THE RUSSIAN ACADEMY OF SCIENCES
INSTITUTE OF SOCIO-ECONOMIC DEVELOPMENT OF TERRITORIES OF RAS

ECONOMIC AND SOCIAL CHANGES:

FACTS, TRENDS, FORECAST

6 (18) 2011

The journal is published according to the decision of RAS economic institutions' administration in the North-West federal district

Institute of Socio-Economic and Energy Problems of the North
Komi scientific centre of the Ural RAS department (Komi Republic)

Institute of Economics of Karelian scientific centre of RAS (Karelia Republic)

G.P. Luzin Institute of Economic Problems of Kola scientific centre of RAS (the Murmansk region)

Institute of Socio-Economic Development of Territories of RAS (the Vologda region)

and according to the decision of St. Petersburg State University of Engineering and Economics administration

and other RF regions

Institute of Social and Economic Research of Ufa Science Centre of RAS (Bashkortostan Republic)

The decision of Presidium of the Higher Attestation Commission of the Russian MES (№6/6, dated 19.02.2010) the journal is included in the list of leading scientific editions, recommended for publication of the main results of dissertations for the degree of Doctor and Candidate of Sciences.

ISSN 1998-0698

Internet address: **http://esc.vscc.ac.ru**

CONTENT

FROM THE CHIEF EDITOR

DEVELOPMENT STRATEGY

BRANCH-WISE AND REGIONAL ECONOMY

SOCIAL DEVELOPMENT

MODELING AND INFORMATICS

OF EDITORIAL MAIL

YOUNG RESEARCHERS

IN THE WORLD OF BOOKS AND JOURNAL ARTICLES

FROM THE CHIEF EDITOR

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

Dear readers!

This volume of the journal releases after the elections of the deputies to the Federal Assembly of the Russian Federation State Duma of the sixth convocation, on the 4th of December. Thus, the first stage of the new political cycle in the country has started.

What are the basic results of the elections? According to the published data of the Central Selective Commission of Russia, the party "United Russia" got 49.4% or 32.4 million voices (in 2007 it got 64.3% or 44.7 million voices), having lost in comparison with the elections of 2007 about 12.3 million voters[1]. Pre-election debate and the results of the last voting showed, that the significant part of population has serious claims to the extremely liberal financial and economic course carried out for the recent 4 years by legislative and executive authority. The requirements for the transition from declarative policy to the real one providing economic, social and political validity in the interests of the most part of the population, instead of the narrow group of the oligarchic capital with representatives of legislative, executive and law bodies serving them, have sharply increased. For the previous political cycle of 2008 – 2011 the scientific and expert communities[2] have actively discussed the necessity of the duly serious correction of the activity of the federal authority's bodies both in the financial, economic, social, cultural spheres, and in the political one, - the importance of the real struggle against the state political corruption and of the maintenance of equality of all authorities in the face of law.

[1] According to the data of the website of the Central Selective Comission of the Russian Federation http://www.vybory.izbirkom.ru/

[2] See: Ilyin V.A. The problems of the socio-economic development of the Russia's territories at the post-crisis period // Economic and social changes: facts, trends, forecast. – 2011. – 5 (17). – Pp; 9-23. About the strategy of the Russian economy's development / S.Yu. Glazyev, V.V. Ivanter, V.L. Makarov and others // Economics in contemporary Russia. – 2011. – № 3 (54). – P. 29; Minakir P.A. Space variety of Russia and the regional policy's problems // New economic association's journal. – 2011. – № 10. – Pp. 150-153; Kara-Murza S.G. To elaborate the acceptable doctrine within the frameworks of the current political system is a difficult task // Russia's strategy 2020. Specific opinion. The "round table" materials. – M., 2011.

The loss by the party in power ("United Russia") more than 77 deputy mandates (reduction from 315 to 238 places) testifies that the activity of the State Duma of the fifth convocation did not reflect the interests and the values of the considerable part of the Russian society.

Many accepted laws did not meet the requirements of the majority of the population[3].

The constitutional majority of the deputies of the fifth State Duma appeared to be deaf to such offers of experts from the opposing parliamentary parties and public organizations as:

- establishment of the socially optimum level of minimal wages and of the size of pensions;
- carrying out the specifications of the budgetary charges (concerning gross national product) on science, education, agriculture, public health services;
- introduction of the state monopoly to tobacco and vodka;
- introduction of the ascending scale of taxation of personal incomes, including incomes under dividends;
- cancellation of the return of the export VAT;
- establishment of the tax for the currency export abroad;
- toughening the control over offshore operations from Rosfinmonitoring;
- giving tax bodies powers for getting the information on the activity of the largest tax bearers, etc.

In the experts' opinion[4], all the disadvantages did not allow increasing (almost to two times) the incomes to the federal budget.

As a result, by the present time in Russia almost 85% of regions and more than 90% of the municipal formations are donated (subsidized) for more than 10 years[5]. At the same time, the number of the dollar billionaires[6] in Russia grew from 87 to 101 for the period 2007 – 2011.

Imbalance in the legislative activity of the State Duma influenced the work of representatives and agencies of authority in the subjects of the Federation and the municipal formations, and as a result - on the socio-economic position of these territories.

So, the economy of the Vologda Oblast, as well as of many other regions, has seriously suffered from the world financial crisis in 2008 that at once affected the situation in the social sphere of the region. The ratio between the average monetary incomes of the population and the size of the living wage has reduced recently both in the Russian Federation (from 4.1 to 3.2 times), and the Vologda Oblast (from 3.3 to 2.3), that testifies to falling of the standard of the population's living *(table)*.

In the speech at congress of "United Russia" on the 27th of November, 2011 the Chairman of the Government of the Russian Federation V. V. Putin gave his consent to stand on the post of the head of the state in March, 4, 2012, and declared, that the major principle of the government bodies' work at all levels should be the social responsibility.

[3] So, the Federal Law "About the modification in separate acts of the Russian Federation in connection with the development of the legal status of the state (municipal) establishments" (from 08.05.2010 № 83-FL), providing commercializing of practically all budgetary spheres, caused discontent of the population. In Russia the wave of meetings (for example, in May, 15, 2010 during international "Day of Family" more than in twenty cities of Russia the protest actions against introduction of the law took place) occured, and also the groups of counteraction were created: "Civil initiative for free-of-charge secondary education", "People against the reform of the budgetary sphere", "All-Russia parental committee" (the source: Reform of the budgetary sphere: essence and social consequences // Collection. – Barnaul, 2010).

[4] Inozemtsev's V.L. interview at the channel "Culture" in V. Tretyakov's program "What to do? What are the political imperatives of the forthcoming year?" 19.11.2011.

[5] According to the data of Russia's exchequer http://www.roskazna.ru/

[6] According to the Forbes' data http://www.forbes.ru/

The basic parameters of the social development (in the comparable estimation)

Parameter	Territory	January – September				
		2008	2009	2010	2011*	2011 to 2008, %
Average real monetary incomes a month, rubles	VO	16136	13393	14612	14744	91.4
	RF	19262	19262	20225	20185	104.8
	VO/RF, %	*83.8*	*69.5*	*72.2*	*73.0*	*x*
Ratio between the average real monetary incomes and the size of the living wage, times	VO	3.3	2.5	2.5	2.3	*x*
	RF	4.1	3.7	3.5	3.2	*x*

* Data for January - August.
Sources: Social and economic position of the Vologda Oblast in January – September, 2011: report / VologdaStat. – Vologda, October 2011. – P. 123; Social and economic position of the Vologda Oblast in January – September, 2009: report / VologdaStat. – Vologda, October 2009. – P. 122; data of the Federal service of the state statistics's website (http: // www.gks.ru).

"**The development of the country, – he emphasized, – should be carried out for people, instead of due to people. Each our decision, each step should meet the interests of overwhelming majority of the citizens of our country... But businessmen also should understand that to hide actives and the money in "offshore" or to leave social obligations is inadmissible...**".

However the situation in the country and in the subjects develops in a different way. Both the federal and the regional bodies of the government not only neutral towards to the negatives of the private business, but in many respects specially create legislative grounds for redistribution of the added cost for the benefit of the oligarchic capital.

Let's result some examples, taken from the executed by the ISEDT RAS analysis of the financial and economic parameters of the activity of Cherepovets, Magnitogorsk and Novolipetsk metallurgical plants[7].

The information basis were the annual reports made under the Russian standards of accounting and published in the official sites of the mentioned plants[8].

- *By the results of 2010, Magnitogorsk and Novolipetsk metallurgical plants gave the double reduction of the taxable and net profit in comparison with 2007 – 2008; and Cherepovets metallurgical plant has not generated taxable profit and finished 2010 with the loss.*
- *One of the major factors of un-profitability of Cherepovets metallurgical plant was investing of the significant volume of the financial resources on keeping low-margin North American and Italian enterprises. More than 100 billion rubles or 40% of investment charges were spent for their purchase. However, instead of generation of the monetary streams foreign business brought the by-effect as losses and huge debt loading.*
- *As a result of the necessity of financing unprofitable foreign companies the taxable base of Cherepovets metallurgical plant reduced to 56 billion rubles in 2010. The tax to profit of this sum could make: to the federal budget – 1.1 billion rubles, to the regional budget – 10.1 billion rubles.*

[7] In 2011 on the pages of the journals the researches about the influence of the interests of the metallurgical corporations' proprietors on the national and the regional development were made (Ilyin V.A. The influence of the interests of the metallurgical corporations' proprietors on the national and the regional development // Economic and social changes: facts, trends, forecast. – 2011. – 3 (15). – Pp. 14-38; Povarova A. The influence of the interests of metallurgical corporations' proprietors on the financial results of the head plant (by the example of "Severstal") // Economic and social changes: facts, trends, forecast. – 2011. – 5 (17). – Pp. 36-51.

[8] According to the data from the websites OJSC "Severstal" (http://www.severstal.com/rus/ir/disclosers/financial_ reports/index.phtml), OJSC "MMK" (http://www.mmk.ru/for_investor/financial_statements/dynamics/) and OJSC "NLMK" (http://www.lipetsk.nlmk.ru/about/figures/financial/quarter/).

• *In 2008 – 2010 at use of the trading circuits of metal products' export it was deduced 31.1 billion rubles of proceeds of Cherepovets metallurgical plant and more 80 billion rubles of proceeds of Magnitogorsk metallurgical plant from under the Russian taxation. The tax to profit from the specified sums could fill up the budgets of the Vologda and Chelyabinsk Oblasts – 5.6 billion rubles and 14.5 billion rubles accordingly.*

• *The offshore structure of the metallurgical corporations' property allowed to deduce 30 billion rubles of the net profit of Cherepovets metallurgical plant, 18.6 billion rubles of the net profit of Novolipetsk metallurgical plant and 10 billion rubles of the net profit of Magnitogorsk metallurgical plant at payment of scanty taxes from the head plants in the form of dividends. Regional budgets received less than 2.4 billion rubles of surtax, including the budget of the Vologda Oblast – 1.2 billion rubles from the offshore shares at the Russian metallurgical enterprises.*

• *For 2010 on the background of the sharp deterioration of the final financial result of the metallurgical enterprises' activity the personal condition of their owners increased:*

– Lisin V.S. (Novolipetsk metallurgical plant) from 5 to 24 billion dollars;

– Mordashov A.A. (Cherepovets metallurgical plant) from 4.3 to 18.5 billion dollars;

– Rashnikov V.F. (Magnitogorsk metallurgical plant) from 2.5 to 11.2 billion dollars.

• *Dividend payments resulted in the sharp growth of the deficiency of own turnover means the lack of which ferrous metallurgy enterprises' owners filled due to the scale loans which increased debt loading.*

• *Percentage payments on debts' service reduced the taxable base of Cherepovets metallurgical plant for 11 billion rubles, Magnitogorsk metallurgical plant - for 2.6 billion rubles, Novolipetsk metallurgical plant – for 4.6 billion rubles.*

• *Cherepovets metallurgical plant will be burdened by liabilities in the volume of 170 billion rubles till 2018.*

• *Administrative expenses which were taken into account, at formation of the taxable profit, made more than 6 billion rubles (at Magnitogorsk and Novolipetsk metallurgical plants) and more than 8 billion rubles (at Cherepovets metallurgical plant). In 2010 the average monthly income of one manager made:*

– at Cherepovets metallurgical plant (an aggregate number of managers is 10 people) the managers' income makes 5.6 million rubles, that exceeds the average workers' salary (34 thousand a month) 165 times;

– at Magnitogorsk metallurgical plant (an aggregate number of managers is 25 people) the managers' income makes 1.2 million rubles, that exceeds the average workers' salary (35 thousand a month) 34 times;

– at Novolipetsk metallurgical plant (an aggregate number of managers is 17 people) the managers' income makes 1.4 million rubles, that exceeds the average workers' salary (30 thousand a month) 47 times.

These examples suggest that the federal authorities of Russia have not created legal mechanisms against the rule of oligarchs in the economy that, in particular, allowed during 2008 – 2010 to derive only from the three largest companies in the steel industry to their owners' foreign accounts 170.3 billion rubles in the form of revenue and net income earned by the labor of thousands of workers in these enterprises. There is a reason to believe that such a situation is in other branches of the raw material orientation. The oligarchic nature of the Russian economy is painfully reflected in the level of profitability of the budget and solving of problems of national and regional development, and becomes a source of tension in the society and can not move towards the implementation of Article 7 of the Constitution[9].

[9] Article 7 of the RF Constitution (adopted on 12.12.1993 by the popular vote) states that "Russian Federation is the social state which policy is aimed at creating conditions ensuring a worthy life and free development of a man".

It seems that in the coming three months before the presidential elections, the candidate for the President of Russia V.V. Putin must clearly emphasize his position on the pressing problems of the Russian reality, defining terms and setting the vector of their solutions, and then, without waiting for the elections, to act in such a way that people could see real movement to eliminate prevailing in the country system of social injustice in the financial, economic, social, cultural, moral and political spheres, and to feel confident that Article 7 of the Constitution of the Russian Federation will be implemented in the next 2 – 3 years in full.

* * *

At this time we publish information on the results of the elections to the State Duma of the fifth and sixth convocations, as well as the results of public assessment of the RF President, the Government, the Governor of the Vologda region in the last 4 years.

The elections to the State Duma of the RF Federal Assembly of the sixth convocation, held on December 4, 2011, led to a change in alignment of political forces in parliament *(table)*.

The level of support for the "United Russia" in various parts of the country is extremely heterogeneous - from 99% in the Chechen Republic to 29% in the Yaroslavl region. In a twenty of the territories of the Russian Federation, which have rendered the least support to the "party of power" there are 8 of 11 North-West Russian regions: the Arkhangelsk, Murmansk regions, Republic of Karelia (32%), the Vologda, Leningrad regions (33%), the Novgorod region, St. Petersburg (35%), Nenetsia Autonomous Okrug (36%).

The election results, chief among them - a significant reduction of the electorate of the "United Russia", were largely the natural result associated with poor rates of post-crisis stabilization, unresolved pressing social problems and a lack of clear prospects for further development of the country.

We can not say that what happened was a big surprise. As the data of sociological studies conducted by ISEDT RAS in the Vologda region in recent years have witnessed a steady increase in popular discontent against the federal and regional leaders (fig. 1 – 4), the proportion of people supporting the party of power decreased (from 41% in October 2008 to 30% in October 2011).

During this period, as well as all the years of our researches, we sent the received information in various federal and regional structures of power, but there was no response to the ongoing negative trend, therefore, we have such results of the elections.

The comparison of results of elections to the State Duma of the RF Federal Assembly of the fifth and sixth convocations (2007 and 2011)

	The RF		The Vologda region	
	2007	2011	2007	2011
Turnout	63.8	60.2	66.2	56.3
United Russia	64.3	49.4	60.5	33.4
KPRF	11.6	19.2	9.3	16.8
LDPR	8.1	11.7	11.0	15.4
Just Russia	7.7	13.2	8.8	27.2
Apple	1.6	3.4	1.1	3.5
Just cause	-	0.6	-	0.7
Patriots of Russia	0.9	1.0	0.8	1.3

Source: According to the website data of the Central Election Commission of the Russian Federation http://www.vybory.izbirkom.ru/

Figure 1. The assessment of the Russian Federation President's activities (%)

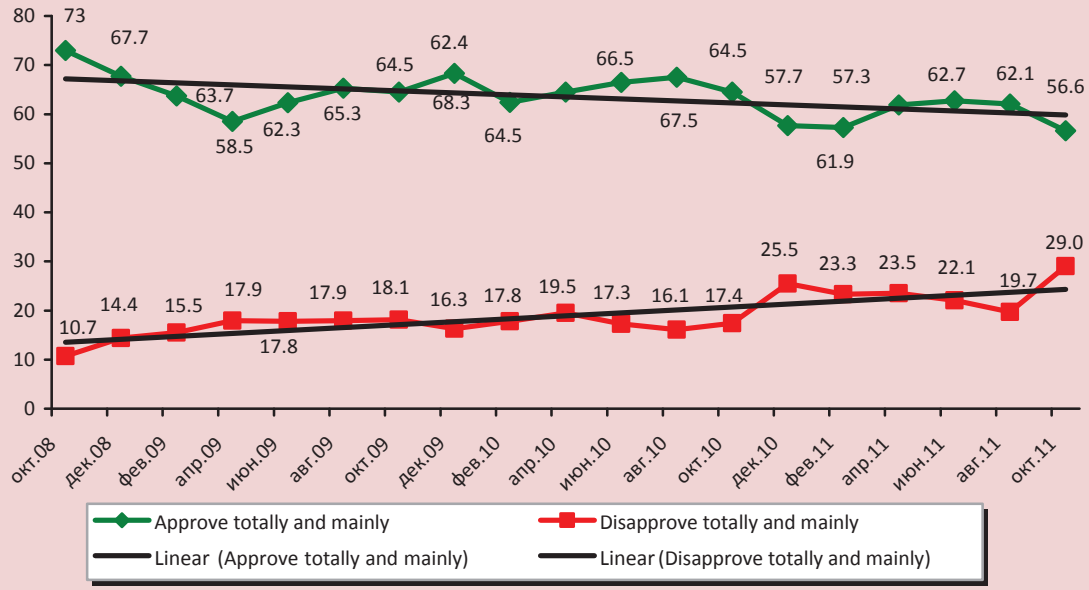


Figure 2. The assessment of the Prime Minister's activities (%)

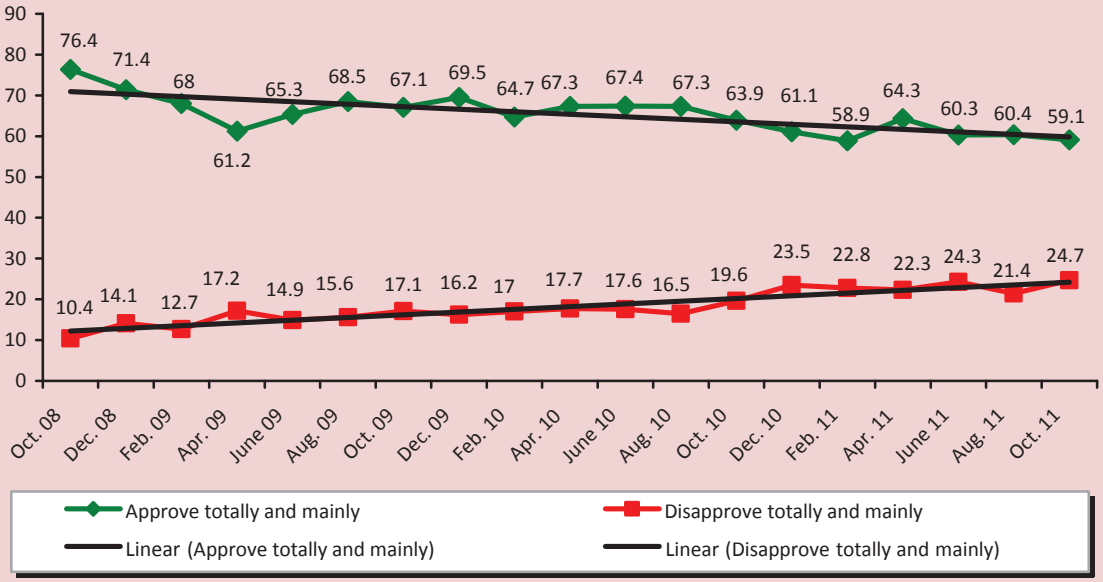


Figure 3.The assessment of activities of the Vologda Oblast Governor (%)

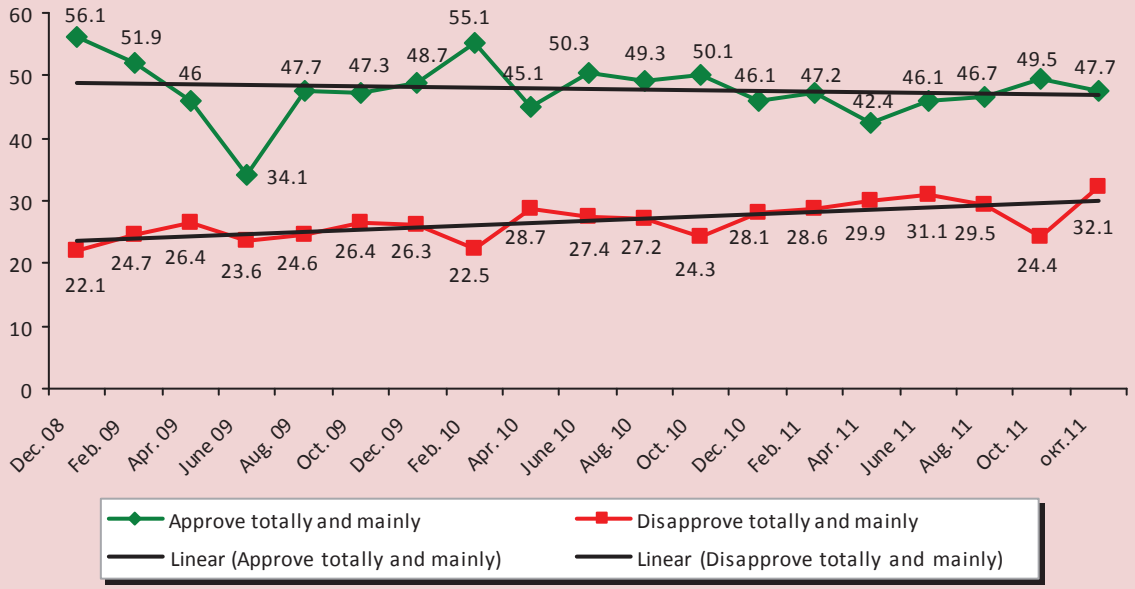
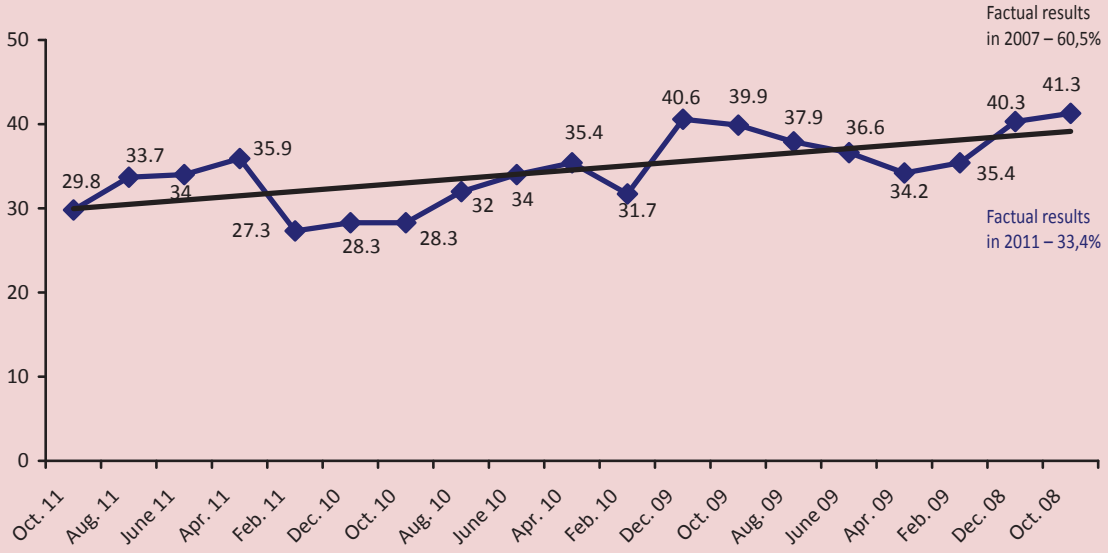


Figure 4. The assessment of activities of the Vologda Oblast Governor (%)



j

As in the previous issue, in this one we publish a rating journal articles.

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

Rating	Article	Total time of reading, minutes for the whole period *	Number of readers for the whole accounting period*	Number of views for the recent 12 months	Number of views for the recent 3 months	Average time of viewing (minutes) for the whole accounting period*	Issue	Release date	Authors
1	Development of the regional clusters' system	11114	444	215	50	25	№1	March 2008	Uskova Tamara Vitalyevna
2	Problems of local budgets' and municipal property's formation	5499	312	269	48	17	№ 1	March 2008	Valentey Sergey Dmitriyevich Khabriyeva Taliya Yarullovna
3	Diversity strategy of the regional economy	6581	319	187	17	20	№ 1	March 2008	Iogman Leonid Genrikhovich
4	Intellectual resources as the factor of the innovational development	2729	131	117	12	20	№ 11	September 2010	Ilyin Vladimir Alexandrovich Gulin Konstantin Anatolyevich Uskova Tamara Vitalyevna
5	Methodology of the comparative estimation of the scientific and technical potential of the region	2073	109	109	19	19	№ 12	December 2010	Zadumkin Konstantin Alexeyevich Kondakov Igor Anatolyevich
6	Small-scale business as an important reserve of the mono-town development	2036	94	87	7	21	№ 11	September 2010	Tkachuk Stepan Nikolayevich
7	Tendencies and perspectives of the socio-economic development of the Murmansk Oblast	3855	221	118	24	17	№ 1	March 2008	Didyk Vladimir Vsevolodovich
8	Dynamics of the socip-economic development of Komi Republic	2260	155	102	33	14	№ 1	March 2008	Lazhentsev Vitaly Nikolayevich
9	Integrated ecologically ballenced natural resources use is the basis of the Northern regions develop-ment	1863	131	98	7	14	№ 1	March 2008	Larichkin Fedor Dmitriyevich
10	Investment process in the region: the new century – old problems	1031	68	62	26	15	№ 11	September 2010	Gubanova Elena Sergeevna Vorontsova Tatyana Vladimirovna

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

UDC 338.2(470)

Programmed project modernization of the federative structure in Russia*

The modernization is considered as a programmed project need for sustainable and balanced social development. Science and innovative should become a mover of this modernization. The article deals with the essence and meaning of modernization, it defines the forms of modernization and its features. The priorities and programmed project development institutions have been substantiated by the socio-economic development of the Russian Federation, regions, municipalities and market agents. The article also analyzes the theoretical and methodological approaches to the evaluation of the eventual result of modernization which is considered as a possibility to use a human development index and / or a human happiness index.

Modernization, essence of modernization, modernization forms, programmed project modernization model of the regional and territorial development, the role of human factor in the modernization, eventual result of the development and its evaluation.

Alexander I.
TATARKIN
Academician of RAS, the Director of the Institute of Economics
the Urals Branch of RAS
tatarkin_ai@mail.ru

Yuliya G.
LAVRIKOVA
Doctor of Economics, the Deputy Director of the Institute of Economics
the Urals Branch of RAS
K515L@mail.ru

* This article was prepared by the means of the program № 29, RAS (subprogram of Ural branch of RAS "Regularities of formation and functioning of self-developing economic systems based on the use of advanced organizational and management techniques". № 09-P-6-1003).

The word "modernization" or its essential principle originates from the word "modern". It is a symbol of the inconsistent, long and expensive changing process of the dominant mode of production and management to a new and more efficient mode of production which is demanded by most of the population.

Modernization is always based on two interpenetrating processes.

On the one hand, modernization is aimed at the creative destruction of the old mode of production and elimination of inefficient management methods (mechanisms, forms and institutions).

On the other hand, modernization introduces *new and more advanced scientific* methods of production and more competitive industry structure into the social, economic and social development. It connects effective institutions and development sources to the social development: political and institutional, sectoral and territorial, internal and external, production and social ones.

Social and political need for the modernization of Russian society

The definition of "modernization" is principle and split. Its interpretation is inconsistent in literature: it varies from "the process that is undertaken in various countries to reduce the resulting backlog of the state competitors" [12, p. 67] to "the process which cannot be limited only by the certain economic sectors", according to the reasonable assertion by A.G. Aganbegyan, V.A. Mau and others [1, p. 7; 11, p. 13]. V.A. Tsvetkov offers to realize "applied modernization considering the comparative advantages of the Russian economy with regard to functionally interrelated industries: production of hydrocarbons (oil, gas) – transportation – processing – sale – consumption" [31, pp. 37-40]. According to Y.N. Dubenetskiy, "the central task of modernization is to restore and update the industry, which came into the state of half-disintegration" [5, p. 3].

E. Gontmakher points out the fact that there are a lot of unsolved problems which are too important for the development of our country. The country hasn't taken the opportunity to use raw materials revenues to diversify the economy and increase its competitiveness. The government has managed to increase the differences in population's incomes (even according to official statistics). The state also has divided health care system into two sectors: one of which is formally free with a minimum set of "would-be medical" services, the other sector includes most of the health services required by our population but it's actually paid. In recent years general and professional education quality has dropped dramatically due to the efforts of the Minister of Education and Science A.A. Fursenko. As a result, the human potential index in the Russian Federation rolled down to the 71st place in the world.

Therefore, the author believes that the essence of modernization doesn't consist in the rejection of "the current evil practices, come-and-go people in the government and the usual borrowing of advanced institutions. It consists in the updated economic and socio-political life of the civilized space...and their implementation into Russian life" [4, p. 3].

The chief adviser of the Analytical Management Department of the State Duma Apparat M.S. Ayrapetyan has proposed the concept of simultaneous economic and political modernization considering the influence of the factors and features of the cyclical system development. In his opinion, Russia needs for the *conservative modernization* in the form of "the operating mechanism aimed at the neutralization of the external and internal threats and negative impacts which are the results of such swings and which are typical for both stages of growth and decline" [9, p. 96].

The essential features of the Russian economy modernization are difficult to be estimated because *there are no fields and kinds of activity which wouldn't need to be upgraded and aimed at the rapid, balanced and socially oriented economical development.*

Modernization is one of the most acute problems for the Public Development Management Department, its quality and effectiveness, professionalism and honesty of employees in the state government and administrative bodies [24, p. 25]. Modernization of economy and its production, infrastructure, financial, budgetary, banking and other sectors is also too important. It is impossible to ensure the sustainable economic growth without modernization of higher and general education, health and pension systems. It is an unsolvable problem to provide innovative modernization without updating changes in the role and status of science in social development. It is impossible to enhance the contribution of the regions, territories and a spatial factor in the incensement of public well-being without the modernization of federal relations, the renunciation of the hard line of command and transition to the self-development of the federation and municipalities which could decide on the majority of regional and municipal development issues [13, 14, 16].

That's why we consider the statements by A.G. Aganbegyan, V.A. Mau, D.A. Sorokin [17, p. 24-25] and others are fair that the modernization couldn't be limited only by the economy. Its essential purpose is the renewal of social life in order to create the most progressive institutions of the balanced and sustainable social development based on innovative sources and innovative skills. And the essential *basis of modernization is revealed in this sense as the scientific and innovative renewal of all social spheres in compliance with developmental needs. At the same time, this is a mission of science as an innovative renewal base*. The most significant signs of modernization are the following:

- The complex and systematic nature of modernization, which presupposes consistent scientific solution of interrelated problems of social and economic development. Modernization of the economy couldn't be effective and complete without appropriate changes in the political, social and environmental spheres, as well as without changes in the sectoral, territorial and infrastructural development. We can develop innovations and trade them, but if we don't establish innovation-oriented environment, the effect of innovative developments will be received by the other countries where there is such innovation-oriented environment which is functioning and "sucking up" all the progressive developments.
- Target orientation of modernization to the solution of national problems that can consolidate the society in their decision. It is important, for example, to set up the task to increase GDP of the country and double or triple it, as well as to raise labor productivity by several times at the workplaces, etc. But if the most part of these revenues ends up in the pockets of the oligarchs and bureaucrats and the bulk of the population collects only "crumbs" of these incomes, this task will never be mobilizing and consolidating. The regions and municipalities are limited to improve profitability of market agents, since more than 65% of the taxes from the territories are collected by the Federal budget.
- Modernization inconsistency – "destruction for the sake of creating" of more effective institutions requires "flexible firmness". *Firstly,* the essence of this feature is the permanent scientific support and providing of modernization with new knowledge and solutions, as well as opportune and scientific changes and adjustments in the process of its implementation under the influence of external and internal circumstances. *Secondly,* it is a guiding hand behind the state which regulates and controls all the processes of modernization. *Thirdly,* the most important requirement of modernization should be the support of positive public opinion for its implementation by the use of fair distribution of modernization revenues between the different strata of the population.

We can select some other features of modernization (its social and environmental orientation, continuity, phasing, etc.), although according to the given features it possible to consider it ***as a system of ties between the government and all the subjects of market relations in order to maximize the resulting effect of social development by the use of the most advanced and innovation-oriented institutions of social and economic development.***

Modernization is a public process which, on the one hand, "keeps the door open" for all the market agents and citizens who want to join in the modernization processes on-site through the parties and other social organizations and institutions. On the other hand, the basis of the modernization processes is the formation of advanced sixth technological structure and appropriate method of management, which are surrounded by the suitable political, spiritual, moral, social and economic environment. Just that very environment is designed to facilitate rapid development of a new mode of production and its access to the planned level of operation and the limitation of influence spheres of the fifth technological structure and ineffective forms of economic activity [25, pp. 25-36].

For Russia, as well as for any other country, the condition for successful modernization should be a long-term using strategy of the development institutions that preserve and enhance their own economic potential and provide stable, balanced and socially-oriented growth with rising share of the new productions of the sixth technological structure. This circumstance requires, *firstly,* to defend the domestic market and domestic potential from the intervention of international and domestic speculative capital, maintaining and expanding the sources of social and economic development at the local level (market agents), territorial level (municipalities) and regional and interregional levels. *Secondly,* it is necessary to create progressive and modernization-oriented environment to form and use the most effective development institutions.

The latter are demanded of strategic support. They include traditional institutions (education, science and cooperation) and the new ones which are venture and investment funds, innovative centers, clusters, business territories, public and private partnership institutions, innovation-oriented economic zones, territorial and regional self-development, regional and territorial integration, etc. *Thirdly,* it's necessary to get the most part of market agents and population involved in the processes of modernization, enhance the role of human factors in the providing of modernization with new innovative ideas and solutions. It is also important to maintain sustainable and balanced socio-economic development at all the levels of the federal system [26, pp. 46-55].

Recognizing the formation of a new and more advanced technological structure as the main criterion for modernization, it is impossible to note the crucial role of human factors and role of the individual national leader in the successful modernization of social development. The examples of China, Singapore, Finland, India, South Korea, Brazil and other countries demonstrate the growing role of the individual in the initiating and carrying out of the modernization reforms and getting the most part of population involved in them. The motives and action sequences of the leaders of these countries are different, although the logic of their actions is very similar. It includes the following:

1. The developing of a long-term strategy for the country's leading positions in the global community which is based on its own potential, resource capabilities and personnel. The strategy identifies the modernization time-frame, stages and sources, which are its own or engaged in the different periods of its implementation.

2. Involvement of all sectors and most of the population in the modernization processes thanks to taking into account their needs in the process of modernization and fair income distribution among all strata of the population.

It is too important to involve elite, creative and enthusiastic people which are able to provide political, technical, technological, institutional and commercial success of social modernization in these processes. It is clear that fair modernization income distribution is understood as an ability of each party of the modernization process to receive the income that corresponds to his or her "contribution" to the reforming of the social and economic development. But it should not push a person away the feasible involvement in the modernization processes.

3. Increasing role of science, education and innovation factors and skills in social, economic and social development. The abilities of different countries to solve this task are various: they can increase education spending and develop domestic science, as well as they are able to invite the specialists from other countries and acquire patents. In all circumstances, the requirement to improve the educational, cultural and intellectual level of the population and participants of modernization is the main need and the most important source of socio-economic development.

Modernization in China, for example, is regarded as a transformational revolution in the history of mankind modernization. In this connection, the Chinese Academy of Sciences with the assistance of China's leadership decided to give preference to scientific and technology researches of the priority directions of Chinese modernization. The Academy has developed a fundamental synthesis report "Science and technology in China: Roadmap for the period till 2050" (Beijing, 2010)" to do this. It consists of nearly 150 pages. The stages of researches development for the period till 2050 have been stated in five sections of this document. The report has also identified the alternate results and the ways of using of the research results in social development based on the Chinese specifics [15].

4. Formation of technological, financial and credit sources of modernization. The first presupposes the government support of scientific researches, strengthening of the ties between science and business in the development and productive use of new equipment and technologies of the sixth technological structures, the development of experimental science and experimental facilities, etc. The formation of financial and credit sources usually requires the mobilization of internal and external opportunities (loans, reserves, current expenses minimizing, etc.). If modernization is based on the ambitious aspirations to pursue a preemptive tactic it can't be limited by a catch-up scenario. According to the assertion of S.Y. Glazyev, the art of leading is the ability to discern the beginnings of development before the markets signal of them [3, p. 505, 508].

5. Economy restructuring with a focus on the supporting of accelerated development of those sectors and industries which are the basis of a new technological structure. Operational development of the basic industries of the sixth technological structure allows us to create quickly a comparative advantage in the competition at the national and international markets of goods, ideas and services. The key areas of the sixth technological structure are being discussed actively in literature. There are a lot of different points of view both of scale and terms [11, pp. 6-7]. The authors are unanimous that the development of the basic industries and production of the sixth technological structure will create a competitive advantage of the national economies in the globalized world at least until the middle of the 21th century [3, p. 21].

They have also defined the basic directions of the economy: *biotechnology, based on the achievements of molecular biology and genetic engineering; nanotechnology: artificial intelligence systems, global information networks and integrated high-speed transportation systems*.

They continue to develop flexible product automation, space technologies and systems, production of tailor-made artificial materials, etc.

6. Industrial and social infrastructure should get a new impetus to development. *On one hand,* such infrastructure can ensure sustainable development of the basic industries and enterprises which are able to guarantee rapid economic development and enhance their ability by the increment of value added [30, pp. 395-420]. The latter can be ensured by the creation of cluster associations, the development of cooperative ties and the expansion of support manning for their products.

On the other hand, industrial and social infrastructure should prepare qualified personnel for the basic industries, form appropriate standards of production and consumption of innovative products, regulate (study and make recommendations) internal and external demand, provide priority scientific researches, develop and modernize the social sector and improve the ecological state of the society [7, pp. 6-12].

Informative, educational and health services, as well as the formation of comfortable human environment dominate in the structure of consumption. Such transformational changes, the pace and quality are largely dependent on the developmental level of the regions and territories, their ability to form effective market institutions and improve the social role of business.

Modernization should complete the transition from formal to real federative relations, from sectoral to territorial specialization, from "consumer society" to "intellectual society", which are characterized by the increasing role of the territorial factor of social development, life quality rating for all its parameters (life span, health, education level and income structure, opportunities for creative development, etc.).

The issue of life quality or human development index (HDI) is usually assessed by three indicators: GDP per capita, average life span and educational level of the population. If IHD is 0.8 or more we can consider it is an economically developed country with a high human development index. When HDI is 0.5 – 0.8, living standard is moderate, but if HDI is less than 0.5 the country is regarded as underdeveloped one with low human development index.

The human development index in Russia is far from desirable as well as in other former socialist countries [17; 20, pp. 9-12]. It is a deterrent of social, economic and general development. That is why *we consider it is reasonable to provide the modernization of social development with social orientation and place it under the interests of comprehensive human development and implementation of all its possibilities and potentials.*

Nowadays there is an alternative to the life quality researches in the societies with advanced market economies. They are the researches in *the economy of happiness,* where a person feels happy when the human development index is low. Human happiness index which was proposed by Nobel laureate Joseph Stiglitz is used to explain so-called Easterlin paradox [10, p. 171], according to which, human happiness index is far higher in the less developed countries.

By the way, the term *"economics of happiness"* isn't interpreted quite adequately in Russian. According to the translation of the Academician V.L. Makarov, the word "Happiness" doesn't mean only happiness [10, pp. 172-173]. It also means satisfaction in state, environment, tempo of life, etc. Human population is extremely diverse and multifaceted. A person often finds more satisfaction not in money or material values, but in his or her own place in the social or industrial group, whose opinion is valuable. A person can also find satisfaction in the activities where he puts his heart and soul.

The pursuit of social status isn't less realistic feature of human nature, than the pursuit of material goods. Just because of these circumstances, science should more fully, more deeply and objectively assess the role and place of man in the processes of modernization, so his ability and energy don't only serve for social development, but they can add "crumbs of happiness".

Opportunities and trends in the modernization of federative relations

The modernization of Russian society needs for the greater social orientation of economy, increasing of a territorial factor in the socio-economic development and improving of macroeconomic indicators by means of the regional specialization, the development of inter-regional integration and rapid development of such sectors which determine the foreign economic status of the country and region. Supposed transition demands on a set of interrelated sectoral and territorial changes in resources, terms and stages of transformation. The latter will include the necessity to move to a new model of the territorial development in Russian economy, which allows us, *on the one hand,* to create a framework of regional (republican, regional, provincial, district) and territorial centers (city, district) of economic growth which can generate and transmit the innovative impulses for economic development to the allied subjects. *On the other hand,* it should accelerate the development of remote and outlying regions and territories [22, pp. 19-30].

The modernization of social structure requires activating the processes of innovation development and the formation of socially-oriented state by means of increasing role of science in the substantiation of "smooth" transition from the regional aligning policy to its new type which satisfies the federative structure of Russia. We see the ideology of this transition in the following.

The first move is the active and purposeful formation of *institutional environment* by the use of different and more progressive development institutions and norms that contribute to the creation of *a polycentric spatial structure of the country's economy*.

This means the formation not only one or two centers, but numerous centers of economic growth, which will include all the major regions and cities. They will promote the network effect around these centers. Small and medium-sized cities will get a shot in the arm through the development and inclusion them into the metropolitan area, as well as other remote and outlying territories. The centers which can carry out this mission now include the agglomerations of Moscow, St. Petersburg, Yekaterinburg, Chelyabinsk, Samara and Togliatti, Nizhny Novgorod, Volgograd, Vologda, Kazan, Ufa, Novosibirsk, Tomsk, Omsk, Krasnoyarsk, Irkutsk, Khabarovsk , Vladivostok, as well as the agglomerations of the south of the Rostov Oblast and Krasnodar Krai.

The second move is *the search for the new sources of regional competitiveness*. The developed countries, including the European Union known for its profound traditions in the regional policy, formulate and realize the strategy focused on the implementation of the idea of territorial cohesion and balanced approach to the territorial development. European countries have recognized as a scientific fact the possibility of accelerated economic growth *not only in big cities*.

Regional policy shows that it is important to develop industrial communications of small and medium-sized towns (polycentric development) and form regional, territorial and innovation centers in rural areas. The role of medium-sized towns is seen in the conjunction of large cities, small towns and remote rural areas. If we create the appropriate macroeconomic and regional conditions, medium-sized towns could promote integration and inhibit the depopulation of rural areas.

Just that very approach allows us to give consideration to urban agglomerations in Russia as the new major centers for innovative development, *which could give a new impetus to the regional and territorial development based on the modernization of development institutions and the formation of new generating competitiveness centers:*

- *outlying territories* as the exponents and translators of Russian geopolitical interests in the border areas with other countries;
- *remote areas and small towns* as the necessary participants of cluster projects and solutions which are produced in the major regional and territorial centers that will allows us to transform these territories into the regional centers of economic development;
- *rural areas* as the new centers of competitiveness based on the diversified economy. New opportunities of renewable energy sources, efficiency and radical change in agricultural technology, approaching of agricultural product processing to the production contribute to the competitiveness of these territories.

These territories can become the new sources of large-scale competitiveness of the country along with the largest cities. New regional policy should be aimed at the realizing of these territories' potential and permanent development and modernization of their integration with the cities and regional innovative centers.

The third move is a *human-centred development paradigm* which should be at the heart of modernized regional policy.

The most important imperative for our country is the forcing of the whole spectrum of investment in human development, first of all, its innovative components. The new human-centered development paradigm in the XXI century consists just in it. Today it is an axiom that the only decisive and future-oriented factor of successful resource funds implementation is socially and economically motivated, professional and civic-active human potential. The qualitative characteristics of the population, their active innovation and pioneering position may be the dominant factor in the determining of the country's future development contours.

One of the major problems of preserving and maintaining of the sustainable economic development in the regions is the lack or decrease of the incentive component's effectiveness of highly productive labor. It is especially true for the remote regions with large amounts of agricultural lands and territories – the areas for the traditional nature management of indigenous smaller peoples[1].

Radical changes in the socio-economic system during the reform period have led to the radical transformation of the motivational processes conditions. The considerable part of enterprises is oriented to the compulsion strategy using a strong negative motive of possible dismissal and unemployment. This motivation model forms attitude to work as the means to obtain material benefits. It sets only the lower levels of motivation in motion. It doesn't take into account the potential of innovative initiative and responsibility for the fate of the country which were used previously as a model of labour and civic activity of working people.

That's why within the scope of modernized regional policy it would be reasonable to discuss the possibility of expansion of scale effect by the use of the increased motivation of labor activity in such key areas as:

- the forming of worthy labour standards in the regions;
- the development of the corporate relationship culture among administration and employees in the regions;

[1] "Economic reality raises the thorny question about human capital competitive recovery... – V.N. Belkin, N.A. Belkina, L.V. Vladykina write, – that but this fact is not realized by everyone...and the contribution of science to the theoretical justification of this process is not sufficient" [2, p. 4]. M. Starchevoy calls to "reconsider neoclassical theory and build a new model of man, which could explain a lot of things which were misunderstood previously or even excluded from the analysis" [18, p. 78].

➲ the use of stimulating potential of social technologies implemented in the legal and economic forms based on the principles of reasonableness, fairness and awareness;

➲ the expansion of the regional employee potential oriented to initiative and creative labour.

The fourth move is the reliance on the self-development processes in the regional and territorial socio-economic systems as a driving force behind the modernization of Russian economy [21, p.15-23; 23, pp. 77-99]. In order to do this it is necessary to define the mechanisms and tools to choose *the most effective regional development priorities, which include the problem areas and aim at the improving of their sustainable functioning based on self-organization and self-sufficiency.*

The most difficult issue is the definition of the self-developing regional (municipal) economic system. Without going into detailed analysis of existing approaches, we take the liberty to propose the following author's version.

Under the self-development of the regional economic systems *we mean the strategical ability of the region to provide the expanded reproduction of the gross regional product in the current social macro environment at the expense of the existing potential of their own resource capabilities and revenue sources for the implementation of both macroeconomic objectives and national priorities, as well as for the realization of the regional systemic targets.*

The self-development of the regional economic systems requires two generating signs:

1. Internal self-sufficiency of the regional economic system which can ensure the long-term sustainability of the regional development at the expense of:

1.1. Material, labor, financial, intellectual and other resources which are necessary and sufficient for the development, as well as production, infrastructure, business and other opportunities to provide the expanded reproduction of GRP.

1.2. Objectively defined mission and purpose of the regional self-development, priorities and the motivations of self-development. *On the one hand, the mission and purpose are intended to be based on the targets of the macro-economic system in whole providing their systemic implementation. On the other hand, they must ensure the implementation of the regional goals that reflect regional needs and interests of those people who live in the region. From our point of view, the ability to implement regional needs and interests as a part of the macro-economic needs in the process of self-development is a powerful motive to improve the tools of self-development in future.*

1.3. Regional industrial, infrastructural, organizational, management, territorial and other systems can retarget autonomously under the influence of internal and external changes.

