reproduction function (ensuring the reproduction of labor force), regulating function (it promotes the establishment of the proportions between supply and demand), social one (it allows you to enjoy social benefits), stimulating one (it is used by the employer to encourage the employee's working activity), motivational one (it creates the work motivation), status one (it reflects an employment status of the employee) etc.

Wage plays an important role in solving the problems of improving productivity and increasing the gross output. As it is shown in the published works of the International Labour Organization, "even with the wide dispersion in the country-level indicators there can be generally traced a positive relationship between rise in labour productivity and rise in real wages"[1]. In this case, the labour productivity was measured by the ILO experts as GDP per an employee. It means that for each country they used the indicators of average productivity and average wages, and all obtained relationships are true of the "average" employee.

In this article we have tried to get away from such a macro-economic approach and to answer the questions: How are wages and labor efforts of real workers not the "average" ones

[1] The report "Wages in the world". – International Labour Organization, 2010. – P. 18.

interconnected? What role do wages play in rising in the implementation of the employee's labor potential?

The sociological measurements allow us to answer these questions. Thus, the information basis of our study was the data of monitoring of the qualitative state of the population's labor potential of Vologda region, conducted by the Institute of Social and Economic Development of the Territories of RAS. Within the framework of monitoring the object of research is the working-age population of Vologda region. The polls are held every year in August – September in the cities of Vologda and Cherepovets and in eight districts of the region (with the centers in Babayevo, Veliky Ustyug, Vozhega, Gryazovets, Kirillov, Nikolsk, Tarnoga and Sheksna). The sample size is 1500 people. The sampling method is zoning with proportional distribution of observation units. The sample type is quota sample by sex and age. The magnitude of the random sampling error is 3-4% with confidence interval 4-5%.

In accordance with the specifics of the study we don't consider the working-age respondents who don't work at the time of the survey and receive no salary.

The study revealed the relationship between the wages and the level of implementation of the labor potential of the working population. It revealed the motivational function of wages. We substantiated the role of wages in our time in rising in the implementation of the labour potential of the population.

Theoretical and methodological basis

Under the implementation of the labour potential the economists mean the process and result of its use in the production of tangible and intangible goods and services[2].

Labor potential is a multilevel category. In this study the labour potential was considered at the level of the individual, the individual worker, i.e. the unit of analysis was the personal labour potential as a primary structure-forming element of the labor potential of the higher levels: the level of group, company, society, region or country. Meanwhile, by the labour potential we meant qualitative characteristics of working-age employees: physical and mental health, cognitive and creativity potentials, communicability, cultural and moral levels, need for achievement[3].

Regardless of the considered level the form of implementation of labor potential is the labor activity of its specific bearer. By its socio-economic content the labor activity reflects the social form of labor and employment simultaneously. In this case the implementation of the society labor potential is characterized by the level of use of the totality of its resource capabilities and versatile qualities by the working-age population.

To estimate the level of implementation of the qualities and skills in specific work within the labour potential monitoring held by the ISERT of RAS in 2009, there was developed a special technique based on a block of questions such as "How much do you "work flat out"? How much do you use your qualities and skills?" The following four-point scale was proposed: "I use in full" (at the limit of one's capabilities) – 4 points, "more or less completely" (I can use more) – 3, "in part" (little) – 2, "very little" (minimum) – 1 *(tab. 1)*.

Further, by dividing the actual number of points into the maximally possible number the obtained points were transferred into the indexes conventionally named as an index of the implementation of labor potential and corresponding to eight basic qualities of labour potential (physical and mental health, cognitive and creative potentials, communicability, cultural and moral levels, need for achievement).

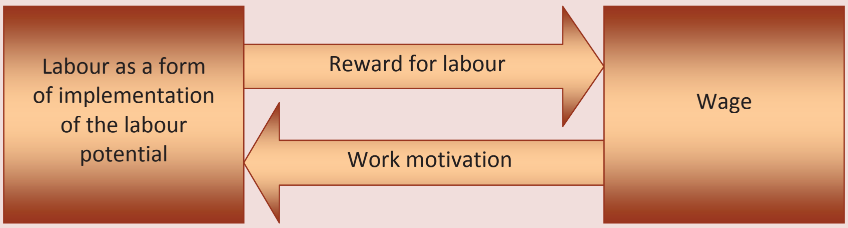
[2] For example, see: Soboleva M., Maslova I., Beloserova S. The implementation of labour potential // Human and labour, 2006. – № 9; Maslova I.S. – Labour potential of the Soviet society: the theory and methodology issues of research / I.S.Maslova. – 1987. – 32 p.; Skarzhynskii M.I. Labour potential of the socialistic society / M.I. Skarzhynskii, I.Yu. Balandin, A.I. Tyazhov. – M., 1987. – 102 p.

