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**ECONOMIC  
AND SOCIAL  
CHANGES:  
FACTS, TRENDS, FORECAST**

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The formation of the scientific personnel with an active life position, a great demand for Institute's investigation, academic community's support of the new journal published by ISED T RAS, which combined efforts of the economic institutes of RAS in the Northwestern Federal District, and furthermore development of international ties have become the main outcomes of the last years.

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# FROM THE CHIEF EDITOR



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ILYIN**

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## Scientific analysis of global challenges for Russia

*(on the article “How not to lose in the war”  
by Academician S. Y. Glazyev)*

The opening article published in the previous issue of the Journal<sup>1</sup> dwelled upon the relevance for modern Russia of the ideas set forth by the outstanding domestic economist Academician Dmitrii S. L’vov in the work “Economic Manifesto – the future of the Russian economy”.

The work substantiates the notion that Russia must follow its own path. Dmitrii Semenovich proves that the modern capitalist world is plagued by contradictions more and more, it facilitates the emergence of social conflicts, regional clashes and local wars. He points out that Russia’s future development should focus on the spiritual heritage of Russians, their desire to solve the core issues together, collectively, to ensure social justice, strengthening the role of public administration in the economy and social life.

This article especially stresses that in recent years the ideas of D.S. L’vov have been increasingly developed in the Russian science by his students and followers. Academician Sergey Glazyev is one of them<sup>2</sup>.

<sup>1</sup> See: Ilyin V.A. Rossiya dolzhna prodvignat’sya po svoemu puti [Russia Must Go Its Own Way]. *Ekonomicheskie i sotsial’nye peremeny: fakty, tendentsii, prognoz* [Economic and Social Changes: Facts, Trends, Forecast], 2014, no.3, pp. 915.

<sup>2</sup> To date, S.Yu. Glazyev has published more than 130 works on economic, financial, and social issues. They include: *Teoriya dolgosrochnogo tekhnikoekonomicheskogo razvitiya* [The Theory of Long-Term Economic Development]. Moscow: VlaDar, 1993; *Blagosostoyanie i spravedlivost’. Kak pobedit’ bednost’ v bogatoi strane* [Welfare and Justice. How to Overcome Poverty in a Rich Country]. B.S.G.PRESS, 2003; *Vybor budushchego* [The Choice of the Future]. Moscow: Algoritm, 2005; *Sotsialisticheskii otvet liberal’noi globalizatsii* [A Socialist Reply to Liberal Globalization]. APN, 2006; *Modernizatsiya rossiiskoi ekonomiki na osnove novogo tekhnologicheskogo uklada kak klyuchevoe napravlenie antikrizisnoi politiki. Analiticheskii doklad po programme Rossiiskogo gumanitarnogo nauchnogo fonda (proekt № 090295650. dokl.). 2009* [Modernization of the Russian Economy on the Basis of a New Technological Paradigm as a Key Direction of the Anti-Crisis Policy. Analytical Report on the Program of the Russian Humanitarian Science Foundation (project No. 090295650. Rep.). 2009]; *Strategiya operezhayushchego razvitiya Rossii v usloviyakh global’nogo krizisa* [The Strategy for Advanced Development of Russia in the Conditions of the Global Crisis]. Moscow: Ekonomika, 2010; *Uroki ocherednoi rossiiskoi revolyutsii. Krakh liberal’noi utopii i shans na ekonomicheskoe chudo* [Lessons of One More Russian Revolution. The Collapse of the Liberal Utopia and the Chance for an Economic Miracle]. *Ekonomicheskaya gazeta* [Economic Newspaper], 2011; *Politika ekonomicheskogo rosta v usloviyakh global’nogo krizisa: doklad (2012)* [The Policy of Economic Growth in Conditions of the Global Crisis: Report (2012)], etc.

In 2013 a report of the Russian Academy of Sciences “Russia on its way to the modern, dynamic and efficient economy”<sup>3</sup> was prepared under the editorship of Academicians A.D. Nekipelov, V.V. Ivanter and S.Yu. Glazyev. The report was submitted to the President of the Russian Federation V.V. Putin in February 2014 and it was discussed at length at the meeting of the President with the expert group of economists of the Russian Academy of Sciences<sup>4</sup>.