2. Favourable external conditions can ensure the stable and balanced self-development of the regional economic systems on the strategic perspective. The list of the external conditions which can ensure the stable functioning and development of the regional economic systems includes:

2.1. Social, political and ideological willingness of the federal leadership and regional administration to ensure the achievement of socio-economic parameters by the use of self-development regional economic systems. It is very important that most of people would interpret the idea of self-development regions as the most affordable and reliable form to realize their individual and group needs and interests. It is also necessary to support this idea by the use of insurance macroeconomic conditions and arrangements.

2.2. Constitutional and legislative guarantees to the regions and macroeconomic possibilities (fiscal, budget, credit, property, etc.) to use self-development models both for the realization of macroeconomic objectives and priorities and regional targets. The most promising regional targets are the following:

the formation and development of business areas based on the municipalities, the creation of technology towns, transfer centers of advanced technology, market institutions to secure labor, land and forest resources for the region, regional ownership reforming, etc. *We consider it is principal to remove restrictions from the regions regarding the establishment of the regional state-owned corporations based on the principles of state and private partnership in order to solve the problems of structural modernization and restructuring, as well as to raise competitive capacity of domestic production through its innovative renewal.*

2.3. External change forces over the regional development (they were caused by the changes in world market for goods and services, regions' participation in international programs and projects, development of international integration ties between the regions and the country in general) demand on the reasonable approach to the balance of external economic factors and indicators. Such reasoning is necessary to maintain a self-developing region by the use of international community's possibilities for the technical and technological modernization of its own domestic goods and services production. Ultimately, international economic and integration ties of the regions are reasonable in terms of expansion and consolidation of competitive positions, import dependency restriction and increase in the production capacities of the regions and the country in whole[2].

System-generating and system-protecting role of external conditions, guarantees and factors in the processes of formation and functioning of the self-developing regions is seen in the following. *If the internal self-sufficiency of the regional economic system provides the sources of sustainable development and reproduction of the GRP (simple or extended), then the external conditions should form and reproduce social, political, legislative and foreign macroeconomic environment which can provide it with the most complete and efficient use of territorial opportunities and resources for the implementation of general federal and regional targets, stability and security of the Russian Federation in whole.*

One of the key instruments of the regional economic policy is improvement and creation of the new forms of economical territorial organization and, in particular, formation of *business areas* in the regions and municipalities. It was established successfully in the developed countries long ago.

Typical examples of the established business areas, which were approved in the world and domestic practice and science, are technology towns, industrial parks, special economic zones, transport and logistics centers, specialized trade and warehousing zones, etc. The business areas can be formed wherever in the region or municipality, if there are suitable objective and subjective conditions.

One region or municipality may contain several business areas. All of them make a valuable contribution to the local economic development through the development (especially small and medium-sized), expansion and improvement of infrastructure, employment increase and rise in the standard of living, activization of investment and innovation processes, rise of tax base and budget income. The business areas are the means of economical diversification and the ways to find new industries and services for the single-industry towns. The business areas are the means of rebranding and the ways to attract new companies and industries for the depressed areas and cities. Land redevelopment (in the first place, old industrial areas redevelopment) is very important for the creation of business areas in such regions. Redevelopment is primarily associated with the complex property transformation; it can become a very popular and relevant tool

[2] Increace in the financial risks during the process of economic globalization will inevitably require balanced and science-based decisions on the entry of regions into the international integration alliances and community with Russian participation [29, pp. 3-15].

of the regional policy, since 85% of cities in Russia were founded on the basis of large industrial enterprises. In market economy these enterprises are unclaimed but they still have huge territorial and infrastructural resources. Redevelopment allows us to neutralize such disadvantage of business areas as significant financial costs which are especially necessary to build infrastructure and communications.

The firth move is the implementation of the new regional policy which is possible due to the *establishment, adoption and improvement of various* ***development institutions***. At the same these institutions should be sufficiently varied, as well as they should provide multipurpose focus of the territorial development.

The first group of institutions may be related to the direct actions of the government to implement the key provisions of the regional policy, especially for problem areas. These institutions may include: Housing and Utilities Reform Fund, Fund for financial support of the Russian Federation; fund for regional finance, regional development fund, etc. *The second group* includes the institutions that promote incentive innovation of the territorial development: the creation of special economic zones, foreign-castles, etc (introduction and development). *The third group* of institutions can be oriented to change the technologies for regional planning and management. These institutions may include a revolving fund based on the introduction of project management in the regions and municipalities, indicative planning, etc. *The fourth group* of development institutes is associated with the activation of the business community in the form of strengthening of horizontal linkages, including the cluster forms of business development, Public–private partnership (PPP), project planning, etc.

Cluster approach allows us to establish linkage between the center and its surroundings at the expense of closer inter-firm cooperation, creation of common labour-markets, technology, knowledge, more available total resources for enterprises, combined costs reducing and the formation of synergistic interaction effect. All participants in the cluster have competitive advantages under the influence of total effects of scale synergies. Moreover, the cluster contributes to the development of horizontal networks of relations, as well as partnership cooperation in the chain: business – government – science – education[3].

The integrating nature of the cluster approach as the Institute for Regional Development is also consists in the possibility of complex problem solving. They include a regional strategy aimed at the increasing of regional economy and businesses' competitiveness; industrial policy aimed at the creation of a competitive industrial complex in the region; transition to the innovation model of regional development; creation of competitive environment for small and medium-sized business in the cooperation with big business; extension work in the region and regional infrastructure development, etc.

The sixth move is **a programmed project approach** which should become the basis for the new regional policy and territorial development governance as the federal development institute that can meet modern needs of the globalizing economy.

The mechanism for the implementation of the regional policy is related to the definition of its strategic priorities. That's why there is a need for the development and approval of the *Concept (main lines) of the regional policy in the Russian Federation* as a part of the strategy for the socio-economic development of Russia up to 2030.

[3] The government of the Sverdlovsk Oblast and the staff of the Institute of Economics, UB RAS have developed a methodology to create the cluster consolidations based on the sectoral, specific and territorial characteristics[8; 27, pp. 11-19]. The experience of Volgograd is worth to be noted which used a cluster model of complex building management in the major cities [6, pp. 60-65]. It is also necessary to point out OJSC Russian Railways. This company and the Institute of Economics, UB RAS develop the cluster model of traffic management, as well as FSPC "Altai" (Biysk) uses the cluster of industrial and social infrastructure of the parent company [30, p. 399].

The programs covering the most difficult issues of regional development should be elaborated on the basis of strategic priorities for the regional policy (no more than 4 – 5). Specific targets should be solved on the basis of *programmed project approach*[4].

Yekaterinburg has taken the lead in the use of programmed project development of the territories. It was the first city in the Russian Federation which adopted "Strategic Plan of Yekaterinburg" by the resolution of the Municipal Duma on June 10, 2003 [19].

According to the opinion of the mayor and now a deputy of the Federation Council of Russia A.M. Chernetsky, the plan of the city development was created and implemented on the basis of three innovative ideas which were new for Russia. Those ideas required material changes in the mentality of the city leadership and city population [19, p. 3]. *Firstly,* the motto for the development, negotiation and implementation of the plan was the idea to "think strategically and act together". That idea was a starting point for the development of the Strategic plan and *it joined the priorities of the city development with the project initiative of its people*.

Secondly, the Strategic plan has become a city-wide document since its development. A lot of scientists, managers, deputies, businessmen, public organizations and professionals were discussing and developing the document during three years.

They studied international experience including programmed project development of Birmingham (UK). The Strategic Plan was also discussed by public. Then it included a huge number of suggestions and wishes of city residents, state and federal agencies. This fact allows us to consider the Strategic plan of the city as *the programmed project creativity of the whole urban community*.

Thirdly, the Strategic plan of Yekaterinburg is focused on the steady improvement of life quality in the city. All eight programmed directions of the plan and the majority of more than a hundred business projects are devoted to this purpose. The first programmed direction of the plan is "Preservation and development of human potential". It opens the action program. And the eighth programmed direction "The General plan of Yekaterinburg – the city for a person" completes the action program of the urban community in the development of Yekaterinburg. The final section of the plan "The mechanism for the strategic plan implementation" is also noteworthy. Its essence can be summed up with the words: "We should work on the result and shouldn't close from innovation" [19, p. 3].

The Strategic Plan of the city is a scientifically substantiated generalization of the needs of different population strata and megalopolis's market agents which takes into account the specifics of the city and its competitive opportunities. At the same time, it is characterized by high innovation trend aimed at the solving of city problems of economy restructuring, the accelerated development of industrial and social infrastructure, etc.

The relevance of the programmed project approach in the market conditions is seen not only in the situation when the people take part in development of the strategic plans and permanent public monitoring of the main priorities implementation. They are one of the most important but not the only advantages of it.

[4] The practices shows that developed strategies and programs of socio-economic development of the regions and municipalities have suffered and still suffer, firstly, from the lack of clear goals stipulated by the regional (territorial) needs for development. They are often replaced by political slogans and calling for macroeconomic. Secondly, they suffer from reduced public opinion support, existing needs and preferences of various and social groups in the region. But they are guided by the macroeconomic preferences which are usually remote and unclear for most of the population. Thirdly, they have an ability to unite organically policy decisions and creative activity of the population in the same document, planned and market-based approaches, administrative resources and market initiative (enter-susceptibility), the scientific breakthrough ideas and business savvy of business [26, 50-55; 32, pp. 65-73].

On the one hand, the programmed project approach allows us to join in the same document planning administrative and marketing initiatives, as well as administrative resources and enterprise for the benefit of development. It makes it possible to meet the needs of urban integration of government, science, business and public opinion. *On the other hand,* it allows us to distribute the financing of these programs and projects between the city budget, business and population. It can reduce significantly the total costs and increase the effect of the business projects.

Positive evaluation of the Strategic Plan of Yekaterinburg for the period from 2003 till 2008 has required correcting it and increasing most of programmed parameters. The updated Strategic plan of Yekaterinburg for the period till 2025 was approved by the Municipal Duma in 2010 after two-year debates (from 2008 till 2010) [20]. It was supplemented with the development parameters specified in timing and directions. The project section of the plan was revised seriously. The number of projects was increased up to 130. Business activity in project financing increased greatly – up to 45% of the total project cost and more.

The methods of programmed project management allow us to set more reasonable goals and plan innovation, investment and other activity of the regions in the optimal way. Project management allows us to recognize project risks, optimize the use of available resources and avoid conflict situations, monitor the implementation of the plan, analyze the actual activities, make timely adjustments in workflow. It also makes it possible to store, analyze and use the successful projects in future.

Project territorial management ensures the formation of effective management model which allows us:

- *to obtain the measurable results* of each goal, each service and activity;
- to see *the services and activities* the goals of which will turn around for the region's population;
- *to estimate the influence* of increased or decreased budget *over the other indicators*;
- to estimate *the socio-significant result* of the services, which are provided for the regions;
- to regulate the working efficiency of the agencies and institutions based on the analysis of their expenses relative to the obtained results;
- to identify *the real value of the goals achievement, implementation tools and responsibility for these goals* according to each purpose of socio-economic development.

At the regional and municipal level the use of the project-based approach involves, *firstly,* organic project embeddedness into the document complex of strategic territorial planning (strategy). It should also secure the strategic goals and objectives of the region (municipality) So these projects are essentially the strategic projects which are gathered in the logic chain: the development strategy of the region (municipality) ↔ strategic programs ↔ strategic projects (business projects).

Secondly, it is a transformation of strategic projects into the specific mechanisms and institutions of strategic development areas programs. Their development must be based on the interaction of all members of the territorial community: private business, government and administration, science, education, public members which should ensure the implementation of these projects. The business plans of private sector must become the basis of the strategic projects including the principles of State-Private Partnerships.

With this approach, the projects will focus on the efficient interaction of all project's developers. They will continue to be based on clear planning and quite specific activities of social development modernization. They will be provided with the funding sources of the projects' participants. Only in this case, the projects will become *the public documents of agreement* and all the members of modernization processes in the regions will be interested in them.

References

1. Aganbegyan, G.N. Modernization of social production in Russia / G.N. Aganbegyan // Regional Economy. – 2011. – № 4.
2. Belkin, V.N. The formation of enterprise's competitive human capital / V.N. Belkin, N.A. Belkina, L.B. Vladykina. – Ekaterinburg: Publishing house IE UB RAS, 2011.
3. Glazyev, S.Ju. Lessons of another Russian Revolution: the collapse of liberal utopia and a chance of "economic miracle" / S.Ju. Glazyev – M.: Economic Newspaper, 2011.
4. Gontmakher, E. Russian modernization: Institutional traps and civilized landmarks / E. Gontmakher // The world economy and international relations. – 2010. – № 10.
5. Dubenetsky, Ya.N. Modernization of the economy: directions, resources, mechanisms / Ya.N. Dubenetsky // Problems of forecasting. – 2011. – № 4.
6. Ivashova, S. Complex building in the large cities: a cluster model of management / S. Ivashova // Theoretical and practical problems of management. – 2011. – № 4.
7. Kuleshov, V.V. Modernization of the economy and its staffing / V.V. Kuleshov // ECO. – 2010. – № 6.
8. Lavrikova Ju.G. Clusters: a strategy for the formation and development in the economic space of the region / Ju.G. Lavrikova. – Ekaterinburg: Publishing house IE UB RAS, 2008.
9. Livshits, V.N. Conservative approach to the modernization of Russia: the results of the discussions at the International Academy of Organizational Sciences conference / V.N. Livshits, A.A. Nikonova // Economics of modern Russia. – 2011. – №1.
10. Makarov, V.L. Social klasterizm. Russian challenge / V.L. Makarov. – M.: Business Atlas, 2010.
11. Mau, V.A. Economic Policy in 2009: Between the crisis and modernization / V.A. Mau // Voprosy Economiki. – 2010. – № 2.
12. Modernization of Russia in the context of globalization // The world economy and international relations. – 2010. – № 3.
13. Modernization of the socio-economic development of municipalities: in 2 vols. / ed. by Academician of RAS A.I. Tatarkin. – M: Economica, 2006.
14. Modernization and economic security of Russia / ed. by Academician of RAS N.Y. Petrakov. – M.: Finance and Credit, 2010.
15. Science and Technology in China: a road map for the period till 2050: fundamental summary report of the Chinese Academy of Sciences. – Beijing, 2010.
16. Restructuring of the regional industrial complex: from the industrial to socially-oriented model: in 2 vols. / ed. by Academician of RAS A.I. Tatarkin. – M: Economica, 2005.
17. Sorokin D.E. Modernization of the Russian economy: directions and opportunities / D.E. Sorokin. – Saratov: Publishing house State Socio-Economic University of Saratov, 2011.
18. Starcevoy, M. A new human model for economics / M. Starcevoy // Voprosy Economiki. – 2011. – № 4.
19. Strategic plan of Ekaterinburg. – Ekaterinburg, 2003.
20. Strategic plan for Ekaterinburg Development: approved by the City Duma, October 26, 2010. – Ekaterinburg, 2010.
21. Sukharev, O.S. Methods for assessing of the effectiveness of social systems: theoretical and measurement problems / O.S. Sukharev // Economic analysis: theory and practice. – 2010. – № 6.
22. Tatarkin A.I. Historic mission of the middle region in the modernization of the Russian economy / A.I. Tatarkin // Federalism. – 2011. – № 11.
23. Tatarkin A.I. The results of the global crisis: what has the world got and what has Russia lost? / A.I. Tatarkin // Bulletin of UB RAS: Science. Society. Man. – 2011. – № 1.
24. Tatarkin, A.I. The region as a self-developing social and economic system: transition through the crisis / A.I. Tatarkin, S.V. Doroshenko // Regional Economy. – 2011. – №1.
25. Tatarkin, A.I. Innovative mission of social order modernization as the need for the sustainable development in Russia / A.I. Tatarkin, D.A. Tatarkin // Regional Economy. – 2011. – № 2.
26. Tatarkin, A.I. Programmed project development of the regions as a condition for the sustainable socio-economic

development of the Russian Federation / A.I. Tatarkin // Bulletin UGGU-UPI. Series in Economics and Management. – 2011. – № 4.

27. Tatarkin, A.I. Cluster policy of the region / A.I. Tatarkin, Ju.G. Lavrikova // Industrial Policy in the Russian Federation. – 2008. – № 8.
28. Tatarkin, A.I. Dialectic of the formation and operation of self-developing regional economies / A.I. Tatarkin, D.A. Tatarkin // Federalism. – 2009. – № 4.
29. Tatarkin, A.I. Financial risk management as a condition of inter-regional balance / A.I. Tatarkin // Financial Analyst. – 2010. – № 8.
30. Pacific Russia – 2030: scenario forecasting for the regional development / ed. by Academician of RAS P.A. Minakir. – Khabarovsk: Publishing house DVO RAS, 2010.
31. Tsvetkov, V.A. The main directions of the domestic economy modernization / V.A. Tsvetkov // Regional Economy. – 2011. – № 2.
32. Yakushkina, T. Formation of the program for the socio-economic development of the region / T. Yakushkin // Theoretical and practical problems of management. – 2011. – № 4.

UDC 338.24(470)

Stages of control of regional development in Russia *

The article considers the dynamics of the system of regional development state regulation in Russia. The stages of state regulation are identified through the use of dialectical and historical-logical analysis methods.

The basic goals, achievements and shortcomings are identified at each stage. The consequences of regulation are considered under the prism of asymmetry problem of socio-economic space as a reflection of dominant values of sociality or effectiveness in regional policies, and as a measurement of practical management effectiveness. The conclusion on the substantial theoretical and methodological shortcomings of regional development regulation is argued.

Regional development, government control, regional differentiation.

Sergey V.
BARANOV
Ph.D. in Physics and Mathematics, Associate Professor, Senior Scientist
of Kola Scientific Centre of RAN
bars.vl@gmail.com

Works on the dynamics of the system of the state regulation of regional development are relatively rare. However, significance of such studies is undeniable, since it allows to relate theoretical views on issues of regional development and practical steps of the state and administration authorities. In the paper, results of regulation are considered under the prism of a problem of socio-economic space asymmetry. The emphasis on this issue stems from the fact that it is a reflection of dominant values of sociality or effectiveness in the regional politics, as well as a unique measure of results of practical management measures.

It is generally accepted that these spatial differences are the basic object of study in domestic and foreign studies as well. In particular, in the proceedings of Organization for Economic Cooperation and Development (OECD), summarizing theoretical aspects and practical experience of regulation [23, p. 51] it is stated that the object of government regulation is spatial inequality of different kinds - differences in the level and living conditions, employment, rates of economic development in individual regions, business conditions, etc. One of the main purposes of government regulation is to minimize those inequalities

* The study was sponsored by the Russian Scientific Fund for the Humanities and the Murmansk oblast on the long-term target program "Development of Education of the Murmansk oblast" for 2011 – 2015" "Creating a methodology for analysis and assessment of asymmetry of socio-economic development of cities and districts of the Murmansk oblast", project № 11-12-51005a/C, with financial support from RFBR of the research project "Information and communication technologies in the regional space and their influence on social and economic development of the territories of the Russian Federation", project number №11-06-00110-a.

that may potentially lead to social tensions and conflicts that interfere with balanced and effective development of economic and social development (see, for example [24]). It is obvious the decision of this purpose is particularly significant for countries where conditions of economic and social development are very diverse.

In this study I will not invoke detailed quantitative data on dynamics of inter-regional differentiation. But there are given references to studies in which in detail with proven statistical methods the phenomenon of inter-regional differentiation of various components of the resource and infrastructural, social, financial and economic development is studied.

Complexity of quantitative representation of calculations is associated with this complex phenomenon of inter-regional differentiation. Consequently, a variety of criteria, symptoms, possible valuation methodologies (more about the problems of measuring differentiation see, for example [3]). Consequently, there is a problem of too cumbersome presentation of these results. Often, in the theoretical studies there is the use of the method – give the break on some indicators of regional development ("the best" region / "the worst" region).

However, this simplification is unacceptable, because it characterizes only scale and differentiation between two regions apart from the existence of other Russian regions. Therefore, in this article there are findings of quantitative researches with appropriate references to the works.

According to the author's opinion, since the beginning of the market reforms in Russia there are three stages of formation of the modern system of the state regulation of regional development.

The first stage covers the period 1991 – 1993. This period can be called "a period of destruction" of the existing system of management of regional development, and management approach can be called a situational approach.

Radical reforms are characterized by two trends. On the one hand, at the federal level remained a number of features of the Soviet policy of control (in the form of specialized forms of industry knowledge accumulation; prevalence of intra-industry rather than regional information, etc.) [see 16]. Obviously, this is the legacy of the previous Soviet period. On the other hand, when weakening capacity of the federal budget and control, a number of central powers were delegated down the vertical of power. As a result, there were new forms of regional coordination, characterized by the informal nature and lead to the strengthening of the role of regional governments. The result is the disordered giving to the number of regions economic benefits and privileges (the Republic of Tatarstan, Bashkortostan, etc.), leading to imbalance in the interests of the regions. This powerful trend has been motivated by a desire to preserve its territorial integrity in exchange for major concessions to the regions.

The destruction of the existing system of economic relations has led to particularly sharp deterioration in the socio-economic characteristics of the following groups of regions.

Firstly, regions with high concentrations of MIC production (due to the decline of public orders and implementation of an ill-considered diversification system) and production of consumer goods (due to liberalization of foreign trade activities).

The second group - the peripheral regions, the most important characteristic of which is their location outside the zone of economic activity.

The third group, according to the established typology, form "regions, previously received substantial funds from the federal budget for investment and subsidies for production and lost these sources of financial existence (for example, a lot of northern regions)" [17, p. 21]. We can not agree with selection of regions of the North as problematic regions in connection with deprivation of their "sources of financial existence".

This approach depreciates significance of the North to the national economy and the role of northern specifics predetermined particular pain of transition from planned to market economy. In the author's opinion, it is useful to define a third group as "the regions of the North". And the reasons for their "problem" are to be associated exclusively with specifics of the northern territories linked with the increased cost of reproduction of all types of capital and intergovernmental relations, "washing out" incomes from the territories of their formation.

Despite the proposed clarification, notes and alerts the fact that, when applied to the Russian Federation adopted in the world qualifiers, in its territory there are practically no regions that do not belong to the category of depressive ones. In the worse conditions there are the industrialized regions [19]. In the relatively better conditions there are extractive entities of the Russian Federation [21].

Thus, various conditions of adaptation in the absence of targeted measures of the state regulation were the impetus for the asymmetrical socio-economic development of the territory of the Russian Federation. A number of researchers believe that in fact it led to the consolidation of the specific feature of the Soviet economy – the imbalance of regional development. It is difficult to agree with such a characteristic of the USSR. Socio-economic characteristics of the regional development period of the Soviet Union indicate significant achievements in addressing the problem of unbalanced, asymmetrical development.

In numerous studies on historical aspects of the state regulation formation of the territorial development, it is noted that in this period all the known methods of government regulation were involved in: administrative and legal methods, tax administration, public contracts, methods of direct control (public investment, subsidies, transfers to the problem regions), etc.

Obviously, the extremely low efficiency of direct and indirect measures is explained by chaos of compromises between different levels of power and corruption. This naturally led to the consolidation of the specific feature of this stage of the system development of the state regulation of regional development - violation of the unity of the legal and economic space.

Generalization of the works by E.M. Buchwald [5], S.D. Valentey [6], L.N. Lykova [13] allows to establish a multifaceted impact of this feature on the development of managerial relations of the federal center and regions. It manifests itself in a "permanent "fiscal war" of the Russian Federation and its regions; and in total uncertainty of the question of ownership on the vast majority of objects;... in the uncertainty of the boundaries and forms of interference of the executive and legislative branches of the Russian Federation within the competence of its constituent entities...; in intrusion of transformation models to the regions without taking into account their socio-economic, socio-cultural and other specifics; in the practice of non-fulfillment by the Center of its obligations to the places" [6, p. 29].

The situation was worsened by natural reaction of the regions to not thought-out decisions of the federal center in the virtual absence of mechanisms of influence on the regions of the Russian Federation. For example, it is an attempt mentioned enough often to acquire the status of a constituent territory under the protection of "titular ethnic groups", naturally limiting the provision of social cohesion. Inherited from the Soviet Union the principle of "ethnoregional" (in terms of S.D. Valentey) administrative-territorial division caused the deformation problem. In particular, the former ASSR (the Russian republics presented as a part of Russia), having the right to the constitution and other attributes of the state power, had the right to claim on a special status; national autonomies found themselves in legal vacuum; it appeared that the socio-economic

and political status of national autonomies, not subjects of the Russian Federation, had not been elaborated on. These features are largely due to inherited from the USSR administrative-territorial division and the process of law adaptation under the specifically folding compromise relations between the central and regional political elites as well.

As a result of political and, consequently, economic adaptation, in this period were initiated by the processes of development of the phenomenon of high inter-regional differentiation, due to both objective factors (geographical, cultural) and subjective (the regulation of regional development).

The second stage (1994 – 1999) is characterized by the ordering system of state regulation of regional development, strengthening the power vertical, considerable efforts and achievements in the field of separation of powers between levels of government, etc.

Note that the analysis of specificity of the state regulation of this period in various aspects is presented in the works of A.G. Granberg [8], N.I. Larina [10], O.P. Litovka, N.M. Mezhevich [12], S.A. Polynev [16], V.P. Samarina [19], T.P. Skufina [20], a number of authors' studies [1, 2, 3]. Generalization of the results indicate that the defining feature of this stage is the transitional nature of the system of state regulation – from the "destruction" to the purposeful formation of a system of relations of the regions and the center.

For the first time a set of interrelated goals and objectives of regional development is presented in the Russian Federation Government Resolution "Main regulations of the regional policy in the Russian Federation". Analysis of these objectives makes it possible for to specify that the main purpose of the regional development of this period was the solution to the problem of deepening inter-regional differentiation of social and economic development of the territories of the Russian Federation.

Note that the priority of this goal was established by objective circumstances. Thus, according to the evaluation of A.O. Polyneva the gap between regions in average per capita industrial production reached by 1996 approximately 100 times, by the magnitude of per capita income of the population – more than 14 times, by the level of official unemployment rate – 23 times [16, p. 140]. In a number of studies was highlighted the incompetence of determination of inter-regional differentiation as swing between the "best" and the "worst" territory, leaving apart other, repeatedly proven ways to evaluate differences that take into account not two, but all the territories of the Russian Federation (see, for example [3]). However, the problem of asymmetry of socio-economic development is undeniable. That is why in the Resolution under discussion among the eight most important problems of regional economic policy was formulated a single goal – "reducing of deep differentiation of levels of socio-economic development of the regions, the gradually creating of conditions for the strengthening of their own economic base growth of the population, rationalization of the settlement systems".

Some other problems also directly related to solving the problem of asymmetry of the RF territories. For example, the task of "promoting the development and deepening of the economic reform, formation of **mixed economy in all the regions,** the establishment of regional and nationwide markets for goods, labor and capital, institutional and market infrastructure (*emphasis added* – S.B.)".

Another objective – "development of inter-regional infrastructure systems (transport, communications, informatics, etc.)" – also contributes to leveling differences between strong and less developed regions covered by infrastructure projects.

The next objective – "to provide state support for regions with difficult economic conditions, which require special methods of control

(regions of the Arctic and the Far North, Far East, the border regions, etc.)" – is aimed at consideration of regional differences in the possibilities of adapting the territories of the Russian Federation to formed market relations.

Note that in the medium-term program "Reforms and development of the Russian economy in 1995 – 1997" there was given typification of problem regions for which it is necessary to conduct a special regional policy. It is obviously, taking into account of these regional characteristics in forming and implementing regional policy was also a guarantee of reducing regional socio-economic disparities.

During this period the most important form of regulation of regional development towards the realization of these goals were federal programs of socio-economic development. According to the A.G. Granberg more than 75% of the territory of the Russian Federation has been involved in approved federal programs for regional development. As it is known, the results of realization of the federal programs in Russia have been extremely low.

The first reason for this is obvious – underfunded programs (according to experts, the overall level of funding did not exceed 20% of planned volumes). According to experts of The Council for the Study of Productive Forces, the second reason lies in the shortcomings in the programs themselves. Typical shortcomings of programs include the following ones. Firstly, the selective implementation of the program activities, that changes the original plan, structure and ultimate goals. Secondly, there is the lag in the creation of mechanisms for the implementation of programs, particularly financial. Thirdly, the lack of coordination between the federal target programs, carried out in parallel in a certain territory. Fourthly, there is the absence of fixed rules of allocation of scarce financial resources between the programs. Fifthly, the lack of control over the use of budgetary funds allocated for the programs and the conformity of the results to the program objectives [7].

In addition to these, it should be noted weak interaction between the programs both horizontally and vertically, the lack of a clear link between objectives, targets, means of specific program documents to the priorities in the field of regional policy at all levels.

Another feature of this period was the introduction of a new mechanism of financial relations between the federal center and territories of the Russian Federation. Its essence was in the formation of the Fund for Financial Support of Regions (FFSR), distributing federal aid for regions on the basis of established special procedures. You can completely agree with that "embedded in the practice the mechanism of fiscal adjustment has failed to provide equal opportunities to strengthen the revenue base of the Federation territories, radical improvement of the financial situation of the majority of the country. Its major shortcoming is the ignoring of the sharp territorial differentiation of the needs of the regional budgets ..." [16, p. 141]. That is what led to constant changes in the procedures for calculating the distribution of funds to the regions of Russia.

However, it must be said - by the end of the century the problem of inter-regional differentiation has not been substantially transformed. Moreover, in most studies [16] there was observed its steady growth during the period under review. However, the author's calculations on a wide range of socio-economic indicators and evaluation criteria indicate a lack of a growth trend of inter-regional asymmetry of development [1, 2, 3].

We believe the most notable element of the formed model of intergovernmental relations was, in fact, unitary nature of regional policy. This new character was explained by the increase in importance of solving the fundamental problem of the declared objective – to achieve the overcoming of the tendency of deepening the differentiation in levels of economic development and the current socio-economic situation of the Russian regions.

In particular, adopted in 1998 the concept of reforming inter-budgetary relations in 1999 – 2001, even more fixing the unitary nature of regional policy, defines the main purpose of FFSR – alignment of fiscal provision of the RF regions.

Note, in this regional alignment policy there is a number of contradictions. Firstly, as E.M. Buchwald rightly points out, "activization of the role of regional link of the Russian economy in terms of ensuring its stabilization and long-term recovery requires the overcoming of trends of dependency that will be inevitably formed by the budgetary situation of infinite endowment, and gain of a direct interest of the territories of the Russian Federation in the mobilization of domestic resources for covering their essential needs, including a major share of costs of the social nature" [5, p. 71]. For example, it is the arrears of wages which indicate on the typicalness of such a position of regional authorities.

The active solution to this problem by federal authorities, particularly in 1998, led to an increase in targeted cash transfers (to pay off debt in 1998, the Finance Ministry sent 26.2 billion rubles) and loans for the repayment of arrears of wages (in 1998 total budgetary loans were 2.5 billion rubles, written off debts for loans amounted to 4.1 billion rubles) [5, p. 73].

However, the studies of E.M. Buchwald indicate that in practice the situation with the increase in debt of almost all the regions to workers of the budgetary sphere was reproduced in the subsequent period. This is due to the adoption of unfeasible budgets by the RF regions, diverting funds to other needs, as well as artificial support of low proportion of spending on wages in the total regional costs (in Russia they were at 16.8% in the average according to 1998).

The situation is that the alignment of conditions of social-economic development of the regions by the federal government deprived the authorities of the territories the necessary independence, and as a consequence, the regional authorities declined all responsibility before the public in the case of unfavorable socio-economic development in the regions.

In view of these contradictions there was traced inconsistency in the basic practical steps of the regional policy. Most of the research teams associates these differences with the lack of clear conceptual beginnings of development of Russian federalism.

Without denying this important cause, we believe that the incompleteness and inconsistency of national and state reforms in the regional sphere associated with a large number of objective constraints of the federal government activity.

The first constraint should include the general economic situation – the economic crisis, fiscal crisis (aggravated in summer of 1998), high inflation, etc.

A significant outflow of capital abroad shows the growth of destructive tendencies in the economy and financial sector. According to estimates of "Expert Institute" on the basis of payment balance of the Russian Federation on the sum of three items (net errors and omissions, granted trade credits and advances, the change in debt in not timely received currency and ruble receipts and outstanding import advances) capital exports in 1996 amounted to 27,904 million dollars, in 1997 – 26,061 million dollars, in 1998 – 23,342 million dollars, in I quarter of 1999 – 3,665 million dollars. According to the estimates of the rating agency Fitch IBCA, the export of capital from Russia in 1993 – 1998 reached 136 billion dollars [9]. It was during this period that is fixed the effect of implicit capital flight in the form of increasing share of foreign investment by domestic enterprises, including public corporations.

The direct impact of the financial crisis led to a dramatic change in the ratio of ruble revenues to the regional budgets and the size of foreign currency obligations to foreign creditors. The problem was aggravated by failure to refinance debt obligations of the RF subjects by issuing securities in connection with consistent

leaving of investors from the market of sub-federal securities. The deterioration of the RF subjects was complicated by the fact that the loans of commercial banks 1998 – 1999, intended for regional investment development, virtually turned into an instrument for the refinancing of debt obligations, leading to the formation of a kind of financial scheme. For example, in May 1998, the Leningrad oblast obtained a loan of $ 50 million dollars for investment purposes. As a result, 93% of the loan was spent on repaying current liabilities [14].

The growth of losses from enterprises, especially in 1998 – 1999, inevitably led to reduction of state and federal revenues. Note that in this period, the income tax played a crucial role in the formation of revenues of the regional budgets. For example, the budget of the Nizhny Novgorod oblast in 1998 was performed by 88% of the plan, the Republic of Bashkortostan – 82%, the Voronezh oblast – by 79% (and this in the beneficial effects of inflation on the execution of budgets).

Moreover, investigations of A. Lyasko demonstrate that the regional authorities were actively using the mechanisms of changing legislatively established ratio of tax revenues to the federal and regional center (at the time about 50:50) at the expense of the possibility of making parts of payments in non-monetary form to the budget of the regional level, which was strongly banned until September 1998, with offsetting of debts at the federal level.

For example, in 1998, in the Chelyabinsk oblast revenues in the federal budget declined compared with 1997 by 38%, and regional – to only 10% [14]. In fact, this confirms the assertion of S.D. Valentey, made in 1996, about the existence of a "permanent" fiscal war" of the Russian Federation and its regions" [6, p. 29]. However, we believe, due to worsening economic conditions for the territories of the regional economy and relatively small federal transfers payments in non-monetary form between enterprises and regional budgets was a logical and cost-effective event.

The second constraint is associated with redistribution of the real power of the federal government in favor of the territories of the Russian Federation in the previous period.

The third constraint is the following. The growing problems of socio-economic development of the Russian regions, industrial and investment spheres suggests that the liberal approach to reforms for 1993 – 2000 did not prove itself, that is explained by the virtual absence of market mechanisms.

These constraints and uncertainty of many basic provisions of regional policy and management, apparently, were the reasons that in spite of taking the task of reduction of inter-regional differentiation to the priorities of management, at this stage it was not possible to launch a comprehensive program of leveling the socio-economic status of regions. The task of forming a coherent program of raising the depressed Russian regions was also left unresolved. Statistical studies show [1, 2, 3, 18] that in the aspect of inter-regional differentiation, a fundamental feature of this period was the strengthening of regional factors that affect the socio-economic asymmetry of the RF development.

The third stage in the formation of the regulatory system for regional development is the period from 2000 to the present. Highlighting of 2000 as the beginning of a new stage is linked to the sharp change by the RF President of the approach in the management of territorial development, aimed at strengthening the vertical of power at the expense of the concentration of federal power and financial resources, unification of relations between the region and the center, the increased responsibilities of regions. It is rightly considered that the greatest achievement of this stage was a clear division of powers between the federal authorities, authorities of the RF territories and local authorities on the base of phased adoption of laws.

Thus, the federal law from July 4, 2003 № 95-FL "On Amendments to the Federal Law" On general principles of organization of

legislative (representative) and executive authorities of regions of the Russian Federation" has established a confidential list of powers of public authorities of the Russian regions on the subjects of joint jurisdiction for which implementation their own income is permanently assigned; it is found that the alignment of budgetary provision is made by subsidies from the Federal Fund for Support of Regions of the Russian Federation.

We can completely agree with V.A. Cherepanov [22], A.V. Bezrukov [4] that for the effective implementation of planned changes of a federal reform to avoid counteraction at the regional level there was a need to strengthen dependence and direct reporting of regional governments to the federal center.

This predetermined the adoption of the Federal Law dated 11 December, 2004 № 159-FL "On Amendments to the Federal Law" On general principles of organization of legislative (representative) and executive authorities of the regions of the Russian Federation" and the Federal Law "On basic guarantees of electoral rights and the right to participate in the referendum of the citizens of the Russian Federation". They canceled the election of the Chief of the region of the Russian Federation, defined empowerment of senior official of the region of the Russian Federation by the legislative (representative) body of the region of the Russian Federation by the representation of the President of the Russian Federation; established a procedure for replacement of the head of the RF region, greatly limiting the powers of the legislative (representative) body of the region of the Russian Federation; simplified the process of dissolution of the legislative (representative) body of the region of the Russian Federation; determined that only in case of distrust to the RF President and for the improper performance of duties only the President has the right to strip a senior official of the RF region of power.

It should be noted that the objective of state regulation, which consists in achieving social and economic equality of the territories, had a special position in the regional politics in the early period of this stage.

This is evidenced by the adoption in 2001 of the Federal Target Program "The reducing of disparities in the socio-economic development of regions of the Russian Federation (2002 – 2010 and till 2015)". However, despite the obvious importance for the economic and social development of the program that uses the interests of nearly half of the regions, according to M.M. Minchenko, the planned funding for it in 2003 was 7 times less than the program of development of Tatarstan and Bashkortostan [15].

We believe that this is the result of the transition from the policy of "equalization" (realizing the goals of social equality) to "effective" policy which primary goal is development of competitive regions in the global economy and which guides other regions to the forces of self-development. As conceived by the Government on the surface of the regional events this new goal is to be realized in the form of maximizing the production of GRP.

In the field of intergovernmental relations further increase of the unitary principle is observed. Reducing resource base of the regions limits the ability of the regions of the Russian Federation to use the mechanism of self-development. One of the main reasons for this is to set of the Government for reduction of the share of consolidated budget expenditures in GDP and territorial budgets in tax revenues of the consolidated budget of Russia.

The second reason is connected with the transfer of most collected taxes from the regions in the federal government (VAT, royalties, excise duties on tobacco products, etc., along with the abolition of sales tax, highway tax, etc.).

The third cause is further consolidating of the duties for regional budgets in the social sector [15]. Studies show that in the terms of

full self-financing by the regions of the sphere of public social services in 2005 – 2006 the regions faced with a number of additional problems caused by unequal economic opportunities of the regions. There has been a growing shortage of own financial resources in the municipalities, respectively, increased their dependence on the budgets of higher levels.

In many ways, these factors led to the unresolved problem of inter-regional differentiation, particularly on social indicators. An increase of the level of depression in the Russian Federation against the background of strengthening the federal government gives rise to speculation that "one of the hidden problems of the campaign on creating new regions of RF by combining "depressed" ("weak" or "backward", "problem", etc.) regions with relatively affluent ones is statistical adjustment of territories. Indeed, with simple administrative measures we can achieve that differences between the main socio-economic parameters of 25 – 40 enlarged (and, simultaneously, "averaged") regions will be 1.5 – 2.0 times less than the difference between the original 89 subjects of the Russian Federation" [11] . However, in the opinion of the author, the main reason for combining regions with the titular nations is the leveling of the possible problems of separatism.

We believe in the current stage of reforms in progress, it is prematurely to evaluate results, but facts of the regions' development indicate that the current policy does not create the underlying conditions and prerequisites for self-development of the regions. This demonstrates the unrealized goal of effectiveness be the government, aimed at developing regional competitive structures and activization of internal factors of socio-economic development. The problem increase of inter-regional socio-economic differentiation draws attention, indicating a lack of implementation of a goal of social equity in the regional aspect.

Summing up the results of these stages of reforming the state system of regulation of regional development, it must be noted that none of the goals of reforming has not been realized, despite the fact that at different stages the state involved almost all known to world experience of industrialized countries, methods of regulating the development of regional systems. This indicates serious theoretical and methodological miscalculations that lead to errors in management practices.

For example, if during the implementation of the policy of "alignment" the active regulatory role of the state was necessary, there was the opposite – increased independence, weak dependence of the regions on the federal government, liberal forms of reforming.

In the modern period of the regional policy aimed at strengthening forces of self-regulation in every region of the Russian Federation, the regions require financial and power capabilities for searching, recording and development of their specific socio-economic potential. In practice, there is the opposite – reducing its own resource base of regions and strengthening the control influence of the center. As for the problem of asymmetry of socio-economic development, its acuteness remains the same.

Taking into account some uncertainty of theoretical bases of state regulation of regional development, it seems appropriate in analyzing and developing proposals on managing regional systems not to go from theoretical postulates to attempts to explain the practical results of government regulation of regional development. We consider it is necessary to go from real indicators to research of their theoretical explanation, and then – to development of practical proposals for the adoption of cost-effective solutions.

References

1. Baranov, S.V. Investigation of inter-regional differentiation / S.V. Baranov // Economics. – 2010. – № 4. – Pp. 113-118.
2. Baranov, S.V. Statistical evaluation of the asymmetry of economic development of the North and non-northern part of Russia / S.V. Baranov // Problems of Statistics. – 2010. – № 4. – Pp. 44-49.

3. Baranov, S.V. Technologies of evaluation of heterogeneity of socio-economic development of the Russian Federation: problems and solutions / S.V. Baranov // Economics of modern Russia. – 2009. – № 3 (46). – Pp. 48-55.
4. Bezrukov, A. Reforms and the fate of Russian federalism / A. Bezrukov // Federalism. – 2005. – № 3. – Pp. 115-116.
5. Buchwald, E.M. Perspectives of Russian Federalism / E.M. Buchwald // Problems of Forecasting. – 1998. – № 4. – Pp. 70-77.
6. Valentey S. Russian reforms and Russian federalism / S. Valentey // Problems of Forecasting. – 1996. – № 1. – Pp. 23-36.
7. Granberg A.G. Basics of the regional economy / A.G. Granberg. – M.: Higher School of Economics, 2000 – 495 p.
8. Granberg, A.G. Economic space of Russia: transformation at the turn of centuries, and alternatives of the future / A.G. Granberg // Society and Economy. – 1999. – № 3, 4, 5.
9. The investment climate in Russia (the report of the Expert Institute) // Problems of Economics. – 1999. – № 12. – P. 5.
10. Larina, N.I. A paradigm shift in regional politics / N.I. Larina // Region: Economics and Sociology. – 2000. – № 4. – Pp. 3-22.
11. Leksin, B. "Economics doubling" and its regional implications / B. Leksin // Federalism. – 2005. – № 3. – P. 11.
12. Litovka, O.P. The reform of the territorial and political structure of the Russian Federation: analysis of the situation and some practical advice / O.P. Litovka, N.M. Mezhevich // North West Economics: Challenges and Prospects. – 2001. – № 2. – P. 10-18.
13. Lykova, L. Some problems of fiscal federalism development in Russia / L. Lykova // Federalism. – 1996. – № 1. – Pp. 37-57.
14. Lyasko, A. The economic crisis and its implications for the budget system of the Russian regions / A. Lyasko // Problems of Economics. – 1999. – № 3. – P. 27.
15. Minchenko, M.M. Actual problems of resource provision for territorial development in the Russian Federation / M.M. Minchenko // Problems of Forecasting. – 2004. – № 3. – P. 79.
16. Polynev, A.O. Inter-regional economic differentiation: methodology of analysis and state regulation / A.O. Polynev. – M.: Editorial URSS, 2003. – Pp. 136-137.
17. Regional development: the experience of Russia and the European Union / ed. A.G. Granberg. – M: "Publishing House "Economics", 2000. – P. 21.
18. Samarina, V.P. Key elements of regional policy of cooperation between the state and business / V.P. Samarina // The North and the market: formation of economic order – Apatity: Cola Center RAS. – 2007. – № 1 (18). – Pp. 28-34.
19. Samarina, V.P. Assessment of inequality of social and economic development of the Central Chernozem economic region / V.P. Samarina // Regional Economics: Theory and Practice. – 2008. – № 8 (65). – Pp. 33-38.
20. Skufyina, T. Characteristics of socio-economic development of the regions of the Central Chernozem region / T. Skufyina, V. Samarina // Federalism. – 2008. – № 1. – Pp. 55-66.
21. Skufyina, T.P. On the development of the North of Russia / T.P. Skufyina // Economics. – 2010. – № 4. – Pp. 109-113.
22. Cherepanov, V. Federal reform in Russia / V. Cherepanov // Federalism. – 2005. – № 3. – Pp. 98-102.
23. Tendencies regionales – 1998. Syntheses / INSEE. – Paris. – 1999. – № 22. – P. 32-34.
24. Wadley D. Restructuring the Regions: Analysis. Policy Model and Prognosis / OECD. – Paris, 1986. – P. 174.

UDC 339.924(470.6)

Ways and methods of economic integration of the North Caucasian regions

The article deals with the possibility of further full-fledged economic integration of the North Caucasian Federal District subjects into the Russia's economic space and the possibility to include them in the system of interregional and international relations and large strategic projects. The author uses the techniques and researches of the state scientific institution "Council for the Study of Productive Forces under the Ministry of Economic Development and Trade of Russia and Russian Academy of Sciences" and her own methodological groundwork. It is proved that priority development of transport, fuel and energy sectors, creation of industrial clusters, wholesale agricultural markets, scientific and educational centers should be the basis for economic integration of the subjects of the North Caucasian Federal District.

North Caucasian Federal District, economic integration, innovative development, production and social infrastructure.

Svetlana A.
LIPINA
Ph.D. in Economics, Leading Scientific Associate of Council for the Study of Productive Forces under the Ministry of Economic Development of Russia and the RAS, Professor of the Institute for International Economic Relations
s.lipina@mail.ru

It is fundamentally important and urgent to include the North Caucasian Federal District in the system of interregional and international relations and large strategic projects, as well as the development of technology infrastructure in order to integrate the North Caucasian District into the Russia's economic space. The solution of this pressing problem – creation of economic space and economic cooperation of the North Caucasian respublics – requires the definition of "growth points", the characteristics of the economic potential, institutional factors and administrative resources for stable and sustained development of the territory, as well as the defenition of the respublics' place, role and rating.

The basic principles of economic integration can be the following:

- provision of economic (and not just economic) security in the region, because there are treats not only in economics but also against the ethnic group in the region;
- overcoming of the national economic complexes' territorial isolation and creation of the terrotories with the developed infrastructures and a high level of entrepreneurial activity (agricultural holdings, international transport corridor, product groups, nodal production units) which could link location and development of the productive forces in the region to one schema;

➢ improving innovation economy of the respublics: the formation and development of industrial infrastructure of the economic complex (transport corridors, intermodal terminals, information and computer networks, telecommunication systems, etc.);

➢ creation of the common civilization, competitive market at the inter-regional level and the global market at the level of international economic relations [6].

Thereby the economic integration of the North Caucasusian subjects should be started with the priority development of the key infrastructure sectors such as *transport, fuel and energy complex*, which are the strategic guidelines of the "growth points", as well as with the development of the potential clusters in the region.

The lack of attention to these key regulating factors of the integration process can cause uneven distribution of the modernization processes in the region and a departure from the construction of a single economic space in the Russian Federation. In this regard, ther is a pressing question about each respublic's potential to provide growing volumes of foreign trade and international transit with transport [6].