[3] For example, see: The quality of population / ed. by N.M. Rimashevskaya, V.G. Kopnina. – M., 1993. – 185 p.; Rimashevskaya N.M. About the methodology of determination of the qualitative state of population [Text] / N.M. Rimashevskaya // Demography and sociology. – Issue 6. – M., 1993. – Pp. 7-21.

Table 1. Distribution of estimates of using the qualities and skills at work by the population of Vologda region in 2009 (in %)

Quality	I use				The level of implementation of quality of labour potential, %
	In full	More or less completely	In part	Very little	
Physical capabilities and health	35.8	45.7	14.9	3.6	***78.4***
Psychological stability	27.9	51.0	17.7	3.4	***75.9***
Knowledge, erudition, qualification	30.2	48.9	16.6	4.3	***76.3***
Creativity (inventive ingenuity, ability to solve previously unknown problems ets.)	21.1	41.6	26.5	10.7	***68.3***
Communicability, interpersonal skill	34.9	46.4	14.9	3.8	***78.1***
General culture (good manners, politeness, restrain etc.)	31.9	46.5	16.5	5.1	***76.3***
Moral qualities (honesty, truthfulness, sense of duty, moral rectitude, obligatoriness etc.)	31.4	47.0	17.2	4.5	***76.3***
Will to promotion, display of initiative and enterprise	22.7	42.5	22.6	12.2	***68.9***
Source: Monitoring of the quality state of the labor potential of the population of Vologda region; ISEDT of RAS.					

Figure 1. Scheme of primitive interrelations between wage and labour potential implementation



The substantial meaning of the indices is the following: each index shows what percentage of the available quality is actually realized in the labor activity, i.e. if the index is 0.25 units, it means that a person realizes only a quarter of his potential. Multiplying the calculated indices by 100%, we have an indicator reflecting the extent to which (in %) is realized the quality of labor potential. That is a kind of analogue of the employment level showing the extent to which the amount of labor potential is implemented. The index calculated in such a way was provisionally called the implementation level of the labor potential quality. As a result of using the devised techniques, we calculated the following indices for each respondent: the implementation level of physical abilities, the implementation level of cognitive capacity, the implementation level of communicability etc. (eight indicators altogether). The implementation level of the labor potential quality of some group (whether it is the population as a whole or some part of it) was calculated as the average implementation level of the labor potential of the members of this group.

The calculated values show that the overall population uses its physical capacity (the implementation level – 78%; see table. 1) and communicability (78%) most of all. According to the population's estimates the creativity (inventive ingenuity, ability to solve previously unknown problems etc.; 68%), will to promotion and display of initiative and enterprise (69%) are used least fully.

To estimate the wage within the monitoring of labor potential we used a direct question: "Please, indicate your average monthly wage." It was assumed that as a reward for labor, the wage at the same time creates the motivation to work and to more fully implementation of the labour potential *(fig. 1)*. It means that we considered the simplest interrelations without going into the mechanisms of their realization and interaction with other functions of wages.

Further we used the adjacency matrix and the correlation-regression to analyze the statistical relationship between the implementation level of the labor potential and the wage.

The measurement results

As it was shown by measuring, the implementation level of the labour potential quality varies significantly depending on the size of wages: the groups with larger wage have higher implementation level of the labour potential *(tab. 2)*. So the workers with wages below the minimum wage are characterized by lower implementation level of all qualities of the labor potential in comparison with the workers who receive wages in the amount of five minimum wages or higher. For example, the implementation level of physical health – 72% against 84%, cognitive capacity – 63% against 84%.

So one can assume that the wage increase provides the employee with higher motivation to implement the labour potential.

One can observe an interesting result that those people whose wages are more than 5 minimum wages yield to the employees from the previous wage group in the respect of the implementation level of most qualities, in particular, they realize their abilities in the creative, cultural, moral and communicative terms weaker. However, they have a significantly higher implementation level of the social pretensions (need for achievement), i.e. they are ambitious and motivated people who have big plans and try to fulfill them. Besides there is probably a certain threshold, after having been achieved it, the stimulating role of wages is reduced (by analogy with the theory of marginal productivity).

According to the results of monitoring, only 30% of workers believe that the existing wage encourages them to work effectively, or more likely than not. At the same time the workers with high estimation of stimulating role of their wages show a higher implementation level of the labour potential *(tab. 3)*. The average wage encouraging the population to work effectively is 16 thousand rubles. And it is necessary to take into account that it accords with the data over the year of 2009.