S.Yu. Glazyev’s economic and political erudition, his constant involvement in the scientific analysis of the processes taking place in our country, given its position in an increasingly globalizing world, were clearly manifested in his recent article “How not to lose the war”<sup>5</sup>, which examines the Ukrainian crisis in the context of global economic changes that create objective prerequisites for escalation of political and military tension in international relations, forecasts its implications for modern Russia, sets out a vision of the structure and essence of measures aimed to overcome their negative impact on Russia’s future.

In our opinion, the article contains the science-based formulation of these issues. It not only provides an analysis of the current geopolitical position of Russia; it is also a major step in scientific research into the issue, many things that were not spoken of until recently are called by their proper names in the article. But

<sup>3</sup> *Rossiia na puti k sovremennoi dinamichnoi i effektivnoi ekonomike* [Russia on the Way to a Modern Dynamic and Efficient Economy]. Ed. by Academicians A.D. Nekipelov, V.V. Ivanter, S.Yu. Glazyev. Russian Academy of Sciences. Moscow, 2013. 93 p.

<sup>4</sup> Transcript of the Meeting of V.V. Putin and economists of the Russian Academy of Sciences on February 19, 2014. Available at: <http://www.kremlin.ru/transcripts/20291>

<sup>5</sup> Full text of the article (over 90 standard typewritten pages) is available online at: [http://www.glazyev.ru/sodr\\_ssn/368/](http://www.glazyev.ru/sodr_ssn/368/).

the value of this article does not end here. It is distinguished by extensive argumentation, by the use of classical and modern theoretical-and-methodological approaches to the problem, by the clear structure, by the application of tools of the modern scientific analysis of economic, social and political phenomena.

The article opens with an extensive section, which describes the fields of conflict in the Ukrainian crisis.

S.Yu. Glazyev believes that the first notional field of conflict here refers to the political structure of Ukraine. This field was initially formed on the background of long-standing demands of the population in Donbass and other areas in the South-East of Ukraine for federalization and recognition of the Russian language by the Ukrainian government.

The second notional field of conflict is the so-called European choice of Ukraine. It was supported by activists of Maidan and by European officials and politicians, who support the opposition.

These two conflicts cannot be resolved by violence. The war in Ukraine is not aimed at that. Glazyev proves that conceptually, it has Nazism as its core. The propaganda campaign adopted by Kiev junta fills public consciousness with misanthropic notions concerning their opponents by calling them, say, “subhumans”. They are denied the right to express their position, they are allowed to be burnt alive and killed. It is the Nazi semantic field that generates major tension in the conflict and explains the use of violence for its resolution.

The essence of the question, according to S.Yu. Glazyev, lies in the conflict field that has been present for many centuries. This is the field of aggression of the West against Russia.

It is the United States that is currently bearing the banner of this aggression. Americans

are truly convinced of their superiority over all other peoples of the world. The cult of American exceptionalism is the foundation that allows the U.S. authorities to punish other peoples up to physical destruction, in case of their unwillingness to submit. The very sense of submission is determined by economic interests of American capital, which provide for the full opening of the borders for American goods and capital, for the introduction of American standards of living, for the use of the U.S. dollar as a reserve currency and the means of international payments.

In full compliance with the Anglo-Saxon tradition “divide and rule”, American ideologists fill Ukrainian Nazis with a cult of hatred and superiority over the Russians, who were proclaimed guilty for all the troubles and offences of the Ukrainian people.

Support provided to Ukrainian nationalists by Europe is also stimulated by America’s interests in ensuring its global dominance, which is currently manifested virtually in all possible spheres – economic, financial, military, and ideological. S.Yu. Glazyev provides extensive analytical data that prove irrefutably that the U.S. is the only force that benefits from the escalation of the Ukrainian conflict.

An objective basis for expansion of the conflict into global political and military tensions consists in the problems associated with the replacement of the structures of existing technological mode and the formation of the structures of the new one.