It is important to define *the main development priorities*, catching trends and benchmarks of the neighboring regions, which determine their future economic image:

• creation of the common civilized regional market which will be competitive not only in the trans-regional exchange, but also in the international economic relations of the world market;

• creation of a support network linking the economic complexes of the Russian Federation into the coherent regional economy (agricultural holdings, international transport corridor, product groups, nodal production units) which represent the large-scale modular structures of its "supporting" framework in the layout of productive forces of the South of Russia and the whole country;

• development of industrial infrastructure of the economic complex (transport corridors, intermodal terminals, information and computer networks, telecommunication systems, etc.) [6].

Priority development of the key infrastructure sectors of fuel and energy complex *(it is a petrochemical cluster on the basis of the scientific and industrial machinery)* requires the government support measures which are specified in the Strategy of socio-economic development of the North Caucasian Federal District for the period till 2025 (it was approved by the order of the RF Government from 06.09.2010 № 1485-p) (hereinafter – the Strategy) [3].

In order to form a petrochemical complex or a cluster in the North Caucasian Federal District it is necessary to go over the survival period to the renewal and development period which is characterized by the complete modernization of the equipment that is ecologically friendly and based on the most modern technologies of deep processing of raw materials, where oil and gas from the Northern Caspian will become a resource base for hydrocarbons commercial production in the Russian sector of the Caspian Sea.

Oil and gas resources are strategically important for the region; they are the base for reconstruction and development of chemical, oil and gas industries determining the economic prospects and efficient development of the Chechen Republic and the most of the North Caucasian republics. Oil and oil products revenues can form the republican budget revenues and attract the investment, which would raise oil and gas production and prevent the national republican economy from disaster. At the same time the construction of the major oil-refining plant by Rosneft will turn the republic into one of the advanced oil and petrochemical centers in Russia, as well as it will help to create a gas and petrochemical cluster with a scientific base in Grozny. Chechnya has a chance to become the leading gas and petrochemical center in Russia.

It is possible to obtain the funds of Russian oil companies, as well as national and international environmental funds to realize this idea. This includes the restructuring of the oil production management system, rehabilitation of petroleum products and liquefied gas selling, reorganization of oil refining, related petrochemical organizations and auxiliary machinery plants. In essence, we should talk about the project of the local industrial and scientific-educational petrochemical complex or the cluster which would unite the whole oil and gas processing complex of the North Caucasus [1, 4].

As the top-priority projects we may recommend to develop a network of small enterprises which would produce and process oil, anthropogenic oil products and oil mud waste products and turn them into asphalt, mastic, soft roof, paint, etc. An ecologically friendly oil and gas processing project for the Northern Caspian can become a starting point to form the oil and gas cluster. This project is based on the new technology; it is implemented by Lukoil and an oil refinery in Chechnya.

Stavropol plants processing refinery's waste into synthetic resins, polymers, organic monomers, olefins, aromatics, and pharmaceuticals would continue to develop the petrochemical sector. Republican newly reconstructed chemical plants would produce lacquer and paints, consumer products, plastics and fiberglass pipes for housing and communal services so the republics would have a special position in the market in the South of Russia.

Scientific innovation support of this cluster, training and retraining of specialists for the needs of the cluster would be based on the existing scientific base (specialists from CJSC "GrozNII", OJSC "Grozneftegaz", prominent scientists of RAS, Institute of Sciences of the Chechen Republic and many others) and oriented to inter-regional cooperation.

The integration potential of the Northern Caucasian national economies needs to solve not only the most important strategic objectives of the economic security (and not just economic); it needs to join republican administration efforts to form a competitive civilized market within the scope of the regional exchanges.

Therefore, it is important to develop the special economic zone of industrial type within the framework of the industrial clusters in the republics, which is guided by the development of mechanical engineering (car assembly, agricultural equipment, precision instrument engineering) and high-capacity regional market and which is specialized in high-tech production in order to produce competitive products and the development of interregional and international integration. It would help to reduce the highest unemployment rates in the Russian republics.

The experience of other Russian regions in successful development of the integration processes in the North Caucasian republics is limited in application. It requires to be adopted not only to their current economic opportunities and needs, but also to their national and historical features, as well as to their territorial and inter-settlement problems.

However, it is possible if the Northern Caucasian authorities consolidate their efforts and cooperate with the research centers. They need to create favorable economic environment and support for the creation of wholesale markets for agricultural products delivery. The research centers must provide the agribusiness in the region with scientific support, train and retrain the specialists and invest the companies.

The large number of self-sufficient population with historically established labor skills *increases the potential for revival and development of agricultural production* in the North Caucasian region. Favorable climatic conditions and fertile black earth can join together all the efforts to develop the agricultural complex of the North Caucasian republics and Stavropol Krai.

Despite some positive trends which are stipulated by the high-yield farming in the sphere of cash grain production, agricultural

small business in Stavropol Krai faces the same problems as the North Caucasian republics. They are low ratio of commodity output to the total output, underdevelopment of contractual relationships with the processing enterprises, price disparity between the industrial and agricultural products.

Recently, the role of cooperatives is increased in the mixed agricultural economy of Stavropol Krai. Stavropol farmers are quickly organized on a voluntary basis into cooperatives and associations not only for joint cultivation of their land, but also for the processing of agricultural products with a single financial and material balance and a common market infrastructure.

However, cooperative movement in the North Caucasian republics is in the initial stage of the organization. Under these conditions, Stavropol agribusiness can become an "engine" for recovery of their own economy and the economy of the nearby North Caucasian republics. It is possible to join the interests on the basis of partnership agreements by stepping up of the agricultural integration process and by the providing of the balanced organizational, economic and technological activity of the economic systems that integrate production and processing of agricultural products. Currently, a variety of agro-industrial organizations such as agricultural companies, agricultural holdings, scientific-production associations, large corporations are more prevalent in agriculture.

According to the experts, the most promising forms of integration between Stavropol Krai and the Northern Caucasian republics are the sectoral agricultural holdings, where the producers of raw materials are combined around the plants according to their economic interests, keeping their own balance sheet. They act as parent enterprises; they pool production in their hands, as well as product processing and marketing. Also they finance and support primary producers respecting the interests of all structures [1].

The Federal Law of 29.12.2006 № 264-FL "On the Development of Agriculture" defines the strategy of agricultural development for several years [5]. It focuses on the creation of the industrial unions. Stavropol industry is based on the food industry. There is a chain of workshops and mini-factories which produce milk, cheese and sausages. Several enterprises process plant oilseeds. There are also sugar and canning factories. The total power of the food and processing industries allow population not only to cover the requirements but also export products outside the region. The existing demand for raw materials can be supplemented by the deliveries from the nearby North Caucasian republics. The suppliers are the producers of environmentally friendly crops and livestock products of high quality which are safe for consumption. They have the agreements with the governments of the republics about the price level of raw material purchases.

Livestock business is a leading sector of agriculture in the North Caucasian republics and Stavropol Krai. It is oriented not only to meet the food needs of the population, but also to provide the light and food industries with raw materials. Cattle breeding and fine-fleeced sheep breeding are the most important sectors here. High-quality wool and tanning materials are more expensive today than subsidized export wool. The problem of wool and tanning materials distribution is actual not only in Stavropol Krai, but also in the North Caucasian republics. Therefore, sheep breeding has the prospect to become a profitable and competitive sector in the establishment of the republican centers which would purchase raw materials in bulk and supply them to the wool-washing and tanning factories. The sectoral agricultural holding companies can solve several marketing problems and find a rational approach to management. A single agricultural structure will facilitate consolidation of financial and industrial potential; it will reduce production costs and tax burden by reducing of the intermediary links.

It is difficult for the processing plants to ensure regular deliveries of raw materials for processing. Raw materials costs are so high, that's why it is necessary to form a structure of closed-circuit production, which has close-farm linkages in combination with individual autonomy and economic responsibility; that is it's necessary to create such production chains, which will allow us to process local raw materials and ensure storage and sale of the final products.

Thus, Stavropol industry can revive if there is a regional monopoly for purchasing and processing of raw materials. Then it can raise livestock farms in the North Caucasian Federal District.

Improving of the production technology in the dairy and cheese industry in order to increase the quantity and quality of milk (primary processing and purchase incensement) is an acute problem. It is also important to adopt the technology of complex and zero-discharge treatment of agricultural raw materials with the effective use of recoverable resources. Due to the lack of funds the most valuable raw materials such as skim milk, buttermilk, whey, food bones and others are used often as animal feed and the worst products are poured out into the bodies of water.

As a consequence, it is possible to form a large scientific and educational industrial association which is based on the agricultural research potential, as well as it's possible to create the butter and milk agricultural holding and the union of farmers, which would develop the target programs for intensified processing of agricultural production. Indeed, the main problem is not in agricultural production, the difficulty lies in storage and distribution. The agricultural complex effectiveness will increase if they mend fences between the consumption centers. Agricultural holdings can be the most appropriate form of agriculture rebirth if the republican authorities cooperate with the agricultural producers.

"These farms are the unions that represent a cooperative form of multi-sectoral and inter-regional organization of production operating under the control of a single management body"[1].

Stavropol Krai is one of the major regions of grape growing and winemaking in Russia. There is a large vine complex with the full technological cycle of production, processing and marketing of grapes, wines and liquors here. It is possible to create an agricultural association in future. It would secure all the vineyards for itself and buy raw materials at the farm enterprises and personal subsidiary plots on a contractual basis with the neighboring North Caucasian republics. It will not only improve their material and technical basis, but reduce costs and lead to increase production efficiency.

As the South of Russia is the only region where rice is produced, then the rice producers can join a newly established non-profit partnership "South Rice Alliance" which will create more favorable conditions for them. During the monopolization Stavropol and North Caucasian rice producers will be able to control pricing. Also they will be provided with stable procurement.

The proposed changes in the agricultural sector will not only contribute to the growth of productive forces and transfer of agriculture to innovative high-tech production, but also they create a single market area in the North Caucasian region.

They plan to create the new North Caucasian Federal Okrug and set up the special economic zones (SEZ) in this territory. According to the authors, the main idea of the SEZ in the disputed territories is to create an economic mechanism, where the investors from different ethnic diasporas will work.

[1] Zhilokov A. Large marketability as a factor of effective use of the regional production potential // Regional economy: theory and practice. – 2007. – № 10 (49).

They will link the economic complexes of the republics into the integrated economy by their production infrastructure (transport corridors, intermodal terminals, information and computer networks, telecommunication systems, etc.) and create additional opportunities for economic integration of the subjects.

The other important and positive effects of integration are the joint efforts and the creation of the local management company "Resorts of the North Caucasus". It has the significant benefits for employers who invest the North Caucasian tourist attractions. It is a really good beginning; it can facilitate the integration of the resort and tourism business in the region, support the investment programs and form a single cluster of ski tourism – from the Caspian Sea to the Black Sea, combining the region into a single transport and energy infrastructure. But it should be noted here that the chronic instability in most of the republics causes alarm. That's why a lot of tourism projects seem to be out of touch with reality [2].

It is important to develop the areas that are appropriate for the district. They are the maximum diversification of industry and agriculture, the development of activities that demonstrate the greatest efficiency and enhance competitiveness of national economies and create jobs. Each republic of the North Caucasian Federal District has its own peculiarities and economical structure.

Historically, the economic complex in North Ossetia has a large share of metal production. There are two reoriented plants in Dagestan – "Dagdiesel" and "Dagelektroavtomat". They can produce engines for tanks and tractors, as well as tractors for viticulture. Investment projects in woodworking and light industry can be relized through private investment. Local non-metalic reserves will provide a good basis for developing of the building material industry. It facilitates the cross-border movement of resources and lead to increased levels of inter-regional integration.

Today, the small business tries to implement itself in all the sectors of economy. Its share in national gross regional product is growing. If they support different forms of entrepreneurship such as credit cooperation, micro-financing, guarantee funds, business incubators, they can stimulate new companies, new forms of interaction. So there will be "free flowing" of resources (information, human, financial, etc.) between the republics.

There is a necessity to develop and realize a system of financial and credit support because of the mixed economy. The author thinks that it will allow us to use small and medium-sized business not only to increase employment and improve the material conditions of the population in the republics, but to create conditions for development of the priority ethnic and economic specializations of the municipalities which are located in the territory of the republics as the tools for cross-border cooperation in the ethno-tourism development.

The North Caucasus is necessary to be fully integrated into the information and the humanitarian space of Russia. As for political integration, we must understand that is not only a political issue for the republics, but social, humanitarian and human question. Integration activity of the republican population may become an important factor in stabilization of the situation in the region.

References

1. Lipina, S.A. The North Caucasian republics. Priorities for agricultural development / S.A. Lipina. – M.: URSS, LCI, 2008.
2. Lipina, S.A. The strategic priorities of the socio-economic development of the North Caucasus. Ways and means to achieve them / S.A. Lipina. – M., 2010.
3. Lipina, S.A. Prospects for the formation of tourist and recreational complex in the Northern Caucasus / S.A. Lipina // National interests: priorities and security. – 2010. – № 34 (91).

4. Strategy of socio-economic development of the North Caucasian Federal District for the period till 2025: resolution of the RF Government from 06.09.2010 № 1485-p.
5. Strategy of socio-economic development of the Chechen Respublic for the period till 2025: resolution of the Chechen Government from 09.11.2010 № 202.
6. On the Development of Agriculture: The Federal Law of 29.12.2006 № 264-FL.
7. Lipina, S.A. Transport system of the North Caucasian region: security and development. Report of the International Conference "Modern Technologies of Safety", forum "The international community against the globalization of crime and terrorism", 26.05.2010 / the State Duma.
8. Lexin, V.N. State and Regions: Theory and practice of state regulation of the territorial development / V.N. Lexin, A.N. Shvetsov. – The stereotype. – 2009.
9. Kovaleva, V.D. Modeling of the strategic development of the South Federal District / V.D. Kovaleva; Stavropol Institute of Economics // Regional economy. – 2007. – № 47.
10. Mitrofanov, I.V. Target-oriented approach territory management: an analysis of contemporary national experience / I.V. Mitrofanov // Regional Economics: theory and practice. – 2006. – № 6.
11. Ovchinnikov, V. Socio-economic problems and stabilize resources in the North Caucasus in the new geo-economic formate / V. Ovchinnikov // National interests and priorities of safety. – 2010. – № 12 (69).
12. Zhilokov, A. Large marketability as a factor of effective use of the regional production potential / A. Zhilokov // Regional economy: theory and practice. – 2007. – № 10 (49).
13. Yarasheva, A.V. North Caucasus: Problems of economic integration. The effectiveness of economic management in the agricultural enterprises / A.V. Yarasheva // Economics, management. – 2004. – № 10. – Pp. 69-73.

BRANCH-WISE AND REGIONAL ECONOMY

UDC 338.984

Assessment of the regions' socio-economic development levels
(in the case of the Komi Republic, the Arkhangelsk and Vologda oblasts)*

The author made an attempt to enhance the reliability of indicators that reflect the regions' development levels and their analysis linkage with actual problems of socio-economic policy and spatial integration. In order to increase the objectivity of assessing the level of the regions' socio-economic development it is proposed to use indicator of value added per person employed taking into account the regional economy. The level of social development, according to the author, most aptly reflects the ratio of per capita income with the subsistence minimum. This, ultimately, will determine the vector of regional policy in the direction of social justice and sustainable development. The paper agreed the need for harmonization of the Russian Federation subjects and the formation of inter-regional programs of development of "transit" infrastructure "related" municipalities.

Spatial standards, economic dimensions, social stratification, consolidation of resources and concerted action.

Vitaliy N.
LAZHENTSEV
Corresponding Member of RAS, Doctor of Geography, Professor
Chief Scientific Associate of the Institute of Socio-Economic and Energy Problems of the North KS Center, UD of RAS, RAS adviser
askhabov@presidium.komisc.ru

Introduction

Comparison of countries' and regions' development levels is a topic the history of which is as old as socio-economic geography, and government statistics. Prerequisites for comparisons were at first informative and analytical, then practical to regional policy and corporate strategies formation. These general grounds of comparison are now added with the following important issues:

- territorial scale search, appropriate for the requirements of sustainable development;
- creating a system of indicators that present the financial results and social progress reliably;
- the need to enhance spatial integration within Russia, including in the framework of emerging macro-and mesoeconomic structures.

* On the basis of the report at the VI International scientific and practical conference "Strategy and tactics of socio-economic reforms implementation: regional aspect" (Vologda, 6 – 8 October, 2001).

If the organization of social ties and relationships is considered from the perspective of sustainable development of countries and regions, it is quite legitimate to ask the following question: what kind of territorial and economic system possesses the greatest stability? In our opinion, it is the one that matches (or nearly matches) the content of the standard (ideal) socio-economic area [3, 4, 6]. The Dvina-Pechora region is "nearly matching", and therefore it is a supporting unit of macroeconomic zoning. I should note that regional policy of most states is based precisely in the areas not designed as administrative units [7]. In a region that is not endowed with the rights of administration, the problems of sustainable development are implemented through the joint efforts of the central (federal) and regional governments, municipalities and businesses within the scope of targeted programs, and general land use planning.

The second prerequisite to the actualization of assessing the state and levels of regional development is related to understanding the essence of statistics and bringing it into line with modern social and economic processes. Here it is appropriate to refer to the Report of the economic performance and social progress assessment Commission, founded on the initiative of French President Nicolas Sarkozy in 2008 [2]. Critical attitude to a number of economic indicators of production growth (including GDP) and a shift of emphasis on social aspects of life, noted in the report, cannot pass unnoticed by the Russian Statistics Service and Economic science.

The third position is actualizing the problems of internal Russian spatial integration; the solution is elevated to national security. Integration as the final stage of all other forms of social organization of the economy – concentration, specialization, combining and cooperation – is useful for practice in a consistent sequence of steps: first vertical link on the technological basis, then its horizontal adjustment on the basis of consolidation of the territories' potential for the solution of common business problems, and further development and implementation of joint projects [6].

The Dvina-Pechora region as territorial and economic system

Territorial and economic system is the interconnection of two or more administrative centers on the use of shared natural and social resources. It may be systems of local, regional and interregional levels. The most complete alignment of the natural resource, settlement, infrastructure subsystems occurs within the major socio-economic regions, available as statistical and spatial planning (design) units without requiring the administrative clearance.

The specific of the North is that no real TES reaches here the level of basic socio-economic district *(tab. 1)*.

The differences in spatial norms between the standard and the northern TES are due to the fact that the North is characterized by focality and dispersion of the production and population location, the exclusion of certain parts of the territory of the statutory conditions of life, their loss due to the lack of territorial capital from socio-economic relations and processes of regional development and inter-regional integration [1].

Table 1. Spatial norms of standard (1) and Northern (2) TES [6, 8]

Centers	Availability radius, km		TES territory, th. km^2		TES population, th. people	
	1	2	1	2	1	2
Local	30-50	100-140	3-8	30-60	35-55	10-15
Basic	80-100	200-250	20-30	125-200	400-600	200-350
Supporting	250-300	700-800	200-300	1500-2000	4000-6000	1500-3000

Table 2. Territory, population and GRP volume of the Dvina-Pechora region

Administrative-territorial units	Territory, th. km^2	Population thousand people*	GRP, 2008, bln. rub.**
The Komi Republic	416.8	901.6	295.6
Arkhangelsk Oblast	589.9	1228.1	298.1
including Nenets AO	176.8	42.7	91.5
Vologda Oblast	144.5	1202.3	298.1
Total	1151.2	3332.0	891.8
Dvina-Pechora region's share in Russia, %	6.73	2.33	2.60

* Based on the Census.
** Here and in other tables the information is given according to the collection "Regions of Russia. Socio-economic indicators" 2010: stat. coll. / Rosstat. – M., 2010. – 996 p. In analyzing the dynamics of a living wage and some other indicators we used stat. coll. "Regions of Russia" of other years, since 2005.

Perhaps the only northern macro-regions approaching to the "standard" is the Dvina-Pechora region in the Komi Republic, the Arkhangelsk and Vologda oblasts *(tab. 2)*.

Relative to a standard economic region the Dvina-Pechora region has a territory approximately 4 times more, but the population is 2-fold less, and GDP is at the level of 80 – 90%. In the formation of the properties and qualities of its systemacy a special role is played by the rivers, boreal forests and the unity of timber resources bases, a unified system of fuel and energy, transit and distribution pipelines, road building: railway "Belkomur" (in the future "Barentskomur"), Syktyvkar road – Kotlas, Usinsk – Naryan-Mar, etc. We should also note the "historical memory" of Zavolochye, Biarmia, Pomorye, the Northern Territory.

Economic indicators

The Republic of Komi, the Arkhangelsk and Vologda oblasts in the system of the Dvina-Pechora region are estimated to be equivalent in economic potential, with their own strengths and weaknesses of the development. Their spatial integration under certain environmental conditions could serve as a significant factor in increasing the positive effects and smoothing the negative ones. External conditions in this case are the conditions in the framework of a common regional policy aimed at strengthening national security, creating a single market space, improving the quality of life, taking into account the natural features of places of residence, ethnic cultures and economic structures.

Regional policy requires, first of all, an objective assessment of socio-economic development levels. For this purpose the indicator of "domestic regional product" (GRP) is widely used which reflects the absolute and per capita relative amount of economic activity. For any other measurement it is necessary to use GRP adjusted to specific circumstances. For example, the dynamics is evaluated, usually on the basis of constant prices. However, if there is interest in elucidating the role of the price factor, the dynamics can be considered at current prices compared with constant prices.

In Russia, for the period of 2000 – 2008 at current prices, gross domestic product (GDP) grew 3.3 times greater than in the constant, indicating the prohibitively high inflation. In addition, economic growth is influenced significantly by structural changes in GDP (GRP) in the direction of services, most of all the financial and banking ones, including those not connected with real production and turnover. The guideline of the country's political leadership for doubling GDP in ten years is nearly completed, but is also possible due to these shifts.

If it is necessary to highlight the differences in labor efficiency when evaluating the levels of socio-economic development of the country and its regions, it is reasonable to assume GRP per person employed in economic activity.

However, it is well known that its certain types are very much different in cost effect, as if putting the regions of various specializations in an unequal position in advance. Therefore, comparison of the regions will be more reliable and fair, taking into account these structural differences. This is done by determining the level of each economic activity and "weighing" this level share on the same activity in the total GRP *(tab. 3 and 4)*[1].

As is shown in tables the structural component has a significant impact on the development level performance. Let us note the most significant points.

In the Komi Republic, one-third of value added is accounted for mineral extraction, which gives a positive effect in terms of employment, income[2], tax, social development of labor collectives and territories. But in the Komi it (extraction) is not an increment to the average level of development, as in many other regions it has better results. Moreover, the decline of coal mining, oil and gas in the country is non-refundable by the equal amount of new mineral deposits development.

On the other hand, manufacturing activity has here a higher effect than the average in the country due to the pulp and paper industry, oil and gas processing. Syktyvkar, Ukhta and Sosnogorsk oil and gas processing plants after the reconstruction carried out in 2004 – 2009, occupied leading positions in their sectors of the economy. The Komi Republic has a relatively high position on the value added in construction. This is due to large capital-intensive core industries and transport, as well as the northern appreciation.The Arkhangelsk Oblast's GDP per capita is slightly lower than the average for Russia, but significantly higher with the structure of its economy, mainly due to the development of new oil fields in the Nenets Autonomous District[3]. The Oblast has a high added value in construction for the same reasons as in the Komi Republic.

Differences in the assessment of economic development levels in different figures are vividly illustrated by the Vologda Oblast. Here, as opposed to the Komi Republic and the Arkhangelsk Oblast, agriculture has a performance level even slightly above the average.

The most significant addition is provided by manufacturing activity, which includes metallurgy and chemical industry I the city of Cherepovets, machinery and textiles in the city of Vologda, woodworking in Sokol and other places, as well as construction. The remaining industries show estimates lowering the Oblast's position in the country's economy.

The result of dividing the region's share in Russia in added value in specific activity into a share of the region in terms of population is presented by *localization coefficient*: the number of times the region's activity is represented more or less in comparison with Russia as a whole *(figure)*.

[1] The specific structure of economic activity is reflected in statistics on "added value".

[2] Pointing at the profit as the economic effect, it is impossible not to draw attention to the methodological difficulties in identifying the real situation in the profitability of individual enterprises and their regional sets. Firstly, the balanced result fixed by statistics (profit minus loss) does not have any economic impact. Figuratively speaking, it is not clear what to do with it? Secondly, the fluctuations in profits, including those caused by the financial crisis, are not adequate to the power of this influence. Signs of crisis are sometimes regarded as a pretext to hide the real profit and its withdrawal from taxation. Third, it is not clear how the market economy can function if 30 – 40% of companies have been at a loss from year to year, for decades. In the planned economy, the losses were covered by the state, in the market economy – just in agriculture and housing and communal services, or in extreme cases, in transport and industry. However, in the Komi Republic, the share of unprofitable enterprises in 2000 was 47%, in 2009 – 38%, in the Arkhangelsk region in 2002 – 51%, in 2009 – 39%, in the Vologda region in 2002 it was 36%, in 2009 – 34%, in the whole of Russia in 2002 it was 43%, in 2009 – 32%. "Common sense" of such losses can be understood only by the logic of the corporate economy, where a number of enterprises belonging to the production company sell their production to head enterprises of this company at specially reduced prices (below cost), which again provides overall tax savings.

[3] Nenets Autonomous District could be separated from the Arkhangelsk Oblast in the economic analysis. However, it mono-specialization on oil provides very high levels relative to the average data for Russia (%): GDP per capita is 901.3; GRP per one person employed is 564.8; value-added, weighted by the structure of the economy is 418.5. Comparison of the District with the regions having a branched structure of economic activities, loses the real sense.

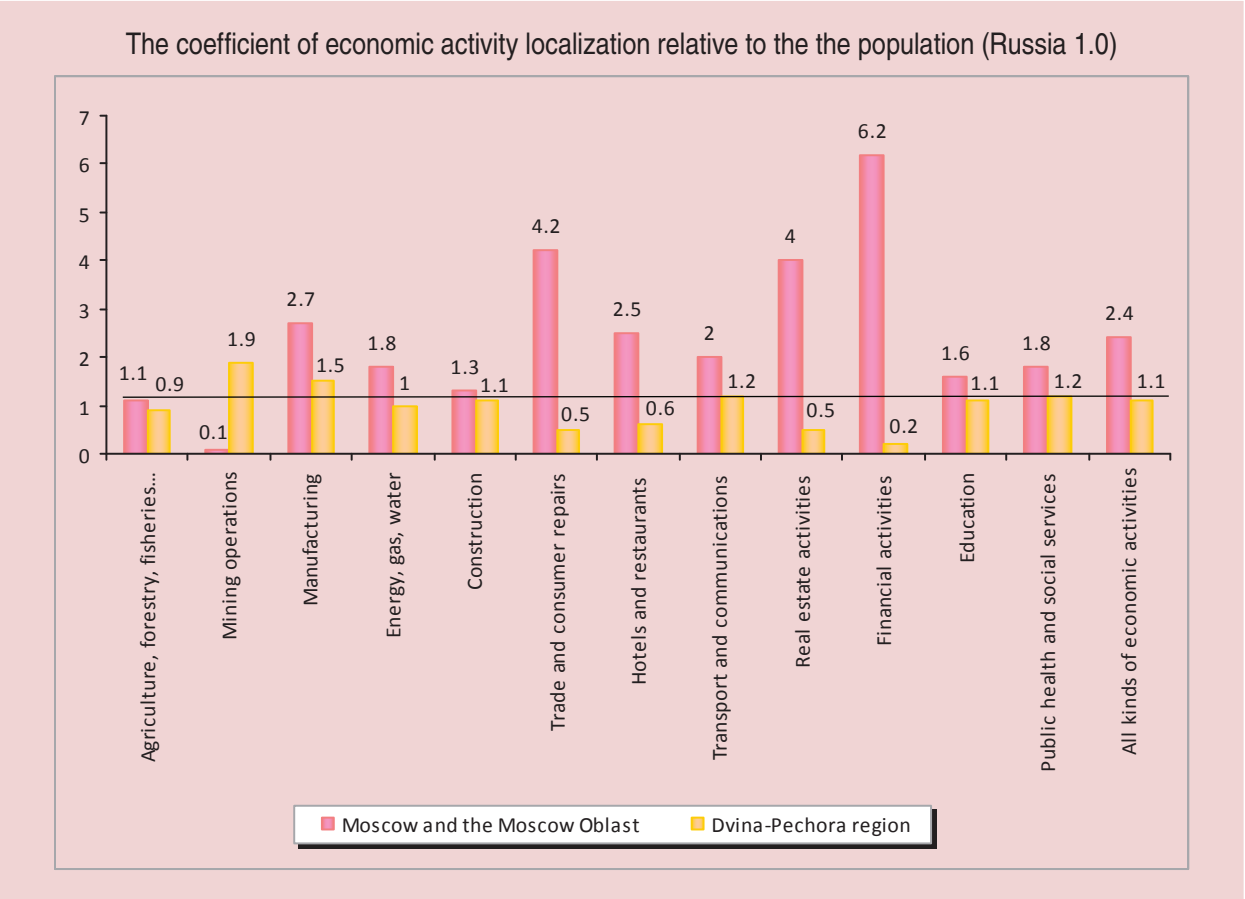
Table 3. Assessment of development levels of the Republic of Komi, the Arkhangelsk and Vologda oblasts on economic activities based on the measure of "value added per employee" with regard to economic structure, 2008, in % (Russia – 100%)

Types of activities	The Komi Republic			Arkhangelsk Oblast			Vologda Oblast			Dvina-Pechora Region in general		
	structure, %	level, times	"contribution" to the overall development level*	structure, %	level, times	"contribution" to the overall development level*	structure, %	level, times	"contribution" to the overall development level*	structure, %	level, times	"contribution" to the overall development level*
Agriculture, timbering, fisheries and hunting	2.2	0.68	1.496	3.7	0.90	3.33	5.4	1.09	5.886	3.8	0.92	3.496
Extraction of useful minerals	31.9	0.94	29.986	20.7	2.20	45.54	…	…	…	17.5	1.19	20.825
Processing production	10.8	1.29	13.932	16.4	0.78	12.792	50.0	1.93	96.5	25.8	1.43	36.894
Production and electricity, gas and water distribution	4.5	0.99	4.455	1.7	0.38	0.646	3.3	0.86	2.838	3.2	0.74	2.368
Construction	7.8	1.80	14.04	9.6	2.26	21.696	6.5	1.59	10.335	8.0	1.89	15.12
Trade and repairs	9.8	1.00	9.8	12.6	0.68	8.568	8.0	0.42	3.36	10.1	0.64	6.464
Hotels and restaurants	0.4	0.71	0.284	0.8	0.80	0.64	0.5	0.46	0.23	0.6	0.64	0.384
Transport and communication	9.6	0.87	8.352	13.4	0.97	12.998	9.8	0.90	8.82	11.0	0.92	10.12
Real estate transactions	9.7	0.99	9.603	5.2	0.59	3.068	4.5	0.61	2.745	6.5	0.74	4.81
Education	2.6	0.94	2.444	3.4	1.00	3.4	2.4	0.78	1.872	2.8	0.90	2.52
Health and Social Services	3.5	1.05	3.675	4.4	0.99	4.356	3.8	0.98	3.724	3.9	1.00	3.9
Other services, including public utilities	0.9	0.59	0.531	0.9	0.56	0.504	1.0	0.63	0.63	0.9	0.59	0.531
Other activities	6.3	1.13	7.119	7.2	1.10	7.92	4.8	0.85	4.08	5.9	1.02	6.018
The overall level taking into account the economy structure	100.0	-	105.7	100.0	-	125.5	100.0	-	141.0	100.0	-	113.5

* The level is multiplied by the «share» in the economy structure.

Table 4. Assessment of economic development levels in the Republic of Komi, the Arkhangelsk and Vologda oblasts in 2008, % (Russia – 100%)

Regions	GRP per capita	GRP per person employed in the economy	GRP (value added) per employee, taking into account the economic structure
Komi Republic	127.5	124.0	105.7
Arkhangelsk Oblast	97.7	96.0	125.5
Vologda Oblast	101.2	98.3	141.0
Dvina-Pechora region as a whole	107.2	104.7	113.5



Significant differences in the localization of material production rather faithfully reflect the specialization of regions. In the Dvina-Pechora region (total) it relates to mining, manufacturing, construction, transport and communications. European North is different from the Asian by a wide range of specialization sectors. But here, many local utility systems are single-industry that is fraught with danger of unemployment, especially in times of economic crisis[4].

In the context of single-industry it is worth recalling the classical economic-geographical comparison of region with the image of two-faced Janus, one face of which is oriented to the external, the second is to the internal needs and interests. It is essential to develop the economy for the needs of the "own" population that smoothes out the disadvantages of narrow specialization, but with the corresponding potentials of neighboring cities and territories.

The coefficient of localization of education, health and social services in the Dvina-Pechora region as a whole, the Komi Republic and the Arkhangelsk Oblast is above unity. This can be evaluated positively, and explained by the presence of large university complexes and specialized medical centers in Arkhangelsk and Syktyvkar. However, one must bear in mind the explanation concerning the high cost of budget and paid services, partly caused by additional expenses on salaries in line with regional coefficients and experience allowances for the Far North and territories equated to them.

[4] In 2009 (the peak of the negative impact of the global financial crisis on the Russian economy) unemployment rate in the whole country was 8.4%, in the Republic of Komi – 11.8, the Arkhangelsk Oblast (excluding NAA) – 7.1, Nenets Autonomous District – 9 7, the Vologda Oblast – 10.9%. Registered unemployment rate in rural and forest areas is 2-3 times higher than the average in the Komi Republic, respectively, the Arkhangelsk Oblast – 1,6-2,8 times, the Vologda Oblast – 1.4-1.6 times. Calculated by the method of Mort registered unemployment is higher in the Komi Republic in 3.8-fold, the Arkhangelsk Oblast – 2.6, the Vologda Oblast – 3.6 times. According to the Komi Scientific Centre, this excess in the Komi Republic is 5-6 times.

For comparison, we present the localization coefficients for Moscow and the Moscow Oblast, taken as a single region. The level of localization of all kinds of economic reality here is 2.4 times higher than the average for Russia. This is quite normal, especially for manufacturing industries (2.7), hotels and restaurants (2.5), education (1.6), health (1.8), but too much for trade (4.2), real estate activities (4.0) and financial activities (6.2). Out of the 1058 credit institutions registered in Russia at the beginning of 2010, 522 (49.3%) are located in Moscow, 42.7% of ruble deposits of legal entities and individuals are concentrated there, and 70% in foreign currency. Of course, it is natural that the capital region has high levels of concentration of market infrastructure. Negative in this case is the fact that this level is obtained mainly due to its underdevelopment in most other parts of the country. One of the basic principles of distribution of productive forces is not observed – it is national security, which applies to all economic activities, including finance and banking.

Social indicators

In the socio-economic development the social component is estimated multi-faceted: form the organization of jobs to the "economy of happiness", from absolute poverty to almost complete well-being. At the same time every social stratum of the population understands happiness and prosperity of in their own way.

Without going into sociology, we will try to select those statistical indicators out numerous that most accurately characterize the social aspects of life from the perspective of assessing levels of regional development.

Among cash income such indicators include the average per capita amount and the correlation with the subsistence minimum *(tab. 5)*.

It is evident that high incomes do not always correspond to the same level of availability of money relative to the subsistence minimum level. It is the ratio of income and the minimum of subsistence that reflects the real situation in the regions' social development. Only in the light of this fact can be seen on the dynamics of real income growth *(tab. 6)*.

Table 5. Average per capita income and the subsistence minimum in 2008 and 2009

Russia and regions	Average monthly per capita income				Subsistence minimum in IV quarter				Ratio of income and subsistence minimum in IV quarter			
	rubles		% to Russia		rubles		% to Russia		%		% to Russia	
	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009	2008	2009
Russia	14941	16857	100.0	100.0	4693	5144	100.0	100.0	364.7	386.1	100.0	100.0
The Republic of Komi	18636	20125	124.7	119.4	6198	6798	132.1	132.1	321.3	319.4	88.1	82.7
Arkhangelsk Oblast	14824	17218	99.2	102.1	5661	6210	120.6	120.7	292.9*	301.7*	80.3	78.1
Vologda Oblast	12193	12125	81.6	72.0	4851	5270	103.4	102.4	276.8	259.2	75.9	67.1
Dvina-Pechora region total	14905	16169	99.8	95.9	5513	5801	117.5	112.8	294.8	291.2	80.8	75.4

* The statistics do not reflect the ratio of per capita income and the subsistence minimum in the IV quarter in to the Arkhangelsk oblast, so the ratio is shown to the value of gross wages and salaries.

Table 6. Population's money incomes growth in real terms and their relation to the subsistence minimum, %

Russia and regions	Growth of average per capita real earnings		Growth of real income and subsistence minimum ratio	
	2005 – 2009	2009 to 2008	IV quarter 2004 – IV quarter 2009	IV quarter 2008 – IV quarter 2009
Russia	148.7	101.0	120.2	105.8
The Republic of Komi	119.4	95.5	110.6	99.4
Arkhangelsk Oblast	155.8	103.3	122.0	109.0
Vologda Oblast	128.6	89.6	125.9	93.6
Dvina-Pechora region total	136.2	102.7	120.2	100.9

The information in tables 5 and 6 represents the following.

• The cost of living wage increases faster than real incomes. This is because the price indexes taken into account per capita real income and the subsistence minimum encompass the set of goods different in size: in the first case it is quite wide, in the second it is relatively narrow and includes food, clothing and housing services. Essential commodities prices, especially in housing and communal services, are growing at a faster pace, but they determine the degree of material well-being of most of the population.

• In the ratio of real income and living wage northern regions yield many others that affect the outflow of the population.

Only to the Komi Republic yields in the dynamics of this ratio of the all-Russian relations among the three considered regions, its population has decreased quite substantially, from 1240 thousand in 1990 to 906 thousand in 2010.

The financial crisis had a negative impact on the provision of public money in the Republic of Komi and the Vologda Oblast whose leading enterprises are largely export oriented, the Arkhangelsk Oblast in this aspect of social development was more stable.

Distribution of total income by population groups reflects the degree of social stratification of society *(tab. 7)*. In Russia it is excessive everywhere, especially in the regions with large capitalization of oil and gas resources, for example, in the Komi Republic and Nenets Autonomous Okrug. Science has claimed long ago that this situation does not match the image of a socially just state. However, the positive shifts in the direction of social justice in recent years are not observed, stratification in income even increased. But there is a positive trend: the proportion of people with incomes below the subsistence minimum in the total population has decreased over the period 2000-2009 in Russia from 29.0 to 13.2%, in the Komi Republic from 26.3 to 16.6, the Arkhangelsk Oblast from 33.5 to 14.0, including the NAO – from 37.9 to 7.3, the Vologda Oblast – from 28.5 to 18.4, in the Dvina-Pechora region in general from 28.7 to 16.1%. In principle, the specified percentage should be reduced to zero.

Imagine a desired state when:

• the coefficient of income inequality is no more than 10 times which the maximum permissible in terms of keeping social stability;

• a population group with the lowest incomes will have a per capita income not below the subsistence level;

• the ratio of per capita income and wage living in the compared regions is not lower than the average for Russia, except Moscow, which is about 333%.

Under given conditions and their projections on the situation in 2009 per capita income would have to make in a month: in the Komi Republic – 20.6 thousand rubles, the Arkhangelsk Oblast – 18.6, the Vologda Oblast – 16,0 thousand rubles. Deviation from the actual income is from 2 (Komi Republic) to 32% (Vologda Oblast).

It seems to us that the estimates presented in *table 8* are a vector of regional policy in the direction of social justice and sustainable development. It is clear that it will not be possible by

Table 7. Distribution of total cash income for 20 percent population groups in 2005 – 2009

Russia and the regions	Share of population groups, %				
	First (lowest-income)	Second	Third	Fourth	Fifth (highest-income)
Russia	5.5 – 5.1	10.2 – 9.8	15.2 – 14.8	22.7 – 22.5	46.4 – 47.8
The Republic of Komi	5.0 – 5.0	9.6 – 9.8	14.7 – 14.7	22.5 – 22.5	48.2 – 48.1
Arkhangelsk Oblast	6.5 – 5.9	11.3 – 10.8	16.1 – 15.6	23.0 – 22.9	43.1 – 44.8
including Nenets AO	5.3 – 4.6	9.9 – 9.2	15.0 – 14.2	22.6 – 22.3	47.2 – 49.7
Vologda Oblast	6.4 – 6.3	11.3 – 11.2	16.0 – 16.0	23.0 – 23.0	43.3 – 43.5
Dvina-Pechora region total	6.1 – 5.8	10.8 – 10.6	15.7 – 15.5	23.0 – 22.8	44.5 – 45.3

Table 8. The distribution of cash income for 10 percent population groups, taking into account subsistence level in IV quarter 2009 and for a given (desired) conditions, thous. rub.

Regions	Living wage size	Population groups										Monthly per capita income		
		1	2	3	4	5	6	7	8	9	10	Calculation	Fact of IV quart. 2009	Ratio of calculation and fact, times
The Komi Republic	6.8	7.0	8.2	10.3	12.6	13.4	16.5	20.6	24.7	31.0	62.0	20.6	20.1	1.02
Arkhangelsk Oblast	6.2	6.5	7.6	10.8	12.1	13.2	15.8	17.7	22.3	26.0	54.0	18.6	17.2	1.08
Vologda Oblast	5.3	5.5	6.4	9.5	10.7	12.0	13.6	16.2	19.4	22.1	44.8	16.0	12.1	1.32
Dvina-Pechora region total	6.0	6.3	7.2	10.1	11.8	12.9	15.4	17.9	21.7	25.7	52.0	18.1	14.9	1.21
The share of population groups in the distribution of the total sum of incomes, %	-	3.4-3.5	4.0-4.1	5.0-5.9	6.1-6.7	6.5-7.5	8.0-8.5	9.5-10.1	12.0-12.1	13.8-15.0	28.0-30.0	-	-	-

* The terms are marked in the text

Table 9. Indicators of social stratification: de facto in 2009 and calculated under given (desired) conditions

Regions	Funds coefficient *		The Gini coefficient **	
	de facto	calculated	de facto	calculated
Komi Republic	17.2	8.8	0.426	0.371
Arkhangelsk Oblast	12.8	8.3	0.385	0.340
Vologda Oblast	11.4	8.1	0.369	0.332
Dvina-Pechora region	13.5	8.3	0.391	0.342

* Funds coefficient (coefficient of income inequality) characterizes the degree of social stratification and is defined as the ratio between the average incomes of 10% of the population with the highest incomes and 10% of the population with the lowest incomes.
** The Gini coefficient (incomes concentration index) characterizes the degree of deviation of the line of total income actual distribution from the line of equal distribution. The higher the index value, the more unequally incomes are distributed.

its own because the first two income groups (out of ten) will require a 3.0 times increase in the Komi Republic, 2.4 times in the Arkhangelsk Oblast, 1.7 times in the Vologda Oblast. It is life sustenance of the population with the lowest incomes that is associated with the decision of the most difficult tasks in the field of employment, creating jobs with relatively high incomes and appropriate training, strengthening of commercial enterprise, and public works for the disadvantaged, the regulatory of differences in wage and price ceilings on goods essentials, restructuring population costs[5] and increasing social benefits.

[5] According to Komistat for 2008 people with the lowest incomes spent 50.5% of their costs on food, with the highest – 16.2%; on the purchase of non-food items, respectively, 17.7 and 67.3%. It is also a sign of excessive social stratification.

The proposed proportions in the distribution of the total real incomes hardly affect the interests of groups with middle and high income, although the social gap and the overall level of income concentration (the Gini coefficient) decreased significantly *(tab. 9)*. To implement the proposed decision it would be required (in the general list of these measures) to enhance the role of public social security funds, which many people associate with the introduction of a progressive tax scale. However, this political decision, for obvious reasons can be blocked. In this case the tax base should be differentiated by providing a separate payroll, property income, dividends, corporate bonuses and other sources, each having a significantly higher flat tax rate than the payroll tax.

Coordinated development

Improving the management of socio-economic development depends largely on the coordinated initiatives of the Federation subjects, especially if they represent the interests of the people, united by common social and economic space, in our case the Dvina-Pechora region. At first, the regional governments should focus attention on the rationalization of intergovernmental relations, normalization of involvement of each region in the implementation of general federal programs and national projects, the formation of inter-regional development programs, "transit" infrastructure and "adjacent" regional and district municipalities.

Certain entities are interested in the coordinated development of the Vologda, Arkhangelsk Oblasts and the Komi Republic, in particular such as the Office of the Northern Railway (Yaroslavl), JSC "Belkomur" (Syktyvkar), Vologda forest management organization "Northern Branch of the National Forest Inventory of Federal State Unitary Enterprise "Roslesinfort", Dvina-Pechora Basin Water Management of the Federal Water Resources Agency (Arkhangelsk), Arkhangelsk Center for Hydrometeorology and Environmental Monitoring, almost all oil, gas and exploration organizations working in the north of the Komi Republic and Nenets Autonomous District. A significant role in coordinating policies and programs of socio-economic development is given to regional governments and the "related" municipalities. However, we should note that this role is implemented sluggishly yet, limiting with cooperation agreements, without the creation of common investment institutions and holding large-scale economic activities.

A territory under the code name "five corners" could be considered as a long-term spatial integration object: south of the Arkhangelsk Oblast (Kotlas, Solvychegodsk, Koryazhma, Vychegda), south of the Komi Republic (Obyachevo, Spasporub, Loyma, Letka), east of the Vologda Oblast (Veliky Ustyug, Kichmensky Gorodok, Nikolsk, Permas), north of the Kirov Oblast (Luza, Pinyug, Oparino, Murashi), east of the Kostroma Oblast (Vokhma, Pischug, Pavino). This should be the object of special territorial planning, regional projecting and program-oriented management. The problematic nature of these areas is beyond any doubt because in these very "corners" the poor condition of the periphery is particularly evident. Doubt arises only with respect to the integration desires and abilities of state and municipal government to implement them.

References

1. Dmitrieva, T.E. Methodological context of spatial development of the northern region / T.E. Dmitrieva // Economy of the Northwest. Problems and prospects. – 2009. – № 1 (39). – Pp. 22-29.
2. Report of the Commission for economic performance and social progress assessment // Problems of Statistics. – 2010. – № 11. – Pp. 12-29; № 12. – Pp. 13-46.
3. Zimin, B.N. Small advanced countries of Western Europe, the theoretical results of the study / B.N. Zimin // Proceedings of the Russian Academy of Sciences. – 1993. – № 2. – Pp. 95-104.
4. Kolosovsky, N.N. Selected Works / N.N. Kolosovsky. – Smolensk: Oikumena, 2006. – 336 p.
5. Lazhentsev, V.N. Theory and practice of spatial integration of inter-regional cooperation / V.N. Lazhentsev // Horizons of economic and cultural development: Proceedings of the Plenary Session of the Second North socio-environmental Congress / chief editor V.A. Chereshnev. – M.: Nauka, 2007. – Pp. 64-68.
6. Lazhentsev, V.N. The relationship of theory and practice (an example of the methodology of economic and geographical research) / V.N. Lazhentsev // Proceedings of the Komi Scientific Centre, UD of RAS. – 2010. – № 3. – Pp. 99-105.
7. The Russian regions: the economic crisis and the problems of modernization / ed. by L.M. Grigoriev, N.V. Zubarevitch, G.R. Hasaeva. – M.: TEIS, 2011. – 347 p.
8. The northern city. – L.: Stroiizdat, 1984. – 168 p.

UDC 332.8:620.9.004.183(470.1/.2)

The ways and problems of power efficient development of housing and communal services economy of the Russian Northern regions on the basis of innovation techniques

The article considers the problems of power savings and increase in power efficiency in the housing and communal services economy of the Russian northern regions and the ways of solutions to these problems on the basis of innovation techniques using power servicing contracts as a possible mechanism to finance the investments in this sphere. As an example the author examines the implementation of pilot project "Power efficient quarter" in the city of Apatity in the Murmansk Oblast.