Correlation of the received cash with the level of claims often makes an employee to be dissatisfied with the size of wages, and it has a negative effect on the labour potential implementation. Dissatisfaction undermines the motivational role of wages, stifles the desire to

Table 2. The implementation level of the labor potential (in %) in groups with different wage

Labour potential quality	Wage group					
	Below the minimum wage (up to 4430 rubles)	1 – 2 minimum wages (from 4430 to 8660 rub.)	2 – 3 minimum wages (from 8660 to 12990 rub.)	3 – 4 minimum wages (from 12990 to 17320 rub.)	4 – 5 minimum wages (from 17320 to 21600 rub.)	5 minimum wages and more (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 potential	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
Communicability	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 for 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 the quality state of the labour potential of Vologda region; ISEDT of RAS, 2009.						

Table 3. The implementation level of the labour potential (in %) in groups with different self-estimation of stimulating role of wages

Quality	Do you consider that your wage encourages you to work efficiently?				
	Yes	More likely yes, than no	I don't know	More likely no, than yes	No
Physical health	87.9	79.7	79.0	78.4	78.6
Mental health	80.8	77.6	77.8	74.8	76.7
Cognitive potential	81.8	80.4	77.7	74.8	74.2
Creative potential	74.0	70.0	69.4	66.8	65.6
Communicability	81.0	81.2	79.7	77.5	78.9
Cultural level	79.2	79.2	77.9	74.4	77.5
Moral level	80.8	77.5	78.3	76.1	76.3
Need for achievement	73.5	73.7	72.6	67.1	64.8
Average	***79.9***	***77.4***	***76.6***	***73.7***	***74.1***
Average wage, roubles	15910	13231	11619	10021	8963
Source: Monitoring of the quality state of the labour potential of Vologda region; ISEDT of RAS, 2009.					

Table 4. The implementation level of the labour potential (in %) depending on the level of wage satisfaction

Quality	Are you satisfied with your wage?				
	Yes	More likely yes, than no	I don't know	More likely no, than yes	No
Physical health	81.5	83.5	79.1	79.6	78.5
Mental health	80.1	78.4	79.5	76.1	75.5
Cognitive potential	82.5	81.7	78.0	75.5	74.5
Creative potential	71.3	71.9	69.7	68.6	64.9
Communicability	79.3	82.0	78.4	79.3	78.5
Cultural level	75.3	79.2	77.9	76.8	77.2
Moral level	75.3	78.6	77.7	77.0	78.1
Need for achievement	69.9	74.9	72.3	68.4	66.7
Average	***76.9***	***78.8***	***76.6***	***75.2***	***74.2***
Average wage, roubles	18354	13953	10952	10964	8793
Source: Monitoring of the quality state of the labor potential of Vologda region; ISEDT of Academy of Sciences, 2009.					

"flat out at work" i.e. to use their abilities more actively. Thus, the employees satisfied with their received wages show higher values of the implementation level of the labour potential for most qualities than the persons unsatisfied with their wages *(tab. 4)*. The average wage which suits the population of the region is 18 thousand rubles. Interestingly, the group of people satisfied most with their wages has the lowest implementation level of the cultural and moral qualities. It results in the question of how to achieve higher salaries and to observe the cultural and moral norms simultaneously.

Formation of the employee's motivation to improve the implementation of the labour potential is closely linked with a sense of fairness to payment. The employees who feel that the payment is fair to the labor contribution, as compared with those who feel that the pay of their labour is injustice, have higher implementation level of most qualities of the labor potential *(tab. 5)*. The sense of unfairness to wages and the non-compliance with their labor contribution reduce the implementation level of labour potential.

The availability of additional monetary rewards has a positive effect on the implementation level of the labour potential. Thus, the employees who received cash bonuses for their quality job, compared with those who did not receive such awards, show higher values of the implementation level of all qualities of labour potential *(tab. 6)*.