By instigating a major war in Europe, the U.S. intends to survive the crisis that is covering the country due to fading efficiency of the dominant technological mode, and then to reach a new long wave of economic growth.

At the same time, according to Glazyev, as for the world economy in general, we can talk about one of the three scenarios for further development of the events in the medium term.

The optimistic scenario envisages the transfer of the crisis into a controlled mode, allowing the leading countries to channel the decline in obsolete sectors of the economy and in peripheral regions, and to allocate the remaining resources to the rise of innovation activity and rapid growth of the new technological order.

The catastrophic scenario implies the collapse of the existing U.S.-centered financial system, the formation of relatively self-sufficient regional monetary and financial systems and the destruction of the most part of international capital.

And finally, the inertial scenario envisages the increasing chaos and destruction of many institutions both in the core and on the periphery of the world economy, new centers of economic growth will emerge in the countries that will be the first to ride on a new long wave of economic growth. This scenario is the most interesting for American elites.

Having performed a comprehensive analysis of the nature and content of the strategy and tactics of American politicians, S.Yu. Glazyev proves that the Ukrainian crisis was initially organized by the USA against Russia.

The direct goal of the crisis was to separate Ukraine from Russia; this separation is formalized by the subordination of Ukraine to the European Union in the form of association, by which Ukraine gives its sovereign rights in the regulation of foreign economic activity, foreign and defense policy, and other issues including social, to Brussels. Essentially, this leads to European occupation of Ukraine, and Euro-fascism becomes a means of American aggression.

The current outrageous anti-Russian hysteria in Ukrainian media looks like a response to the Crimean drama only to a superficial observer. In fact, as S.Yu. Glazyev points out, there emerges a Ukrainian version of Euro-fascism as the main tool for instigating a world war against Russia.

Being an objective and responsible scientist, S.Yu. Glazyev focuses mainly on what should be done to prevent a war with Russia, and if the war breaks out, how to win it.

According to the Academician, in order to prevent the war, first of all is necessary to undermine the forces that incite it – economic, informational, political and ideological foundations of their influence. The article sets out ways, methods and tools that can contribute to the erosion of these foundations.

S.Yu. Glazyev points out that in order to find a successful solution to this issue, it is extremely important to form a global anti-war coalition that should offer clear principles of streamlining and harmonization of socio-cultural and economic relations in the world.

Their foundation is the sum of values shared by the main cultural-civilizational societies. These values include, in particular, the principles of non-discrimination (equality of people, without division into “us” and “them”), fairness and responsibility, social protection mechanisms, legal form of the rights and freedoms of citizens.

S.Yu. Glazyev distinguishes the main components of the anti-crisis program of the anti-war coalition. It should be based on the principles of mutual benefit and fair competition in global financial and economic relations, by eliminating the monopolization of the functions of international economic exchange in anyone’s private or national interests. The anti-war coalition should put forward

its peaceful alternative to the arms race in stimulating the development of a new technological mode.

At the same time S.Yu. Glazyev notes: “Even if we manage to prevent the internationalization of the Ukrainian conflict and curb the outbreak of war against Russia in Europe, the risk of its instigation will remain until the U.S. does not abandon its claims to global domination. The U.S. is pushed toward a world war by the above objective regularities of global economic and political dynamics. Understanding them allows us to forecast political and military activity for the next decade”.

According to the forecasts of long cycles of political activity described in the article, the peak of international military and political conflicts will fall on 2016–2018. According to the same forecasts, the most dangerous period for Russia will start in the early 2020s, when developed countries and China will begin their technological rearmament, and the United States and other Western countries will come out of the 2008–2018 depression and will make a new technological leap. To avoid Russia’s lagging behind in this dangerous time (according to Glazyev, it is the most negative scenario that leads to the collapse of the country), it is necessary to conduct a system internal and external policy aimed to strengthen national security and economic self-sufficiency, to enhance Russia’s international competitiveness and promote the priority development of national economy, mobilization of society and modernization of the military-industrial complex.