Power efficiency, innovation techniques, housing and communal services, northern regions, power servicing contracts.

Alexander B.
KOTOMIN
Ph.D. in Technical Sciences, Leading Researcher of the Institute of Economic Problems of Kola SC RAS
abkotomin@iep.kolasc.net.ru

Using of high technologies in the industry and agriculture is one of the basis and necessary prerequisite for modernization of Russia's economy but at the same time under the Russian capitalism it doesn't have a direct positive impact on the quality of life of the most part of the country.

At the same time introduction of innovation techniques and materials in the housing and communal services can reduce power consumption directly, increase power efficiency and improve the living conditions. It is especially urgent for the northern municipalities, where people are pressed from different aspects. One of them is severe climatic conditions, that are not softened in any way for some reason, despite "the global warming", and it leads to the increase in the length of heating season in these regions to 8 – 9 months a year. Another is a raise (constantly advanced the inflation) in heat and power rates for the population under the monopolistic market of these products and power deficit in most northern regions.

The Housing Code and the laws and the subordinate acts adopted in addition to it exacerbate the situation with the population's debts to the energy sector for the consumed heat because management companies have no regulation for using the funds collected from the population, and because of the lack of security risks associated with the bankruptcy of these companies. Besides it, this situation is typical of not only the northern regions, but also of virtually the entire country: "Almost total lack of competition in the power companies market resulted (from 2001 to 2010, author's comment) in more than a tenfold increase in the cost of utility tariffs" [1]. According to the elite estate sales department of the company Penny Lane Realty in 2001 the Muscovites paid 15% of their monthly income for utilities at the average, and in 2010 – 25%, and the elderly

spend almost all pension (without additional payments from Moscow budget) on housing and communal services. Thus, "... the growth of utility tariffs provokes a rise in the price of management services for residential properties and creates conditions for the illicit enrichment of many management companies, and it also increases social tensions among the residents of the capital" [1].

Thus, energy saving and increase in energy efficiency in the sector of housing and communal services can partially dampen the negative effects of the growth of rates in this sector and mitigate social tensions.

According to the World Bank estimates given in the report "Energy efficiency in Russia: hidden reserve", the potential of energy efficiency is as follows *(tab. 1)*.

As the table shows, only about 45% of the potential of energy efficiency in the housing sector and social sector is attractive to investors, while the remaining 55% (at best) must be paid by the homeowners and municipalities ("public sector") from their largely deficit budgets.

Legal basis for the implementation of energy saving and energy efficiency in the sector of housing and communal services in Russia

Federal law № 261-FL [2] made the duty of municipalities "to adopt and to implement municipal programs concerning energy conservation and increasing energy efficiency, to organize energy audit of apartment houses, which are municipal housing stock within the boundaries of the municipality...". Ib. paragraph 4 of Art. 12 directly states: "In order to improve energy efficiency in housing stock and its energy efficiency the list of requirements for maintenance of common property of the owners of the premises in an apartment building includes demands for measures on energy saving and on increasing energy efficiency of apartment building...; executive authorities of the subjects of the Russian Federation approve the list of measures on energy saving and on increasing energy efficiency in respect of the common property of the owners of the premises in an apartment building, these measures are to be carried out simultaneously and (or) on a regular basis. **The person responsible for the maintenance of an apartment building or the owners of the premises in an apartment building with direct management of apartment house must conduct the energy saving and energy efficiency measures included in the approved list of measures on energy saving and on increasing energy efficiency in respect of the common property... The owners of the premises in an apartment building must bear expenses of these measures** ... may require that the person responsible for the maintenance of an apartment building implements the actions aimed at reducing energy resources used in the apartment building, and (or) makes an energy service agreement (contract) providing the reduce in energy resources used in the apartment building".

Thus, in respect of the common property the owners will have to pay regardless of their wishes. The costs of these activities seem to be included in the receipts for utility services.

Table 1. The increase potential of energy efficiency in Russia on average

Sector for achieving energy efficiency	Total potential (%)	Financially attractive potential (%)
Buildings	68.6	30.9
Processing industry	41.5	33.2
Electrical power engineering	44.4	5.8
Heat production	10.4	2.6
Heat distribution	17.3	15.9
In transport including pipeline transport	23.4	19.7

In addition, Section 5 of Art. 13 of this law states: "Prior to January 1, 2012 ... **the owners of the premises in the apartment buildings put into the operation on the date of this Federal Law coming into force must provide such buildings with metered water, gas, heat and electricity devices and they also must put these metered devices into operation.** Meanwhile by the time fixed the apartment buildings must be provided with collective (general building) metered water, heat energy and electrical energy devices, as well as individual and common (for a communal apartment) metered water, natural gas and electricity devices".

Taking into account the average cost of one residential meter of about 1.5 – 2 thousand rubles only for the purchase and installation of meters in one's own apartment, every owner will have to pay additionally from 3000 to 6000 rubles during 2011, and it will make for from 150 to 300 billion rubles on a national scale! It is unknown where the low-income people will take money from, probably so as not to cause social protest, such as followed the launch of the Federal Law № 122-FL, the law will have to be adjusted during the course of execution. As for the energy service contracts, they will be discussed below.

As of today in house-building there are many technologies of production and using of advanced energy-saving materials and structures, energy-efficient heating and lighting, information technology of the optimal control over power consumption and heat in the housing. Widespread use of the existing world experience as well as the Russian one in this field in our country would fully ensure the power settings within the time prescribed in the Russian Energy Strategy until 2030 (approved by Government Decree of 13.11.2009 № 1715-d) [3]), the Federal Law of 23.11.2009 № 261-FL, the State Program on energy saving and increase in energy efficiency for the period until 2020 (approved by Government Decree of 27.12.2010 № 2446-d) [4] and the accompanying regulations.

Of course, this is mostly so-called "catching up" innovation, but they are better than nothing.

The most important condition for this is the availability of source(s) for funding necessary and sufficient investment. Under Russian conditions we cannot apply either the experience of Western countries with their developed housing market regulated by ecological law and aimed at energy saving and energy efficiency, nor the experience of our neighbors – Belarusians, where the government routinely conducts the proper activities, paying for the bulk of expenditures from the budget. By the income of population and because the primary beneficiary in the implementation of energy saving still is the state, the Belarusian experience is closer to us, but by the ideological and political reasons it seems to be unacceptable for the Russian elite in power at present. Therefore, as it has already shown, the bulk of the cost of activities to improve energy efficiency of housing stock will fall heavily on the shoulders of Russian homeowners.

In accordance with the 261-FL, in Russia in 2010 all regions and municipalities developed the programs of complex development of systems of communal infrastructure of the municipalities (PCD SCI). According to the guidelines, these programs must contain the measures for energy conservation and increasing energy efficiency of communal infrastructure, including the housing stock. For example, paragraph 32.3 of "Guidelines for the development of PCD SCI", approved by the Ministry of Energy and Housing and Communal Services of the Murmansk oblast of April 5, 2010 № 16 says: "The section "Proposals for the use of resource-saving technologies" should be developed to meet the requirements of Federal Law of 23.11.2009 № 261 "On energy saving and energy efficiency improvements and on amendments to some legislative acts of the Russian Federation", and it was formally made in the regional program.

Innovation potential of the programs for energy saving and increasing energy efficiency in the sector of housing and communal services

At the same time, the sector of housing and communal services could be an extensive and attractive market for the introduction of innovative technologies of energy efficiency. We list some of the innovative projects that are potentially realizable in the sector of housing and communal services [5]:

1. The use of modern insulating materials for heat insulation of envelope buildings as well as glass packs for construction and major repairs of residential buildings.
2. Construction of block (house) electric boilers of high voltage for diversification of heating sources and reduction of heat loss in the city networks with centralized heat supply.
3. Application of modern thermal centers and heaters with automatic temperature control and adjustment when constructing and doing major repair of residential houses.
4. Introduction of automated control of street and in-house lightning.
5. Use of the energy-efficient light sources including the light-emitting diodes in order to significantly reduce energy consumption, both for street and house-side lighting, as well as in apartment buildings.
6. Use of wind power plants in integrated systems with diesel power plants and small hydroelectric power stations to supply remote isolated users with energy.
7. Use of heat pumps in the construction of residential buildings with low potential energy of the earth, air and water body.
8. Heat recovery of ventilation streams and waste waters.
9. Conversion of existing black oil and gas boilers to advanced technology using steam coal as fuel (Vorkuta, Inta, Artyomovsk etc.) and chippings with the possibility of using wood waste.
10. Construction of new modern solid boilers near the centers of thermal loads to reduce heat loss when transporting heat carrier.So in Belarus the use of mineral plates, which are produced in Gomel and Bereza by stone casting of basalt raw material for heat insulation of facades and roofs of prefabricated houses ("thermal fur"), made it possible to reduce by 3.5 – 4 times heat loss through the envelopes of buildings, and respectively, and to reduce the costs of heat carrier for their heating. Payback period of such projects is 7 – 8 years. Currently, active work on the application of this technology in heat insulation is going on in the cities of Belarus (Minsk, Vitebsk, Gomel, Mogilev and elsewhere) [6]. Russia, for example, the Murmansk oblast has all prerequisites (raw materials, electric power, market) for the development of production of similar products that fits well with the strategy of improving energy efficiency.

The use of electric boilers of high voltage in the Murmansk oblast, where there is an excess capacity in electric power generation, helped to reduce the costs for buying of expensive export raw materials – black oil and to improve the environment. At the same time the use of low-voltage electric boilers became unprofitable.

During the major repair of apartment buildings the replacement of unregulated thermal unit of elevator-type by heating unit with automatic control and the possibility of computer eavesdropping (for example, thermal unit, LLC "Danfoss"), as well as a range of proper activities related to in-house heating systems make it possible to consume only really necessary heat and to pay actually consumed amount of heat carrier, providing uniform heating of the whole house. The higher is the effectiveness of such activities, the better is the complex of energy-efficient measures, such as:

- installation of collective meters;
- repair of electrical networks;
- repair of heat supply networks;
- repair of water supply networks;
- repair of drainage system;

- repair of basement;
- heat insulation of the envelopes of the buildings;
- installation of metal insulated front doors with entrance door intercom;
- replacement of wooden windows by glass packs in the public areas (entrances) and in the flats, etc.

According to the company "Danfoss", the payback of these projects makes up 2.5 – 3 years and requires a cost of 200 – 400 rubles per square meter of floor area. The part of these works can be performed with the use of Housing Reform Fund in accordance with Federal Law № 185-FL. The rest of activities require the use of the mechanism of energy service contracts and fundraising owners. It should be noted that the implementation of this work package should be preceded by the phase energy audit of the building using a thermal imaging survey in the cold (winter) season.

The use of energy-efficient lighting devices in the sector of housing and communal services, including the devices based on the use of LEDs in conjunction with the automated control systems that control the level of natural light, and with the motion sensors in the rooms is able to reduce energy consumption for street and in-house lighting by 3.5 – 4 times.

Some northern regions of Russia, for example, the Murmansk oblast has all the necessary components (raw materials, technology, equipment, personnel, market) to establish production of LED lighting. In particular, there was arranged production of prototypes of street and entrance lanterns at the LLC "Severnye Kristally" in Apatity. Now they are in-service inspection in the framework of the project "Energy Efficient Quarter", but it is already clear that it is necessary to reduce both cost and price of equipment significantly.

Over large areas of the north and north-east of Russia there are practically no main electricity networks. Existing centralized power systems are isolated from the Unified Energy System (UES) of Russia, there is a lot of remote isolated users using diesel power plants (DPP). Because of the remoteness and complexity of delivering diesel fuel the price of electricity derived from such plants is by 3 – 4 times higher than the market price. Because of the high degree of wear many of these stations consume twice as much fuel as it is necessary according to the established standards. It is for these users that the use of alternative energy sources and the use of wind and small hydropower stations (where it is possible), integrated with DPP, can not only improve the reliability of energy supply, but also save up to 50% of diesel fuel [7].

Unfortunately, the use of heat pumps in the Russian construction practice is episodic in nature, unlike, for example, the developed countries. For example, in Stockholm about a quarter of the housing stock is heated with heat pumps. The use of heat pumps in new construction can completely or partially abandon the district heating, saving to 75% of electricity by electrical heating of heat carrier. Some northern regions of Russia, for example, the Murmansk oblast [8] has sufficient conditions for the effective use of heat pumps in both urban planning and industry. Also, under the Russian context we practically don't use the technology of Heat recovery of ventilation streams and waste waters, and it leads to additional costs of heat carrier for heating the buildings and "warms" the environment.

Of course, replacing of oil-fired boilers and thermal power-stations by the coal ones is difficult to be directly attributed to innovations in the sector of housing and communal services, but it is connected with the heat carrier price for the public and when a series of requirements are satisfied some elements of innovation are also present. According to the JSC "Regionenergo Management Group" (the Murmansk oblast), such requirements include:

✓ **drive feed of coal and ash removal (it is necessary for installation high efficiency);**

✓ automation of technological processes;

✓ compulsory presence of cyclones for cleaning the flue gases;

✓ compulsory equipment of boiler installation with water-conditioning system to prevent corrosion in heating networks;

✓ **the ability to use wood waste (50%)**;

✓ **transferring the boiler installations to the center of heat loads – to reduce heat loss when transporting the heat carrier.**

Meanwhile it is possible to use low-grade thermal coal and even chippings, and thermal coal and chip burning in the "fluidized bed" significantly increases the coal-fired plants efficiency. By the way, Orshynsk power men (Belarus) have received the power plant efficiency similar to the coal-fired plant efficiency, when burning milling peat in a mixture with sand in the "fluidized bed". Finland has gained a significant experience in the use of peat, along with bio-fuels as a local energy resource and fuel for heat stations. Maybe, the use of the our neighbors' experience is a desired alternative to the annual fires on the moors near Moscow and an additional source of hydrocarbon fuel in the Northern European regions that are rich in this resource, isn't it?

Of course, when transferring from black oil and gas to coal, ash-disposal area is a problem that must be solved in each case individually. On the other hand, both black oil and gas in particular is an export raw materials and its savings in the domestic market will keep the export potential even under the conditions of reduction in oil and gas production.

Another reason for transferring to coal for heat and electricity production may be the price of raw materials *(tab. 2)*.

Thus, excluding the costs for ash dump, the use of coal in the Russian context is more economical than the use of black oil by 2.8 times. These calculations are confirmed by practice: for example, the price of Giga-calorie received by the residents of the town of Apatity from the Apatity heat station, which burns coal, is by several times less than from the black oil boilers and the heat stations in other cities of the Murmansk oblast.

Another source to increase energy efficiency for the heat stations is a complex heat and electricity generation (CHEG) with a centralized customer service. So in Finland the use of CHEG has resulted in substantial fuel savings compared with other methods of power supply, at the same time the emissions of harmful substances have declined by 40%. At the present time CHEG at the Apatity heat station is being prepared for implementation within the framework of the project related to connecting the town of Kirovsk (located 17 km from Apatity) to district heating from this heat station with decommissioning of the Kirov black oil boiler having outdated equipment.

Energy service contracts

The Budget Code of the Russian Federation (paragraph 3 of Art. 72) was amended by the Federal Law № 261-FL as follows: "Supplement with the following proposals: "The state or municipal customers may enter into the

Table 2. Comparison of coal and black oil as fuel for generating heat

Fuel	Coal	Black oil
Caloric equivalent	0.822	1.370
Specific consumption of standard fuel, kg of coal equivalent / Gcal	220	180
Specific consumption of natural fuel, kg / Gcal	268	131
Price of fuel including delivery, thousand rubles	2200	12500
Fuel component, thousand rubles / Gcal*	589	1642
% of fuel component to coal	100	280

* Analyzing the cost of the fuel component, the boiler efficiency was taken into account.

state or municipal energy service agreements (contracts), in which the price is determined as a percentage of the cost of saved energy resources, for the period exceeding the period of the approved limits of budget obligations. The expenses for payment of such agreements (contracts) are planned and implemented in the expenses for payment of respective energy resources (services of their delivery)".

However, the experience of some northern municipalities with deficit-ridden budget (Apatity, Vorkuta) in the pilot project "Energy Efficient Quarter" showed the impossibility of immediate entering into the energy service contracts even for the subjects of public sector. To do this the town of Apatity had to create a special mediator – Autonomous non-profit organization "Energy Service Company of Apatity" and to resolve all issues related to energy servicing through it.

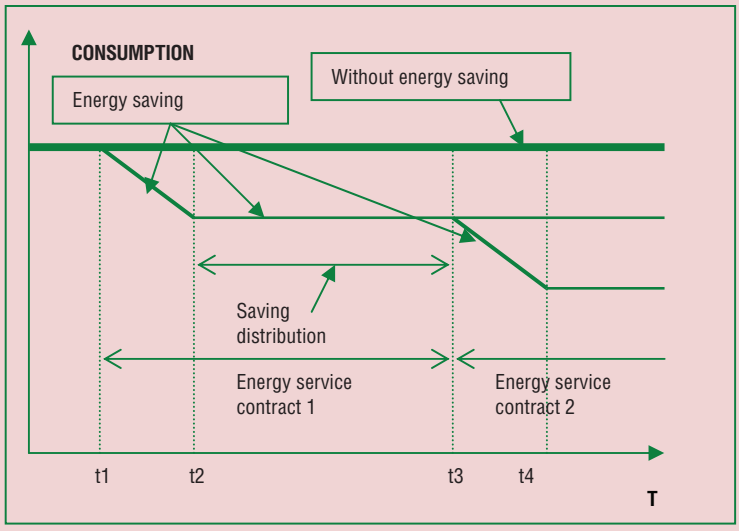
Investing in energy efficiency can save energy resources (especially – export ones) both directly as a result of an absolute reduction in consumption and indirectly as a result of reduction in power inputs for transportation and conversion of energy carriers for final consumption.

The essence of the energy service contract is to apply the principles of public-and-private partnership when investing into energy saving of public buildings and apartment buildings. The share of savings as a result of the implementation of energy saving measures for the entire payback period, is removed by the energy service company – a mediator – in favor of the investor and only then this share becomes the "income" of the consumer (municipality or apartment building), reducing the payment for energy carriers by the magnitude of the effect achieved.

It is desirable to implement the energy services contracts in the "revolving" mode, when the completion of one contract immediately "starts" the next contract, ensuring continuity of small and medium-sized enterprises - performers of energy-efficient measures. Graphically, the scheme of work based on the energy service contracts is shown in *figure 1*.

One of the possible sources of investment in these activities is to obtain loans from international organizations contributing to the problems of energy efficiency in Russia (such as NEFCO or IFC).

Figure 1. Energy service contract, energy consumption, «revolving process» of starting



Such company as IFC (International Finance Corporation) offers to organize cooperation on the following principles:

- establishing long-term partnerships;
- conducting a detailed assessment of financial, legal, economic, environmental and social aspects of the project;
- client's willingness to follow the requirements and recommendations on compliance with the best international practices in procurement under the project, as well as compliance with environmental and social standards;
- the operation of Federal Law on procurement does not apply to the attraction of credit resources of IFC;
- preparation for funding from 4 to 6 months;
- the repayment period and schedule are adapted to the needs of the project.

Possible conditions for obtaining a credit from IFC:

- the borrower is a region or state or municipal enterprise under the guarantee of the region or municipality;
- capacity – from 250 million rubles;
- maturity – up to 8 years;
- time sampling – up to 2 or 3 years;
- the grace period for repayment of outstanding principal – up to 2 or 3 years;
- interest rate on loans:floating (based on 3-month MOSPRIME) or fixed interest rate (fixed equivalent of 3-month MOSPRIME) plus;
- spread according to the risk (borrower, provision, credit period and other risks);
- commissions for the issuance of credit, evaluation and compensation of legal expenses.

The funding scheme on energy servicing for apartment building is proposed by IFC and it is shown in *figure 2*. This software realized with the support of IFC includes:

- increase in energy efficiency of the residential sector;
- encouraging of investment in resource efficiency (direct investment);
- promoting of energy efficiency investments (through banks);
- development of renewable energy.

In Russia one of the projects supported by IFC was a program for the buildings of social sector. The city of Petropavlovsk-Kamchatsky (its popuation is 200 thousand), 87 schools and kindergartens -energy audit 17 model buildings to identify effective measures (with heat viewing). Investments – 200 million rubles.

Achievements:

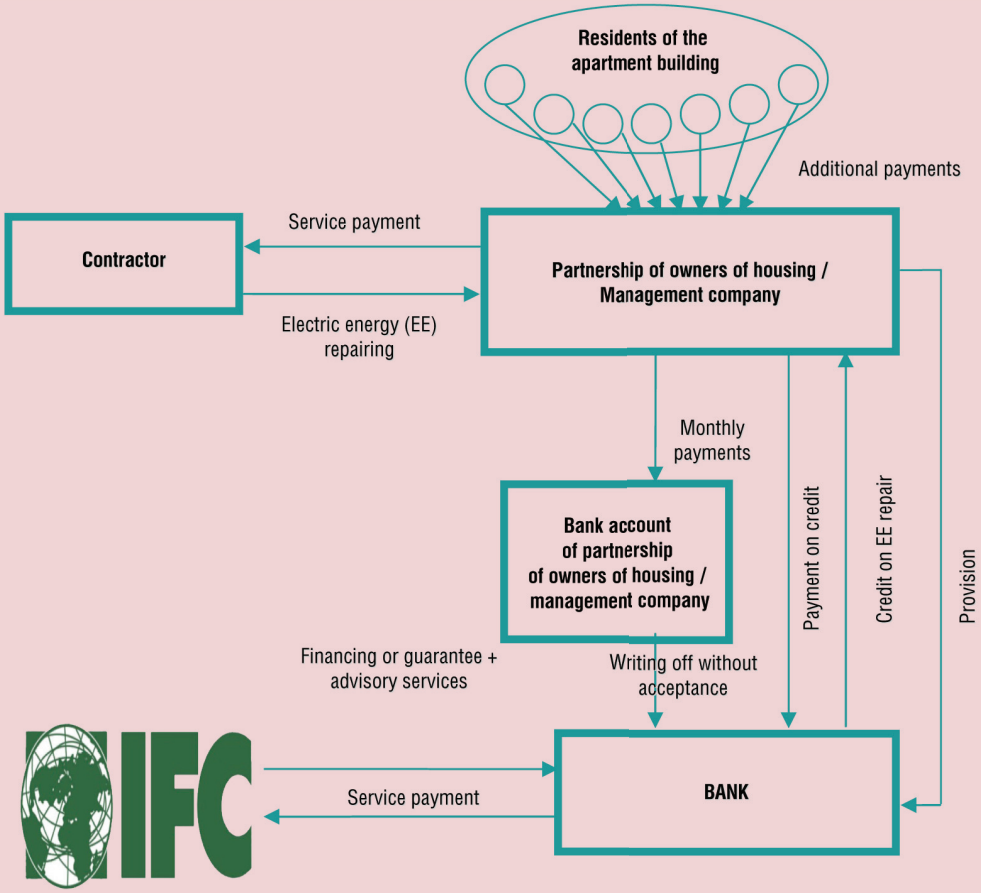
- economy of the budget – 45 million rubles, the payback period is 4.4 years;
- energy saving – 13 thousand Gcal;
- saving water – 104 thousand cubic meters.

Experience in energy saving in the town of Apatity, the Murmansk oblast

From 2000 to 2007 in Apatity there were implemented 3 projects (2 – social objects and 1 – apartment buildings) with investments from North European financial corporation ("NEFCO") on the principles of parity co-financing (50% as "conditional grant") with the obligation of creating revolving fund (revolver lending at the expense of saving achieved by the way of energy efficiency projects). The condition was to create Energy Service Organization (ESKO) in 2002 in Apatity. However, prior to 2006 it was impossible to provide revolver lending. In 2006 the mechanism has been developed to return extra-budgetary funds, it allowed to transform the debt formed in the period 2001 – 2004, the debt of Apatity was 3200 thousand rubles in energy saving measures for heat insulation of contours of municipal institutions.

Since 2009 the part of the energy saving measures and work on warmth keeping and repairing of residential houses are carried out within the framework of the Federal Law № 185-FL at the expense of the Fund for Reforming Public Utilities. Negotiations are underway with NEFCO and other financial institutions for the resumption of the energy service scheme at the objects of public sector.

Figure 2. The scheme of financing energy service contract with IFC



Unfortunately, the city has never received money which was provided from the regional (15%) and federal (20%) budgets and promised in 2009 when running the pilot project "Energy Efficient Quarter".

The experience of the pilot project "Energy Efficient Quarter" has shown that within the framework of public-and-private partnership for financing, **money of Federal and Regional Development Funds should be used on the principles of co-financing with the involvement of property owners**.

A main investor must be the Federal budget, using the Stabilization Fund, as it is replenished by the export of primary resources. At the same time to implement the principle of co-financing we can use a model similar to the tested model of the Federal Law № 185-FL, i.e., through the Fund for Reforming Public Utilities, with annually increasing share of the owners – energy consumers. And the validity of the law should be extended at least until 2015.

We must debug the mechanism of use of local budgets (the objects of public sector), with the involvement of targeted budgetary credits from the budgets of higher levels.

And, as it was mentioned above, we should simplify **obtaining the loans by the municipalities through trusted banks from foreign organizations that help to solve the problems of energy efficiency in Russia (for example, NEFCO, IFC)**.

All of the above will break the deadlock in the process of modernizing the Russian economy in energy saving and energy efficiency, and in the most important area - raising the living standards and reducing social tension in the housing sector, which is especially important for Russia's northern regions.

References

1. For 10 years the housing and communal sector has been risen in price by 10 times. 26.04.2011 9:37, Personal Money [Electronic resource]. – Available at: http://finance.rambler.ru/news/economics/89524413.html
2. Federal Law of 23.11.2009 № 261-FL (as amended on 27.7.2010) "On energy saving and energy efficiency improvements and on amendments to some legislative acts of the Russian Federation" (with amendments and additions entering in force since 01.01.2011): Electronic resource // Reference and Legal System ConsultantPlus.
3. The Russian Energy Strategy till 2030 (approved by Governmental Decree of 13.11.2009 № 1715-d) [Electronic resource] // Reference and Legal System ConsultantPlus.
4. The state program "Energy saving and increasing energy efficiency for the period up to 2020" (approved by Governmental Decree of 27.12.2010 № 2446-d) [Electronic resource]. – Available at: http://government.ru/gov/results/13912/
5. Kotomin A.B. Innovation in energy efficiency and energy saving in the northern regions of European Russia / A.B. Kotomin // Innovation Economy: Problems and Prospects in the North-West Federal District PF: All-Russian scientific-practical conference (St. Petersburg, November 9-10, 2010) / The Institute of Regional Economy Problems RAS, Saint-Petersburg State University of Aerospace Instrumentation, 2010. – 391 p.
6. T. Lobas – BELTA. OJSC "Gomelstroimaterialy" is the first in the construction industry that has acquired the right for CE-marking [Electronic resource]. – Available at: http://gomel-region.gov.by/ru/bottom_menu/news/economics/?ns_id=10839
7. Kotomin, A.B. The role of northern regions in providing the energy security of the Russian Federation / A.B. Kotomin // National interests: priorities and security. – 2010. – № 32 (89).– Pp. 103-109.
8. Kotomin, A.B. Ecological and economic preconditions of heat pumps in the development of apatite-nepheline deposits of Khibiny array / A.B. Kotomin, E.A. Kamenev // Industrial Ecology: Inter-sectorial scientific-practical journal / Federal State Unitary Enterprise "VIMI". – 2008. – Vol. 2. – Pp. 77-80.

UDC 911.3: 369 (470.13)

Spatial development of social service in the northern region*

The article examines the parameters and features of medical and educational service in the northern region, for example in the Komi Republic. The author gives evaluation of the issues relating to functioning of the major elements of territorial framework of social service and determined by low-density, great distances and poor connectivity of space. The spatial development directions are emphasized in the context of development of different medical and educational service centers and reinforcement of net cooperation between them.

Social service, spatial development, territorial framework.

Tamara E.
DMITRIEVA
Ph.D. in Geography, Head of Laboratory of the Institute of Socio-Economic and Energy Problems of the North Komi SC of the Ural RAS department
dmitrieva@iespn.komisc.ru

Margarita S.
BURYAN
Senior Scientific Associate of the Institute of Socio-Economic and Energy Problems of the North Komi SC of the Ural RAS department
buryan@iespn.komisc.ru

The methodological base of research

Theoretical and methodological outline of problems and strategies of spatial development of social services in the northern region indicate the general and spatial trends of world development which are important from the position of the role, structure and territorial organization of the social services.

The increasing role of services sector

Going to the post-industrial society is an undisputed global vector. Among the most important features of post-industrial society Daniel Bell highlights the central role of theoretical knowledge as a basis for technology innovation, the growth of knowledge carriers' class (technicians and professionals); the domi-

* The article was prepared within the scope of the RAS Presidium Program "Fundamental problems of spatial development of the Russian Federation: an interdisciplinary synthesis". The project is "Post-industrial transformation as a factor in reducing peripheral area of the northern region".

nance of people interaction with one another rather than with the nature and artificial objects in the character of labour; the transition from goods production to service production and the emergence of new services in the field of intellectual and human areas [1].

Service sector is an important element of post-industrial society, because according to Daniel Bell, it is determined by the life quality measured by services and various amenities that are desirable and affordable for everyone. The fundamental things for new life are health and education which is necessary for the growth of technical demands and professional skills. Health care service, education, research and management activities – it is their growth and development which are crucial factors for a post-industrial society.

A peculiar indicator of movement toward a post-industrial society is diversification of the services sector. According to the enlarged sectors typology proposed by A. Fisher in 1934 and specified by K. Clark in 1940, the construction and service industries (trade, finance, transportation, public health services, entertainment) as well as science, education and management were attributed to the tertiary sector of economy. When improving the category of the tertiary sector, D. Bell mentioned P. Hatta's and N. Foote's contributions, who in 1953 identified the "quaternary" and "quinary" sectors, they linked the changes in the employment structure with characteristics of social mobility and emphasized critical value of "quinary", or intellectual, sector [1].

In the Hutt-Foote-Bell's scheme the tertiary sector proper includes transportation and communal services, the quaternary sector includes trade, financial services, insurance and real estate activities, and the quinary sector includes health care system, education, research, entertainment and public administration.

A widespread classification (Browning and Sinqelmann, 1975) divides services into distribution ones (transport, communications, trade), productive ones (finance, insurance, business services), social ones (health, social security, education and science, postal service, management), public ones (personal services, hotels and restaurants, entertainment, repair) [2]. Based on this classification, we combine the first and the second groups as an industrial service and the third and the fourth groups – as a social service.

For the post-industrial transformation of the region economy, as it was shown by A.N. Pilyasov, the main role is played by the intellectual part of the social services segment and the scientific and technical part of business services segment (consulting, technical service, etc.) [3].

Basic service sector contribution into the life quality determines its environment-forming role. The post-industrial transformation is impossible without the formation of local and external flow of human capital, without relying on the creative class, sensitive to life activity conditions. Creating a highly organized environment that meets the high-tech ideas of comfort and service is especially important in the northern regions to stop the outflow and fixation of population.

The post-industrial society is a service economy with increased demand for services, attention to a human being, to comfortable environment, to the possibility and necessity of lifelong education of population.

The report on the 2009 world development 2009 "A new view of economic geography" prepared by the World Bank Group says that the development for the benefit of whole population with objectively unequal economic growth provides the alignment of consumption (living standards) and the distribution of benefits from the concentration of production [4].

This thesis, on the one hand, reflects recognition of the uneven economic development related to the objective conditions of forming the profit due to the proximity to resources, the effect of agglomeration and the concentration of other market factors.

On the other hand, it emphasizes the priority of the criterion of social justice of the economic development - wherever people live, they should be equal in their capabilities and life quality.

The alignment of consumption (living standards) is implemented largely by increasing the power and the uniformity of generation and transfer of public services by the service sector that is possible due to the flow of funds from the effective concentrated production.

Space development and spatial development

It is possible to distribute the benefits of concentrated growth and alignment of goods and services consumption in the space by economic integration - economically pulling the lagging areas to the leading ones. The economic integration is carried out through market mechanisms of agglomeration, migration and specialization with special attention to the land, labour and goods markets. The tools for promoting economic integration include the following measures of public policies:

- geographically neutral – institutions (the legal standards for the use of land, labour force, social services);
- geographically binding – infrastructure (policies and investments in the construction of roads, ports, communication systems);
- geographically targeted – incentives (social programs, tax remissions and preferences) [4].

An example of active integration is the European policy of "uniting the territory", its motto is "turning territorial diversity into strength" [5]. Its content specifies the transition from the regional economic development policy (aimed at compensation of the regions for their adverse conditions) to the policy projecting regional growth and competitiveness and aimed at controlling their factors.

The terms of development and application of economic integration tools and at the same time the indicators of its transformative effect on the economy and the economic geography of the territory define three dimensions of *space development:* density, distance, and isolation named by the socio-economic development factors in the World Bank report.

Density means the density of economic activity and population. Distance characterizes the proximity to the nodes of high economic density, it is calculated not only as physical value by kilometers, but also as economic value by transport costs. Disconnection, division is caused by local differences in the rules of doing business, regulatory base, and customs. As they are undeveloped and complicated, it increases transaction costs.

Challenges of low-density, long distances, high disconnection of space impeding the progress of economic and social development are opposed to such principles of the territorial cohesion policy as the concentration of economic activity, connectivity, interaction [6, 7]. The targeted implementation of these principles makes it possible to change qualitatively the space of functioning of different processes of life activity and to improve their performance.

In contrast to the space development that characterizes the "relief" in which the process takes place, *the spatial development* is the concept "adjusted" to control. Generalizing the definition by P. Shchedrovitskii and V. Glazychev given to the country [8], we define the spatial development as identifying a real spatial framework of development of objects, including the advance growth nodes and the links between them, planning the areas of advance development of these nodes and links.

The "carcass" approach to the spatial development in the post-industrial terminology can be interpreted as a "network" approach, which reveals the morphology of the flow space, which M. Castells contrasts the site space historically rooted [9]. The material form of the flow space is composed of three layers:

- the first layer consists of communication network, technology infrastructure, fundamental spatial configuration;

- the second layer consists of nodes, where the strategically important functions are performed in the area, and communications centers that coordinate the interaction of elements in the network;
- the third layer relates to the spatial organization of dominant managerial elites performed the managerial functions, with an organized space being built around them.

Detection and parameterization of these layers, inclusion of areas (hinterland) in a network of centers, interaction intensity (distances in the network) depending on the location of the points – all these positions, unconditionally, are productive and require an empirical study in the context of the spatial development of social service.

Functional-and-territorial organization of social service of the Komi Republic

Among all elements of the social services we consider the medical and educational services determined the conditions of people's life and their development to a large extent.

The system of medioprophilactic institutions of the republic includes the levels of primary outpatient and polyclinic aid in the urban and rural areas and specialized care profiled by groups of diseases (cancer, mental health, tuberculosis, drug abuse, etc.), as well as specialized high technology medical aid.

Primary health care is provided by independent health care agencies and outpatient and polyclinic units which are the parts of medical institutions. In the rural areas they are outpatient clinics (general practitioner's department), medical and obstetric posts (MOPSs), nursing homes, emergency medical stations (offices).

Specialized in-patient and out-patient and polyclinic medical services are provided by specialized clinics and city hospitals in the cities and by the oblast and district hospitals in the rural areas. Highly skilled and high-tech medical care is provided by five health care institutions situated in Syktyvkar.

Designed to provide every citizen with the possibility to obtain basic knowledge, to pass professional retraining or to get new specialty, the education system includes pre-school, school elementary, primary, secondary and higher vocational education. In the republic the school network is represented by primary, elementary and secondary public, municipal and private schools, some of which as the resource and support education centers serve the educational and methodical functions. Practically all stationary and branch institutions of primary and secondary vocational education are located in the urban areas. The centers of concentration of stationary higher education institutions are the cities of Syktyvkar, Vorkuta and Ukhta.

Taking into account both the nature determined by completeness (species diversity) and the services area (geography and number of receivers), we'll interpret the above mentioned functional-and-status types as territorial-hierarchical ones fixing the basic types of service centers in the medical and educational network of the republic.

Settlement service centers provide primary health care and educational services. There are MOPSs, outpatient clinics, local hospitals, primary, elementary and secondary schools that serve people living in rural and urban communities of municipalities, as well as administrative-territorial entities of city districts.

Base service centers situated usually in the capitals of municipal districts and city districts or their "second" centers (the points distinguished in the municipality by its production capacity), in the oblast hospitals (OH) provide wider range of medical services, particularly in the urban hospitals. The profiled agencies (blood transfusion stations, neuropsychiatric institutions, tuberculosis clinics) provide specialized medical services as well. In the base centers along with the secondary schools there are support schools equipped with up-to-date hardware and staffed with highly qualified teaching staff. These centers are characterized by the service of primary and secondary vocational education.

Complex service centers is notable for the most complete set of services, first of all, the specialized ones, which are characterized in the segment of health care by uniqueness for this region, technology, highly qualified staff. These services are provided by Cardiology Clinic, Cancer Clinic, Perinatal Center, and Eye Microsurgery Center.

The complex centers include resource centers of general education retransmitting the experience of introducing profile education, using health saving technology, etc., as well as institutions of higher vocational education. At the present time the complex social service centers are the cities of Syktyvkar, Ukhta, Vorkuta.

The problems of spatial development of social service

The function of the region social sector is to ensure timely and equitable access to the maximum complete (within a specific region) set of services. The integrated accessibility criterion includes not only the service availability, but also its quality and cost. This means both physical and economic accessibility.

The present level of logistical and personnel of state, network availability don't meet enough full generation and transfer of medical and educational services. The analysis based on the parameters of activity density; distances affecting the transport accessibility of services; isolation / disconnection of the services space, will make it possible to identify the peculiarities and to formulate the problems of social service. The main positions of density, distance and disconnection influence on hierarchical space of medical and educational services are represented in *table 1* in general.

As the table shows, the large and almost insuperable distances in the Komi Republic, as well as in any other northern region are critical factor of development space.

We have identified differentiation of the Komi Republic territory by the level of internal (from the settlements to the settlement center) and external (from the settlements centers to the centers of metropolitan districts) transport accessibility on the basis of a specially developed method [10]. The interpretation of its results for the analysis of the space of development of social service has helped to clarify the groups of administrative territories of the base service centers and to choose the pilot ones among them.

By the ratio of territories with different types of transport accessibility we have sorted out 6 territories with the most adverse connection conditions among the 20 municipalities of the republic. At the same time we took into account the share of dispersed territories (the settlements with great distances to the settlement centers) and territories distant from the municipal center.

Table 1. The peculiarities of medical and educational services space

Space development parameters	Specifics of the network (spatial framework) of social service Description of distribution of service centers		
	Primary	Base	Complex
Service density	Distribution of the centers with MOPSs and schools generally corresponds to a system of population settlement and satisfies the requirements for the services availability	Distribution of the centers with the OH and secondary schools generally satisfies the needs The local imbalances in the services of primary and secondary vocational education	Distribution of the centers with specialized medical services doesn't meet modern requirements. The imbalance by the structure of higher vocational education specialties
Distances – transport accessibility of services	Low availability of service centers in the outlying villages, districts, areas and in their groups because of the remoteness of the settlements, unsatisfactory roads and river crossings, unstable bus service		
Isolation – unequal access to qualitative services	Essential differentiation of physical and economic services accessibility because of differences in logistic condition of MOPSs, hospitals, schools, staff, in the transport cost to get the centers with necessary services		

The disadvantaged areas are peripheral Izhma, Ust-Tsilma, Troitzko-Pechorsk, Ust-Kulom, Udora and Priluzsky areas. To compare the characteristics from the group of favourable municipalities we have taken Ust-Vym and Koygorod areas as a conditional reference group.

The problem of providing services of the primary network of social service is not so much a lack of centers, but in their unsatisfactory condition reducing the quality of medical care and general education.

On the whole, distribution of MOPSs, outpatient clinics (OC), local hospitals (LH), and schools are in line with the population settlement system, and it is close to the consumer. Their density is non-uniform and depends on the population number, the compactness / dispersion of distribution of the localities, the state of transport links and availability of seasonal or year-round connection. The features of configuration of rural dispersion in the northern region reflect the influence of natural and economic factors. Mostly a linear character of the arrangement of localities in the underdeveloped areas is related to valley dispersion, and in the developed areas – to route dispersion. The southern areas where dispersed forest and agricultural activities developed geographically and historically have greater density and, hence, smaller distances in the dispersion system, but small population number in the settlements.

In distribution of the health care objects we can emphasize the areas of high density of primary network of health care agencies marked by intense quality background at the schematic map *(fig. 1)*. At the same time the types of distribution of primary centers are different and reflect the character of settlement, the pilot areas can demonstrate it.

The valley type is characteristic of the lower areas of the Pechora (Ust-Tsilma and Izhma areas) with the river system of dispersion and poor transport network. Taking into account a relatively great number and rarity of localities in each of the settlements in these areas, there are from three to six medical institutions serving from 100 to 700 people. In half of the settlements medical care is available in all localities, and in other settlements - almost in all (except one or seldom two small villages).

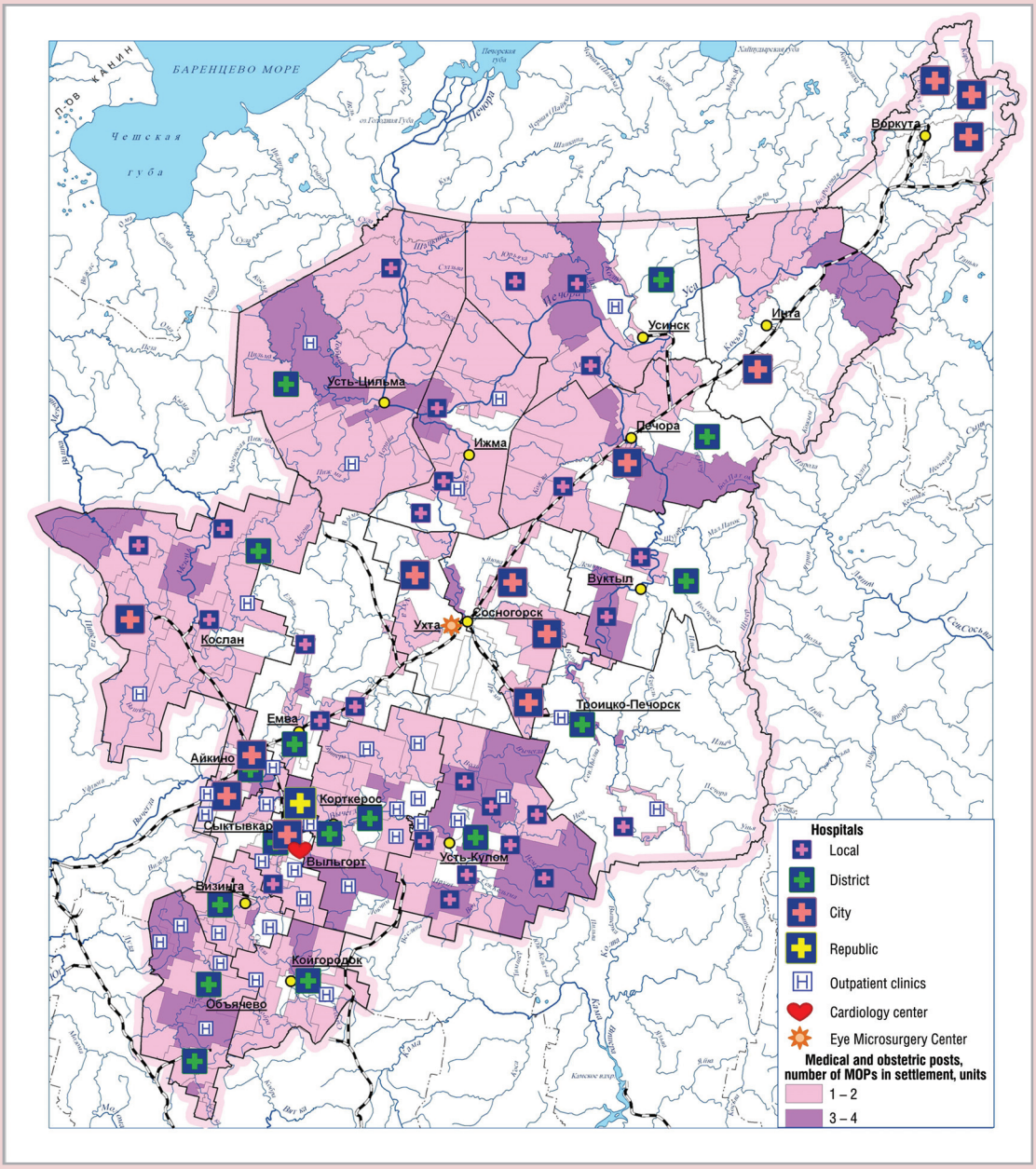
The route-valley distribution of primary service centers are typical of the areas located in the upper reaches of the rivers – the Pechora (Troitsk-Pechorsk), the Vychegda (Ust-Kulom), the Mezen (Udora) – and having one or two district roads. As in the lower areas of the Pechora, there the health care agencies are situated in three or four settlements. Big and small villages without medical facilities are close enough to MOPSs and outpatient clinics except for two or three localities per a district, their population is restricted when obtaining primary medical aid.

The peculiarities of the Priluzsky area, the southernmost district of the republic, are dense small settlement dispersion and as a transport axis – federal highway "Vyatka". Here the route type of distribution of the primary health care centers providing the services to the population of more than one locality prevails. The population of the two localities is restricted in the first medical aid because of the barriers and the distance.

The network of first-aid services being adequate form the dispersion point of view, their quality is restrained by worn-out and obsolete material and technical basis. On the whole, all over the republic more than half of medical institutions buildings are wooden. In some areas from 60 to 80% of the wooden buildings MOPs have a 100% depreciation. 54% of fixed assets have over 50% depreciation, and in the outlying districts these figures are 100% and 70% respectively.

The distribution of school network depends on the demographic structure of population and the transport accessibility of settlements with schools. The students living far from schools, can get to the schools by special buses. The primary schools are as close as possible to the places of residence.

Figure 1. Distribution of the health care agencies of the Komi Republic



In the areas with the river system of dispersion the secondary schools are located in all settlements (one in four or five localities), with one secondary school and one-two elementary schools in settlement. The number of settlements without schools is two or four per a settlement.

In the areas with mixed valley-route type of distribution of the first-aid services there is one secondary school per two or four, more rarely five or six localities, there are settlements only with the primary school (one school per two or three settlements), the number of settlements without schools reaches 3-5 per a settlement.

In the areas dominated by the route distribution of the primary first-aid centers per one secondary school there are on the average three or seven, sometimes ten or more settlements, but with the primary or secondary school in the settlement. Many localities have no schools.

The main problems of giving the general education services – the lack of teaching staff and its aging, the poor material and technical basis – are especially acute in rural outlying schools, where low level of services and utilities, high wear of wooden buildings, there are no teachers of Foreign Languages and Computer Science, the teachers of retirement age work there.

The declining demographic situation (decline in the birth rates, aging of populations in towns and villages, their depopulation), the outflow of population from the northern regions and from the rural areas to the urban ones claimed optimization of school network. Over the past 10 years the number of schools has decreased significantly and the number of towns and villages without schools has increased. The republic has acquired the experience in searching for deliberate and non-conflict decisions when combining the set of conditions – finding schools in the place of children's residence, acceptable (no more than an hour and without risk of boat crossing) distances for conveying, ensuring the required level of education (teaching all subjects, proper equipment). In this case it is clear that taking into account the social role of rural school, it is important to preserve the existing network, technically updating the old schools or building the new small modernly equipped and comfortable schools, using the new technology. These solutions are relevant not only for hard-to-reach localities, but also economically and demographically stable localities.

The main problem of the basic level of social service network is low availability of centers, which applies mainly to medical service. In the basic centers there is a lack of primary and secondary vocational education institutions training the skilled workers for the industries of the republic's specialization - logging, timber, oil-and-gas producing industries – which solves this problem by shift workers from other regions.