Table 5. The implementation level of the labour potential (in %) depending on the sense of fairness to payment

Quality	Do you consider that the remuneration of your labor is fair with respect to your work?				
	Absolutely fair	More likely yes, than no	I don't know	More likely no, than yes	Completely no
Physical health	86.0	83.0	80.7	78.1	78.4
Mental health	78.8	79.4	77.4	76.4	76.0
Cognitive potential	81.7	81.2	77.0	76.9	74.1
Creative potential	72.0	73.1	69.0	68.2	64.6
Communicability	79.5	82.9	78.1	79.0	79.0
Cultural level	75.7	80.3	76.3	76.6	78.3
Moral level	76.1	79.6	77.1	76.8	77.9
Need for achievement	68.6	75.7	71.3	68.3	66.9
Average	***77.3***	***79.4***	***75.9***	***75.0***	***74.4***
Average wage, roubles	18321	14156	11178	10803	8520
Source: Monitoring of the quality state of the labour potential of Vologda region; ISEDT of Academy of Sciences, 2009.					

Table 6. The implementation level of the labour potential (in %) depending on the availability of monetary awards for quality work

Quality	Did you receive any cash bonus for your quality work over last year?	
	Yes	No
Physical health	83.8	78.0
Mental health	80.0	75.7
Cognitive potential	80.7	75.5
Creative potential	72.6	66.6
Communicability	81.3	78.5
Cultural level	79.2	76.5
Moral level	79.7	76.4
Need for achievement	73.9	68.0
Average	***78.9***	***74.4***
Average wage, roubles	12410	11017
Source: Monitoring of the quality state of the labour potential of Vologda region; ISEDT of Academy of Sciences, 2009.		

Along with the presence of additional measures for material incentives, the most important role in enhancing the implementation of the labour potential is played by the possibility to increase wage while improving the quality of work activities. The workers who are sure that if they work better, their wage will be increased, have higher implementation levels of the labour potential in comparison with those who believe that any increase in the intensity of their work will not change their wages *(tab. 7)*. The realization that the wage remains the same regardless of the labour efforts undermines the motivational function of wages, reduces the employees' motivation to more intensive work, provokes a passive labour behavior accompanied by a minimum labour efficiency.

In order to estimate empirically the strength and the type of relationship between the wages and the implementation level of the labour potential we hold the correlation and regression analysis. The analysis considered two variables: y - the average implementation level of the quality of labour potential (in percentage), x - wages (in rubles). It confirmed the existence of statistically significant relationship between the wages and the average implementation level of the labour potential (r = 0.161; correlation is significant at the level of 0.01). The analysis resulted in the following relationship:

$$y = 0{,}0003065 \cdot x + 72{,}5 + \varepsilon ,$$

where y - the average implementation level of the labour potential (in percent),

x - wages (in rubles),

ε - random component.

The resulting regression equation indicates that in modern socio-economic conditions

Table 7. The implementation level of the labour potential (in %) depending on the possibility to increase wages

Quality	Will your wage increase if you work better?				
	Yes	More likely yes, than no	I don't know	More likely no, than yes	No
Physical health	87.9	79.8	78.9	78.6	80.2
Mental health	81.9	76.9	78.0	74.6	77.3
Cognitive potential	83.0	78.9	78.1	76.0	75.4
Creative potential	73.2	72.6	68.6	66.9	67.2
Communicability	82.0	77.6	80.1	78.5	79.8
Cultural level	79.2	74.3	77.4	76.4	79.4
Moral level	78.8	73.7	77.9	77.5	78.9
Need for achievement	72.1	73.4	72.7	67.3	67.8
Average	***79.8***	***75.9***	***76.5***	***74.5***	***75.8***
Average wage, roubles	18042	12194	11768	10637	9451
Source: Monitoring of the quality state of the labour potential of Vologda region; ISEDT of Academy of Sciences, 2009.					

with one thousand roubles increase in the employee's salary, the implementation level of the labour potential quality increases by 0.3% on the average.

In order to improve the quality of the constructed model, we took into account a logarithmically normal form of the wage distribution. As a result of this the degree of tightness of the statistical relationship increased (r = 0,202; correlation is significant at the level of 0.01) and the regression equation takes the form:

$$y = 5{,}1 \cdot Ln(x) + 29{,}1 + \varepsilon.$$

To interpret the resulting equation can be as follows: with e times increase in wages (approximately 2.7 times), the average implementation level of the quality of labour potential in the region increases by 5%. It can be assumed that 20% implementation of the labour potential is due to wages. Relatively speaking, the current efficiency of wages as an instrument to enhance implementation of the labour potential is very small.

Conclusions

The current practice of pay and its institutional features are such that wages are not an effective tool for higher implementation of the population's labour potential. The role of wages in enhancing the implementation of the labour potent ial is ambiguous. Along with the size of wages the important part for growing the implementation of labour potential is played by the following things: the possibility of wage increases depending on the accompanying labour efforts, fairness in wage, its compliance with the labour contribution of the employee, the availability of additional material remuneration for quality work.

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