All this is crucially important for our country in the current situation: a coordinated large-scale attack has been launched against Russia by the U.S. and its allies. An economic

war has been actually waged under the guise of sanctions against us. The purpose of this war is complete destruction of modern Russia. It is critically important for the U.S., after it broke into the sphere of Russia's vital interests, to support and accelerate the implementation of the strategy of the elite, who seized power in Kiev<sup>6</sup>.

Glazyev proposes strategic and tactical measures that will allow us to win the war. These measures are as follows:

- access to the development of mineral resources and other strategic industries should be granted only to the companies fully owned by Russia;
- the end owners of strategic enterprises should register their property in Russia;
- companies located in the offshores should pay taxes in full;
- the channels of illegal and half-legal withdrawal of money abroad should be closed;
- taxes on financial speculation and on export of capital should be introduced;
- dollar assets should be converted into gold and the currency of friendly countries;
- export of hydrocarbons, metals and other products should be carried out only in rubles;
- state-owned companies should stop taking foreign loans.

<sup>6</sup> In this regard, we cannot but agree with the conclusion of S.M. Mironov, the head of the faction of the party "Just Russia" in the State Duma. He says that Kiev regime is preparing for a big war. Under the patronage of the United States of America and under the supervision of American instructors it can embark on any power gamble. See: Speech of S.M. Mironov at the Meeting of V.V. Putin with members of political parties represented in the State Duma. Transcript of the Meeting. Available at: <http://news.kremlin.ru/transcripts/46451>.

Many other well-known experts, specialists and analysts speak about the reality of military claims. For instance, V. Shurygin concludes: "It is high time to realize that we are at war. But not with Ukraine, which in its current condition would not survive even for six months, but with the strongest world power – the U.S., which is behind it" (Shurygin V. Boinya № 4 [Massacre No. 4]. *Zavtra* [Tomorrow], 2014, no.32 (1081), August, p. 2).

As the author notes, the implementation of these and other measures of advanced development and modernization of Russia's economy requires great coherence and certain solidarity of the main social groups of Russian citizens. This implies drastic reduction of social inequality that generates antagonistic and alienated attitude of the citizens toward the policy of the state.

According to S.Yu. Glazyev, these goals can be achieved if the following measures are implemented:

- increase of the subsistence level up to the real value of the basic food basket, and the revision of its content taking into account the actual consumption patterns of the people, their needs in health and education;
  - increase of the minimum wage up to the poverty line;
  - creation of new jobs, promotion of small and medium business;
  - introduction of the progressive scale of taxation of income, inheritance and luxury goods;
  - creation of the necessary conditions for enhancement of human capital and improvement of moral climate in the society through the revival of traditional spiritual values.
- At that it is the system of public administration that requires moral rehabilitation in the first place.

This list is not new; it summarizes the vision of the main directions of the strategy of actions for the Russian authorities; these directions are advocated by representatives of Russian science and the public, as they consider it extremely dangerous to move toward further liberalization of economic and social life in Russia. In this regard we note that the solutions to the problems identified by S.Yu. Glazyev were constantly in the focus of attention of Russia's

scientific community<sup>7</sup>. The majority of issues of our Journal are devoted to them<sup>8</sup>.

Over a month has passed since the publication of S.Yu. Glazyev's article. Its full or concise text is posted on numerous Russian and foreign websites. The scientist's opinion is actively supported by sensible people. But actual measures that are being implemented in the present-day life of our country, in the policy and practice of its leadership – this is what is crucially important.

The expert community, and the parliamentary parties note that V.V. Putin, as the top government official, pursues a policy of realism more actively, and it gains support of most of Russia's population – 85.3%, according to WCIOM<sup>9</sup>, which exceeds the level of 2007 (80.8%).