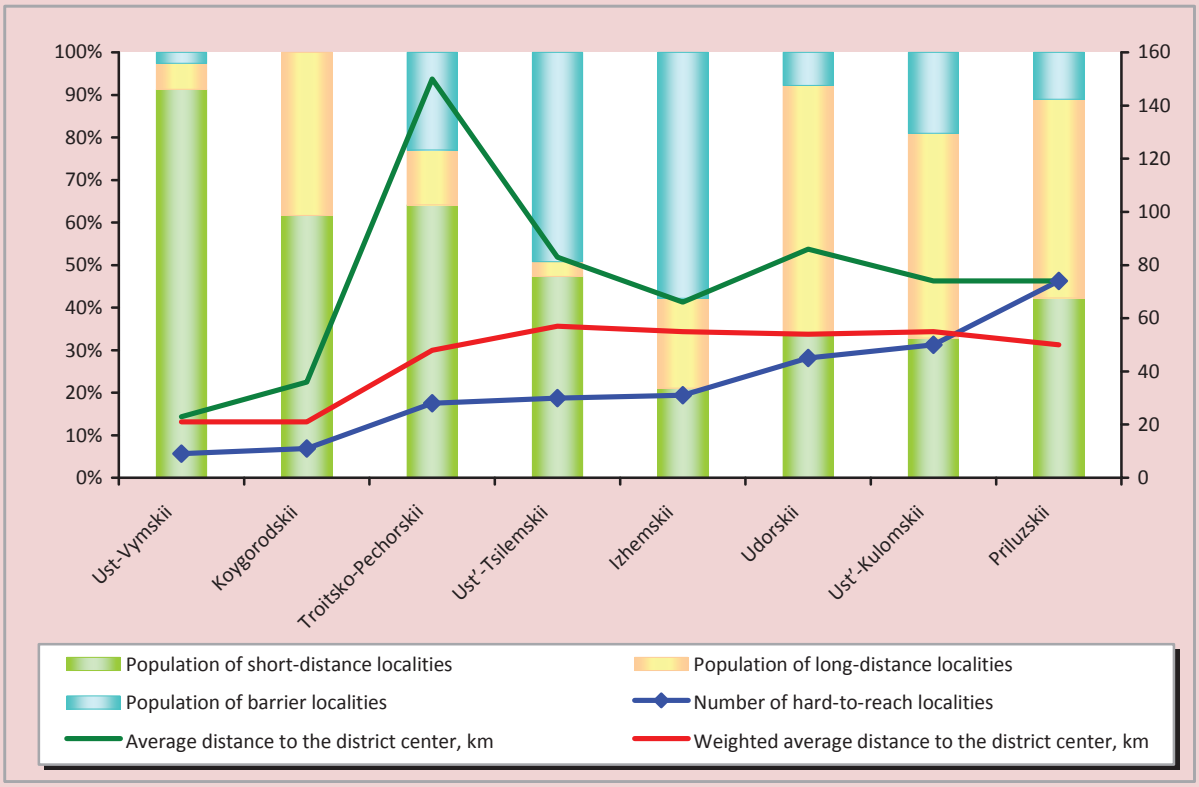
The limitations of transport accessibility of district hospitals because of their long distances, the barriers to movement by the reason of unsatisfactory state of roads and river crossings, rare and unstable bus-communication cause discrimination of the part of population in obtaining timely and skilled medical care, profiled by diseases.

To evaluate the accessibility of basic service centers we have grouped the settlements of outlying districts and compared them with conditionally reference districts. The thresholds of group intervals differentiation were chosen with the period of aid for cardiovascular diseases taken in the Komi Republic – 40 minutes (or 30 km of local roads). The localities up to 30 km from the district center were the short-distance group, more than 30 km – the long-distance group. Regardless of the distance the "barrier" groups are the localities situated beyond the water barrier, which is often overcome by the bridge requiring the repair or (and) the unstable boat, ferry or seasonal ice crossing.

The evaluation results have showed the following features of accessible services of central hospitals located in the municipalities with low internal connection *(fig. 2)*:

- the share of population living outside of standard time for medical care is varied from 50 to 80% and is greater than the corresponding value in the conditionally reference area;
- the population concentration in the district center (51% in the Troitzko-Pechorsk district and 30% in the Ust-Tsilma and Priluzsk districts) increases the proportion of the population living in the nearby settlements;
- the increased proportion of the population form the barrier localities in the Ust-Tsilma and Izhma districts is associated with predominance of the valley type of dispersion;
- the southern Priluzsky district has two principles of dispersion: "state farm – some villages" and "many small villages"; and it is reflected in high specific weight of hard-to-reach localities, which is proportional to the total number of localities in the district.

Figure 2. Transport availability of basic service centers in weakly connected areas of the Komi Republic



The average distance from the locality to the district center characterizes the physical distance of accessible medical services. The peak of the Troitsko-Pechorsk district curve reflects the inaccessibility of Mitrofan-Dikost settlements, people living there have to go 350 km through two municipalities to get to their central hospital due to the lack of year-round communication. The average weighted distance gives an idea of the real load on the lines of communication, taking into account the territory population. We should note that the factors of population density and population employment were taken into account in the detailed assessment of transport accessibility of 2616 communes (municipalities) of Belgium as resistance to communication [11].

A high proportion of people discriminated by the conditions for obtaining timely medical services, suggests the need for reducing critical situation with transportation access by reducing the barrier by force of bridge construction, for ensuring smooth operation of river crossings, for road construction improving the internal connection in Troitzko-Pechorsk, Udora and Ust-Kulom districts.

The problem of specialized services at this stage is connected with their almost total concentration in Syktyvkar. Syktyvkar eccentricity causing 200-1000 km remoteness of the district centers from the capital and the lack of railway exits in many municipalities make it very difficult to obtain and increase the cost of proper services. Unfortunately, many localities of the republic did not even have a two-hour accessibility to the railway station that is adverse according to the European standards. In American researchers' calculations, the fee for medical services due to poor transport activity increases by 30 times with increasing distance by four times [12]. Unfortunately, the examples of such progression of reducing the economic services availability are currently feasible for many people in the Komi Republic.

The directions of the spatial development of social service

In accordance with the claimed content the purpose of the spatial development of social services is to build a framework of the sector to improve service of the republic population, increasing the quality and accessibility of medical and education services throughout the territory.

As noted above, the challenges of "low density", "large distances" and "strong disconnection", distorting the object development space can be answered by economic activity concentration, connection and co-operation or networking. The concretization of these principles in planning the areas of the development of centers and communications of medical and education services segment of social service in the Komi Republic are generally presented in *table 2*.

The proposed areas can be implemented by the activities outlined in strategic documents of the republic modernization of the health system and education [13, 14, 15].

Compaction of the service center network

The primary medical centers are strengthened by replacing the old MOPs and reconstructing the outpatient clinics and local hospitals. Over the past four years more than 20 modular MOPs serving from 400 to 600 people have appeared in many municipal areas. The objects of primary (closest) medical aid are repaired and are planned to be repaired, first of all, in the localities situated in the outlying districts with hard-to-reach settlements – Troitzko-Pechorsk, Udora, Izhma, Ust-Kulom, Ust-Tsilma districts etc. Networking the general medical practice and complex districts covered by a therapist will help to strengthen the primary medical services.

New elements in the framework of medical service will be inter-district centers: rural and urban diagnostic and medical ones *(fig. 3)*.

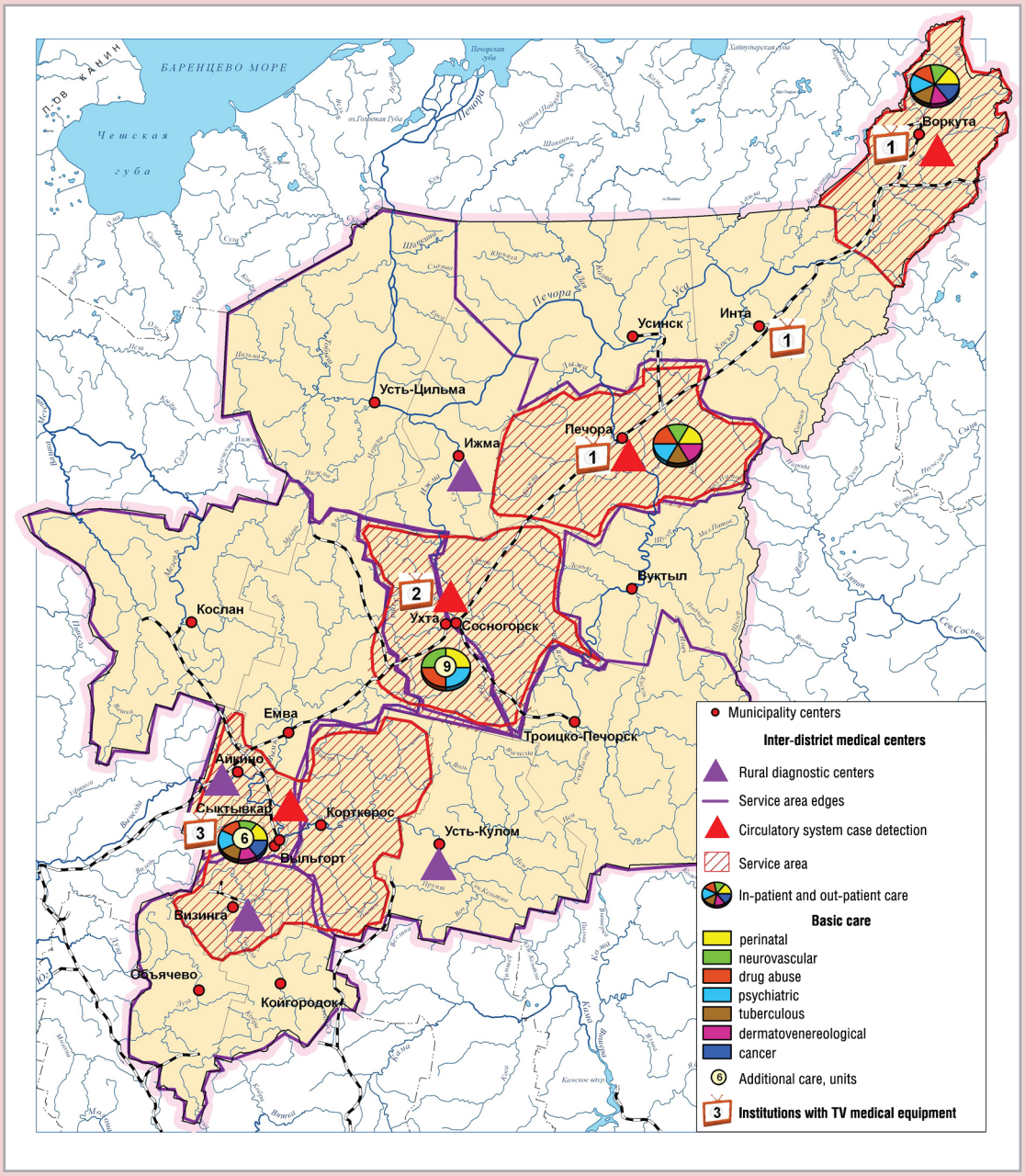
The diagnostic centers are organized on the bases of several rural central hospitals and are equipped with mobile complexes for early diagnosis and selection of risk groups of socially significant diseases (cardiovascular disease, respiratory disease, diabetes, glaucoma, breast cancer). The work of mobile diagnostic complexes will be implemented mainly in remote and hard-to-reach localities. The rural diagnostic centers (Sysolskii, Ust-Kulomskii, Ust-Vymskii, Izhemskii), the activities of which will have more than 33% of the republic population, will strengthen substantially the basic centers in these districts and raise the level of medical aid in all municipal districts.

Table 2. Strengthening of the spatial framework of social service

Spatial development principles	Areas of service center development and co-operation		
	Primary	Basic	Complex
Concentration – quantitative and qualitative compaction	Reconstructing, constructing, technical and staff renewal of MOPs, outpatient clinics, local hospitals, schools Optimization of primary network for dispersion and people's interests	Reconstructing, up-to-date equipment, staff for central hospitals Making addition to primary and secondary vocational education with training the specialists for TPC and FEC* in the centers of proper districts	Organizing new centers and kinds of specialized medical services Training highly skilled specialists for the needs of the region
Connection – Improving the transport service accessibility	Reducing physical and economic (transport expenses) distances due to improving the transport infrastructure (roads, bridges, crossings, bus service and local air communication), appearing some new centers, using the mobile diagnostic complexes		
Co-operation and networking – access to qualitative sevices	Reducing the disconnection of service space and equalizing the consumer opportunities all over the territory by delivering the service to the consumer (making TV medicine and distance education as well as health and education internet systems), expending the range and capacity of free high-tech services		

*TPC – timber processing complex, FEC – fuel-energy complex.

Figure 3. Complex medical service centers



For early detection of circulatory system cases there is organized a vascular center in Syktyvkar and primary vascular departments in the cities of Vorkuta, Pechora, and Ukhta, having its own service area and routes of timely (within 40 minutes) convey of patients with insulin and heart attack and covering two thirds of the population.

Inter-district health care centers located in Syktyvkar, Ukhta, Pechora, and Vorkuta will provide inpatient and outpatient help in many basic and additional directions. The most diversified services in hospitals, as well as adult and child outpatient care are offered by Syktyvkar and Ukhta centers.

Thus, the combination of new medical facilities concentrated in the largest cities of the republic will strengthen Syktyvkar center and will create new centers of integrated health services. Their uniform distribution over the transport and economic axis will set the territorial imbalances of metropolitan centralization right and will improve the accessibility of the population to specialized high-quality medical care significantly.

Improved transport access to the services

In 2010 36% of the rural settlements of the republic did not have paved roads to reach the means of public communication. At the same time almost a third of them is located near the railway station or landing pier.

To improve transport connectivity of the territory the strategies are defined as follows: 1) keeping the existing public communication network, bringing its condition to the level corresponding with the standards and bridging over the rivers; 2) providing reliable transport links in a number of directions from municipal centers to the centers of settlements and some certain settlements by building new sections of roads and bridges [16].

Within the scope of the first task the improvement of transport connectivity can be achieved by:

- keeping a little intense exploitation of railway lines Sosnogorsk – Troitzko-Pechorsk, Mikun – Koslan – Vendinga;
- improving the quality of highway network, overhauling the bridges over medium and small rivers, bridging over the rivers;
- establishing a regular bus service between the support settlements and the municipal centers, constructing the approaches to the settlements;
- improving the state and the quality characteristics of the waterway of the Pechora and the Vychegda river basins and ensuring the stable operation of socially important passenger shipments;
- further developing intra- and interregional air transport.

Sustainable transport links between the settlements with municipal centers and the settlement centers will contribute to the reconstruction of existing road sections and construction of new ones.

Not only internal but also external accessibility of peripheral areas will be improved by reconstructing and constructing the highway sections in the areas Ukhta (Sosnogorsk) – Troitsko-Pechorsk – Komsomolsk – Yaksha – further to Solikamsk, Perm, and Pechora – Vuktyl – Troitsko-Pechorsk – Ust-Kulom – Koygorodok – federal highway "Vyatka", which will become new transport corridors of the republic.

When the road construction Syktyvkar – Ukhta – Pechora – Usinsk – Naryan-Mar and Aikino – Koslan is finished, more than 200 thousand people in five municipalities will receive access to the support public highway network.

Co-operation and networking

The development of service sector and the growth of comfortable environment in the rural hard-to-reach settlements requires a change of the principle of services delivery. The current situation where the rural consumer has to obtain the necessary health care or education services far from home and at a high price, that is "delivery of the consumer to the service" should be changed by mobile "delivery of the service to the consumer" on the basis of TV medicine, distance learning and other forms of service, taking into account the service specific.

The project on the development of TV medicine technologies that make it possible to connect the complex and basic service centers has been implemented in the republic since 2007. Now the appropriate equipment is available in Cardio-logical Clinic, the Komi Republican Perinatal Centre, the Komi Republican Hospital (Syktyvkar), the city hospital and city clinics (Ukhta); city emergency hospital (Vorkuta); city hospital (Inta), central district hospital (Pechora).

The control and coordination are performed by the Republican medical information and analytical center (see fig. 3).

This system, which saves the cost of air medical service and patients' finance, is used by prenatal diagnostics of congenital malformations; advice on keeping pregnant and patients with cardiac pathology; emergency consultations to provide skilled care to the patients who are in critical condition; prehospital counseling to specify the provisional diagnosis, treatment and hospitalization; remote training of specialists.

For schools in remote settlements the distance learning is perspective. Using Internet technologies makes it possible to give the best teacher to every school and every home. Such form of learning requires a special individual educational programs and new organizational forms of support from the federal and regional education centers, which can arrange in-session part-time and full-time education of gifted children in specific areas.

A new form of education has been launched in the republic since 2010 on the basis of the Distance Education Centre for the disabled children in all municipal centers that are connected to fiber optic communications. Within the pilot project the distance education has gone to small schools in the settlements of Irael (Sosnogorsk district) and Yb (Syktyvdinsk district).

The infrastructure of new connection becomes crucial factor in promoting new cooperation technologies and e-connectivity in the network of social service. First of all, it is the completion of commutation to the fiber optic link of all centers of the municipalities followed by adjoining peripheral settlements, which will provide broadband access and significantly improve the quality of communication with all basic and many primary centers providing medical and education services.

In conclusion we fix the following main points of the spatial analysis of social service.

When equalizing the living standards to achieve social justice with objectively unequal economic development, social service and, above all, health and education and services play a leading part.

Provision of services depends on the level of service development and on the availability of services for the population, which is determined by the ratio of such parameters of development activity space as density, distance and connectivity (or disconnection).

In the Komi Republic, a typical northern region, timely access to quality services provided by different centers of a hierarchical network is difficult because of:

✓ insufficient material and technical condition of the primary service centers, the nearest ones to the consumer;

✓ low transport and economic affordability of basic centers with profiled health care and it restrains more than half of municipal residents living in remote locations in obtaining the services;

✓ remoteness of the most population from the specialized high-tech medical services because of their concentration in the capital.

Taking into account the revealed problems, the content of spatial development of social service of the republic should be:

➲ compaction of the network (framework) by updating the primary medical and general education instaurations and forming new medical centers of specialized services of diagnosis and treatment;

➲ growth of connectivity and cooperation of the space of medical and education services reducing the time of their provision and expanding the reach of high quality services by improving transport infrastructure as well as the active introduction of electronic forms of services delivery – TV medicine and distance learning.

References

1. Bell, D. The coming post-industrial society. Experience in social forecasting / D. Bell. – M.: Academia, 1999. – 956 p.
2. The handbook of Service Industries / ed. by John R. Bryson and Peter W. Daniels. London: Edvard Elgar. 2007. – 504 p.
3. Pilyasov, A.N. And the last will be the first: the northern periphery towards the economy of knowledge / A.N. Pilyasov. – M.: Knizhny dom "LIBROKOM", 2009. – 544 p.
4. A new view at the economic geography. Report on the world development for 2009 / World Bank. – Washington, 2009.
5. Green Paper on Territorial Cohesion, the way ahead // en Inforegio panorama. – 2008. – № 28. – December.
6. Growing Regions, growing Europe – Fourth report on economic and social cohesion / European Commission, Luxembourg: Office for Official Publications of the European Communities, 2007. – 222 p.
7. Investing in Europe's future – Fifth report on economic and social cohesion / Euro-pean Commission, Luxembourg: Publications Office of the European Union. – 2010. – 298 p.
8. Russia: spatial development. Report of 2004. – M.: Architectura-C, 2004. – 128 p.
9. Castles, M. The Information age: economy, society and culture / M. Cartels. – M.: GU-VSh, 2000. – 608 p.
10. Dmitrieva, T.E. Transport availability of local systems / T.E. Dmitrieva // Atlas of the Republic of Komi. – M.: Feoria, 2011. – Pp. 280-282.
11. Vandenbulke, G. Mapping accessibility in Belgium: a tool for land-use and transport planning / G. Vandenbulke, T. Sneerberger, I. Thomas // J. Transport Geography. – 2009. – Vol. 17. – №1. – Pp. 39-53.
12. Bugromenko, V.N. The modern geography of transport and transport accessibility / V.N. Bugromenko // Proceedings of the RAS (Geographical Series). – 2010. – № 4. – Pp. 7-16.
13. The program for modernizing the health care system of the Komi Republic for 2011 – 2012 [Electronic resource]. – Available at: http://minzdrav.rkomi.ru
14. State report on the health status of the Komi Republic in 2010 [Electronic resource]. – Available at: http://minzdrav.rkomi.ru
15. The concept of preschool, general and additional education of the Komi Republic for 2011 – 2015: project [Electronic resource]. – Available at: http://www.komiedu.ru/legislation/info
16. The main directions of the development of transport system in the Republic of Komi up to 2020: project [Electronic resource]. – Available at: http://minprom.rkomi.ru

UDC 614.2 (470.12)

Methodological approaches to the estimation of the regional public health services efficiency

The publication is devoted to the problem of estimation of the regional public health services' efficiency. In the article the nowadays existing approaches to estimation of the expenses' efficiency for public health services are discussed, their brief comparative analysis is given. The conclusion about inexpediency of use of the techniques based on the analysis of the resource component of the public health services, without taking into account social effect, is drawn. As an alternative the technique based on the parallel estimation of the financial (the expense for rendering medical aid) and the demographic (losses of the population in the region from premature death rate) parameters is offered.

Public health services, efficiency, technique, expenses, years of potential life lost.

Mikhail D.
DUGANOV
Ph.D. in Medicine, Head of the Department of Health of the Vologda oblast
mduganov@rambler.ru

Konstantin N.
KALASHNIKOV
Research Associate of the ISEDT RAS
konstantino-84@mail.ru

Introduction

Efficiency is the key concept of the economy and managing, and the persons responsible for making administrative decisions, in their practical activities are compelled first of all to take into account the criteria of productivity by virtue of limitation of the resources available at their order. Recently with a wide circulation in the branches of the social sphere the principles of the budgeting focused on the result, and new state management (New Public Management, NPM) the new approach of public sector's management on the basis of tools, traditionally characteristic for private sector (decentralization, differentiation of powers between the center and the periphery, the essential role of monitoring and reporting, motivation of state employees, orientation to intermediate term planning, estimation of result, etc.), demand of the techniques of the economic analysis in public health services grows.

Both the world and national experience offers the set of approaches to the economic analysis and estimation of the investments'

efficiency in the social sphere and public health services, however for managing the branch at the regional level many of them appear hardly applicable: they are either too superficial (as the analysis of the parameters of fixed capital's use, medical personnel, beds' fund), or technically complex for the use in the conditions of operative work (method of the data convolution). Yet the technique of the efficiency estimation of the public health services should be functional, transparent, and its formula should be the clear to the wide public.

The concept of the public health services efficiency

The concept "efficiency" carries various connotations depending on the context in which it is used, and the breadth of the spectrum of economic, political and so forth situations when the term "efficiency" sounds, does not allow to reach the characteristic of the efficiency as extremely individual result from outputs to the expenses (inputs) though in such mathematical interpretation the efficiency is to the greatest degree allocated by useful contents. In spite of the fact that the term "efficiency" is used by various experts: engineers, economists, physicians and etc. If an engineer deals with technological efficiency, an economist considers the economic efficiency expressing in the comparative estimation of alternatives and the choice of the most comprehensible variant, as a rule, connected with the least level of the charges, the most important. As the American economist Paul Heine wrote, efficiency means "to receive as much as possible from the accessible limited resources" [7]. Thus in Economics efficiency and profitability, in Heine's opinion, are synonyms as they characterize "productivity" (effectiveness) of the means' use for the purposes' achievement. But referring efficiency to the social sphere is insufficient: the wide public role of medical aid does not allow being limited by the utilitarian reasons in the branch's management. Two essentially important points can be noted here.

First, in the public health services it is necessary to consider not only the especially economic (economic analysis with a choice of the cheapest variants of the means' investment), but medical (due to regulation and standardization of the medical aid), and also social (orientation to the diseases' and death rate's reduction, increase of life's duration and standard, growth of labor productivity) aspects of efficiency[1].

Second, in the public health services the complexity of estimation of the result at macro- and middle-levels which should be expressed in the death rate's decrease, diseases, invalidity and so forth takes place. The inertial character of the medical-demographic parameters and poly-determinacy of health cause the practical complexity of the establishment of connection among the assignments (inputs) on protection and strengthening of the population's health and their practical results (outputs) that is carrying out incremental analysis of growth. So, the additional expenses for medical programs' realization can lead to positive results only in some years, but also can cause the paradoxical effect when the increase in financing of the public health services due to the increase of availability and quality of services opens the earlier latent morbidity.

Thus, the definition of efficiency concerning the public sector is more complex as the expenses for public health services are focused on the population requirements and on the social effect, not on profit, as in private sector. And the consumers (patients) see obligations of the state as the unlimited granting of medical services (the term "efficiency" can be consi-

[1] The specificity of the public health services is in the organization of services of medical aid's rendering, the understanding of the efficiency in especially economic sense (for example, the choice of the cheapest alternative takes place at state purchases), and at the same time in the public health services there are the spheres and the kinds of activity where the question on the efficiency cannot be raised (sanitary aircraft, rendering of medical aid to children with the congenital pathologies, prematurely born and so forth). It is a characteristic example of the prevalence of humanistic principles above economic feasibility in the social sphere.

dered as unacceptable), and the function of the doctors working in the state and municipal establishments, looks essentially differently as they carry out much wider role, than their colleagues working in the private sector.

What approaches to the efficiency estimation exist in the public health services?

The question on the public health services' efficiency rose in the conditions of the socialist economy when the branch "public health services" was considered in the context of the non-productive sphere[2]. So, Soviet authors M.V. Solodkov, R.I. Samar, L.I. Yakobson allocated the economic and the internal efficiency of economic processes and actions in the public health services. Economic efficiency, in their opinion, should be expressed by the ratio among the gain of the standard of well-being of the population caused by expenses in the public health services, to these expenses:

$$Э = \frac{\Delta Ф}{\Delta З},$$

where $\Delta Ф$ – the gain of the fund of personal consumption in the society;

$\Delta З$ – the gain of expenses in the public health services, caused by $\Delta Ф$ [4, p. 118].

The authors suggest to express the level of the people's well-being in the size of the fund of personal consumption in the society, which gain as the productive part of the efficiency's estimation develops from two components – direct (the gain of producing the non-material goods, that is medical services) and indirect (the result of public health services' influence on the efficiency of other branches' functioning in the economy) effects of expenses in the public health services.

To put it differently, the direct effect of investments into the public health services will consist in the increase of the improvements' quantity and in the services' quality, indirect – in the output increase in other branches of the national economy due to the increase in the health potential and in the labor productivity growth. This methodical principle was represented not only in theoretical calculations, but also in practical recommendations, first of all within the frameworks "Techniques of definition of the expenses' efficiency in non-productive sphere (substantive provisions)", authorized in 1979 by the Scientific Council of the Academy of Science of the USSR [4, p. 125].

The given approach to estimation of the public health services' efficiency, undoubtedly, is the most expedient for the scientific researches and estimation of the public health services' efficiency at the macro-level, and in the conditions of the market economy as it takes into account theoretically true connection among the branch with the development of regional economy as a whole, however its practical use is complicated first of all by virtue of the complexity of the quantitative expression of the result. If the assignments' size and the medical services' volumes can be estimated quantitatively, the positive result as the diseases' and death rate's decrease is difficult "to digit". This circumstance makes the mentioned methodical approach inapplicable in the context of operative management of the public health services. **The tools of estimation of the public health services' efficiency should satisfy to the requirement of availability of the statistical information and be characterized by the comparative simplicity of calculation.**

[2] Let's note, that a number of authors refuse the socialist systems in public health services' efficiency and the basic opportunity of its measurement. Financing medical institutions in the conditions of the command economic system was carried out under the estimate, that is establishments were simply financed (Duganov M.D. Estimation of the charges' efficiency in the public health services at the regional and municipal levels; Sheiman I.M. Economy of the public health services). Actually, even in the most simple understanding of the result in general it is possible to speak about the efficiency only in the conditions of obligatory medical insurance where money are focused on concrete services, instead of the establishments' financing.

Only in the second half of the 2000s the formalized technique quite satisfying the given criteria appeared. In 2007 the commission at the President of the Russian Federation on the problems of development of government and justice in the performance of the Decree of the President of the Russian Federation from June, 28, 2007, №825 "About estimation of the efficiency of the executive authorities' activity of the subjects of the Russian Federation" authorized the official practical technique of estimation of the efficiency of the executive authorities' activity in the subjects of the Russian Federation [3].

The recommended circuit of economic estimation is directed towards the solution of the following problems:

1. Revealing the zones demanding the prior attention of both the regional and municipal authorities;

2. Development of the actions on the increase of productivity of the regional executive authorities' activity, including the optimization of inefficient charges;

3. Revealing the internal resources (financial, material, personnel, etc.) for the increase in workers' wages in the budgetary sphere, improvement of the quality and the volume of services for the population.

In a practical part of the technique the threshold values of the basic resource parameters of the public health services are determined, deviation from which is regarded as the proof of the irrational approach to the organization of the branch functioning and the component of inefficiency of the regional public health services as a whole. Moreover, the degree of a deviation from the specification is calculated arithmetically, being reflected in the concrete value of the sum of the so-called "inefficient" charges.

As the example we shall consider the level of hospitalization. With a view of the more effective utilization of the bed fund in the Vologda Oblast it was planned to lower the level of hospitalization to 22.3 cases for 100 person of the population by 2009.

The volume of inefficient charges on the patients' hospitalization is calculated as follows:

$$P4 = \frac{P^{1}4 \times Vн}{100},$$

$$P^{1}4 = (Уф - Уц) \times C,$$

where *P4* is the volume of inefficient charges on the stationary medical aid owing to the high level of hospitalization (thousand rubles);

P¹4 is the parameter of inefficient charges on the stationary medical aid owing to the high level of hospitalization at the rate for 100 person of the population (thousand rubles);

Уф is an actual level of hospitalization in the state (municipal) establishments of the public health services at the rate for 100 person of the population (cases);

Уц is an average value of the parameter of the level of hospitalization in the state (municipal) establishments of the public health services at the rate for 100 person of the population (cases);

Vн is a mid-annual population in the subject of the Russian Federation (thousand person);

C is the cost of treatment of an in-patient in the state (municipal) establishments of the public health services (rubles)

(Technique of estimation of the activity efficiency of the executive powers in the subjects of the Russian Federation. Report № 1 from July 18, 2007).

According to the carried out calculations, the additional (economically inexpedient) charges of the branch owing to the increased level of hospitalization (in comparison with the accepted specification) were not observed in the region by 2008 *(tab. 1)*.

The similar approach to estimation of inefficient charges' scales, but at the level of the municipal formations of subjects of the Russian Federation, was developed by the experts of the Health Ministry, and in 2008 the President of the Russian Federation signed the decree about their statement (the Decree of the President

Table 1. Estimation of the efficiency of the public health services charges for the patients' hospitalization at the period from 2006 to 2009

Parameters	2006	2007	2008	2009
Level of hospitalization, for 100 people (actual)	25.3	25.5	24.0	22.2
Level of hospitalization for 100 people (normative)	22.3	22.3	22.3	22.3
Cost of treatment of an in-patient day, rubles	669.59	809.30	1031.20	1079.03
Oblast's population, people	1231600	1225300	1222890	1205300
Inefficient charges, thousand rubles	24740.0	421288.7	162686.2	–

of the Russian Federation from 28.04.2008 № 607 "About estimation of the activity efficiency of the local government institutions in the city districts and municipal areas").

However the comparison of the results of both approaches methodologically incorrect as at estimation of inefficient charges by the technique of the Decree № 825 the parameters of all medical institutions in the area are taken into account, including the official bodies whereas under the Decree № 607 – only the municipal establishments of the public health services, without taking into account the state ones, that results in incomparability of the received results. Moreover, in the areas, adjoining to large cities, in Cherepovets and Vologda, the level of hospitalization is much lower (5.4 and 9.6 accordingly), as the part of the patients from these areas is treated in the official bodies of the public health services and city health facilities in Vologda and Cherepovets.

At last, the incorrectness of the mentioned approach will consist in the fact that inefficient charges are estimated in absolute parameters, therefore in the larger municipal formations the scales of inefficient charges appear to be higher, than in municipalities with a smaller population.

Actually the essence of the offered system of estimation corresponds to the methodology of economic analysis of the expenses' minimization when economic benefit is calculated in terms of charges which managed to be avoided as a result of the replacement of the base variant of the program by the new, economically more rational one [10].

It is represented, that the methodical development fixed by the Decrees of the President of the Russian Federation № 825 and № 607 should be applied, but as the additional, specifying reference points of the development of the public health services' resource base that is necessary within the framework of the nationwide policy of optimization of medical aid and the increase of branch functioning efficiency. At the same time their use in operative work and strategic planning of the public health services' activity is connected to a number of basic problems.

Firstly, at inefficient expenses' calculation at the federal level within the framework of the technique fixed by the Decree № 825, the first positions of "efficiency" are occupied with the subjects of federation having the low position on the federal background in the development of the network of establishments of the public health services.

Secondly, at inefficient expenses' calculation at the regional level within the framework of the technique fixed by the Decree № 607, the first positions of "efficiency" are occupied by the municipal formations having the low position on the regional background in the development of the network of establishments of the public health services.

Thirdly, the inefficient expenses' calculation under the Decree № 607 does not take into account the use by the municipal formations of the hospital base of the public health services' official bodies that deforms the efficiency estimation of.

Fourthly, there is no "binding" of expenses to the social and economic result of the public health services' activity. Therefore the significant scales of inefficient charges designed in the public health services' system in some territory (or in municipal formation), do not mean the inefficiency of the public health services' system as a whole.

At last, fifthly, the technique reflects the relative efficiency, that is success of the set parameters' achievement, however as far as it promotes the achievement of the socio-economic result, it is not clear. **Estimation of the public health services' efficiency at the regional and at the national levels should mention not only economic, but also social aspect**[3].

Throughout years (since 2003) in the Vologda Oblast estimation of the public health services' efficiency at the regional and municipal levels which, on the one hand, is based on accessible and statistically authentic data, and, on the other hand, is focused on measurement of the social result, is carried out.

Technique

The essence of the suggested technique is in comparison of cumulative expenses of the budget and off-budget state funds on financing the public health services' system with the scales of social losses of the society from illnesses[4]. The algorithm of estimation will consist of three consecutive stages:

1. The analysis of expenses by the municipal formations and ICD-10 classes[5].

2. The analysis of the social losses by the municipal formations and ICD-10 classes.

3. Actual economic analysis through the comparison of the expenses and social losses.

Let's consider the contents of the mentioned stages in detail.

1. For estimation of the expenses parameters of the public health services' charges, the uniting budgetary and insurance sources of financing concretized and differentiated in the territories, according to classes of illnesses and to diagnostic units with the help of special package of computer programs "Finzdrav" [1] are used.

2. Losses' level of premature death rate of the population from illnesses is accepted as estimated criterion[6]. It is calculated due to the following formula:

$$ППЖ = \sum_{x=0}^{x=L} d_x(L - x),$$

where d_x is a number of cases of death in the age of x within the framework of the given class of diseases or the municipal formation;

L is base value of life expectancy, the age, all death before which achievement are considered premature.

3. Comparison of charges and demographic losses is reduced to the construction of the system of the coordinates consisting of two axes – "losses" and "expenses". The point of crossing of the given axes is determined

[3] It is necessary to note, that at the system of parameters of the discussed technique are also present such ones as satisfaction of the population with medical aid and the population death rate, however they are considered separately from the parameters of the public health services' activity therefore accounting documents by the results of calculations actually represent the help information and, strictly speaking, do not contain actual estimations of efficiency.

[4] The paradoxical approach in general is traditional for the public health services to estimation of the result at the level of losses. Similarly the estimation of the population's health is carried out at the level of disease and death rate.

[5] ICD-10 – International Statistical Classification of Diseases and problems health-related, the last, tenth, revision of which was implemented in 1989.

[6] Use of parameter "ПГПЖ" (lost years of potential life) in practice of the government is perspective by virtue of the lines of its strategic advantages. First, it precisely reflects the degree of the development of the public health care system as one of its prior prevention of death rate of the population acts in those age in which it is unnatural. Second, the statistical information on death rate of the population satisfies to two key criteria - objectivity (the population given on death rate are least subject to influence of such subjective factors as discrepancy of the account, lacks of the mechanism of data gathering) and availability (practically in all the subjects of the federation there are extensive databases on death rates of the population, the contents of the the information on demographic losses – medical, sex, age, territorial and so forth).

Table 2. The Scheme of the typological matrix of the municipal formations or classes of disease entities and ICD-10

		Expenses	
		High	***Low***
Social losses (lost years of potential life)	***High***	**1. Expenses are inefficient?** What are the reasons of inefficiency?	**2. Shortage of resources?** If yes, – additional financing: - public health services - social sphere - industrial sphere
	Low	**3. Surplus of resources? If yes, – redistribution:** - other kinds of diseases - measures of preventive maintenance - hospitalization technologies	**4. Real efficiency?** If yes, what are the further actions? If is not present, there is underfinancing.

as arithmetic-mean value for homogeneous parameters (expenses and losses). The system of coordinates forms four quadrant, corresponding to four variants of ratio of the expenses' and social losses' parameters: "high expenses – high losses", "high expenses – low losses", "low expenses – high losses", "low expenses – low losses" *(tab. 2)*.

Depending on the values accepted by the parameters of expenses and social losses (high – low) for different objects of the analysis (municipal area, class of diseases, nosological unit), the level of the expenses efficiency will be estimated according to four specified variants of interpretation of the data.

High relative expenses at high losses characterize the situation as inefficient use of resources from the point of view of the prevention of premature death rate. Low expenses at high losses are treated as deficiency of resources. Additional resources thus should be not necessarily directed to the system of the public health services: it can be both social and industrial sphere, depending on what actions will give the maximal effect under the prevention or reduction of premature death rate. High expenses at a rather low loss should be estimated as "surplus" of resources. Thus redistribution of means inside the system of the public health services on treatment of other classes of illnesses or with expenses kinds of the help, such as stationary, in cheaper forms (for example, day time hospitals) and preventive activity is possible.

At last, low expenses at low losses can be estimated ambiguously: either they characterize the situation as really effective from the point of view of the prevention of premature death rate, or as sharply negative. By virtue of it at the specified investigation phase the given conclusions have mainly hypothetical character, for specification of the received facts it is necessary to carry out the profound detailed analysis on each of groups, and also on separate categories and objects of estimation.

For the comparative analysis of the objects incorporated within the framework of uniform typological group the index "cost – efficiency", considered through the ratio of the relative parameters of expenses and losses is used:

$$T = \frac{C}{L},$$

where C is expenses for the public health services (ruble per head);

L is losses from the premature death rate of the population (person-years for 1000 people).

The value of the index is in the direct ratio to the level of charges and in inverse proportion to the level of the social losses. The greater value T testifies to the greater level of expenses and, hence, smaller efficiency, that, however, is lawful only within the framework of separate quadrants and is insolvent in comparison of units located in different categories of the typological matrix.

The use of the described approach to estimation of the expenses' efficiency for public health services in the Vologda Oblast allowed to formulate a number of conclusions, important for the acceptance of administrative decisions in the regional public health services.

Results and discussion

Let's consider the examples of use of the analysis algorithm with reference to the municipal formations of the Vologda Oblast on the basis of the data of 2009. The typological matrix of the municipal areas and cities of the region on the parameters of public health services' expenses and social losses has the following kind (territories here are distributed in four areas "expenses – losses"; *tab. 3*).

For each city and district the values of the index "cost – efficiency" are resulted, allowing comparing estimated objects within the framework of separate quadrant matrixes.

Let's consider the basic results of estimation. Basing on the received results for the five years' period, we shall note, that the greatest in the region demographic losses from premature death rate of the population and per head expenses for the public health services take place in the Mezhdurechensk district. As the statistical data testify, in 2007 the scales of the budgetary charges within the framework of a stationary link of medical aid (in relative expression) in the Mezhdurechensk district exceeded the similar parameter for the city of Cherepovets, the largest in the region, almost twice. Thus, in one of the smallest areas there lives hardly more than 7000 people. But where central regional and local hospitals are located, they contain all basic medical services, charges per capita appear very high on the regional background. At the same time the similar situation is estimated as adverse as the Mezhdurechensk district shows high parameters of premature death rate of the population, that is high expenses for public health services are not a pledge of its demographic well-being as are realized with the prevalence of the expenses forms of rendering of medical aid.

The districts of Veliky Ustyug and Cherepovets were included in a category "high expenses – low losses". More detailed analysis of the expenses in the mentioned municipal

Table 3. Typological matrix of the municipal formations of the Vologda Oblast on the parameters of expenses and social losses (according to 2009)

Social losses		Expenses	
		High	**Low**
	High	Mezhdurechensky district – 56,23* Kichmengsko-Gorodetsky district – 49,71 Vashkinsky district – 51,52 Ust-Kubinsky district – 49,28	Ustyuzhensky district –48,33 Chagodoshensky district – 46,81 Kirillovsky district – 44,86 Kaduysky district – 36,13 Chereovets district – 41,29 Gryazovetsky district – 35,14 Babaevsky district – 46,08 Harovsky district – 42,2 Nikolsky district – 38,04 Vytegorsky district – 37,67 Vozhegodsky district – 36,03 Babushkinsky district – 33,84
	Low	Syamzhensky district – 63 Belozersky district – 58 Tarnogsky district – 62 Vologda – 120 Verhovazhsky district – 67 Cherepovets – 68 Velikoustyugsky district – 108	Sokolsky district – 71 Sheksninsky district – 54 Nuksensky district – 52 Totemsky district – 49 Vologda district – 51

*Index "cost – efficiency", T.

formations showed, that a rather high expenses observable here for public health services reflect a developed level of the expensive medical equipment, and also rather massive bed fund that also demands carrying out of re-structuring of the medical network, introduction in medical practice hospitalization technologies.

Among those municipal formations where low charges for the public health services on the background of the adverse situation with premature death rate are marked, it is necessary to allocate Nikolsky and Vytegorsky districts. They demand special attention during making administrative decisions because the problems with under-financing here are supplemented with the adverse demographic tendencies.

The municipal formations showing approached to average-regional parameter of the level of charges on for the public health services, but insignificant (is lower than the average-regional value) parameters of premature death rate of the population, can be referred to "rather safe".

According to the resulted algorithm estimation of the expenses and social losses is carried out. The detailed analysis of the specified parameters allowed to find out, that the reasons of high demographic and financial losses in the region in all the considered years were traumas and poisonings, diseases of cardiovascular system, in particular chronic ischemic illness of heart, disease of bodies of digestion. The similar picture is typical for the area as a whole and for the majority of the municipalities separately, however the degree of influence of different factors can change essentially in different territories. It testifies to the necessity of the expansion of the preventive actions on the designated directions of activity and perfection of the mechanisms of rendering urgent medical aid, is especial in those municipal formations where such need is estimated as sharply necessary *(tab. 4)*.

For more detailed estimation of the efficiency of the profound analysis of expenses and social losses from the diseases or the diagnosis is carried out in separate municipal formations of the region, and then, on the basis of the comparison with average-regional and the maximal parameters in the area and calculation of the factors of deviation, the concrete reasons causing the high level of charges and premature death rate in the given municipality come to light.

Table 4. Typological matrix of the reasons of death (ICD-10) in the Vologda Oblast on the parameters of expenses and social losses (2009)

Social losses		Expenses	
		High	**Low**
	High	Illnesses of bodies of breath – 163.07* Illnesses of bodies of digestion – 49.40 Illnesses of system of blood circulation – 32.15 Traumas, poisonings and some other consequences of influence of the external reasons – 10.83	Neoplasms– 24.77
	Low	Some infectious and parasitic illnesses – 316.00 Mental frustration and frustration of behavior – 2175.74 Illnesses of bones-muscular system and connecting fabric – 1618.22 Pregnancy, natal and the postnatal period – 13848.57	Congenital anomalies, deformations and chromosomal infringements – 18.67 The separate conditions arising in prenatal period – 118.58 Illnesses of nervous system – 119.55 Illnesses endocrine systems, meal frustration, infringement of a metabolism – 299.63 Illnesses of urinogenital system – 561.13 Illnesses of blood, hematopoietic bodies, infringement. The immune mechanism – 657.91 Illnesses of skin and hypodermic – 972.96 Illnesses of ears – 1624.17

*Index "cost – efficiency".

Thus, the opportunities of estimation with application of the suggested mechanism are extremely wide, as it allows to reveal the concrete risk factors – those reasons of death rate which cause the greatest contribution to the sum of charges on public health services and social losses of the society from premature death rate both as a whole in the region, and in separate municipal formations.

Administrative decisions

The regular practice of monitoring giving the information on expenses, losses in separate territories, the reasons of death and separate diagnoses, allows with a sufficient share of reliability and scientific validity to trace and estimate the situation with the efficiency of expenses for the public health services in the municipal formations of the region. The special attention thus is given to those areas which show negative tendencies in the parameters of expenses for the public health services and social losses owing to premature death rate among the population in a long-term time context.

Introduction of the results of the analysis of expenses and social losses, carried out according to the submitted algorithm, in practical activities of the public health services for today allowed:

1. To raise a level of purpose and validity of administrative decisions in the public health services.

The conclusions received during the research, are used at the discussion of the projects of the budget and financing of the target programs with the regional department of the finance therefore achieve the annual steady growth of financing of public health services, for the period from 2003 to 2008 which made 2.7 times. If before the recommendation on the increase in financing had no formal substantiation, today the objective information becomes powerful argument "pro" in discussion of the questions of the additional attraction of budgetary funds to needs of the public health services. It allowed proving the necessity of the acceptance of some target programs on key directions of activity, in particular the preventive providing and treatment of tuberculosis, arterial hypertension, diabetes, AIDS.

2. To reveal the classes of illnesses and separate diseases, death rate which brings the greatest social and economic damage?

It is found out, that the reasons of high demographic and financial losses in the region are traumas, poisonings and other consequences of influence of the external reasons (within the framework of this class – the following nosological units: asphyxia, toxic action of alcohol, fractures, etc.), diseases of cardiovascular system (in particular, chronic ischemic illness of heart, cardiomyopathy, intracerebral hemorrhage, heart attacks of myocardium), diseases of the digestion organs (fibrosis and cirrhosis of liver, alcoholic illness of liver, toxic liver damage).

And though the structure of the death rate from diseases is typical for the majority of municipalities of the region, the contribution of different reasons of death to the total amount of demographic losses can change essentially in the territories that enables "to differentiate" administrative decisions on separate municipalities, revealing the conditions and risk factors specific to them.

3. To carry out the work on re-structuring of the bed networks and on developing of day time hospitals in the state and municipal orders for granting medical services

The received results are used by the department of the public health services at cooperating with institutions of the local government at substantiation of re-structuring the bed fund and creation of the inter-district centers - units of rendering medical aid: in 2008 concentration of beds in the infectious and obstetric profiles in Sokolsky district for Harovsk, Vozhega and Ust-Kubensky districts, in 2009 – the concentration of beds in surgical and pediatric structure in Totma district for the service of inhabitants

of the neighbor Babushkino district is carried out. It can seem that among the conclusions and practical measures there is contradiction: during the analysis the expenses' units come to light and at the same time the inter-district centers, areas of localization and concentration of the resources are created, that automatically results in the "rise in price" of the medical aid in them. But massive bed capacities have much smaller productivity, than smaller scales of the beds' funds, but equipped with modern technical equipment and qualified personnel.