V.V. Putin outlined the policy of realism at the Munich Conference on Security Policy in February 2007, when he expressed his view on the essence of American and European policy

<sup>7</sup> Aganbegyan A.G. Sotsial'noekonomicheskoe razvitiye Rossii: analiz i prognoz [Socio-Economic Development of Russia: Analysis and Forecast]. *Problemy prognozirovaniya* [Problems of Forecasting], 2014, no.4; Amosov A. Ob ekonomicheskom mekhanizme novogo industrial'nogo razvitiya [About the Economic Mechanism of the New Industrial Development]. *Ekonomist* [The Economist], 2014, no.2; Bobkov V. O sotsial'nom izmerenii novogo etapa razvitiya [About the Social Dimension of the New Stage of Development]. *Ekonomist* [The Economist], 2013, no.5; Gurvich E., Prilepskii I. Kak obespechit' vneshnyuyu ustoychivost' rossiiskoi ekonomiki [How to Secure External Sustainability of the Russian Economy]. *Voprosy ekonomiki* [Economic Issues], 2013, no.9; Delyagin M. Krakh optimisticheskikh illyuzii i otpravnoi punkt rossiiskogo vyzdorovleniya [Destruction of Optimistic Illusions and Starting Point for Economic Recovery]. *Rossiiskii ekonomicheskii zhurnal* [Russian Economic Journal], 2014, no.1; Ivanter V.V., Uzyakov M.N., Ksenofontov M.Yu., Shirov A.A. et al. Novaya ekonomicheskaya politika – politika ekonomicheskogo rosta [New Economic Policy – the Policy of Economic Growth]. *Problemy prognozirovaniya* [Problems of Forecasting], 2013, no.6; Idrisov G., Sinel'nikovMurylev S. Byudzhnaya politika i ekonomicheskii rost [Budget Policy and Economic Growth]. *Voprosy ekonomiki* [Economic Issues], 2013, no.8; Kvint V.A., Okrepilov V.V. Kachestvo zhizni i tsennosti v natsional'nykh strategiyakh razvitiya [Quality of Life and Values in National Development Strategies]. *Vestnik RAN* [Herald of the Russian Academy of Sciences], 2014, vol. 84, no.5; Kleiner G. Kakaya ekonomika nuzhna Rossii i dlya chego (opyt sistemnogo issledovaniya) [What Kind of Economy Does Russia Need and for What Purpose? (An Attempt of System Analysis)]. *Voprosy ekonomiki* [Economic Issues], 2013, no.10; Knyazev Yu. Perspektivy rossiiskoi ekonomiki: shans na uskorenie [Prospects of Russia's Economy: a Chance of Acceleration]. *Obshchestvo i ekonomika* [Society and Economics], 2014, no. 23; Komkov N.I. Kompleksnoe prognozirovanie nauchnotekhnicheskogo razvitiya: opyt i uroki [Complex Forecasting of Scientific-and-technological Development: Experience and Lessons]. *Problemy prognozirovaniya* [Problems of Forecasting], 2014, no.3.

<sup>8</sup> These problems, in particular, were the subject of the following publications in the Journal's issues of 2012–2013 and the first half of the current year: Gubanov S.S. Neointustrial'naya model' razvitiya i ee sistemnyi algoritm [Neo-Industrial Development Model and Its System Algorithm], 2014, no.3; Lokosov V.V. Perekhod ot ekstensivnoi k intensivnoi demograficheskoi politike [The Transition from Extensive to Intensive Demographic Policy], 2014, no.3; Shabunova A.A., Lastochkina M.A. Preodolenie sotsial'nogo neravenstva kak impul's k sotsiokul'turnoi modernizatsii [Overcoming Social Inequality as an Impetus to Socio-Cultural Modernization], 2014, no.3; Gusakov M.A. Vyyavlenie napravlenii i putei transformatsii nauchno-innovatsionnogo prostranstva regionov raznogo tipa [Identification of Directions and Ways to Transform the Scientific and Innovation Space in Different Regions], 2014, no.3; Ilyin V.A., Shabunova A.A. Sotsiologicheskoe izmerenie effektivnosti gosudarstvennogo upravleniya [Sociological Assessment of Public Administration Efficiency], 2014, no.2; Popova L.A. Otsenka effektivnosti gosudarstvennykh demograficheskikh initsiativ [Evaluation of Efficiency of the Public Demographic Initiatives], 2014, no.1; Lapin N.I. O strategii integrirrovannoi modernizatsii [On the Strategy of Integrated Modernization], 2014, no.1; Ilyin V.A. Novaya povestka dnya i effektivnost' gosudarstvennogo upravleniya [New Agenda and State Management Efficiency], 2013, no.5; Povarova A.I. Regional'nyi byudzhel 2013–2015: stabil'nost' ili vyzhivanie? [Regional Budget for 2013 – 2015: Stability or Survival?], 2013, no.1; Uskova T.V. O roli investitsii v obespechenii ustoychivogo ekonomicheskogo rosta [On the Role of Investments in Sustainable Economic Growth], 2013, no.6; Terebova S.V. Malyi biznes kak faktor povysheniya urovnya zanyatosti i dokhodov naseleniya regiona [Small Business as the Factor Increasing the Employment Rate and Incomes of the Population], 2013, no.5; Povarova A.I. Neeffektivnoe administrirovanie NDS kak ugroza ekonomicheskoi bezopasnosti Rossii [Inefficient VAT Administration as a Threat to Russia's Economic Security], 2013, no.2; Selin V.S., Selin I.V. Otsenka vozmozhnostei i faktorov innovatsionnogo razvitiya regional'noi ekonomiki [Assessment of Opportunities and Factors Promoting Innovation Development of the Regional Economy], 2013, no.4; Ilyin V.A. Na trudnom puti k sil'nomu grazhdanskomu obshchestvu [On the Difficult Way to Strong Civil Society], 2012, no.6; etc.

<sup>9</sup> Database of the Russian Public Opinion Research Center. Available at: <http://www.wciom.ru>

in relation to Russia. It was then that he pointed out that a unipolar model is not only unacceptable, but completely impossible in the modern world. He sharply criticized the use of double standards in the international policy of the United States and its allies.

The President's policy of realism manifested itself in the new economic policy of our country set out by V.V. Putin in his pre-election articles as a presidential candidate and in the Decrees of May 2012, signed on the day of his presidential inauguration. The solution of these problems is essential to Russia's national security in the coming decade.

The manifestation of realism can be found in the country's acute problems and their deep internal reasons that were highlighted by the President in his speech at the Valdai forum in September 2013. The provision of strategic security and competitiveness of Russia in the 21st century "is impossible without spiritual, cultural and national self-determination. Without this we will not be able to withstand internal and external challenges, nor we will succeed in global competitions". This requires that Russia "has to have military, technological and economic strength, but nevertheless the main thing that will determine success is the quality of citizens, the quality of society: their intellectual, spiritual and moral strength"<sup>10</sup>.

After the coup in Ukraine, the President of the Russian Federation once again exercised the policy of real actions. It took just six days to carry out all the necessary legal procedures in accordance with the Constitution of the Russian Federation for admission of two new entities, the Republic of Crimea and the city of Sevastopol, to the Russian Federation.

On March 21, 2014 the relevant law was signed by the RF President. Thus V.V. Putin has shown the Russian Federation in its new capacity – as a country that not only wants, but is able to defend its national interests.

On August 14, 2014 V.V. Putin had a meeting in Yalta with members of political parties represented in the Russian Federation State Duma; the President again highlighted that special attention should be focused on the priorities of solving current problems of Russia's internal development: **"Regardless of the external political and economic situation, the most important thing for us right now, as always, are our internal affairs, our goals, concerns and objectives that are set before us by the people of Russia, the citizens of Russia. We must focus on resolving our national problems and challenges. Our future is only in our hands. We must ensure high-quality governance and work by political and civil institutions. And most importantly, we must provide high living standards for Russian citizens"**<sup>11</sup>.

It seems that the scientific analysis of international, political and economic situation in the country and in the world, which has been made by Academician S.Yu. Glazyev in his article "How not to lose in the war", as well as the analysis of possible development scenarios and their impact on the economic and political situation in Russia provides a good basis for further development of a clear program of actions for Russia's President and for the country's political leadership; a program that will help neutralize explicit and implicit threats, both external and internal, to the national security of Russia.