As it was shown earlier, Mezhdurechye and Veliky Ustyug districts, and also Cherepovets show the highest parameters of the charges on the public health services in the region. As it was found out during the research, it is caused by the expenses of the created in them beds' funds (so-called Ryomer's Law operates here: the expansion of the beds' fund results in the growth of scales of hospitalization as there will be the necessity to fill the beds). On the basis of the received conclusions the measures on restructuring the stationary help therefore for the period from 2008 to 2010 the beds' capacities of the municipal establishments of the public health services have decreased: in Veliky Ustyug district for 23%, in Mezhdurechensk for 18%, in Cherepovets for 22%. With the reduction of the beds' number the emergency diagnostic branches and the day time hospitals actively developed, allowing to render medical services of the appropriate quality in out-patient conditions therefore significant economic benefit is achieved

4. To prove the necessity of investments on the public health services' development on those services which are responsible for the preventive maintenance and treatment of the most "problem" diseases.

For 5 years (from 2003 to 2008) in the region the staff of the regional center of medical aid was expanded, its branches in all the municipal areas were developed. The staffs are increased and the functional duties of the AIDS-center are expanded, the organizational methodical cabinet is organized on the basis of the regional infectious hospital. Significant investments (596 million rubles) were enclosed into the construction and equipment of the radiological case of the regional oncology center which started to work since June, 2009; therefore the availability of the mentioned kind of help raised, the charges on which, as researches allowed to conclude, were insufficient.

Due to the organization of the three-level system of rendering medical services to pregnant and to lying-in women it was possible to lower the infantile death rate practically twice. On the basis of the data on high death rate of people from the road and transport incidents on the line "Vologda – Sokol" it was decided to found two trauma centers on the basis of the Vologda regional and Sokol city hospitals that will allow to render effective help to those people who was injured and to deliver them to hospital within "gold hour".

The results of the economic analysis according to the mentioned technique are used for substantiation of the priorities of financing within the framework of the branch and for definition of the most comprehensible variants of investment providing protection and strengthening of the public health. Realization and duplicating of the given project in the area's scales will allow providing the increase of the charges' efficiency for the public health care and transparency of the managerial process and planning in the regional public health services.

References

1. Duganov, M.D. Estimation of the charges' efficiency in the public health services at the regional and municipal levels / M.D. Duganov. – M., 2007. – 112 p.

2. Kochurov, E.V. Estimation of the activity efficiency of the treatment-and-prophylactic establishments: the comparative analysis of methods and models / E.V. Kochurov // Bulletin of St. Petersburg State University. Edition 8. – 2005. – №. 3. – Pp. 100-120.
3. Technique of estimation of the activity efficiency of the executive powers in the subjects of the Russian Federation. Report № 1 from July 18, 2007 [Electronic resource]. – Available at: http://www.primorsky.ru/files/5584.doc
4. Non-productive sphere in the USSR / ed. by M.V. Solodkova. – M.,1981. – 351 p.
5. About the ratification of the Plan of actions on realization of the Program of the socio-economic development in the Vologda Oblast for the period 2011 – 2013: decree of the Government of the Vologda Oblast. [Electronic resource]. – Available at: http: // vologda-oblast.ru/periodic.asp? CODE=8052 (date of the reference 14.04.2011).
6. Strategic plan "Protection and strengthening of the population's health in the Vologda Oblast for the period 2003 – 2010". – Vologda, 2002. – 100 p.
7. Heine, P. Economic way of thinking / P. Heine. – M., 1997. – 704 p.
8. Chubarova, T.V. Economy of the public health services: theoretical aspects (the scientific report) / T.V. Chubarova. – M.: Institute of Economics of the RAS, 2008. – 68 p.
9. Sheiman, I.M. Economy of the public health services / I.M. Sheiman. – M., 2001. – 323 p.
10. Drummond, M.F. Methos for the economic evaluation of health care programmes / M.J. Sculpher, G.W. Torrance, B.J. O'Brrien., G.L. Stoddart. – Third edition. (Oxford Medical Publications). – Oxford Univercity Press, 1997. – 379 p.
11. Premature mortality in the United States of America: public health issues in the use of years of potential life lost (YPLL) [Electronic resource]. – Available at: http://www.cdc.gov/mmwr/preview/mmwrhtml/00001773.htm (date of the reference 15.03.2011).
12. Kalashnikov, K.N. Health care and region's economy / K.N. Kalashnikov // Problems of territory's development. – 2011. – № 1 (53). – Pp. 75-82.
13. Kalashnikov, K.N. Evaluation of efficiency of costs for health care: the Vologda Oblast's experience / K.N. KalashnikoPv, M.N. Duganov, A.A. Shabunova // The Region: Economics and Sociology. – 2010. – № 3. – Pp. 201-218.

UDC 64.012(470.12)

Analysis of tariff regulation in housing and utilities economy

(in case of the city of Vologda)

The issues of tariff regulation in the housing and communal services in Vologda are considered in the article. On the basis of collected data about public payments for housing and communal services the growth of rates for these services has been identified. State authorities regulating tariffs and their competence are defined. A scheme of tariff, their characteristics and activities restraining growth of tariffs for public utilities are considered.

Housing and communal services, tariffs on public utilities (tariffs on housing and communal services), the scheme of tariffs, tariff regulation.

Alexarder N.
TASLUNOV
Junior Scientific Associate of the Institute of Socio-Economic Development of Territories of RAS
an.taslunov@gmail.com

Andrey S.
BARABANOV
Junior Scientific Associate of the ISEDT of RAS
qwerdsa-asb@mail.ru

Housing and communal services is one of the most important sector not only of national and regional economies, but and municipal, having a significant impact on all aspects of society. The availability and quality of public utilities are determining factors in living standards, elevating to rank of strategic task the development of social infrastructure.

The reform of the Housing and communal services and mass privatization of housing resources have formed a qualitatively new area of housing relationships, at the same time causing some disproportion of the housing and communal services' development. There are problems of weak legal preparedness of the majority of housing owners in the questions of effective management of housing; of lack of full service market operation and of proper maintenance of housing stock as well as municipal infrastructure, capital repairs of residential buildings and internal engineering life-support systems; of lack of state control over the normative content of housing resources and administrative leverage over the maintenance service.

Table 1. The participants of the analysis of tariffs on housing and communal services in Vologda

№	Address	Management form*	Organization's name	Part of the city
1.	29, Udarnikov St.	Management company (private property)	"Visis" Ltd.	Central
2.	65, Kozlyonskaya St.	Management company (Municipal)	Municipal autonomous organization "Housing Authority of Vologda", station number 2	Central
3.	5, Pervomayskaya St.	Management company (Municipal)	Municipal autonomous organization "Housing Authority of Vologda", station number 2	Central
4.	18, Dalnaya St.	homeowners association	Homeowners association "Dalnaya 18"	Riverside
5.	18, Samoylo St.	Management company (private property)	OJSC"Fryazinovo"	Riverside
6.	22a, Dalnaya St.	Management company (Municipal))	Municipal autonomous organization "Housing Authority of Vologda", station number 2	Riverside
7.	77, Leningradskaya St.	Housing and building company	HBC "Risk"	West
8.	8, Goncharnaya St.	Housing cooperative	Housing cooperative "MGC"	West
9.	26, Petrozavodskaya St.	Management company (private property)	Management company "RES-12+" Ltd.	East
10.	10, Tekstilshikov St.	Management company (private property)	Management company "RES-12" Ltd.	East

* The main forms of managing the apartment building are homeowners association, management companies and direct management of an apartment house (Art. 135, 162, 164 Housing Code of RF). Management of apartment buildings can also carry out housing and housing cooperatives, which are special kinds of consumer cooperatives (Art. 110 Housing Code of RF).

A special imbalance in the development of housing and communal services can be seen in the pricing and tariff policy for the services of natural monopolies, on which depends the possibility of normal operation and development of enterprises communal complex. The procedure for establishing and forming tariffs for enterprises of this complex affects the interests both of the companies (in terms of the formation of the financial results of economic activity) and population (in terms of availability and opportunity to pay this type of service).

Therefore, the participants of the system of tariff regulation are interested in ensuring consistency of interests and in objectivity and transparency of the tariff regulation. Increased attention to the issues of tariffs for the services of enterprises of municipal housing and communal complex causes high monopolization of this sphere of economic activity that generates and justifies the need for analysis of the tariff regulation of this type of enterprises. Analysis of tariff regulation was based on the information about the payment for housing and communal services by the population in Vologda. The account-receipts of the housing owners of ten blocks of flats (different on management form and territorial location) were used as the materials *(tab. 1)*.

Based on collected data the structure of payments for utility services[1] was calculated in order to prove the influence of distinct tariffs for a total cost of services. The most expensive service is heating – 34% of the amount of utility payments, there are housing maintenance and hot water supply on the second and third places – 18 and 14%, respectively *(tab. 2)*. This is broadly in line with the All-Russian tendencies.

Almost 78% fall on utilities and 22% on housing services in the structure of the total payment for utility services in Vologda (in comparison with Russia as a whole – 84 and 16% respectively [10]).

[1] Calculation of the payment structure was based on data presented in the accounts-receipts for property owners in 2010, for a standard apartment (under the administration of the municipal management company), area of 54 sq. meters and a family of three with an average monthly power consumption of 200 kW/h.

Table 2. The structure of payments for utility services in Vologda, calculated for the apartments of 54 sq.m and a family of three

Type of public utilities	2006	2007	2008	2009	2010	Change for 2010 – 2006
In all	100.0	100.0	100.0	100.0	100.0	x
Heating	34.8	34.0	32.6	33.5	34.2	-0.6
Maintenance	22.2	18.2	20.6	19.8	17.7	-4.5
Hot water	14.1	13.8	13.2	13.5	13.8	-0.3
Electricity	11.8	10.9	10.5	9.6	10.7	-1.1
Cold water	6.8	7.2	7.6	8.7	8.6	1.8
Sewerage	4.6	5.1	4.9	6.6	6.3	1.7
Capital repairs	2.3	6.3	6.0	4.9	4.4	2.1
Gas	1.9	2.0	2.4	2.0	2.4	0.5
Removal of domestic waste	1.5	2.5	2.2	1.4	1.9	0.4

Table 3. The dynamics of tariffs on public utilities in Vologda (Jan. 1)

Parameter	2006		2007		2008		2009		2010		
	cost	to 2005, %	cost	to 2006, %	cost	to 2007, %	cost	to 2008, %	cost	to 2009, %	to 2006, %
Heating, rub. / sq.m.	15.95	No data	19.03	119.3	19.03	100.0	23.94	125.8	27.41	114.5	171.9
Gas, rub. / person	16.08	No data	20.28	126.1	25.22	124.4	25.22	100.0	34.98	138.7	217.5
Cold water, rub. / person	56.12	No data	73.00	130.1	80.03	109.6	112.18	140.2	123.76	110.3	220.5
Hot water, rub. / person	116.5	No data	138.98	119.3	138.98	100.0	174.31	125.4	199.54	114.5	171.3
Sewerage, rub. / person	37.93	No data	51.01	134.5	51.19	100.4	85.00	166.0	90.93	107.0	239.7
Electricity, kW / h.	1.46	No data	1.65	113.0	1.65	100.0	1.85	112.1	2.31	124.9	158.2
Removal of domestic waste, rub. / person.	12.50	No data	25.35	203.0	23	91.0	1.03*	80.6	1.34*	130.0	192.1
Consumer price index, %	109.0		111.9		113.3		108.8		108.8		164.0
* Cost for sq. m.											

An analysis of payments for **municipal services** has not revealed differences between them in the houses of different forms of control and on a territorial basis (location): they are the same for all residents. However, the increase in tariffs for 2006 – 2010 years was very significant (on *electricity* – 158%, *hot water* – 171%, *heating* – 172%, *gas* – 218%, *cold water* – 220%, *sewerage* – 240%, *removal of household rubbish* – 192%; *tab. 3*). During the period under review the increasing of tariffs on certain types of utility services to more than 50% has been ahead of the consumer price index *(fig. 1)*.

Growth of tariffs on public utilities predetermined 1.8-fold increase in the overall cost of utilities for 2006 – 2010 years for apartments with full amenities of 54 sq.m for a family of three (by comparison, there is almost 2-fold increase in Russia in general; *tab. 4*).

Analysis of tariffs for **housing services** allows us to conclude that they are different for owners of apartments in buildings with different forms of management. Growth of tariffs on the housing maintenance in the HOA (homeowners association) was higher than in houses managed by private and municipal companies (for 2006 – 2010 years this growth of tariffs in the HOA was 191% vs. 142, and 139% in the private and municipal management companies, respectively; *tab. 5*).

But in absolute value of these rates were lower. Of special note is the housing cooperative, in which the tariff for the housing maintenance in 2006 amounted to 9.77 rubles for the square meter, and it remained throughout the period under review (this fact requires further research). The increase of tariff for the maintenance of housing in the HBC (housing and

Figure 1. Comparison of consumer price indexes and tariffs on public utilities in Vologda, 2010 – 2006, in %

Table 4. The cost of public utilities for a standard apartment, area of 54 square meters and a family of three in month

Parameter	2006	2007	2008	2009	2010	2010 to 2006, %
The total cost of utilities (excluding electricity) in Vologda, rub.	1578.5	1953.3	1982.6	2542.3	2899.8	183.7
Including: - heating, rub./sq.m	861.3	1027.6	1027,6	1296.7	1480.1	171.8
- gas, rub. / person	48.2	60.8	75.6	75.6	104.9	217.6
- cold water, rub. / person	168.3	219.0	240.0	336.5	371.2	220.6
- hot water, rub. / person	349.5	416.9	416.9	522.9	598.6	171.3
- sewerage, rub. / person	113.7	153.0	153.5	255.0	272.7	239.8
- Removal of domestic waste, rub. / person	37.5	76.0	69.0	55.6	72.3	192.8
The total cost of utilities (excluding electricity) in RF, rub.	1629.1	1813.8	2137.1	2637.9	3243.5	199.1
Source: The calculation is based on the officially established tariffs REC Vologda region, as well as account-receipts submitted by homeowners.						

building company) for 2006 – 2010 was 571%, at the same time the magnitude of the tariff in 2010 had been at the city level.

Payment for capital repairs isn't be charged in houses with a form of management HOA, HC, HBC , in some cases due to the fact that the house is new and it is not need of capital repair, or due to the fact that payment for repair is included in the fee for maintenance, for example – HOA "Dalnaya 18". Growth of tariffs on payment for capital repairs in houses managed by private companies and municipalities for 2006 – 2010 years amounted to 332%, but this service is 4.4% in the structure

Table 5. Dynamics of tariffs for housing maintenance in the houses with various forms of management in Vologda (Jan. 1)

Management form	2006		2007		2008		2009		2010		
	cost	to 2005, %	cost	to 2006, %	cost	to 2007, %	cost	to 2008, %	cost	to 2009, %	to 2006, %
Municipal Management company	10/17	No data	10.17	100	12.0	118.0	14.16	118	14.16	100	139.2
"Fryazinovo"	10.17	No data	10.17	100	12.0	118.0	12.0	100	14.16	118	139.2
MC "Visis"	10.17	No data	10.17	100	12.0	118.0	12.0	100	14.50	120	142.6
MC "RES-12+"	10.17	No data	10.17	100	12.0	118.0	12.0	100	14.50	120	142.6
MC "RES-12"	10.17	No data	10.17	100	12.0	118.0	12.0	100	14.50	120	142.6
Housing and building company	2.48	No data	5.01	202.0	12.0	239.5	14.16	118	14.16	100	571
Homeowners association	7.33	No data	9.0	122.8	11.20	124.4	11.20	100	14.00	125	191
Housing cooperative	9.77	No data	9.77	100	9.77	100	9.77	100	9.77	100	100
Consumer price index, %	109.0		111.9		113.3		108.8		108.8		164.0

Table 6. The dynamics of the tariffs on capital repairs in houses managed by private and municipal companies (January 1)

Parameter	2006		2007		2008		2009		2010		
	cost	to 2005, %	cost	to 2006, %	cost	to 2007, %	cost	to 2008, %	cost	to 2009, %	to 2006, %
Capital repairs, rub./ sq.m	1.06	No data	3.52	332.0	3.52	100.0	3.52	100.0	3.52	100.0	332.0
Consumer price index, %	109.0		111.9		113.3		108.8		108.8		164.0

of payments ,that indicating a slight effect on its overall cost of housing and communal services *(tab. 6)*.

As a result, it can be concluded that the tariffs on communal services in the past five years have increased on average by 218% (an increase of consumer prices – 164%). The growth of tariffs is ahead the index of consumer price by 54%. Accordingly, it is reflected in the share of expenditure on public housing and communal services in the family budget, which annually increases (from 5.4% in 2000 to 10.2% in 2009; *fig. 2*).

According to a survey conducted by staff ISEDT RAS, in 2010, the average in the city proportion of pay for housing and communal services in the family budget was 20 – 30% (mentioned by about 63% of respondents). At the same time, about 13% of respondents to part with 40% of their family budgets to paying utility bills.

However, the situation in the housing and communal services in Vologda can be described as controversial. Despite the high growth rates of wages of employees of housing and communal services, as well as its excess in-kind over the average in the city wages of employees more than 40% *(tab. 7)*, the effectiveness of housing and utilities sector is still low.

This is evidenced by financial results of organizations providing housing services, which in 2007 and 2009 was negative (loss amounted to 20.6 and 73.3 million rubles, respectively; *fig. 3*).

In this regard, a significant increase in tariffs on housing services indicates the need for a clear understanding of the scheme of their formation. This is confirmed by the results obtained during the survey "Assessment of housing and communal services in Vologda", conducted ISEDT RAS in 2010. The system of calculation of tariffs on housing services is

Figure 2. The share of spending to pay for housing and communal services in Vologda, %

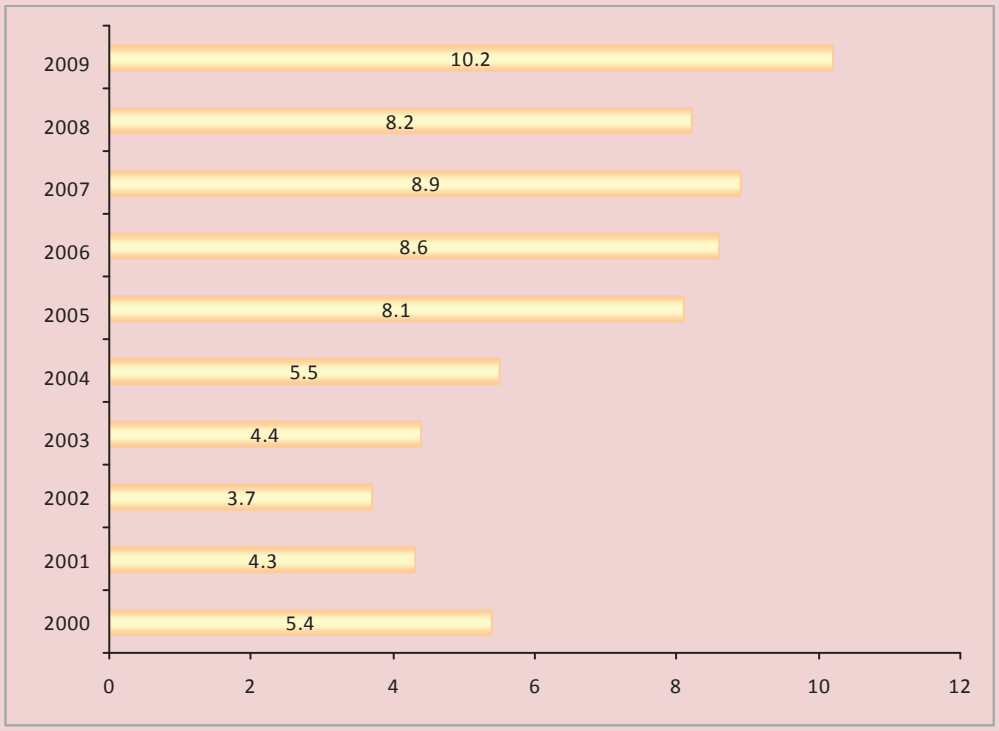


Table 7. Salaries of employees of organizations in Vologda, rub.

Parameter	2006		2007		2008		2009		2010	
Average in the city	11061	100.0	13821	100.0	17273	100.0	17580	100.0	18634	100.0
Housing and communal services	**16561**	**149.7**	**18233**	**131.9**	**22136**	**128.2**	**24993**	**142.2**	**26492**	**142.2**
Transport and communications	12321	111.4	14597	105.6	18805	108.9	20921	119.0	22364	120.0
manufacturing industry	10026	90.6	12818	92.7	15629	90.5	15029	85.5	15479	83.1
Wholesale and retail trade	8701	78.7	10928	79.1	14841	85.9	14048	79.9	14581	78.2
Health and social services	8507	76.9	10533	76.2	13411	77.6	13107	74.6	13985	75.1
education	7440	67.3	9253	66.9	11604	67.2	12618	71.8	13627	73.1

Source: Regions and cities of Vologda. Socio-economic indicators: stat. call. / Vologdastat. – Vologda, 2010.

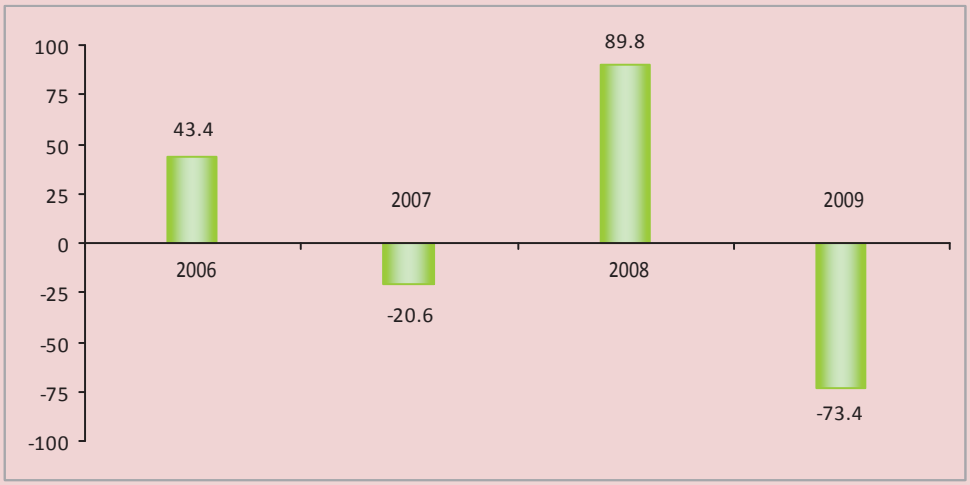
still not clear for 28% population of Vologda, more than 40% of respondents understand it only partially, 69% of respondents consider that the tariffs are overstated and do not match the quality of provided services; more than 42% of respondents have no idea about the form of management of their houses [9].

The survey data indicate a low awareness of population of Vologda in part of changes in the housing sector, as well as the problems of perception of diverse regulatory-legislative framework of tariff regulation in the housing sector, which consists of various legal acts of federal, regional and local importance.

The most important of them:

- Housing Code of the Russian Federation of 29.12.2004 № 188-FL;
- Federal Law of RF of 30.12.2004 № 210-FL "On the basis of tariff regulation organizations, public utilities";

Figure 3. Financial result of activity of organizations of Housing and communal services in Vologda, mill. rub.



Source: Regions and cities of the Vologda oblast. Socio-economic indicators: stat. coll. / Vologdastat. – Vologda, 2010.

• Federal Law of 14.04.1995 № 41-FL "On state regulation of tariffs on electric and heating energy in the Russian Federation";

• Government Resolution of 26.02.04 № 109 "On the pricing of electricity and heat in the Russian Federation";

• Federal Law of 31.03.1999 № 69-FL "On Gas Supply in the Russian Federation".

The Regional Energy Commission of the Vologda region is executive authority performing functions in the regulation of tariffs and markups on goods and services to the housing and communal sector, it provides:

■ tariffs (price, payment for the transfer) of electricity and heat supplied by all the supplying organizations;

■ prices for natural and liquefied gas sold to the population;

■ tariffs on goods and services organizations of public utilities (providing water and wastewater, wastewater treatment and disposal (burial) of municipal solid waste.

Tariffs for organizations engaged the production and transfer of **heat and electricity**, are formed according to the scheme shown in *figure 4*.

The feature of the regulation of the tariffs is that the Federal Tariff Service sets the limits of tariff changes[2] on the basis of forecast of socio-economic development of the Russian Federation for the next year.

Pricing of services of gas supplying organizations differs from the previous scheme in that the Federal Tariff Service doesn't set limits on tariff changes, but forms the wholesale price of the resource *(fig. 5)*.

The scheme of formation of tariffs on services of enterprises of communal complex providing cold and hot water supply, sewerage, sewage treatment and disposal (burial) of solid waste is presented in *figure 6*. According to the existing powers public authorities establish tariffs based on the financial needs of these organizations necessary to implement production and investment programs.

[2] Limited levels of change – the minimum limit and (or) maximum levels of regulated tariffs in frame of which tariffs are set and sales markups.

Figure 4. Scheme of formation of tariffs on services of electricity and heat supplying

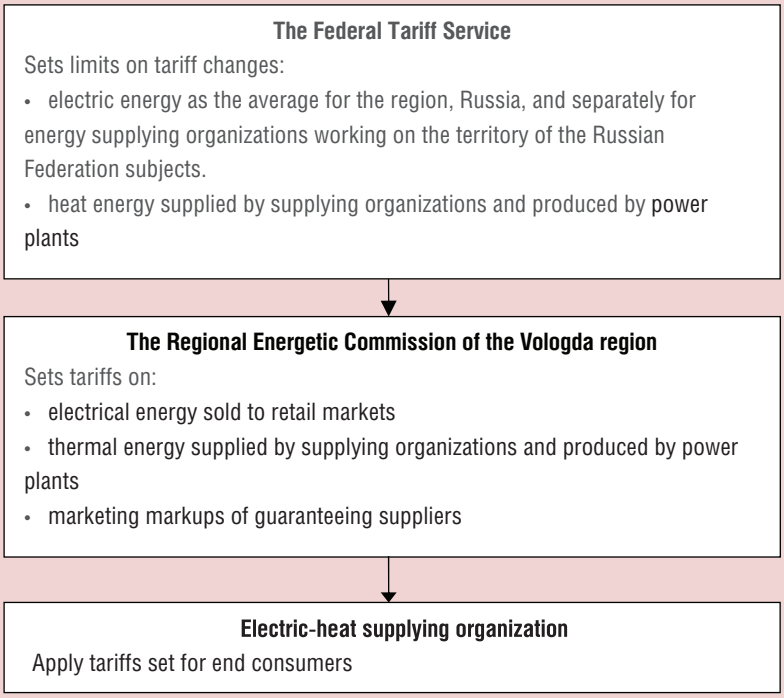
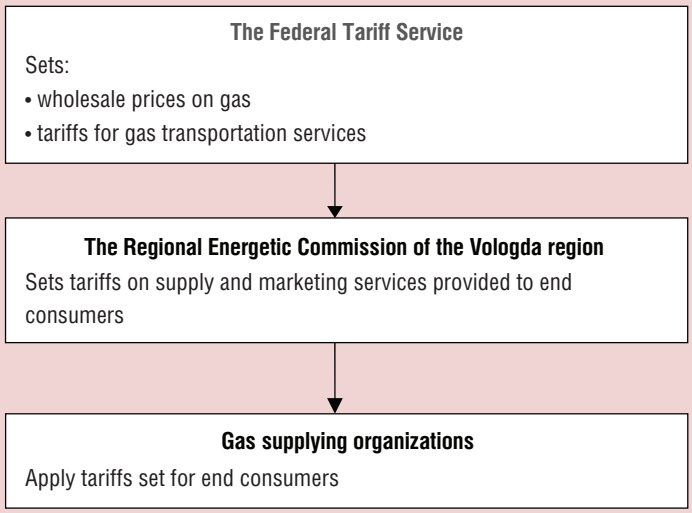


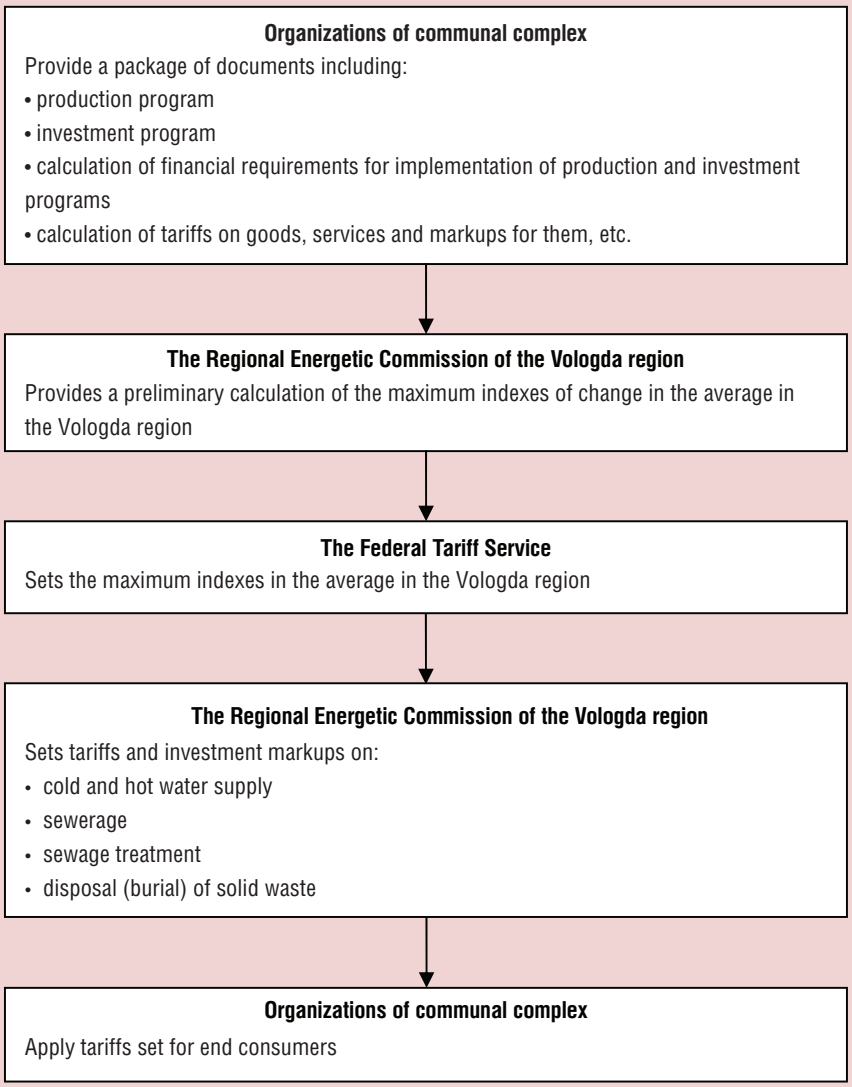
Figure 5. Scheme of formation of tariffs on services of gas supplying organizations



Formation of tariffs for housing services is different from the previous patterns of setting of tariffs on communal services that the payment for maintenance and repair of the dwelling is not regulated by the state, the order of its formation is not fixed by law. It is fixed at a general meeting of homeowners based on the estimates of ordered works and services, approved by the management company or homeowners' associations. Planning of the cost of works is based on various resolutions issued by Gosstroi RF[3] (The State Committee of Russian Federation for Construction).

[3] Methodical recommendations on the financial justification of rates for maintenance and repair of housing fund, approved by Order of the Construction Committee of Russia from 28.12.2000 № 303; Recommendations for standardization of material resources for maintenance and repair of housing fund, approved by Order of the Construction Committee of Russia from 22.08.2000 № 191.№191.

Figure 6. Scheme of formation of tariffs on services of organizations providing: cold and hot water supply, sewerage, sewage treatment and disposal (burial) of solid waste



However, if owners of housing do not have decided on the form of housing management or with the magnitude of the tariff, the fee for the repair and maintenance of housing is set by local authorities.

In Vologda, it is established by the appropriate resolutions of the Head of Vologda [5]. This explains the difference in pay for housing services in homes with different forms of management.

Analysis of the existing schemes of tariffs on services of housing and communal organizations of the complex allows marking their following features:

1. Pricing of tariffs and markups on goods and services of energy-supplying organizations is based on the forecast of socio-economic development of the Russian Federation [7]. Such approach is economically unreasonable. In our opinion, in the sphere of regulation of natural monopolies pricing should be based on costs of production, excluding the possibility of economic profit at the expense of a monopoly position in the market.

2. The system of calculating of the maximum indices and tariffs by regulatory authori-

ties and the absence of members of the public in this process allows characterizing this system as non- transparent.

3. A complex three-tier regulatory system allows realizing the interests of resource supplying organizations, making the approval process of tariffs politicized. The reason is that local authorities are also owners of the utilities' property. This leads to the fact that relations between the enterprises of housing and communal services and local authorities became just administrative in nature.

4. The current regulatory system does not allow to take into account the payment actual incurred by the producer costs, the volume of real consumption and rate of loss of product during its production and delivery. This is a significant discrepancy between the amount of supply and consumption of the product (for example, the consumption of cold water in Vologda on the norm is 180 liters/day per person. On meter readings of the order of 73 liters/day per person; Hot water – 120 l liters/day per person, actually consumed 55 liters/day per person) [9].

5. Formation of tariffs for public services is not actually regulated by the state and depends on the activities of management companies.

These features of regulation of tariffs for housing and communal services explain the difference in the rate of its growth and in some way are the causes of its increase.

In order to determine the objectivity of the formation of tariffs for public utilities it is necessary to introduce a mandatory auditing expertise, conducted by a special commission consisting of representatives of the REC (The Regional Energetic Commission), and independent experts on housing and community representatives that allows:

- to identify inefficient and unreasonable costs included in the calculation of tariffs (various types of resources' losses during transport to the end consumers);
- to take into account all factors that reduce cost of production at all levels of the pricing;
- to conduct an independent estimate of the usefulness and return on investment programs, after that a decision on their inclusion in the tariff structure should be made.

Administrations of Vologda and Cherepovets have already made first steps to regulate the activities of management companies. In Cherepovets the Public Council for Control of housing and communal services has been created, whose members together with the City intend to participate in the audit of the effectiveness of spending money by management companies.

In Vologda at the initiative of a group of deputies of the party "United Russia" the rating of management companies is formed, it takes into account the number of calls on the "hot line", efficiency of problem solving, debt management companies to suppliers of public utilities, common area of residential buildings under management, and other indicators *(tab. 8)*. Then rating is higher, the more reliable is the company that provides utility services.

However, it should be noted that the population of Vologda is not adequately informed about the organizations that manage the housing stock. In our case only MC "Fryazinovo" and MC "Visis" have official internet sites with information in form of report about the providing of communal services in 2010. Houses on the streets of 77, Leningradskaya St. and 8, Goncharnaya St. are absent in the list of served houses on the official website of the Administration of Vologda.

In our view, in order to identify the objectivity of the formation of tariffs on housing and communal services is necessary:

➲ *The Introduction of a mandatory auditing expertise, conducted by a special commission consisting of representatives of the Regional Energy Commission of the Vologda region, independent experts on housing and community representatives.*

Table 8. Rating of management companies in Vologda (05.05.2011)

№	Name	Number of houses	Number of applications	Solved applications	Rate %
1.	Management company "CentrZhilStroy"	6	20	20	89.8
2.	MC "Teploservice"	9	23	22	89.2
3.	MC "Zhilstroyindustriya-service"	13	6	3	88.9
4.	MC "Vologdaagrostroy Service"	14	15	9	88.6
5.	MC "Vologda river port"	1	1	0	88.5
6.	MC "Vladistroycomfort"	2	2	0	87.7
7.	MC "Zhilkomhoz"	9	6	0	86.8
8.	MC "Roszhilkom"	3	3	2	86.0
9.	MC "Santehmontazh 1"	3	0	0	81.0
10.	MC "House manager"	8	0	0	81.0
…	……	…	…	…	…
16.	MC "Visis"	**7**	**5**	**3**	**80.1**
17.	MC "New technologies"	29	55	48	79.9
…	……	…	…	…	…
33.	Municipal autonomous organization "Housing Authority of Vologda"	**1281**	**782**	**734**	**71.9**
34.	MC "Res-3"	78	175	145	71.7
…	……	…	…	…	…
39	**MC "Fryazinovo"**	**120**	**190**	**182**	**71.3**
…	……	…	…	…	…
42.	**MC "Res-12+"**	**35**	**81**	**71**	**71.1**
…	……	…	…	…	…
45.	**MC "Res-12"**	**78**	**174**	**138**	**70.7**
…	……	…	…	…	…
47.	MC "House-Service-3"	20	32	12	19.3

* Official site of the city of the Administration of Vologda. – Available at: http://vologda-portal.ru/oficialnaya_vologda/uprcomp/

Conducting of audit expertise may be at least 1 time per year (based on the REC of the Vologda region) with the obligatory publication of the results in the media (newspaper "Red North", "Vologda week", etc.).

➲ *The activities of management companies in Vologda should be more transparent and open, so reporting on the results of their work should be available to the public*. Annual reports of asset management companies should be available to owners of housing stock. In this context, guided by the resolution Government of RF dated September 23, 2010 № 731, to oblige the management companies to publish reports on its activities on their websites or on the site of the local government of the municipality. And they should be available within 5 years.

➲ *Increased awareness of population of Vologda on legislative changes in the housing and communal services*. It is necessary for local authorities and management companies to conduct systematic work on public awareness on the reform of housing and utilities, on changes in the legal acts related to housing and community services, both at the level of municipality and region, and the Russian Federation a whole.

The introduction of such measures in housing management practice will bring clarity to the decision of many controversial issues, and will also help to keep the growth of tariffs for public utilities that provide protection of the economic interests of the public and other consumers.

References

1. Housing Code of the Russian Federation of 29.12.2004 № 188-FL.
2. On Gas Supply in the Russian Federation: Federal Law of 31.03.1999 № 69-FL.
3. On state regulation of tariffs on electric and heating energy in the Russian Federation: Federal Law of 14.04.1995 № 41-FL.
4. On the basis of tariff regulation organizations, public utilities: Federal Law of RF of 30.12.2004 № 210-FL.
5. On establishing fees for maintenance and repair of the dwelling for residential tenants on social contracts of employment and contracts of employment premises of community housing: Resolution of the Head of Vologda on 10.04.2009 № 1854 (as amended on 29.12.2010).
6. On approval of rules maintenance of common property in multi-apartment building and the rules change the size of fees for maintenance and repair of the dwelling in case of service delivery and performance of work on management, maintenance and repair of common property in apartment buildings of inadequate quality and (or) at intervals greater than set duration: RF Government Resolution 13.08.2006 № 491.
7. On the pricing of electricity and heat in the Russian Federation: Government Resolution of 26.02.04 № 109.
8. Afonina, A.V. About Protection of right of Consumers of utility services / A.V. Afonina // Journal of the head and chief accountant. – 2008. – № 4. – Pp. 56-61.
9. Proposals to improve the efficiency of resource use in the sphere of houses water supply: Report on Research and Development / A.S. Barabanov, A.N. Nesterov. – Vologda, 2010. – 98 p.
10. Civil Society and housing and communal services: materials of report of the Public Chamber RF from April 6, 2011.
11. Economics and Organization of Housing and communal services of the city: textbook for university students / ed. by D.M Zhukov. – M.: VLADOS-PRESS, 2003. – 216 p.
12. Kamenev, E.A. Finance of Housing and communal services / E.A. Kamenev, S.V. Barulin. – M.: Axis-89, 2003. – 312 p.
13. Klyuyeva, O.N. On limiting growth rates indices for 2010 / O.N. Klyueva // Rates and investment. – 2009. – № 4. – Pp. 46-47.
14. Ognev, I.A. Reform of Housing and communal services in a deadlock / I.A. Ognev // ECO. – 2010. – № 3. – Pp. 92-107.
15. Chernyshov, L.N. Pricing and tariff policy in housing and communal services / L.N. Chernyshov: ed. by E.V. Basin. – M.: Book World, 2005. – 183 p.

UDC 314.174 (470)

Social and economic damage due to population's mortality from suicides

The paper presents an analysis of the social and economic burden of suicide death rate in Russia, conducted by research team of ISEDT RAS in research "Social health of the population" in cooperation with the Federal State University "The Moscow Scientific Research Institute of Psychiatry" of the Health Ministry in Russian Federation.

The place of suicide in the structure of mortality is defined. It is shown that Russia is a country with the highest suicide rate in Europe.

Social and economic costs of suicide in different age and gender groups at the regional and state levels are counted. Its highest level is among men aged 20 to 29 years. The regions with the highest number of lost years of productive life due to suicide are concentrated in the south of Russia (the Volga, Urals and Siberian federal districts).

A comparative assessment of suicides burden in the rankings with the common mortality causes from natural and external causes is given. By the level of socio-economic loss suicides far exceed the other causes of the class, "Accidents, injuries and poisoning" and are comparable to the losses caused by coronary heart disease.

Suicide, social and economic damage.

Mikhail V.
MOREV
Ph.D. in Economics, Scientific Associate of the Institute of Socio-Economic Development of Territories of RAS
379post@mail.ru

Evgeny B.
LYUBOV
Doctor of Medicine, Professor, the Head of the Department of Suicidology in the Federal State University "The Moscow Scientific Research Institute of Psychiatry" of the Health Ministry in the Russian Federation
lyubov.evgeny@mail.ru

The demographic situation in Russia throughout last two decades is characterized by a high death rate and poor health quality of the population. The urgency of the problem is caused by the fact, that it takes a stage of "the long stagnation". In the long term "population estimations have mainly pessimistic character" [13]. Possibilities of maintaining and health strengthening often are a subject of scientific discussions, but only in recent years the scientists began to address to economic aspects of this question. "This is the understanding of that

circumstance that the population of the country forms, perhaps, its most important resource, and it is a basis of the future economic growth and scientific and technical development, that is why it requires careful research and from the point of view of economy" [16].

Various aspects of the economic damage from health losses were considered by:

1. S.N. Bobylev, V.N. Sidorenko, J.F. Safonov (they studied ecological costs for health of the population connected with water pollution and atmospheric of air).

2. D.I. Shmakov, B.B. Prokhorov (they developed a technique for estimation of losses health capital, as a component of the human capital, due to morbidity and mortality of the population in the working age).

3. A.A. Afanasev, B.P. Maksimenko (they considered various kinds of energy losses, including the negative influence of the production of electricity energy on human health).

4. V.P. Korchagin, V.L. Narozhnaya (they analyzed the population losses because of natural and manmade accidents, failures and natural disasters).

Currently, the negative demographic situation in Russia defines an increased death rate from "external causes" among which the considerable share is occupied with suicides. The increasing attention is paid to suicidal behavior, however basically the researchers address to its demographic or psychological aspects. Meanwhile, the death rate of the population from suicides has also essential social and economic consequences caused by the fact, that suicides widespread among persons of working age. One of such consequences is the high level of a social and economic damage, which estimation is the basis of this research.

The improvement of mental health of the population is noted as one of the fundamental tasks in the World Health Organization program "Health – 21: policy of health achievement for all in the European region of the WHO".

In particular, it is underlined that "improvement of mental health – especially decrease in number of suicides – requires the most steadfast attention to questions of strengthening and a mental health care throughout the life, in particular, in groups of the population being in disadvantaged economic and social situations" [5].

During the period from 1950 to 1995 the prevalence of suicides has increased in the world on 60%. In the USSR the statistics of suicides was secret, that's why authentic can consider only the data which were published by the Department of Moral Statistics in 1926 (then the level of suicides was 6.4 on 100 thousand people), and the data for 1965, published during the period of Khrushchev (the level of suicides was 17.1 on 100 thousand people) [2]. Thus for the period from 1965 to 1995 the death rate from suicides increased in Russia on 42% (from 17 to 41 cases per 100 thousand population).

In the European region suicide is now a leading cause of death among young and middle age men. Among causes of death in the age group from 15 till 35 years the suicides take the second place after road and traffic accidents [10]. In the Russian Federation (by data of 2009) in this specified age category suicides were on the first place, being ahead of the number of deaths due to road and traffic inquiries on 10% (13.7 and 12.4 thousand cases accordingly).

It should be noticed that suicide behavior is a wider problem, than population's mortality from suicides. The perpetrators of parasuicide are associated with it (the attempt of the suicide, which was not ended with the lethal outcome), close relatives of such person, all people having thoughts about suicide.

According to the formula of the WHO experts, at n completed suicides are accounted for $10 - 20n$ parasuicides, $8n$ close relatives (they enter into a group of the raised suicide risk), $100n$ people, thinking of suicide or carrying out destructive actions on subconscious level [3].

Thus, on 37,580 suicides (1.9 of total mortality), officially registered in the Russian Federation in 2009, are accounted, by calculations, 0.4% of inhabitants of the country, who were trying to commit suicide, 0.2% of people from among the nearest environment of the suicident and 2.7% of the persons having "the internal suicide discourse". In general, the problem of suicide behavior can be turned to 4.7 million persons that makes 3.3% of the population of the country.

According to the World Health Organization, Russia during the last 20 years constantly is among the top five countries having the most high death rate of the population from suicides (in 1990 and 2010 Russia took the 6th place; *tab. 1*).

The trends of suicide activity of the population in 1990th were explained with critical events for the country in 1991 and 1998. Disintegration of the Soviet Union has made more essential influence on the mental health of the population, than the economic crisis of 1998. This explains the long-term period of growth of suicides level (1991 – 1994 and 1998 – 1999, respectively).

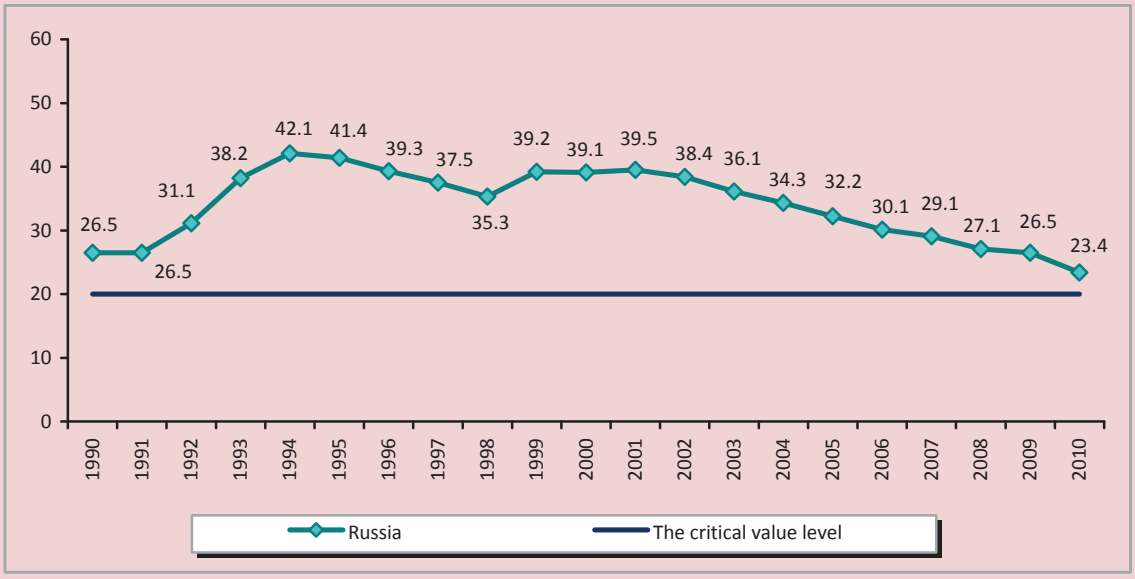
As is noted by the chief specialist of the Federal State Employment Service of the Republic of Karelia, Ph.D. in Economics T.M. Shumilova "economic impact of the crises are leveled much faster than the consequences of personality's social exclusion" [18].

Despite the positive trend of decrease, observed from the beginning of 2000th, the average death rate from suicides in Russia exceeds the critical value, established by the World Health Organization (20 cases on 100 thousand people; *fig. 1*).