<sup>10</sup> Putin V.V. Speech at the Meeting of the Valdai International Discussion Club on September 19, 2013. Available at: <http://www.cremlin.ru/news/19243>

<sup>11</sup> The quoted text is available at the official website of the President of Russia <http://www.kremlin.ru/news/46451>

## Public opinion monitoring of the state of the Russian society

As in the previous issues, we publish the results of the public opinion monitoring of the state of the Russian society conducted by ISEDТ RAS in the Vologda Oblast<sup>1</sup>.

The following tables show the dynamics of a number of parameters indicating the social feeling and socio-political sentiment of the Vologda Oblast population in June – August 2014 and also on the average for the last six polls. These data are compared with the data for 2013, 2011 (when D.A. Medvedev's presidential term was due to expire), and 2007 (when V.V. Putin's second presidency was coming to an end). We do not provide comparisons with 2012, since it was an incomplete year of V.V. Putin's presidency (his inauguration took place on May 7, 2012).

### Estimation of performance of the authorities

Despite the fact that international political situation is rather tense (crisis in Ukraine, bilateral sanctions of Russia, and the EU and USA), the assessment of the federal and regional authorities in June – August 2014 did not change. The support of the RF President remains high (66%) as well as that of the Chairman of the RF Government (55%). The nationwide proportion of positive assessments of the President's activity for the last two months has not changed and amounted to 85% (according to WCIOM).

We recall that the growth in the support of the RF President has been very rapid since the beginning of the year. During the first half of 2014 the approval of V. Putin's activity as head of state has increased by 22 percentage points in Russia as a whole (from 64 to 86%) and by 11 percentage points in the Vologda Oblast (from 56 to 67%). The nationwide support of the President in 2007 was higher than that in the region by 6 p.p. (81 and 75%, respectively), and in August 2014 – by 19 p.p. (85% and 66%, respectively). This is largely due to regional specifics: drastic consequences of the 2008 global financial crisis for the Vologda Oblast, and the change of the leadership in the RF subject at the end of 2011.

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<sup>1</sup> The polls are held six times a year in Vologda, Cherepovets, and in eight districts of the oblast (Babayevsky District, Velikoustyugsky District, Vozhegodsky District, Gryazovetsky District, Kirillovsky District, Nikolsky District, Tarnogsky District and Sheksninsky District). The method of the survey is a questionnaire poll by place of residence of respondents. The volume of a sample population is 1500 people aged from 18 and older.

The sample is purposeful and quoted. Representativeness of the sample is ensured by the observance of the proportions between the urban and rural population, the proportions between the inhabitants of settlements of various types (rural communities, small and medium-sized cities), age and sex structure of the oblast's adult population. Sampling error does not exceed 3%.

More details on the results of ISEDТ RAS polls are available at <http://www.vssc.ac.ru/>.

The performance of the Vologda Oblast Governor is approved at a somewhat lower level (39%). It should be noted that the support of the Vologda Oblast Governor stabilized after a long decline in October 2013 – June 2014 (the percentage of positive assessments during this time has decreased from 46 to 39%). Apparently, the fact that the support of the region's head in August 2014 remains at the level of June is connected with the upcoming elections of heads of the Subjects of Federation (September 14, 2014 will be the single day of voting), and also with O. Kuvshinnikov's statements about the readiness of the region's economy to function effectively under the sanctions.

How do you assess the current performance of..?  
(as a percentage of the number of respondents)

Indicator	2007*	2011*	2013*	Oct. 2013	Dec. 2013	Feb. 2014	Apr. 2014	June 2014	Aug. 2014	Average for the last 6 surveys	Dynamics (+/-), the last 6 surveys in comparison with		
											2013	2011	2007
<b>RF President</b>													
I approve	75.3	58.7	55.3	54.3	57.3	56.1	62.8	66.6	66.4	60.6	+5	+2	-15
I do not approve	11.5	25.6	29.4	28.7	28.9	29.3	25.4	21.8	19.3	25.6	-4	0	+14
<b>Chairman of the RF Government*</b>													
I approve	-	59.3	48.9	49.0	51.1	49.3	52.5	55.8	55.2	52.2	+3	-7	-
I do not approve	-	24.7	32.8	30.6	32.5	32.9	30.9	26.4	26.8	30.0	-3	+5	-
<b>Governor</b>													
I approve	55.8	45.7	44.4	45.9	44.1	42.8	41.6	38.5	38.8	42.0	-2	-4	-14
I do not approve	22.2	30.5	33.2	32.4	35.3	36.9	39.0	40.9	40.1	37.4	+4	+7	+15
* included into the survey since 2008													