Table 1. Ranging of the countries – the leaders on a death rate from suicides (a number of deaths per 100 thousand people; the sample size – 53 countries) [4]

1990	1995	2000	2005	2009
1. Hungary (38.1)	1. Lithuania (47.9)	1. Lithuania (46.7)	1. Lithuania (37.0)	1. Lithuania (31.5)
2. Finland (29.1)	**2. Russia (41.6)**	**2. Russia (37.8)**	**2. Russia (29.8)**	2. Kazakhstan (24.5)
3. Slovenia (28.0)	3. Estonia (40.9)	3. Belarus (34.2)	3. Belarus (29.0)	**3. Russia (24.1)**
4. Estonia (27.6)	4. Latvia (40.7)	4. Kazakhstan (32.7)	4. Kazakhstan (26.8)	4. Hungary (21.8)
5. Lithuania (27.2)	5. Kazakhstan (33.3)	5. Latvia (30.7)	5. Hungary (23.2)	5. Latvia (20.7)
6. Russia (27.0)	6. Belarus (32.3)	6. Hungary (29.2)	6. Latvia (22.5)	6. Slovenia (18.7)

Figure 1. A correlation of suicides level in the Russian Federation [9] and the critical value index of suicides according to the WHO (who have died on 100 thousand people) [4]



For comparison: in European countries the average number of suicides is 17.5 on 100 thousand people [3].

The external reasons of death rate, which include suicides, took the 3rd place on prevalence in structure of death rate of the population in the Russian Federation. At the same time, within the given class the maximal number of deaths fells on the suicides, despite the downward trend in their numbers during the period from 1990 till 2009 (*tab. 2*).

Thus, distribution of suicides is an actual problem for the Russian Federation, and not only with demographic, but also from the economic point of view. According to the data for 2009, 50% of suicides were made by the people in the age till 40 years, with this maximum number of suicides were in the age group 25 – 29 years (4231 units). In other words, suicide behavior is widespread among the youngest, working population categories, what causes not only consideration of psychological and demographic aspects of the given problem, but it is also necessary to analyze it as a factor causing an essential economic damage due to early death rate and losses of productive years of life.

For calculation of losses of productive years of life because of suicides we used the World Health Organization YLL indicator (Years of Life Lost, the lost years of life because of premature death rate) [8]. The statistical assumption was made in the case of the absence of the information about the exact age of the person at the time of committed suicide. The person had a medium-average age of 12 years in group from 10 till 14 years, 17 years in group from 15 till 19 years etc.

$$YLL = N \times L,$$

where N – number of deaths;

L – average life expectancy at the age of death (in years). In our case the retirement age was accepted for this indicator (54 full years for women and 60 years for men).

To express in economic terms, each lost year is multiplied on the average GRP of studied year. According to the received data, GRP losses in consequence of LYPL (the lost years of potential life) from suicides considerably exceed the losses from other reasons of a class "Accidents, injuries and poisonings», and also they are compared with losses from the most widespread causes of death (neoplasms and an ischemic heart trouble; *tab. 3*).

Table 2. Changes in structure of death rate of the population in the Russian Federation in 1990 – 2009* [10]

Class of the death reasons	Number of deaths on 100 thousand people			In % from all reasons of death		
	1990	2000	2009	1990	2000	2009
Structure of the general death rate						
All reasons	1119.1	1529	1416.78	100.0	100.0	100.0
illnesses of blood circulation system	618.7	846.1	800.98	55.3	55.3	56.5
neoplasms	194.4	204.7	206.89	17.4	13.4	14.6
the external reasons	**134**	**219**	**158.25**	**12.0**	**14.3**	**11.2**
illnesses of the digestive system	28.7	44.4	62.69	2.6	2.9	4.4
illnesses of the hole damping	59.4	70.2	56.00	5.3	4.6	4.0
some infectious and parasitic illnesses	12.1	24.9	24.03	1.1	1.6	1.7
The reasons of death rate	Number of deaths on 100 thousand people			In % from the external reasons		
	1990	2000	2009	1990	2000	2009
Structure of death rate from the external reasons of influence						
The external reasons	134	219	158.25	100.0	100.0	100.0
suicides	**26.5**	**39.1**	**26.48**	**19.7**	**17.9**	**16.7**
all kinds of transport accidents	–	–	21.22	–	–	13.4
accidental poisonings of alcohol	10.9	25.6	15.04	8.1	11.7	9.5
murders	14.3	28.2	15.06	10.7	12.9	9.5

* Ranked by the value of the index in %.

Table 3. Social and economic damage due to LYPL (the lost years of potential life) (2009)

Territory	Ischemic heart trouble		Neoplasms		Accidental poisonings of alcohol		All kinds of transport accidents		Murder		Suicides	
	LYPL (years)	in % to GDP	LYPL (years)	in % to GDP	LYPL (years)	in % to GDP	LYPL (years)	in % to GDP	LYPL (years)	in % to GDP	LYPL (years)	in % to GDP
Regions with the highest level of a social and economic damage from suicides												
Republic the Bashkortostan	26779	0.659	16905	0.416	3064	0.075	15952	0.393	7657	0.189	36508	0.899
The Perm Territory	10693	0.395	12338	0.456	6811	0.252	12623	0.467	12694	0.469	23612	0.873
The Chelyabinsk area	12818	0.365	15669	0.447	5246	0.150	13126	0.374	10361	0.295	22712	0.647
The Irkutsk Region	15765	0.630	12514	0.500	4159	0.166	12949	0.517	13131	0.524	22580	0.902
The Sverdlovsk Region	15704	0.357	19239	0.438	6459	0.147	14025	0.319	14405	0.328	22525	0.513
Regions with the least level of a social and economic damage from suicides												
The Republic of Ingushetia	214	0.042	1101	0.215	0	0	1331	0.260	2311	0.451	39	0.008
The Chechen Republic	2205	0.176	4497	0.359	0	0	3915	0.312	272	0.022	42	0.003
The Republic of North Ossetia-Alanija	4008	0.571	2253	0.321	54	0.008	3341	0.476	708	0.101	378	0.054
Karachay-Cherkessia Republic	1231	0.288	1519	0.356	232	0.054	2876	0.673	944	0.221	533	0.125
The Magadan Region	937	0.578	813 0	0.502	401	0.247	646	0.398	736	0.454	651	0.402
Across Russia	*675369*	*0.476*	*640249*	*0.451*	*229896*	*0.162*	*580350*	*0.409*	*350586*	*0.247*	*645061*	*0.455*

Regional features of formation of a social and economic damage from suicides require the deepest analysis (next stage of researches will be devoted to this question), in the present time we can say that the regions with the highest losses of LYPL from suicides are concentrated in the south of Russia (the Volga, the Urals and the Siberian Federal Districts), that is caused by the raised level of suicides in these areas among representatives of the youngest age groups (till 30 years; *fig. 2*).

The minimum losses of LYPL are marked in the republics of the North Caucasus. In our opinion, it can be connected with influence of the religious factor (Islam strictly forbids a suicide and, thus, rigidly enough supervises private life of a person).

The highest LYPL losses from suicides arise in the earliest age groups (20 – 29 years; as a whole, 37% of all LYPL losses from suicides fell on the given group; *tab. 4*). The similar situation is observed only concerning transport accidents that can be connected with the raised death rate of children and teenagers from road accident because of non-observance of traffic regulations.

For comparison: the greatest losses from the leading reasons of death rate are in the later age groups (from murders – in group from 25 till 35 years, from alcoholic poisonings – 30 – 39 years, from neoplasms and ischemic heart troubles – 45 – 55 years). It means that suicide trends start to form and prove themselves at early age. Then, if the situation remains not resolved, it can lead to others forms of deviant behavior – aggressions towards others or drug using, which are factors of death rate from murders, alcoholic poisonings, cancer, illnesses of cardiovascular system.

Among youth (by definition of the WHO it is age group from 15 till 24 years) the LYPL size from suicides is 206972 years, that is higher,

Figure 2. Distribution of the regions of the Russian Federation according to the level of LYPL losses from suicides (2009)

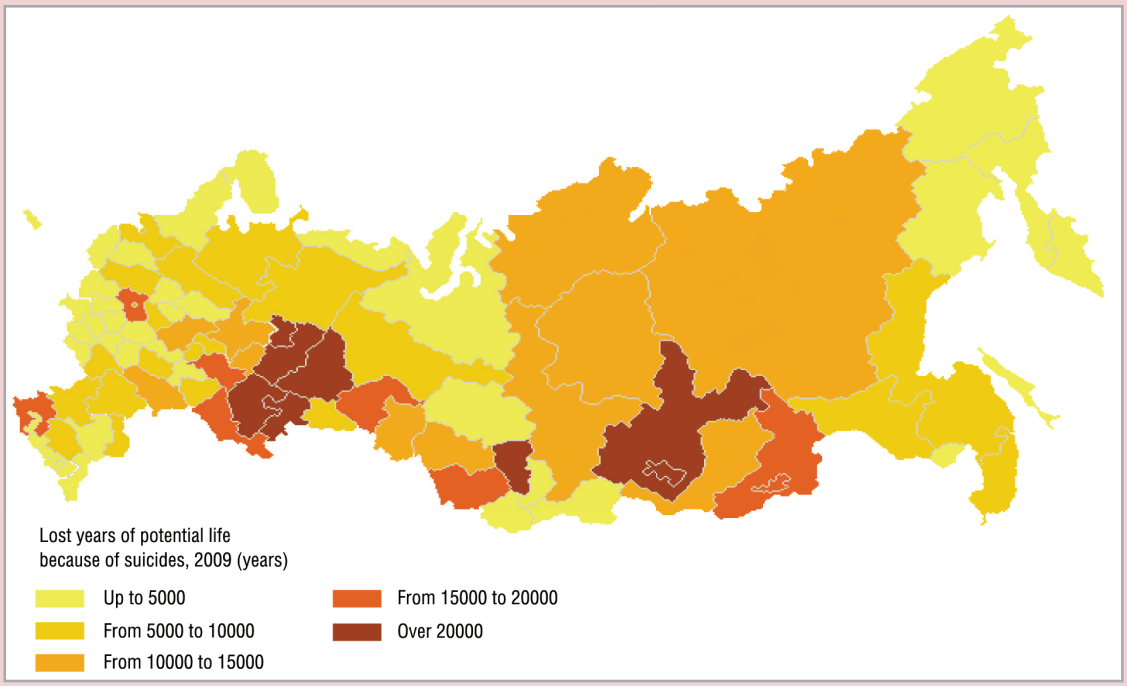


Table 4. Dynamics of LYPL in various age groups of the population in the Russian Federation

Cause of death	Age (years)										
	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39	40 – 44	45 – 49	50 – 54	55 – 59
Ischemic heart trouble	47	42	3146	10276	25922	48541	72757	109537	175137	169830	60134
Neoplasms	12715	10881	20656	28413	40380	53263	63737	84667	132767	125041	44832
Accidental poisonings of alcohol	0	136	2077	12534	29580	42136	42833	36123	37503	21740	4758
Transport accidents	13342	16119	68327	138348	113427	82378	52997	37639	29036	13881	2634
Murders	2631	2408	21944	53928	64600	65788	52168	35366	28861	13749	2578
Suicides	515	10613	71571	135401	133027	105111	71107	48737	41590	22823	4566

than the losses due to all considered reasons of death rate. As a whole, 34% of all LYPL losses from suicides fell on children and teenagers (till 24 years).

For comparison: losses from an ischemic heart trouble account for 2%, from cancer – 15%, from alcoholic poisonings – 7%, from transport accidents – 43%. Thus, suicides, along with road and transport accidents, are those reasons of death rate, which carry the biggest economic damage because of their wide distribution among young people.

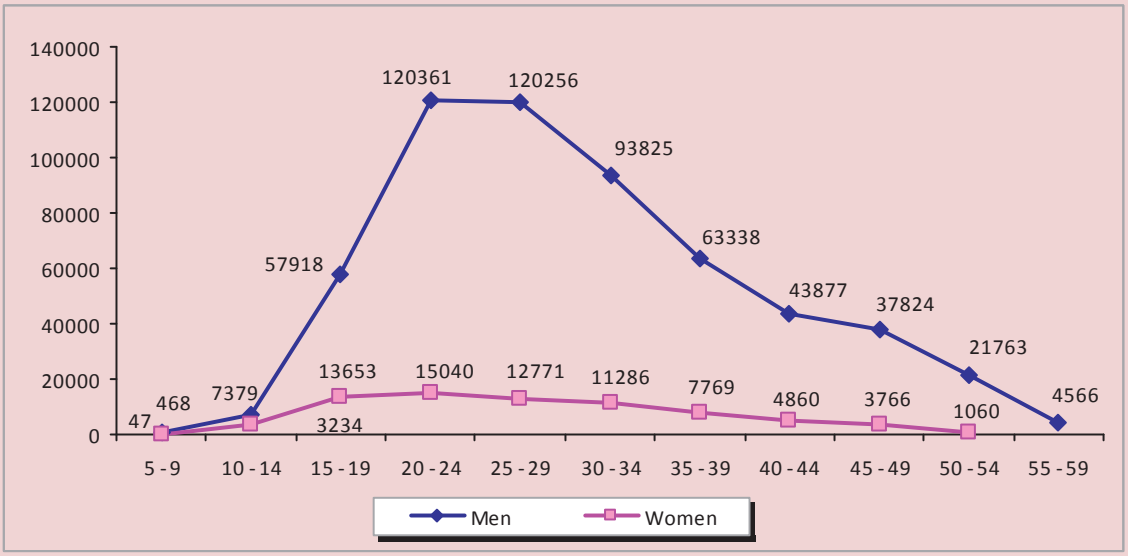
Among men, for LYPL losses the suicides concede only ischemic heart troubles, while the death rate from suicides in the given group is about 8 times lower (for the period from 2000 to 2009 it was 56,4 on 100 thousand people, from ischemic illness – 441,5; *tab. 5*). Among female, suicides, despite much smaller prevalence, lead to more essential economic losses, than the other reasons of mortality rate.

Cumulative losses of productive life due to the death rate of the population from suicides across the Russian Federation are 645,1 thou-

Table 5. LYPL and GRP losses among men and women in the territory of the Russian Federation (2009)

Cause of death	Men			Women		
	LYPL (in years)	GRP damage (bill. rub.)	GRP damage (in %)	LYPL (in years)	GRP damage (bill. rub.)	GRP damage (in %)
Ischemic illness	608686	137.568	0.429	66683	15.071	0.047
Neoplasms	416882	94.218	0.294	223367	50.483	0.157
Accidental poisonings of alcohol	198411	44.842	0.140	31485	7.116	0.022
Transport accidents	468194	105.815	0.330	112156	25.348	0.079
Murders	285510	64.527	0.201	65076	14.708	0.046
Suicides	571575	129.180	0.403	73486	16.608	0.052

Figure 3. Losses of productive life from suicides in territory of the Russian Federation, in years



sand years *(fig. 3)*. From them the share of men is 89%. The reason of such distribution is caused by two factors:

1. Firstly, because of the character and type of behavior man traditionally more often, than women, resort to such act, as suicide. This singularity, shown in all age groups, is marked in various researches. For example, men are rarer, than women, address for help to experts in case of psychological problems; in case of suicide attempt select a way with the maximum probability of a lethal outcome (hanging, crossbow).

2. Secondly, the high level of losses of productive life due to suicides among the male population is connected with considerable number suicides at a young age (from 10 till 29 years). The share only in this age category is more than half (54%) of all suicides among men.

Suicide behavior among children and teenagers is more often the result of situational-personal reaction (mainly opposition reaction) [16]. Its object are parents, later – teachers and mates. Thus, the high level of suicides among children and teenagers can evidence of negative character of the relationship between these subjects of society.

As a whole, the raised level of suicides among men is marked in many as classical (P. Sorokin, E. Djurkgejm), and modern (D. Vasserman, G.V. Starshenbaum) researches. Scientists agree in opinion, that a primary factor of suicide behavior includes the lack of social integration, psychological feeling of loneliness, mental heartache. That fact is connected with it, for example, that more often suicides are made by men in the age of 45 – 50 years.

At this age they have problems with health, they feel themselves old, against it they cease to feel the support of the spouse, which in this period is as much as possible claimed by children or grandchildren. Except that, men sensitive react to loss of the work, which is the main source of income in the family, to loss of the personal serving, acting as one of the most important social groups for them.

At the territorial level, both among men, and among women, on LYPL losses from suicides the leading positions are occupied by the Volga and the Siberian Federal Districts (*tab. 6*). It can be explained by the Republic of Bashkortostan, the Republic of Tatarstan, the Perm Territory (the Volga Federal District) and the Krasnoyarsk region, the Irkutsk and the Kemerovo regions (the Siberian Federal District).

It should be noted that GRP loss as a percentage is the most representative and important out of the loss indicators presented in table, because it is relative and does not depend on such characteristics as population size and the absolute value of GRP in rubles.

On an example of the Vologda region we have a possibility to compare economic expenses of the healthcare system for treatment of classes of diseases, which correspond to the death rate reasons. Expenses for treatment of illnesses in systems of blood circulation and mental frustrations in 2009 were identical (1.04 and 1.06 billion rub. or 11.5 and 11.7% from the general level of expenses accordingly; *fig. 4*).

At the same time index of LYPL in the Vologda region only on suicides in 2009 was 1532, which is in 13 times higher, than LYPL from an ischemic heart trouble (116 years). It should be noted, that a part of murders, alcoholic poisonings, road and traffic accidents and deaths for unclear reasons is also influenced by a suicide impulse, but for various reasons it isn't registered as a self-murder.

Thus, the problem of suicide behavior remains very actual in the Russian Federation throughout last 20 years. The high death rate from suicides speaks about insufficient wellbeing of a psychological climate in the country, and also represents the essential social and economic problem, caused by early age of death of the majority of suicidents.

Besides the listed indicators of a social and economic damage, in this work there were not considered the direct costs of healthcare system on the liquidation of negative consequences of parasuicides, and also the indirect costs on the psychological and economic help to the nearest environment of suicident.

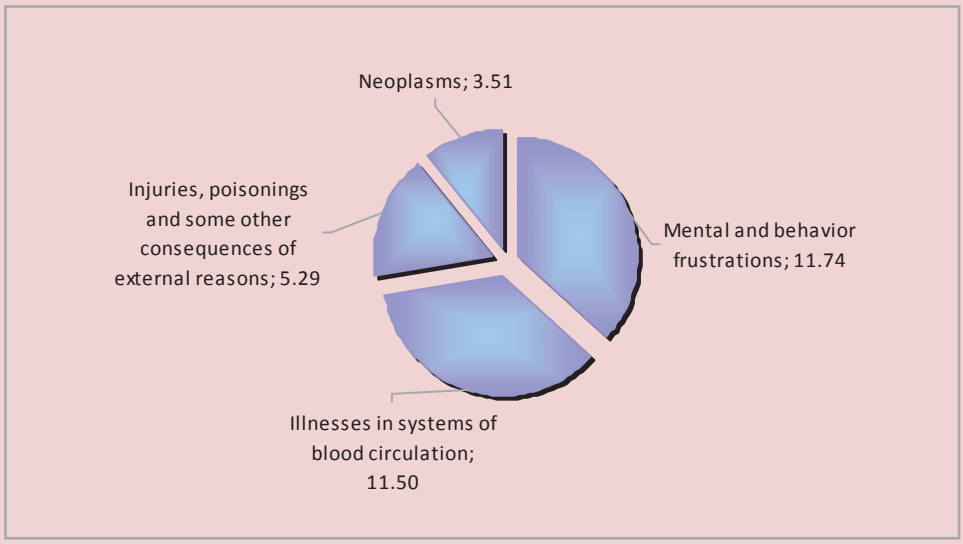
However, even in the calculation of losses from officially registered cases of a completed suicide there is obvious an economic benefit, which is possible by realization of the actions, directed on early prevention suicide behavior and decrease of death rate from suicides.

Comprehension by the world community of suicide behavior as the factor, having negative consequences for economy and demo-

Table 6. Territorial distribution of losses LYPL and GRP among men and women (2009)

Territory	Men			Women		
	LYPL (in years)	GRP damage (billion rbl.)	GRP damage (in %)	LYPL (in years)	GRP damage (billion rbl.)	GRP damage (in %)
The Russian Federation	571575	129.180	0.403	73486	16.608	0.052
The Central Federal District	81448	25.113	0.219	10033	3.093	0.027
The Northwest Federal District	45138	11.430	0.336	7008	1.775	0.052
The southern Federal District	49652	7.200	0.362	6494	0.942	0.047
The Volga Federal District	**161155**	**26.312**	**0.535**	**17687**	**2.888**	**0.059**
The Urals Federal District	63412	22.726	0.517	7666	2.747	0.062
The Siberian Federal District	**130878**	**22.692**	**0.669**	**19553**	**3.390**	**0.100**
Far East Federal district	39892	10.705	0.618	6155	1.652	0.095

Figure 4. Expenses of healthcare system in the Vologda region for treatment of separate classes of diseases (in % from the total costs; 2009)



graphic situation in the country, increases attention to the solution of this problem from the public and authorities. Creation and realization of national strategy for suicide prevention since 1989 are classified by the World Health Organization to a number of priority directions in sphere of public health [15]. Such strategies operate in some European countries (Finland, Estonia, Hungary, Sweden).

In the Russian Federation suicides are one of most often reasons of death rate among the population at working age, however this circumstance isn't considered in the Concept of long-term social and economic development of the Russian Federation till 2020 by the formation of such strategic direction, as "decrease in death rate of the population, first of all the high death rate of men at working age from external reasons". Similarly, the mental health aspect isn't reflected at the realization of the second direction – "the preservation and health strengthening of the population, increasing of a role disease prevention and healthy lifestyle formation" [7].

At the regional level under the modernization health program it is planned to improve forms and methods of the help to the patients with alcoholism, drug addiction, and mental frustration, but the category of suicidents also isn't selected among priority [12]. Meanwhile, effective steps to the solution of the problem of suicide behavior are possible only in the conditions of the coordinated actions various public and political institutions. This requires the development of special programs (at federal and regional levels), focused on decrease of suicide activity of the population.

Initiatives to establish a system for the prevention of suicidal behavior are fairly common among the subjects of the Russian Federation, but for maximum effectiveness they should be supported at the federal level, what can be achieved through the development and adoption of a single concept of suicide prevention and help to the suicidally inclined.

Similar decisions must be made at the regional level, the following activities should be taken into account in this case:

1. Developing a network of crisis and rehabilitation centers, suicidology offices based in hospitals.

2. Establishment of statistical information service on the issues related to public mental health and suicidal behavior. Monitoring and development of a data bank on persons exhibiting suicidal tendencies or depression.

3. Advanced training of employees in health care and specific areas of activity (social services, children's homes, penitentiary system, the army, schools, youth organizations, etc.). Development of educational programs of suicidology profile.

4. Organization of home poly-professional help to people with mental health problems, based on social assistance centers.

5. Development and implementation of a targeted program aimed at promoting a healthy lifestyle among the population and providing the organization of co-operation with the media in covering issues related to suicide, informing the public about the possibilities of overcoming stressful situations, as well as the activities of the specialized services that provide help in case of psychological of problems.

6. Stimulation of non-departmental organizations support and protection of human suitsidentov, their families, and individuals exhibiting symptoms of depression.

7. Tightening censorship on the Internet, banning sites containing information that may contribute to the development of suicidal tendencies among the population.

8. Teaching the basics of Suicidology, methods of adaptation to stressful situations, providing psychological and pedagogical support in crisis situations to school, middle school and high school students within the educational programs (in Life safety, Valeology classes).

Together with the measures aimed at the representatives of the groups of increased suicidal risk it is necessary to implement general social actions (provision of professional employment of the population, constructive realization of leisure among young people, prevention of harmful habits, increasing income level of the most needy population groups).

References

1. Bychenko, J.G. Modernization of society and quality of human capital [Text] / J.G. Bychenko, L.V. Loginova // News of the Saratov university. – 2008. – T. 8. – P. 48.
2. Gilinsky, Ya.I. The dynamics of suicides in Russia [Electronic resource]: an electronic version of the bulletin "Population and Society" / Ya.I. Gilinsky, G.A. Rumyantseva // Demoscope weekly. – № 161-162. – Available at: http://demoscope.ru/weekly/2004/0161/analit01.php
3. Gulin, K.A. Mental health problems of the population [Text] / K.A. Gulin, O. Falaleeva, Y.E. Oslopova. – Vologda: Vologda Scientific Coordination Center CEMI RAS, 2003. – 71 p..
4. Health for all: WHO European Database [Electronic resource]. – Available at: http://data.euro.who.int/hfadb/shell_ru.html
5. Health – 21: the politics of health for all in the European region of WHO [Text]. – Copenhagen, 1998.
6. Kolin, K.K. Human capital and innovation economy [Text] / K.K. Colin // Bulletin of the RAS. – 2003. – № 4. – P. 1.
7. The concept of long-term social and economic development of the Russian Federation till 2020 [Text]: approved by Governmental Decree from November 17, 2008. – № 1662-p. – M., 2008.
8. A technique for measuring DALY [Electronic resource] // Official site of the World Health Organization. – Available at: http://www.who.int/healthinfo/global_burden_disease/metrics_daly/en/
9. Official site of the Federal State Statistics Service [Electronic resource]. – Available at: www.gks.ru
10. Mental Health: problems and solutions [Electronic resource]: Report of the WHO European Conference at the ministerial. – Available at: http://whodc.mednet.ru/ru/psihicheskoe-zdorove-i-psihicheskie-rasstroystva/
11. Problems of psychological health in Russia [Electronic resource]: report of physician-psychologist S.V. Boyarintseva at the Round table on the Environment, held in the State Duma March 22, 2010 – Available at: http://3rm.info/publications/2908-problemy-psixologicheskogo-zdorovya-naseleniya.html

12. The program for the health modernizing of the Vologda region in 2011 – 2012 [Text]: approved by Resolution of the Regional Government from March 4, 2011. – № 183. – Vologda, 2011.
13. Rimashevskaya, N.M. Russian cross [Electronic resource] / N.M. Rimashevskaya // The Nature. – 1999. – № 6. – Available at: http://vivovoco.rsl.ru
14. Smirnov, V.T. Classification and types of human capital in innovational economy [Electronic resource] / V.T. Smirnov, I.V. Skoblyakov // Creative industry. – 2006. – № 12. – Available at: http://www.creativeconomy.ru/library/prd165.php
15. Social rehabilitation and support for the disabled in Germany [Electronic resource]: proceedings of Conf., Cologne, January 26 – 30, 2010. – Available at: www.dorogavmir.ru/text/Materialy_konferencii.doc
16. Psychology of extreme situations [Text]: a reader / comp. A.E. Taras, K.V. Selchenok. – Mn.: Harvest, 1999. – 480 p.
17. Shmakov, D.I. Assessment of economic losses as a result of mortality from accidents, poisonings and injuries [Text] / D.I. Shmakov // Proceedings of the Institute of Economic Forecasting RAS. – M.: MAKS-Press, 2003. – Pp. 377-385.
18. Shumilova, T.M. Moral principles in modern Russia's labor market / T.M. Shumilova // Supply and demand in the labor market and educational market in the Russian regions: collection of reports on the Second All-Russian Scientific and Practical Internet conference (October 26 – 27, 2005). – Book II. – Petrozavodsk: Petrozavodsk State University Publishing House, 2005. – Pp. 192-203.

MODELING AND INFORMATICS

UDC 336.581 (076.5)

Model of strategic managing the competitiveness of the integrated company

The author's interpretation of strategic managing the competitiveness of the mining company is offered, the theory-methodological bases of the model are developed, and application of the resource theory of strategic management, value-based management, and also the theory of real options are proved. The model of strategic evaluating and managing the competitiveness should be based on interest multiplicity of stakeholders which are carriers of financial, intellectual, social and natural capital.

Model, strategic managing the competitiveness of the mining company, stakeholders, the resource theory, the value-based management theory, the real options theory.

Tatyana V.
PONOMARENKO
Ph.D. in Economics, Docent of Saint-Petersburg State Mining University
stv_mail@mail.ru

Fedor D.
LARICHKIN
Doctor of Economics, Professor, Director of G.P. Luzin Institute of Economic Problems of Kola SC RAS
lfd@iep.kolasc.net.ru

Strategic management plays a key role in the integrated companies that are dominant in the mineral-raw complex (MRC) and are the backbone for the national economy, and these companies provide the effective and rational use of mineral resources.

In our view, strategic managing the competitiveness of the mining company is a system of tools and actions aimed at improving the resource and dynamic competitiveness of the company during the growing competitive status and fundamental value of the company,

taking into account the dynamics of internal and external environment and the use of option management.

The model of strategic managing the competitiveness of the mining company is based on the following theoretical and methodological basis:

- the resource theory is the fundamental theoretical basis – it is the most modern concept of strategic management;
- the management theory focused on the value-based management is the methodological basis;
- the real option theory providing flexibility of management decisions and accounting the dynamics of internal and external conditions and factors, including the institutional environment is the instrumental basis.

Strategic management includes analysis toolkits and mechanisms of managing the object.

Choosing the model1 [1] and key indicators of strategic analyzing the competitiveness of the integrated company, the variety of key methodological approaches should be considered. In general, these models can be divided into three groups.

The first group includes models using indicators of company's financial situation and focusing more on the interests of debt holders and creditors [2].

The second group includes models of corporate governance based on the VBM-management, aimed at maximizing owners' welfare and increasing the investment attractiveness of the company and actively introduced in the progressive corporations of the world [3].

The third group includes integrated models aimed at combining the interests of many interested parties in an integrated company.

[1] The model in this case is the relationship of specific, but as a rule, not formalized in mathematical form elements: rules, forms, principles, institutions, etc.

In our view, a strategic analysis of the competitiveness and efficiency of the integrated company should take into account the interests of all interested groups (stakeholders) and be based on them. This modern approach is based on a common definition given by R. Freeman that defines stakeholders as "interested groups of people or individuals that can help the company to achieve its objectives or themselves are affected by this process" [2]. It should be noted that the stakeholders have various forms of interests in the company not only now but also in the future, and it determines the need of their integration into strategic management.

There are different terms to identify various types of stakeholders and their influence on the company [2, p. 126-127]. Classification of the General Electric Company divides the stakeholders into shareholders, employees, customers and the public. Resource classification identify the stakeholders according to the type of strategic resources they provide, they include investment (objects of investment), reputational (resources of relations) and intellectual (transformational resources). Classification according to the criteria of risk-sharing reflects the relationship between risks of the company and risks of company stakeholders as results of the company activity determines risks of stakeholders. Classification according to the criteria of influencing strength is based on the stakeholders' impact on the results of the company activity in a favorable or unfavorable direction. In addition to these, there are classifications of stakeholders according to their interdependence, shared responsibility and other characteristics.

Communication and dependence of own interests and goals of stakeholders with the results of the company activity determine their motivation and their potential to act as resources for the company. Specificity of interrelation between stakeholders and the company has a complex, many-sided and mainly non-financial nature.

Therefore there are primary categories of stakeholders, which include some persons among the investors, personnel, clients, suppliers which are the most interested in the company activity and without whom the company cannot function in the future. The secondary category cannot support the company policy and share its program; therefore their influence is not so essential.

The uniqueness of strategic resources provided by the stakeholders and the company risk-sharing allows to consider them as special investors, offering a unique investments.

In the mineral-raw complex the sites of subsurface resources owned by the state are actively developed, and they are also controlled by the mining companies in the mineral assets. Therefore, the dominant stakeholder and participant of interrelationship in the integrated company is the state and this fact must be taken into account in the process of negotiating interests in a model of strategic management. Interests of different stakeholders can be opposed, not conforming to the common goal of maximizing the value of the company. Possible conflicts between western authors are ambiguous and their interpretations can be divided into the following types [2, p. 128-135].

1. Radical positive position, its followers believe that the maximization of the capital cost corresponds to the maximizing the claims of all other stakeholders' categories. This interpretation is the result of the contract theory of the firm; in addition it is assumed that all of the obligations are guaranteed satisfied. Therefore, the only party having the right for residual claims to the assets of the company is the company's owner bearing the risk from their making decision.

2. Radical negative position, its followers believe that the conflict of interests between the owners of capital and other stakeholders is inevitable. This interpretation is based on a new version of the contract theory of the firm based on the assumption of incomplete contracts.

The company is not considered as the sum of resources, assets and sources involved under any conditions from different markets, it is considered as the object with new features due to the combination of specialized and complementary assets. Unsolved problems in this case are the ownership rights and control over specific resources (non-financial, natural, social), with not always regulated status, so each owner of resources (stakeholders) has his own interest, sometimes non-formalized, non-protected, non-coincident with the interests of company's owners.

3. Compromise position is characterized by a variety of interpretations. Thus, the resource theory assumes that stakeholders can form as well as limit the resources so the mechanisms of motivation are need, and they provide greater efficiency and competitiveness of the company. The concept of corporate social responsibility shows that the quality of corporate social responsibility of the company is related to financial performance, profitability and capital value of the company. Therefore the introduction of stakeholder interests as an active element into the concept of value management can be considered as a condition to achieve maximization of shareholder's capital value in the long-run period.

Thus, the model of strategic analyzing the competitiveness of the integrated company must be based on the interest multiplicity of stakeholders who carry the financial, intellectual, social and natural capital; this model must consider the optimal balance between them, now and in the long run. This "model provides a solution of the problem ... to create a harmonious company in which management cycle is submitted to the structuring the space of multiple interests and achieving the balance in it. Balancing the interests forms a special quality of relationships with stakeholders of the company (network), which transform into a new factor of company's value in the transition to innovation economy" [2, p. 152].

The efficiency of the activity and the degree of market power of the company, features and efficiency of achieved integration and diversification influence on a strategic analyzing the competitiveness and the competitive status of the integrated company.

Therefore, the strategic analyzing the competitiveness of the integrated company should differ from this analysis within the focused company and be realized in the following way:

- analyzing the influence of integration and diversification and their results on the competitiveness of the company;
- rationalizing the approach to analyze the competitiveness of the integrated company;
- adapting the estimating model of the fundamental value of the company, taking into account the concept of value-based management (VBM);
- developing an integrated (stakeholder) model.

Building the model of strategic analyzing the competitiveness of the mining company and its main tools are presented in the *table*.

Three types of competitive advantages provide the competitiveness of the integrated company: resource advantages – the possession of the resources of special quality or quantity (natural or acquired); operational advantages – the efficiency of using the available resources, strategic advantages – the availability and quality of a particular development strategy of the subject as the carrier of competitive advantages. Therefore it is necessary to realize the qualification and identification of strategic and competitive advantages as a basis for strategic competitiveness: the identification of specific and strategic assets, the connection between them and their assessment. Analysis of the existing valuation models of certain asset types qualified as a fix specific and strategic showed the absence of a generalized approach to their evaluation as a separate economic category.

Indicators of lagging indicator system used for diagnosis and monitoring of resource opportunities (potential) and value of the company at the moment should reflect the major interests of the stakeholders based on the systematic approach reflecting the interaction of systems and their environment.

The model of strategic managing the competitiveness of the mining company

№	Stage of model building	Tools
1	Qualification and identification of strategic competitive advantages	1.1. Identification and analysis of specific assets 1.2. Identification and analysis of strategic assets 1.3. Analysis of conditions for conversion assets from specific into strategic
2	Development of lagging indicator system, diagnostics and monitoring of resource capabilities and value of the company in the present on the base of resource theory	2.1. Analysis of resource potential of the company 2.2. Valuation of raw-mineral assets 2.3. Valuation of the company according to the resource theory
3	Development of the system of leading indicators and establishment of target strategic indicators	3.1. Determination of resource capabilities of the company for the future 3.2. Monitoring of changes in the competitive environment (competitive strategic analysis) 3.3. Establishment of target strategic indicators
4	Analysis of institutional constraints in the forming and using the strategic assets	4.1. Analysis of the current institutional environment 4.2. Monitoring and analysis of institutional changes
5	Valuation of the company based on the theory of value-based management	5.1. Choice of model of the company valuation 5.2. Valuation of the company on the chosen model according to the strategic assets, resource capabilities, changes in the competitive and institutional environment
6	Strategic decisions on managing the competitiveness and value of the company	6.1. Development of alternative strategic projects 6.2. Choice of the strategic project in relation to the use of optional methodology 6.3. Development of tactical direction of strategic managing the competitiveness and value of the company

The system of leading indicators provides the setting of target meaning of strategic indicators.

Changes in external factors (circumstances) can affect the interests of economic agents, and correction of regulating conditions stimulate the company to achieve the efficiency of the system based on the harmonization of private economic interests and the collective social and institutional interests [4].

Institutional restrictions creating the artificial competitive advantages affect greatly on the strategic managing the competitiveness of the company. The influence degree of institutional restrictions is determined, first of all, by economic activities, its strategic importance for the national economy in the present and in the future, by the backbone character of industry and other strategic factors. From the all elements of the institutional environment in the MRC as the most significant ones there are: subsoil use, taxation and organizational structure. These elements of the institutional environment are closely interrelated and mutually determined by each other; the condition and dynamics of their change depend greatly on the state policy according to the MRC.

The valuating of the integrated company based on the theory of value-oriented management is carried out on common theoretical basis. Elements of the model (core modules) remain the same (analysis, strategy, finance, corporate governance) [5], and the content become more complex and adaptable to the conditions of the integrated structure.

Evaluation module in which the choice of model and methods for determining the value of the company for the owners, monitoring the value change, the analyzing the mechanisms to create new value are realized, should be supplemented by new models, factors and drivers of value, taking in account the nature and degree of interaction between participants of the integrated company.

Strategic module, establishing the communication between the value of the company for owners and corporate and business strategy of the company is supplemented taking in account the interests of many stakeholders, variety of strategies, possibility of their combinations, and the impact of greater uncertainty of the environment.

Finance module, reflecting fiscal policy, is supplemented by new tools, which using is associated with domestic markets of financial resources and the access to Russian and international capital markets, etc.

Corporate managing module is complicated by harmonizing the interests of a greater number of agency conflicts.

In the evaluation module can be used the traditional model of the company valuation. In addition, in connection with the publicity of the most integrated companies, for their evaluation are more suitable models, based on market capitalization, unlike evaluation models of focused companies based on the estimated value. The stock market has a special, institutionalized connection of the securities with their assets of the real economic sector [7]. As a rule, the capitalization of the companies is estimated according to expected revenue in the long-term (strategic) perspective.

It should be noted that the evaluation of integrated companies according to the external market indicators (capitalization) is characterized by several features.

Firstly, the strategic perspectives are less predictable because of the greater uncertainty of several areas of development and the need to consider both systematic and nonsystematic factors. As a result, the market attention can be focused on short-term profits without adequately considering the prospects of company development that leads to their undervaluation.

Secondly, often the integrated companies formed by means of mergers and acquisitions reduce the capital cost and efficiency that is caused by overpriced supply, non-receipt of synergy effects, and the complexity of combining different corporate cultures [8, p. 15].

Thirdly, public companies with a clear operational and financial activity in the market are valued higher than private companies.

Fourthly, companies not having sufficient liquidity as the companies that did not pass through the procedure of the initial public offering (IPO), as well as newly established companies with an expected external growth through mergers and acquisitions, operating in the MRC, have maximum attraction for investors (Russian and foreign ones).

Fifthly, the most liquid securities are the securities of the parent or center company, but not the rights to specific assets, which are usually owned by mining companies, and are low-liquid [7].

Sixthly, in any market which is not efficient, as in the domestic market, a deviation in stock prices from their fundamental value is possible.

These features suggest that it is not enough to rely only on market capitalization and evaluation of the stock market in the process of analyzing the value and competitiveness of the integrated companies.

Strategic module differs greatly for the integrated and non-integrated company [9]. The strategy of the integrated company is managing the business portfolio; these businesses compete with each other for resources of the center. The strategy of the focused company is the set of strategic initiatives aimed at achieving stable competitive advantage in this segment in relation to specific consumers and foreign competitors. The choice of corporate strategy is based on the analyzing their potential contribution to value creation at the corporate level.

Finance module reflects the specifics of the forming the integrated company in domestic markets, empowering the borrowed sources, increasing the share capital, realizing some projects, forming the portfolio of earning assets, etc. The system approach is needed for budgeting and capital rationing, according to such financial effects, such as cross-financing, cross-sponsoring, cross-holding, cross-hedging.

The peculiarity of the integrated company functioning, which should be reflected in the strategic evaluating the competitiveness is developing the domestic capital market [10], providing the reallocation of resources between different projects and also the control over cost of investments. The increased domestic capital markets create opportunities to monitor and regroup the assets compared to foreign markets, to reduce agency costs, to increase the efficiency and liquidity of the companies because the capital moves into more efficient units. The relative efficiency of domestic capital markets is related to the asymmetry of information; in addition, such markets perform a protective function, reducing the risk of depletion of capital in relation to the cyclical and transient change in investment sentiment.

Active domestic capital market is characterized by the dependence of the subsidiary company investments on its own cash flows and cash flows of other subsidiary companies. At reallocation of resources between units the activity of domestic capital market grows. In this case, the sensitivity of investments to group cash flows exists only when subsidiary companies are affiliated with the coordinating center.

The effectiveness of the domestic capital market is reflected in the fact that investments of the subsidiary company depend on the amount of overall resources available to the holding; respectively, the growth of investment opportunities in a subsidiary company leads to a decrease in investments in other companies of the holding. If the company is financially limited, it cannot finance all the projects, and it is necessary to allocate resource. The efficiency of internal capital markets implies an increase in company value.

One of the features of the integrated company is realizing the several projects or complex of them. At the same time there are additional investment opportunities, and also some challenges. Thus, one loss-making project can provide strategic benefits for the corporation as

a whole; projects can serve each other's sources of generating financial resources, strengthening or weakening the effect from the whole investment industry. However, the choice of the optimal project or direction for a specific company does not provide taking the optimal decision for the entire system (the corporation) as a whole.

Optimization of the investment project complex in the corporation provides the optimal combination of projects within budget in the given time interval, the connection between external financing with the capabilities to mobilize financial resources (cross-financing), the management of the project efficiency through the redistribution of income and expenditure between them (cross-sponsoring), the possible increase in debt financing through cross-shareholding (cross-holding), as well as risk reduction and stability increase of the entire project as a whole (cross-hedging) [11].

The integrated company expands significantly opportunities to attract new sources of investment, and this provides the growth of financial stability in an unstable environment. For integrated mining companies are characterized by high capital intensity and the high proportion of specific assets. Capital structure becomes the tool by which the company management aims to reduce the costs of investing into specific assets.

Corporate managing module is complicated by harmonizing the interests in a great number of agency conflicts, including the coordination of the owners', managers' minority and majority shareholders', managers', competing departments and business units, shareholders' and debt holders' interests [2]. Each participant has his own interests and expectations from the corporation. According to that how controversial and realistic expectations the participants have, what is the system of their rights and responsibilities, the order to harmonize their interests determines.

Strategic evaluating the competitiveness in relation to definition of fundamental value (setting a fair price) for the integrated (composite) companies is extremely difficult in principle [8, p. 13], because it requires accounting and forecasting the structure of incomes and losses; the asset structure of integrated companies, the cyclicality of industry development; evaluating the potential of the internal and external growth, different levels of risk and profitability of business areas, systematic and non-systematic factors, optional capacities of firms, agency conflicts, the possible synergistic effects; price of capital.

This evaluation is needed to justify and make strategic decisions on managing the competitiveness and the value of an integrated mining company: alternative strategic projects are being developed; choosing the strategic project is based on the using the optional methodology; tactical directions of realizing the management strategy of competitiveness and value of the company.

The resource theory lays the foundation for the qualitative analyzing the strengths and weaknesses of the organization, allowing to allocate resources that are important for forming the competitive advantage of the company. The resource theory allows identifying specific and strategic resources and assets which are necessary to forming and maintaining the competitive advantages in the long-term period and more effectively managing them.

The value-based management theory has tools reflecting the value and competitiveness of the companies. Value analysis can identify the key factors of value and competitiveness; it can take into account potential reserves, opportunities and competitive advantages of the company. This theory provides a link between the systems of financial and strategic management and identifies investment decisions.

Optional methodology provides the possibility of accounting the influence of the environment dynamics and the reaction of mining company management.

The problem of irreversibility of investments has a great importance for mining projects; this determines the importance of correct realizing the optional approach and valuating the management flexibility. Using the method of real options improves the tools of strategic management in the mining companies due to adequately accounting the risks, providing flexibility and consistency of strategic decisions, fast switching and continuously changing [12]. The analysis of real options encourages management to explore the uncertainty factors, ensuring the creation and growth of the value and competitiveness in the mining company.

References

1. Varnavsky V.G. Partnership of the state and a private sector / V.G. Varnavsky. – M.: Science, 2005.
2. Ivashkovskya, I.V. Modeling company value. Strategic responsibility of boards of directors / I.V. Ivashkovskya. – M.: INFRA-M, 2009.
3. Rasskasova, A.N. Financial aspects of corporate governance. Calculating the added value of own capital / A.N. Rasskasova // Financial management. – 2002. – № 5.
4. Skobelev, V.L. Modeling relations of exchange and competition of managing subjects: the theory of the interest coordination / V.L. Skobelev. – SPb.: Publ. of SPbSUEF, 2005.
5. Volkov, D.L. Management of value: indicators and estimation models / D.L. Volkov // The Russian management magazine. – 2005. – Vol. 3. – № 4. – Pp. 67-76.
6. Kramin, T.V. Methodology of forming the control system of company's value on the basis of the institutional approach / T.V. Kramin // Problems of modern economy. – № 3 (19).
7. Alifanova, E.N. Fund mechanisms of estimating and regulating the effects of integration in economy / E.N. Alifanova [Electronic resource]. – Available at: www.finanal.ru
8. Ferris, K. Estimation of company's value: how to avoid making mistakes by purchasing: transl. from English / K. Ferris, B. Peshero. – M.: Publishing house "Williams", 2005.
9. Ovanesov, A. Control system features according to the purposes in the holding companies / A. Ovanesov // Resource: E-xecutive.
10. Grigoriady, E.E. Analysis of domestic capital markets / E.E. Grigoriady // Corporate management [Electronic resource]. – Available at: http:// www.cfin.ru
11. Limitovsky M.A. Investment projects and real options in developing markets. – 4th add. issue / M.A. Limitovsky. – M.: Publishing house "Yuright", 2008.
12. Sergeev, I.B. Estimation of mineral-raw actives in the mining company by means of method of real options / I.B. Sergeev, T.V. Ponomarenko // Problems of modern economy. – 2010. – № 4.

OF EDITORIAL MAIL

UDC 316.42:372.8(470)

Suggestions about the problems of the social development, innovations and teaching of economic disciplines*

The article is devoted to consideration of the social problems interfering innovational development. Specificity of understanding of innovational education is defined. The problems of economics as a scientific field of study are discussed.

Social problems, innovational development, innovations in teaching, problems of economics.

Tatyana P.
SKUFYINA
Doctor of Economics, Chief Researcher of the Institute of Economic Problems of Kola SC RAS
skufina@iep.kolasc.net.ru

For the recent years the word "innovation" became popular in the researches in social science, "fashionable" in mass-media. It is the consequence of the key value of the term in the formal documents concerning socio-economic development of Russia and its regions.

The fundamental character of this term for the mentioned priorities of the present and the future development of Russia is included into some contradiction with two factors.

First these are steadily low qualitative characteristics of life of the Russians, including bad working conditions, the low level of the public health services' development, lack of high-grade food stuffs, bad living conditions, etc.[1]. In this case the contradiction is caused by the fact, that the criteria of innovational development mean a high level of the development of the human capital which major component is the quality of the population's life.

Second, in the practice of the governmental administration neither the criteria of the social justice (mean the alignment of the social and economic conditions of life and oppor-

* The research is carried out with the financial support of RFFI within the framework of the project "Information and communication technologies in the region and their influence on the socio-economic development of the RF subjects" (project №11-06-00110-a.).

[1] For example, let's consider population's housing conditions in Russia. The average housing condition in 2010 was 22.4 square meters per head, in Europe 40 – 60, in the USA – 70. Still, these conditions are very difficult to be compared with the Russian parameters. As for Russia – on the average the share of the housing equipped with the modern conveniences makes 61.4%. For the beginning of the year of 2010 the share of people who live without plumbing makes 31 mln. people (21.8%), without wastewater 37 mln. people (16.9%), without hot water 49 mln. people (34.5%).

tunities of the population), nor the criteria of economic efficiency (mean the essential dependence between economic and social results of the subjects' living ability) are not shown precisely.

The base quantitative criterion of the productivity of the policy of "equation" is the index of incomes' concentration (Gini index). On this index Russia steadily ranks first among the countries with the advanced and transitive economies (makes 0.4). The deciles ratios are not less illustrative and show consecutive growth of break from 3 (the period of the USSR) to 17 times (2010).

As to breaking the principle of economic efficiency in particular, it can be noted in the essential increase in successful representatives of the medium-scale business, ready to leave the country. The other example from the point of view of the spatial development conclusions of the researchers concerns the weak connection between the social characteristics and economic results of the activity of the Russian Federation subjects [1, 2].

Especially obvious the mentioned feature is shown in the regions of the North (for more details see: [3, p. 113-135]). The raised requirements of northerners for the public health services, high-quality food products, clothes, etc. generate the concern on the coordination of economic and social changes.

Disproportions between economic and social development are shown in the national parameters. So, according to the data for 2010, Russia ranked 50 among 146 countries of the world in the level of economic development (gross national product per capita), and it ranked 65 in the index of the social development (the complex index including the level of the real incomes, educations, life expectancy). The situation with the complex index is obviously rescued by the level of education (the 40th point).

In view of the second factor, the contradiction is caused by the fact that the innovational development is a very expensive way of development demanding predictability of the state economic policy. It is obvious, that the successful movement along the innovational way assumes, as a minimum, establishing of the precise criteria of the socio-economic development.

The absence in practice of management of the settled valuable reference points results in the absence of the distinct purposes of the social development, fixes the unhealthy psychological state of the population, the necessary component of the quality of the population's life. In this connection the problems being the base subject of researches carried out by psychologists and sociologists, the mass feeling of the social injustice, uncertainty in the future, indifference to the own and another people's lives, prevalence of depression, fear, deficiency of the ethnic tolerance, destruction of traditional values, etc. are natural.

Some parameters characterizing the psychological state and the social sphere of the modern Russian society are resulted in the researches of the Institute of psychology of the Russian Academy of Science: death rate from suicides is 30.1 for 100 000 inhabitants (the second place in Europe after Lithuania); death rate from casual alcoholic poisoning is 23.1 for 100 000 inhabitants (the first place in Europe and the CIS); death rate from road and transport incidents is 17.5 for 100 000 inhabitants (the third place in Europe and the CIS after Lithuania and Latvia); natural increase of the population is 4.5 for 1000 inhabitants (last places in Europe after Bulgaria and Ukraine); the number of children who live without parents' care is 89 for 100 000 inhabitants (the second place in the East Europe and the CIS after Lithuania); the number of abortions is 40.6 for 1000 women at the age from 15 to 49 years (the first place in the East Europe and the CIS); index of corruption (measured within the limits from 0 to 10 points, the higher is the

point, the lower is the level of corruption) is 2.3 (the 143^{d} position in the world alongside with Gambia, Indonesia, Togo, from 180 possible points). The listed parameters are also supplemented with the other data – annually 2 000 Russian children become the victims of murders and get hard physical injuries, every year 5 000 Russian women die because of their husbands' assaults; 1.5 million children of the school age do not attend school, there are 40 000 junior prisoners in Russia, that is 3 times more, than in the USSR in the beginning of 1930th (for more details see [4]).

The natural result of the poor quality of life and psychological health of the population of the Russian Federation is the extremely low life expectancy (the last place among the countries with the advanced and transitive economies). In 2009 life expectancy was 68 years on the average (for men – 62 years, for women – 74 years).

Each of the discussed parameters is not only an unfavorable result of the management of social development. Each of them also generates the problems of economic development. According to the forecasts of RosStat from 2011 till 2020 the population of the able-bodied age in the Russian Federation will reduce more than for 20 million people (i.e., for one million people annually). And this demographic call proves that the unique chance of the country for development, and preservation of the territorial integrity is innovational development.

The researches show, that the opportunities of innovational development in Russia for the present exist (see [5]). The perspectives of the major industries depends, first of all, on what was possible to keep in the system of science and higher education.

The problems of teaching. Recently the term "innovational education" or, depending on the context, "innovational educational technologies" became extremely popular, it can be met almost everywhere – in the documents of the bodies of the government, education, science, mass media.

There are also some questions here. What can be considered as innovational educational technology? What place does it take in the system of professional training, including the staff on management in economy? Can this term have deep meaning or is it just the "fashionable" name for the existing typical educational process (by analogy as, for example, "nano-existing" subjects)?

Having addressed to the results of the discussions at conferences, a number of which was devoted to the directly innovational educational process (see [6]), to the information submitted on the high schools' sites of (see [7]), to the scientific publications (see [8]) it is possible to assert, that as a whole the understanding of this term is unified enough, despite of the typical attempts to hold the infinite discussion of the probable interpretation of terms "innovation", "education", "technologies" and the specificity generated by these words' rearrangement (see [8]).

Informatively this typical understanding can be presented by the following citation: "Modern innovational educational technologies assume maximal use in teaching and educational process of the technical opportunities of receiving, processing, transferring and keeping information. For instance, at studying foreign languages dictophones that allow increasing the intensity of the training process [7] are widely applied. Probably, it isn't worth to discuss such understanding of "innovations". Unfortunately, the inclusion of "fashionable" words-mantras, allows raising the chances of getting the financial support for conferences, to provide budgetary places at institutions of higher education, etc.

The attention in the present work is paid to the economy in connection with the fact that recently some "strange attitude" towards it is observed. For example, after the statement of President Medvedev about the excess of economists and lawyers in Russia, the quantity of budgetary places on corresponding specialties was reduced.

At the same time, these directions are the most claimed at the labor market of the Russian Federation. So, of ten most claimed specialties in 2010 only seven are directly connected to the economy and jurisprudence[2]. Besides it is obvious, that innovational development of the country is impossible without qualitative management, without competent economists. And this practice is the product of mainly typical technologies of training used in the advanced countries creating best economists, commercial managers and state officials in the world.

Let's consider the problems, characterizing the economy, determining the problems of teaching. It will not be the report on the carried out, strictly argued scientific research, more likely, it is a certain reflection of the specificity of economics as science and educational discipline.

Economic disciplines are extremely various. Still economics as any other special direction of the social studies has a number of potential problems and characteristic features.

The first feature is that economics involves a wide circuit of subjects. It is not only a subject, but a contour of the subject. That is, economics necessarily includes the whole complex of knowledge on history, ethnography, geology, on the whole complex of realities that influence economic processes and in many respects explain them. And there is the whole spectrum of problems for teaching, connected with the necessity to keep economic contents at a rate, but at the same time to give a complex, polydisciplinary sight at the reality.

In this connection, certainly, it is fine, that nowadays the curriculum of classes can include not only obligatory, federal component subjects, but also the additional ones.

It allows giving the students the knowledge actual for concrete region, or significant in some social and economic conditions. But even within the framework of the course the certain danger is represented by the fact that the person of a teacher can hypertrophy one component of influencing economic processes and to neglect another one.

Also it is positive while solving this problem that nowadays in a number of the higher education institutions training experts in certain spheres is carried out - for example, manager of the chemical industry, etc.

This feature, i.e., wide frameworks, integrated approach of economy, is closely connected to the other problem – "the problem of displacement" [5]. The economy as a science, and its component, basis - economic theory – is a huge quantity of layers, stratifications of various views and explanations of economic processes which are starting with different, sometimes even opposite bases, giving huge, difficult to understand quantity of diverse processes.

In a result, considering economic theory of Marxism, a teacher pays attention to the works and the views of Marx, omitting Leninism, and the later attempts of Marx views' modernization in 30th – 80th years of the XX century (Robinson, Morishim, Vaytszeker, Samuelson, etc.). Or, for example, the same theory of accommodation, as a rule, is absent or is extremely avariciously covered in classical foreign textbooks. Though, undoubtedly, this subject is also interesting as a basis of the theory of urbanization and regional economy.

The other part of the problem of displacement is an involuntary imposing of own, including political, views at teaching economic theory. The matter is that even economic theory implicitly contains political features, and thus works for the political propaganda somehow. And as M. Blaug said, "this element of propaganda is an integral part of the subject, and even when the thinking person assiduously

[2] The leaders in the list of specialties: 1) finance, accounting and audit; 2) banks and investment; 3) jurisprudence; 4) informational technologies and mass media; 5) linguistics, translations; 6) ecology; 7) economy and management at enterprises; 8) marketing, advertising, PR; 9) labor market; 10) transport, logistics. (www.jobsmarket.ru (about 600 000 vacancies in the Russian Federation) [9].

keeps the feeling of the Olympic objectiveness, philosophical and political preferences are present right at the beginning of the analysis at formation of what Shumpeter would define as "vision", meaning the pre-analytical act of choosing certain features of the reality for consideration.

Here is the problem not in denying the propaganda presence, but in separating scientific ideas from ideology in which they are constantly included, and in representation of these ideas for scientific check with the purpose of their statement. Moreover, propaganda does not mean lie; for example, it doesn't mean that Marx wanted to discredit capitalism and began from the biases concerning its disadvantages, and it does not mean, that for this reason his analysis is not worthy, political prejudices can even help the scientific analysis – the critic of capitalism, most likely, will pay more attention to the valid lacks of system, and, certainly, Marx's remark concerning business cycles of fifty years is not casual [11, p. 5].

It seems that the problem for a teacher consists in the balance between his or her own preferences to give students more material about the accepted and shared theories and the necessity of complex teaching the subject. But M. Blaug gives the answer for the probable solution of the problem, speaking about the necessity to show students "as certain biases conduct to various kinds of analysis, and then to ask a question, whether this analysis keeps the value if it is freed from ideological meaning" [11, p. 5]. Certainly, it is possible to agree with this advice, but thus it is important to keep the weighed, median position. That is, there are two kinds of danger: "...There is an anachronistic sin of estimation of the previous authors' works with the criteria of the modern theory, but there exists another anachronism, which Samuelson once defined as "a refined anachronistic sin of non-recognition of the adequate contents in the works of the previous authors, as they do not use the terminology of the present time" [11, p. 1].

Besides it is necessary for the teacher to how politization influences the views of the author of the discussed theory and whether "ideological meaning" determines the conclusions of the author. We shall take Marx as an example. To all of us it is well-known, that the basis of Marxism is based on the theory of additional value. But thus the common sense is contradicted with an initial sending - that any worker with the same qualification creates the identical sum of additional value.

It is clear, that even if workers receive the same wages they do not create identical additional value, extracting oil or twisting nuts at a factory. Moreover, even extracting oil, we admit, in Siberia and in oil fields of Iraq the additional value will be different. Marx does not result any argument, forcing to believe in his assumption of the identical norm of the surplus value for a worker. If to reject this sending the building erected by Marx, falls. The other obvious contradiction is Marxist statement, that the surplus value is not created in the sphere of the manipulation. Marx's theory about productive work, according to which services are excluded from the national income as are characterized by transfer payments, was taken into account in practice at conducting national accounts in the USSR.

Actually aforesaid is closely connected to another immanent problem of the economy – the problem of the ratio of theory and practice, theory and reality. This potential problem is connected to the concept of reflexivity. Here it is possible to study the theory of reflexivity in detail, as the theory of reflexivity of well-known speculator G. Soros was actively discussed in Russia. And Soros suggests counting this criterion, the criterion of reflexivity as a divider, a boundary between natural and social studies.

What is the essence of his reasoning? The perception of the observer of some natural object does not influence the condition of this object. As though a geologist perceived breed, it would remain the same. Social sciences study the society which part the observer is.

Therefore the perception of the observer can change the society. It is possible for us to give religion as a historical example (the change of the society under the influence of Christianity), policy (the consequence of the economic theory of Marxism), and science (A. Einstein's influence). In other words, reflexivity is spontaneous and self-supporting natural process in the social environment which under the influence of perception and expectations of the participants can change the condition of this environment. The presence of this feedback among the observer and an object of supervision explains (by Soros) the distinction between natural and social studies.

"The phenomena investigated by social studies... – Soros writes, – have conceiving participants, and in makes everything complicated. As I tried to show, the sights of the participants are prejudiced ... at decision-making the participants base not on the objective conditions, but on interpretation of these conditions. It is an important point ... It enters the element of uncertainty which makes the object of research less influenced by that type of generalizations, previews and explanations which helped natural sciences to win the reputation" [12, p. 14] "Offering the general theory of reflexivity, I, probably, have gone too far and moved too quickly. I assert that economic theory is incorrect, and social studies represent only false metaphor" [12, p. 17].

The question – is Economics a science and does it progress? – interests many outstanding scientists-economists. It is possible to completely agree with such position? Perhaps, the most objective answer was given by M. Blaug, 50 years earlier Soros' theory. "Any assumptions of economic behavior are not absolutely true for all times and all places, but will anybody seriously deny, that progress was achieved in the methods and analytical constructions of economic science?" [11, p. 3]. P. Samuelson's statement is interesting in this connection: "... experience shows, that though gawks did not achieve success, nevertheless it is not necessary to be the super-person to be fruitfully engaged in the subject which people have named economic theory and which is halfway between art and science" [13, p. 9].

Thus, these questions are already being discussed for a long time. Therefore Soros' ideas are a little discussed abroad and actively discussed in Russia. Who knows, maybe, the opinion of managers about uselessness of economists for the Russian Federation, and that it is not necessary for a manager to know economic bases, etc. are caused by the discussions from the pseudo-scientific environment of the Soros' book, for example, on the Internet?

But what it means for a teacher - the balance between art and science? In my opinion, the ultimate goal of economic education is not simple accumulation of knowledge. For knowledge to be fruitful it is necessary to learn students of the methodology of making decisions in any situation. John Meynard Keynes said, that economic theory does not give conclusions directly applied to politics. It is a method, instead of a doctrine, a device, technique of thinking which helps its owner to make correct conclusions. In other words, teaching economics it not teaching of a set of facts and definitions. It essentially differs by the fact that includes training the way of solving problems.

P. Samuelson's statement in his well-known textbook runs: "The first problem of the modern economic science is to describe, analyze and explain the dynamics of production, unemployment, prices and other similar phenomena and also to establish the ratio between them. For such description has any value, it should represent something more, than enumerating of incoherent transfers. It should be subordinated to the certain system; it is understood as the original analysis" [13, p. 9].

That is, it is necessary to submit the information from the point of view of opportunities of the analysis and opportunities of prediction.

For example, Adam Smith understood the way how the market mechanism is capable to coordinate independent decisions of sellers and buyers, but he didn't notice such a basic thing, as the functional ratio between demand and price. It took one hundred years when Valras, Marshal, Paretto revealed the logic of Smith's idea about "the invisible hand" (see M. Blaug in [11]). And the necessity of illumination of the historical and socio-economic context of arising theories probably through the prism of statement, that finally any theory is focused on prognosis function. And, the forecast depends on the forces which fed the economic science. Such approach will allow expanding the political understanding of the existing problems of economy and social sphere of the present and to find adequate ways for their solution. That is, contrary to the statements of G. Soros, it is necessary for students to show, that the truth concentrates in a limiting increment to economic knowledge. Thus it is necessary to create the general logic of reasoning, illustrating what concrete each theory allows to make in the economic analysis. Such approach will allow generating competent experts, capable to solve arising problems, including those ones connected with the innovational development.

References

1. Baranov, S.V. Research of the inter-regional differentiation / S.V. Baranov // Economic Science. – 2010. – № 4. – Pp. 113-118.
2. Samarina, V.P. Peculiarities of estimation of the non-uniformity of the social and economic development of regions / V.P. Samarina // Problems of the modern economy. – 2008. – № 1 (25). – Pp. 300-304.
3. Features and scenarios of the social and economic development of the modern North of Russia. – M.: Economics, 2010. – 238 p.
4. Yurevich, A.V. Dynamics of the psychological condition of the modern Russian society / A.V. Yurevich // Bulletin of the Russian Academy of Science. – 2009. – № 2 (V. 79.). – Pp. 112-121.
5. Baranov, S.V. Innovational space: about the opportunities and some problems of the innovational development: regional aspect / S.V. Baranov // Creative economics. – 2009. – № 4. – Pp. 81-86.
6. Innovational technologies and methods of training in the vocational education // New technologies as the basis of the development of the professional educational space in the educational-research-and-production complex: materials of the regional scientific-practical conference, Livny, March 16, 2007 (section №1). – Oryol: Oryol-STU, 2007. – Pp. 14-64.
7. Innovational educational technologies [Electronic resource] // Site of the Far East Institute of management, business and law. – Available at: http://www.diubp.ru/12-innovacionnyje_obrazovatjelnyje_tjekhnologii.html
8. Kozlov, A.V. Innovational educational technologies and innovational education: similarities and distinctions [Electronic resource] / A.V. Kozlov, T.V. Pogrebnaya, O.V. Sidorkina // Bulletin IPK. – 2008. – № 3. – Available at: http://www.kipk.ru/rb-topic.php? t=582
9. Center of testing and development. Claimed trades at the labor market [Electronic resource]. – Available at: http://www.proforientator.ru/index.php? option=com_content*view=article*id=573:2011-03-31-11-46-28*catid=22:2009-11-18-12-54-08
10. Skufyina, T.P. Social and economic forecasting: Problems of science and teaching / T.P. Skufyina, S.V. Baranov // Voprosy Economiki. – 2005. – № 3. – Pp. 41-48.
11. Blaug, M. Economic ideas in retrospective view: transl. from English. – 4th edition / M. Blaug. – M., 1994. – 720 p.
12. Soros, G. Alchemy of finance / G. Soros. – M.: INFRA-M, 1998.
13. Samuelson, P. Economics. – Vol. 1 / P. Samuelson. – M.: NPO "", 1992.

UDC 339.33

Development of a methodology of forming anti-crisis management strategy for a wholesale trade organization

This study includes development of a methodology of forming anti-crisis management strategy directly for a wholesale trade organization. The solution of this problem is urgent today as Russian and world literature reflects experience of anti-crisis management only in the industry. The study formulates and systemizes factors that give impetus to development of an organization in the crisis and which are the basis of the proposed methodology. Risks associated with realization of the anti-crisis management methodology are also taken into consideration. The study conclusions are made.

Anti-crisis management, crisis, strategy, anti-crisis strategies, strategies of wholesale trade organization management, methodology of forming anti-crisis strategy.

Marina S.
SHAMINA
Senior Lecturer of the Department of anti-crisis and strategic management of
Russian State Trade and Economic University
Sms-star@yandex.ru

Any social and economic system in the normal course of business is faced to a crisis situation, but, in practice, it does not always find a way out of it. Organizations must take proactive actions aimed at forming measures to resolve the crisis. At present, majority of companies are trying to smooth out the consequences of the recent international financial and economic crisis that has caused irreparable damage to the state economy in many European countries, including Russia and each organization separately.

Here are some statistics from Rosstat characterizing the financial and economic situation in European countries, the Russian business sector and trade organizations in Russia.

As a result of the strong impact of financial crisis on the global economy there was a decrease of turnover volume index of retail trade in 2009 compared with 2008 by 12.6%, in Hungary by 8%. In Germany and Canada, the index fell by 2.02% and 1.46% respectively.

Also during the crisis there was an increase in consumer prices. A maximal growth in 2009 compared with 2008 was observed in Belarus at the level of 66%, Ukraine – 36%, Russia – 32%. A number of countries with the help of state financial injections into big business were able to stabilize inflation and restrain negative trend of increase in consumer prices. As a result, the index remained unchanged in 2009 compared with 2008 in Sweden, France,

Finland, China, Moldova and Canada and was 115%, 117%, 115%, 120%, 231% and 120% respectively. And only in Japan, thanks to effective government anti-crisis measures, solid gold and currency reserves, a stable economic environment, governments have reduced the CPI by 1.5% in 2009 in comparison with 2008.

The company Nielsen, the global leader in consumer behavior research, conducted a survey which found that 40% of Russian women during the crisis reduced the purchase of clothing and 7% put off the purchase to better times. According to the President of European Council of the Fashion cloths and Textile Export Reinhard Depfera Russian retailers have reduced the amount of the order at the European clothing manufacturers by 35% in 2009 compared with 2008.

Labor Agency data revealed a significant increase in unemployment in 2009 compared with 2008. The number of unemployed in Russia amounted to 25.0 million and 16.8 million respectively.

In the crisis conditions of the functioning of organizations, experts in the anti-crisis management are beginning to talk about mergers and acquisitions strategy as an effective measure to overcome the crisis. In the financial and economic crisis of 2008 to 2009 according to Rosstat turnover of small businesses decreased by 9.9% and amounted to 16873.1 billion rubles in 2009.

Foreign capital began to walk away from Russia. Investors who were planning to invest funds into Russian organizations have suspended projects. As a result, the number of companies with foreign capital, engaged in trade, fell in 2009 by 6.79% and amounted to 6164 companies. Turnover fell by 11.59% and amounted to 7730.5 billion rubles. Despite the fact that many organizations do not have weathered the crisis and were forced to close, the remaining players in the market increased the staff, with an emphasis on sales and marketing.

Thus, the Russian trading companies have increased medium-payroll number of employees at 8.57%. Thus, at the end of 2009 in the trade 444.7 thousand people were employed. While in Russia in general the level of unemployment in 2009 increased by 4.48% compared with 2008.

The main instrument of cost creation in the crisis is mergers and absorption, as well as alliances. On the one hand, these actions reduce assets cost, and on the other – stimulate joint efforts to overcome the crisis. Thus, the effective use of this tool during the current crisis, allowed the American health care provider LHC Group to achieve doubling of the cost for seven months of the crisis. The company provides medical services at home, also work in hospitals. By focusing on the outsourcing of services, LHC Group for six months (June to November 2008) was able to open seven joint ventures involving hospitals as partners. In such a way, it provided a stream of orders (i.e. avoided the risk of demand reduction). In addition, steady cash flow allowed to expand the scale of operations – two agencies for home care and a Healthcare company with a presence in 15 states were acquired. Even in the midst of crisis, the company owing to a successful strategy could find funds to finance rapid growth [4].

The company Alaska Milk, despite the market downturn during the Asian cri sis, by 2000 was able to increase its cost half as much compared to the pre-crisis period (1997). This was done by acquiring other manufacturers with strong brand and distribution companies (to improve the representation of their products). Having expanded the distribution network, the company partnered with the firm Nabisco and Kellog's, taking on the distribution of its goods. Thus, Alaska Milk has protected itself against the risks associated with the unique product in the portfolio.

Hana Electronics Company conducted a series of acquisitions that strengthened its competitive position: up to the crisis – the

absorption to upgrade its products and expand its customer base, during the crisis - the absorption of the manufacturer of metal components for the semiconductors and after the crisis – the adjacent high technology business, which uses semiconductors in the manufacturing process. These acts committed from 1997 to 1999, led to an increase in profits (from 19% to 22.5%) and business cost (double) [4].

In domestic and foreign practice of crisis management of organizations of wholesale trade and services must use methods of overcoming crisis, developed for industrial enterprises.

The goal of development of a methodology of forming a crisis management strategy is to develop measures for the early diagnosis of the crisis or its overcoming with losses as small as possible.

The method of forming anti-crisis management strategy by Wholesale Trade Organization is based on the relationship of four models, reflecting all the business processes and integrating long-range planning activities. Each model consists of the following structural elements:

1. A detailed description of the research object.
2. The list of issues that each specific model reflects.
3. Setting of goals, objectives and issues for which the model is constructed.
4. Description of the mathematical system used in the study in development of the model.
5. Ways to interpret the study results, regulatory system of indicators, the possibility of deviations of parameters from the normative values.

In our study we give an explanation for each of above-listed structural elements.

The object of study can be:

1. A specific organization of any legal form. The main declared activity is wholesale. Small, medium and large organizations can be considered. All investigated companies have one characteristic feature - the presence of certain information constraints associated with availability of information about the organization (especially in the financial statements).
2. A set of trade organizations operating in the territory of a definite region.
3. A set of trade organizations of a single business sector. For example, the food and non-food sectors, engineering services sector, the sector of goods for office, etc.
4. A set of trade organizations, consisting of a parent company and its controlled subsidiaries (holding).

The developed methodology of forming anti-crisis management strategy should take into consideration the following parts of object operation:

- the process of functioning of an organization as a trading system;
- the process of organization development at the time of a new project.

Organization as a trading system consists of many components and business processes. Their relationship and influence on each other is reasonable to consider in the course of describing the process of formation and realization of the potential development of specific business areas.

The process of organization development occurs as a result of interaction with elements of the company and realization of new projects.

The process of trade organizations in the crisis can be divided into three successive stages:

1. Accumulation of resources.
2. Rational allocation of resources for the initial momentum of development.
3. Support of the development of an organization.

Accumulation of resources takes place at all levels of the trade organization. The anti-crisis strategy requires material, financial, information, human and other resources. The company can use own resources or bring them by, for example, using services of consulting or credit institutions.

Rational distribution of resources creates momentum for the start of development. Another starting point for business development can serve mergers and acquisitions.

To support the development of wholesale organizations in crisis it is necessary to constantly monitor the internal and external environment, to evaluate financial performance and competitive advantages of organizations.

The main objective of developing methods of forming a crisis management strategy is to identify promising areas of trade organization development, which are formed at two levels:

1. Development of alternative projects of business development and definition of their priority. The main task at this level is reduced to the analysis of new projects, using quantitative indicators.

2. This level is the starting point for the first one. At this point the direction of business development is chosen in which future new projects will appear.

Moreover, for each level its own set of quantitative and qualitative indicators is determined to be agreed with each other.

In the framework of the study it is necessary to consider systemic description of the control object. The actual management object is selected and presented as a relational system.

There is a difference between actual and nominal control object, which lies in the fact that in describing the first it is necessary to consider nominal object itself, as well as factors of micro-and macro-environment, which have a definite impact on the organization.

Given the microenvironment, we represent the nominal object consisting of several subsystems that are independent of each other on functional lines. In this case, the subsystems may differ not only on the structure of performed tasks, but also the structure of the legal framework within which they operate. In such a way, the development of wholesale trade organization is in the process of interaction between the various projects and sub-systems.

In addition, each project can be developed for the scope of subsystems, as well as some projects can be implemented in one area.

The nature of influence of environmental factors on the organization during the process of realization of projects may be qualitatively different. Projects may be developed both through their own and the attracted funds (loans, investments, etc.).

We select a number of factors that give impetus to the development of an organization: including new products and/or services in the range, changes in sales techniques, the use of methods of merchandising, finding new markets, getting the ex-rights to representation of any European brand, development of own brands. Another reason of business development can be a steady demand for any goods (services).

Anti-crisis management in the company, aimed at improving sales, is decisive in the withdrawal of the company from the financial crisis, if the company has problems with the competitiveness of products or the presence of solvent demand [8, p. 12].

We assume that the factors that promote the development of the organization, leads to a relative rise in prices for goods (services) in comparison with the costs. But also may be another situation where the costs are reduced compared to the prices of traded goods (services).

Also factors in the development of wholesale trade organizations in the crisis can be elements of the macroeconomic environment. Results of such influence can be very different, that requires further analysis.

In the developed methodology the influence of macroeconomic factors on the development of the organization is not considered. This future methodology will make the assessment of the development of macroeconomic environment under the impact of changing economic regimes.

In the process of organization development there is inter-connection between the subsystems which is carried out through the reallocation of resources between them.

Terms of reallocation of resources between the subsystems are determined by the prospects of development (selected projects) and the uncertainty of the legal and economic situation in the country.

When developing simulation models of the organization there is a significant disadvantage associated with low regard for the interaction of companies with environmental factors. To remedy this disadvantage, we offer to take into account the interaction of the organization and macro-factors:

- purchasing power of the target audience;
- the level of competition in the selected segment;
- volume and structure of advertising budget;
- working conditions with suppliers.

The most complete and better than its competitors, to meet the needs of consumers it is possible if the chosen areas of activity the company has or may have strong and sustainable competitive advantages based on core competences of the enterprise [7, p. 131].

In the methodology of forming anti-crisis management strategy of wholesale trade organization we also consider aspects of mutual influence of macro-factors and the company on each other. We will explain features of this interaction:

1) when describing the influence of the environment you should not be limited by consideration of competition;

2) to develop assessment of the influence of environmental factors;

3) to analyze the interaction between the organization and external environment in the development process at the time of realization of new projects;

4) to strengthen the ability to influence the macro-environment through advertising business events;

5) to focus on generating new effective managerial decision-making, using a creative approach;

6) to rationalize the ratio of purchased (produced), and selling goods (services).

In the framework of the study we distinguish the external factors that turn out to be resistance to development of wholesale trade organization. The main factor is competition. For example, if a company launch a new product on the market or own brand, many competitors will duplicate these actions. At the beginning of the season or holidays, many companies run advertising actions. As a result, the effectiveness of each action will be considerably less since consumer flow is distributed among all those who ran the ads. If the organization succeeds in reducing costs or developing effective methods of sales, its achievements will be copied by unscrupulous competitors.

As a result of the above examples, advertising expenditures are increasing, the increase of the number of staff in marketing and sales departments, prices increase, profits reduce (all customers are offered more favorable terms of cooperation), etc.

Changing of market conditions may occur regardless of the trade organization. To a certain point in time high quality changes may appear. If the organization has time to make these changes before competitors, it will receive a competitive advantage, and if not, the possibilities of the company are considerably reduced.

Also can be reduced the market as a result of the development of other markets and products. The prices for the products will be shaped by many factors.

The most important will be:

- ✓ the level of production costs;
- ✓ the level of value of production (services) to the consumer;
- ✓ the volume of trade in volume and value terms;
- ✓ the level of competition in the industry;

✓ the structure of distribution network;

✓ the degree of impact of the crisis on the analyzed company and its competitors.

The structure of the competitive environment and the extent of its impact on total revenue of wholesale trade organization in the development process can be described in the methodology in two ways. In the first case, the company can grow by increasing sales volume with limited market capacity. Thus, in one market the number of products increases (this is due to the increase in delay of payment, passage to the full realization of goods and the various promo-actions). As a consequence, competitors will react to the current situation and take some measures. As a result, the price of products must be reduced in order to ensure the planned sales volume.

In the second case, the price of products may vary insignificantly and then every market participant will seek to increase turnover by competitors. That is, some companies will increase their market share, respectively, other companies will miss it. At the same time the offer of this product will exceed demand and the market will be saturated. Both examined variants of the formation of the proceeds will be reflected in the model.

The situation is also possible where growth in sales volume does not entail fluctuations in the price of products (services), but reflects in the increase of costs associated with the implementation and promotion on the market. This version of events is also reflected in the model of the formation of anti-crisis management strategy.

Development of the company may also slow down when sales reach a certain level. In this case, it is necessary to revise the strategic plan of the company, namely, product portfolio, markets, conditions of interaction with suppliers and competitors, etc.

The following objects create obstacles to business development:

- large companies-monopolies that dictate their terms of market development;
- decisions of the first persons of the state and signed by them legal documents;
- change of consumer preferences;
- poor management decisions of top managers;
- an offensive strategy of competitors;
- limited financial resources;
- unpredictability of the environment;
- complexity of international logistics.

During the process of modeling line of the organization development in the crisis the specific obstacle to development can not be determined. In this case you can install only the degree of counteraction of macro-factors of the company depending on time and decisions made under the program of way out of the crisis.

In the formation of crisis management strategies of wholesale trade organization it is necessary to consider the effects of environment on its development. We divide two types of macro-factors influence on the organization:

1. Passive influence. Occurs when the external environment belatedly responds to management actions of managers.

2. Active effect. Environmental factors have a direct impact on the organization, quickly reacting to any administrative action.

In developing the crisis management strategy it is necessary to analyze in detail features of the mathematical apparatus, its variables, their relationships and other elements.

In whole quality of economic and mathematical model is formed by its various characteristics, needs and effectiveness of the model. These parameters must be consistent and reflect the functional possibilities of the model. The effectiveness of methodology of forming the anti-crisis management strategy as the final result is determined by the correct setting of goals and subgoals.

In developing of the theory and practice of anti-crisis management there are three ways to increase the quality of economic and mathematical models and the efficiency of their implementation:

1. Development and improvement of the theoretical framework.

2. Introduction and explanation of new functional parameters and criteria for evaluating models.

3. Development of methods for use in models of diverse information having varied degrees of reliability. Currently developed economic and mathematical models aimed at accounting of quantitative statistical information and do not reflect the quality (indirect) information from various sources.

The study has noted the need to include in the model tools for quantitative comparison of alternative programs, as well as methods for making management decisions on the verbal level. Therefore, in forming anti-crisis management methodology of wholesale trade organization both approaches will be considered.

In the models of the first type to each alternative solution quantitative assessment of its effectiveness is assigned. Typically, in this model, two models are regarded:

1) the method of estimating the budget of the organization;

2) the method of determining the priority in project selection.

In the second type of models focus is on the utility factor. The basis is the information on the base of which one can compare the alternatives of the organization development and to choose the most interesting and promising. This method ensures management decisions at the verbal level, when there is no potential to make quantitative estimates for various directions of business development in the crisis. This methodology is standardized and can be used at any level of management.

The mathematic apparatus used in the formation of methodology of anti-crises management strategy of wholesale trade organization, is designed for choosing of decisions aimed at the development of business and includes:

✓ criteria for the quantitative analysis of alternatives of projects and choice of one of them (the priority);

✓ a set of indicators needed to select the priority option of the organization development;

✓ the methodology designed to take into account the relationship between adopted managerial decisions and the dynamics of trade organization development in the process of placing priorities between new projects;

✓ the methodology for assessing organizational and economic activity;

✓ the methodology for assessing risks;

✓ the mathematical model of interaction of environmental factors and organization;

✓ taking into account of uncertainties that impede in the choice of perspective ways of development.

In summary, we note that the methodology of formation of anti-crisis strategy of wholesale trade organization management is composed of four separate units:

1. Methodology of determining the type and priority of the project.

2. Model of accounting changes in the development process.

3. Methodology of assessing potential directions of development in terms of efficiency.

4. Methodology of rapid assessment and prediction of the organization activity.

In implementing the proposed methodology of forming the anti-crisis strategy of trade organization management it is necessary to consider three groups of risks:

1) the risk of changing the impact on the organization of environmental factors (economic, political, social, international, climatic, market risks).

2) the risk of changing the impact on the organization of factors of internal environment (finance, investment, marketing, logistic risks).

3) the risk of failure of new project realization (innovation start-up).

Any trade organization should resolve the problem of forecasting and risk assessment.

The simplest solution may be the introduction of the post of risk manager in the administrative apparatus and the creation of the body coordinating actions in management of the main types of risk of all departments and organizations. [1, p. 253].

References

1. Anti-crisis management: textbook. – 2nd edition / ed. by prof. E.M. Korotkov. – M.: INFRA-M, 2006. – 620 p.
2. Anti-crisis company management: textbook for students / ed. by M. Mussin, S.P. Ivanova. – M.: RGTEU, 2010. – 304 p.
3. Baldin, K.V. Anti-crisis management: macro- and micro-level / K.V. Baldin, I.I. Perederyaev, A.V. Rukosuev. – M.: Publishing house Dashkov and Co, 2011. – 268 p.
4. Vavilov, V. Strategies which help overcome the crisis as a winner: the experience of foreign companies / V. Vavilov // Journal General Director. – 2009. – № 7.
5. Vishnevskaya, O.V. Anti-crisis company management / O.V. Vishnevskaya. – Rostov-na-Donu: Publishing House "Phoenix", 2008. – 320 p.
6. Garina, E.P. Anti-crisis management. Series: Higher Education / E.P. Garina, O.V. Medvedeva, E.V. Shpilevskaya. – Rostov-na-Donu: Publishing House "Phoenix", 2011. – 352 p.
7. Zakharov, V.Y. Anti-crisis management. Theory and Practice: textbook for students studying in the field of economy and management / V.Y. Zakharov, A.O. Blinov, D.V. Khavin. – M.: UNITY-DANA, 2006. – 287 p.
8. Zharikov, V.V. Anti-crisis management of enterprises: textbook / V.V. Zharikov, I.A. Zharikov, A.I. Evseychev. – Tambov: Publishing House Tambov State Technical University, 2009. – 128 p.
9. Ivasenko, A.G. Anti-crisis management: textbook / A.G. Ivasenko, Ya.I. Nikonova, M.V. Karkavin. – M.: KnoRus, 2011. – 504 p.
10. Kruglova, N.Yu. Anti-crisis management: textbook / N.Yu. Kruglova. – M.: KnoRus, 2010. – 512 p.
11. Foundations of anti-crisis management of companies: textbook / ed. N.N. Kozhevnikova. – M.: Publishing Center "Akademya", 2010. – 496 p.
12. Samorodskiy, V.A. Anti-crisis management. Series: textbooks and teaching aids for students in higher education / V.A. Samorodskiy, I.A. Khlusova. – M.: ColosS, 2008. – 208 p.
13. Russian Statistical Yearbook. 2010: stat. coll. / Rosstat. – M., 2010. – 813 p.
14. Hermann, S. Sales in crisis. How to increase sales, decrease costs and increase profits / S. Hermann. – M.: Business Psychology, 2010. – 256 p.
15. [Electronic resource]. – Available at: www.retailer.ru
16. [Electronic resource]. – Available at: www.strategy.ru

IN THE WORLD OF BOOKS AND JOURNAL ARTICLES

Current work on corruption in Russia

"Corruption is the system feature of post-Soviet Russian capitalism (scientific and journalistic notes)" – so much paper, placed in two editions of "Russian Economic Journal" for 2011[1].

The author Yuri Boldyrev, Ph.D. in Economics, was in 1992 – 1993 Head of Control Department of the Presidential Administration, in 1993 – 1995 – member of the Council of Federation in 1995 – 2001 worked as deputy chairman of the Accounting Chamber. He is currently a columnist, "Literary Gazette" and the online newspaper«STOLETIE.RU».

At the beginning of the work stated that it specifically argued very "pregnant" for the authorities and society thesis, anyway appearing in all the texts on contemporary Russian author. To solve this problem, in our opinion, the author has succeeded, which greatly facilitated the careful structuring of the article.

In the first section of the article "Sly arrangements – sly recipes" the author critically comments on the widely popular among power structures radical and liberal concepts and ideas of corruption and struggle against it. In his opinion, the recipes of healing society from total corruption, corresponding to the fundamental tenets of radical liberalism, namely the rejection of the activity of the state in the economy, the transformation of state power in the entity providing certain services to citizens, about government services automation ("e-Government") are wrong and untenable. Their implementation will not suppress corruption and creates new opportunities for its development as well.

In the next two sections "The control aspect of the problem: retro view" and "Continuing retro excursus: about the ideological support of the scenario of the country criminalization and the plot "corruption and the market economy" involving large amount of factual material the evolution of post-Soviet system of state control (internal and external) is traced, which, according to Yu. Boldyrev, is important to the topic disclosure of corruption in Russia, to the analysis of the formation and historical dynamics of the latter.

The author emphasizes that the result of two decades of managerial activity of post-Soviet Russian leaders, and constructed "for them" power "vertical" are success in the sabotage and discredit of everything associated with the essence of effective macro-democratic management – with independent control of power. In confirmation of this there is a story about the rise and development of the Russian Audit Chamber, which is the supreme body of external state financial control. In the second half of the 90s the Audit Chamber identified and publicized the most brutal and unprecedented irregularities in the government and Central Bank public finance management and state property, and prepared fundamentally important conclusions on the draft laws initiated and lobbied by the executive branch.

[1] See: Boldyrev Yu. Corruption is the system feature of post-Soviet Russian capitalism (scientific and journalistic notes) // Russian Economic Journal. – 2011. – № 2. – Pp. 14-34 (beginning of article); № 3. – Pp. 46-54 (end of the article).

However, in the 2000s in the law "On the Audit Chamber of Russia" radical changes were made: the State Duma and Federation Council lost the right to appoint directors and auditors of the Chamber (those began to be appointed by the representation of the first official of the state). Thus the Chamber lost the status of the body of external state financial control, independent of the vertical of executive power and its actual head - the Russian president. It has evolved from a body of external government control into the "understudy" of internal control bodies of the executive power.

The author points to the fact that in the 1990s actively opposing the formation in new Russia of a system of independent state control and energetically parallel running of a priori fraudulent and predatory mechanisms of total forced privatization, stayed by the federal executive authority social forces deployed at the same time the proper ideological campaign including the promotion of the idea of the inevitability and even the usefulness of corruption. Conducted in the 1990s privatization resulted in the criminalization of governance mechanisms and consciousness of latter-day private owners as well. It was a high-tech implementation of a carefully planned, including in respect of ideological support, multi-pass algorithm, and providing not last of all the interests of external clients of "reduction" of our state and interests of asserted national criminal "elite".

According to the author, based on the market economy corruption occurs under the direct influence of a combination of factors, including public morality prevailing in the society moral concepts (first of all - about the valid-profitable wealth inequality and acceptable extent injustice in distribution of national income); this morality in its turn is closely linked with the entire system of state regulation of socio-economic and politico-legal system. Given these general methodological premise as for the history of the formation of post-Soviet Russian capitalism, we can confidently assert that since the beginning of the deployment of radical and liberal reforms took place conscious and deliberate use of the mechanisms of economic regulation, deliberately provoked and stimulated immoral and fraudulent behavior of counterparties in industrial and in general social relations. As a result, the most important from the standpoint of today's anti-corruption struggle this problem is the problem of subjectivity: who is interested in this?

Designated methodological premise regarding the need for subjective approach to the suppression of corruption in Russia motivates the division of its diverse manifestations into two groups – apparat and state and political.

To these two types of corruption, as well as the principal directions counteracting them is devoted the next part of the article of Yu. Boldyrev.

The first type – apparat corruption – the one that the organs of the system of internal state control are to withstand. The author considers two mechanisms of suppression of this type of corruption. The first pertains to the career prospects and a decent wage rate of state employees (including senior officers). The second is the principle of presumption of a corrupted civil servant, which requires a special delicacy of the official within the statutory regulations. Though not judicial authorities prove the presence of in the actions of an official of a crime-corruption interest, but he himself must prove in court his innocence.

In the course of consideration of the problems of apparatus corruption Yu. Boldyrev, using extensive historical material, discusses the reasons for its conservation in Russia. As the first reason he calls the inadequate remuneration of civil servants. Referring to the 1990s, the author states two things. Firstly, throughout the decade, when the foundations for today's customs and habits were built, salaries of civil servants were humiliatingly low.

Secondly, the media deliberately and aggressively imposed on the public understanding of unreasonably high wage rates of workers of legislative and executive branches, leaving from the comparison of salaries of civil servants and workers in the private sector.

The second reason for the existence of the apparatus corruption in Russia was, in the opinion of the author, frank indistinctness of application conditions of sanctions to managers. The relevant rules are formulated so that "we can bring to trial, but you also can forgive". This entailed not the rule of law, and the formation of public loyalty to superiors, a kind of quasi-feudal dependence of subordinates, who thus find themselves on the many "hooks".

The difference in revenue potential of officials and employees in the private sector has been implemented in a "wholesale buying" of public servants by banks. It was carried out in different forms – both direct and rude and more "intelligent" (i.e. associated with the prospect of future employment of public servants in the relevant credit institutions), but eventually provided the "loyalty" of public servants not so much to the state as the financial and speculative capital which interests are in general not coincide with national ones or opposed them.

The second type is the state and political corruption that impedes the national development of most modern nation states. It represents a more severe disease, because it is a tool for a variety of shadow and even legal forces that seek to subordinate the state institutions for their private interests against the interests of the society.

Yu. Boldyrev marks out the symptoms state and political corruption. The main is the lack of suppression of the apparatus corruption (bureaucracy), as corrupted and dependent officials are its best support. In addition, the author points to the attempts of ideological justification of usefulness of political corruption, the interpretation of it almost as a kind of good.

Thus, the supporters of the recognition of a public and policy mechanism of a democratic state by a variation of the same universe – the "market", i.e. by "market politico-administrative services", in principle, reject the existence of the interests of society. Hence there are no and can not be any strategic interests of the state, and every social stratum, each economic entity must simply acquire for money the services they need: to finance election campaigns, hire and outbid lobbyists, politicians and political parties, and etc., i.e. act purely through market methods. According to the logic of this approach, any question about the state and political corruption is meaningless and even absurd: who is stronger in the market and was able to promote their own "forces" to power, he also realizes its own private interests.

At the end of arguing on the state and political corruption, the author reaches the following conclusion. This type of corruption is a systemic phenomenon: the consequence of coercion of society to hypertrophied injustice and inculcating to it views on the normality of such a situation; the result of primitivization of the economic structure and content of the work of citizens, the priority of the criminal and distribution relations before the "productive" ones; the fruit of "atomization" and expansion of society, lost the ability to show solidarity and healthy value orientation.

Based on the above definitions, firstly, we can assume the following. Without setting the basic questions on values, justice, solidarity and unity of our society, as well as its objectives as a whole and the ideology of progress, the deployment of political reform on the prescriptions of radically and liberally minded part of the expert community only would dramatically broaden the "playing field" for public and political corruption, making the current bureaucratic and corruption relationships into relationships of free sale of "policy and information services".

Secondly, - to formulate in general terms a "comprehensive" (including a number of directions) struggle recipe, the suppression program of state and political corruption. Of course, these are mainly public financing of election campaigns (as in France and Canada), and strict regulation of the media in times of such campaigns (as in France). However, the main lines are the actual provision of scientific and technological progress (instead of empty talk about an innovative upgrade) and the activation of mechanisms of radically more equitable distribution of national income (from the experience of many European countries), designed to bring the entire population out of poverty and give greater awareness of their civic choice.

In the next chapter "The global context of public and political corruption: the multinationals are coming", touching on the question of the social forces that can implement a program of radical anti-corruption actions, the author points to the hidden process of reassignment of the global political system (and hence national political systems, including a number of states generally accepted democratic) to the global financial oligarchy. Yu. Boldyrev said that corruption as a global phenomenon consists of the almost total control of the international financial oligarchy key national media, culture, science and education of different countries, and then the national systems of formation of government bodies.

Returning to the general issues concerning the danger of the state and political corruption for democracy Yu. Boldyrev indicates the difference of the two variants, reflecting the difference between the situation in Russia in the early 1990s and the current situation. In the 1990s the elected authorities were initially free in their actions and at least ideally, dependent primarily on the will of the voters. It could be protected by a variety of measures (including, of course, the threat of severe sanctions) against corruption temptations. At the present time, there is the following vicious circle: elected powers (political parties, presidents and governments), firstly, a priori financially (and, hence, in other respects) are dependent on those who was not elected by no means, and secondly, make every effort to that the Russian government steadily increases its subordination to fundamentals external to the national electoral process.

At the end of the article the author gives a pessimistic forecast about the possibility of repression in Russia of state and political corruption. He believes that although there is no reason to assume that in current continuing trends of degradation of the economy and industry, science and education, our country will be modernized, but in general will remain as a sovereign entity, even in completely observable and foreseeable future. Russia does not have the time (and hence, there is no chance) to a slow, gradual, evolutionary overcome of public and political corruption. There is the only one way out, the revolutionary one...

Dementieva I.N.

junior scientific associate of ISEDT RAS

Index of articles published in 2011

Editor	L.N. Voronina
Make-up page	T.V. Popova, E.S. Nefedova
Proof-reader	N.V. Kozello
Translators	I.G. Kudryavtzeva, N.N. Paramokhina, O.V. Druzhininskaya, I.A. Rusinova, O.V. Tretyakova

Passed for printing 22.12.2011.
Format 60×84 1/8. Digital recording. Poster paper.
Con. pr. sheets 16.8. Number of 100 copies. Order № 509.

Certificate of registration of mass media PI FS77-37798 dated October 12, 2009 in the Federal Service for Supervision of Telecom and Mass Communications (Roskomnadzor)

Institute of Socio-Economic Development of Territories of RAS

Add.: 160014, Vologda, 56a Gorkogo Str., ISEDT RAS

Founder: Institute of Socio-Economic Development of Territories of RAS
The make-up page is edited and printed in ISEDT RAS