For the last two months there has been a decline in the share of the oblast residents, who think that the President's performance is successful in strengthening Russia's international standing (from 54 to 51%), in imposing order in the country (from 50 to 48%), in the protection of democracy and strengthening freedoms of citizens (from 40 to 38%). The level of approval of the President's work in the direction of economic recovery and enhancement of citizens' welfare did not change significantly in June – August 2014 (35–36%). No positive changes in the assessment of the RF President's performance in coping with key problems of the country are observed for the first time since the beginning of the year. However, it should be noted that, in spite of the tense political situation in the country and abroad, there is no significant deterioration in the public opinion.

In your opinion, how successful is the RF President in coping with challenging issues?\*

(as a percentage of the number of respondents)

Indicator	2007	2011	2013	Oct. 2013	Dec. 2013	Feb. 2014	Apr. 2014	June 2014	Aug. 2014	Average for the last 6 surveys	Dynamics (+/-), the last 6 surveys in comparison with		
											2013	2011	2007
<b>Strengthening Russia's international standing</b>													
Successful	58.4	46.2	45.7	47.7	47.5	45.9	48.6	53.7	50.9	49.1	+3	+3	-9
Unsuccessful	24.9	33.7	36.2	33.7	35.8	35.7	35.5	31.7	30.0	33.7	-3	0	+9
<i>Index of success</i>	<i>133.5</i>	<i>112.5</i>	<i>109.5</i>	<i>114.0</i>	<i>111.7</i>	<i>110.2</i>	<i>113.1</i>	<i>122.0</i>	<i>120.9</i>	<i>115.3</i>	<i>+6</i>	<i>+3</i>	<i>-18</i>
<b>Imposing order in the country</b>													
Successful	53.2	36.6	39.4	41.7	44.5	42.7	46.7	49.5	47.5	45.4	+6	+9	-8
Unsuccessful	34.0	50.0	47.5	46.7	45.5	43.7	40.9	39.5	37.8	42.4	-5	-8	+8
<i>Index of success</i>	<i>119.2</i>	<i>86.6</i>	<i>91.9</i>	<i>95.0</i>	<i>99.0</i>	<i>99.0</i>	<i>105.8</i>	<i>110.0</i>	<i>109.7</i>	<i>103.1</i>	<i>+11</i>	<i>+17</i>	<i>-16</i>
<b>Protecting democracy and strengthening the citizens' freedoms</b>													
Successful	44.4	32.4	31.8	33.5	32.8	32.3	36.3	40.1	37.6	35.4	+4	+3	-9
Unsuccessful	37.0	48.3	51.0	50.9	51.6	50.1	48.7	43.9	43.7	48.2	-3	0	+11
<i>Index of success</i>	<i>107.4</i>	<i>84.1</i>	<i>80.8</i>	<i>82.6</i>	<i>81.2</i>	<i>82.2</i>	<i>87.6</i>	<i>96.2</i>	<i>93.9</i>	<i>87.3</i>	<i>+7</i>	<i>+3</i>	<i>-20</i>
<b>Economic recovery and increase in the citizens' welfare</b>													
Successful	47.2	30.7	31.3	31.9	32.6	31.5	34.9	35.8	35.1	33.6	+2	+3	-14
Unsuccessful	39.1	56.1	56.8	57.7	59.7	57.1	54.3	53.5	50.2	55.4	-1	-1	+16
<i>Index of success</i>	<i>108.1</i>	<i>74.6</i>	<i>74.5</i>	<i>74.2</i>	<i>72.9</i>	<i>74.4</i>	<i>80.6</i>	<i>82.3</i>	<i>84.9</i>	<i>78.2</i>	<i>+4</i>	<i>+4</i>	<i>-30</i>

\* Ranked according to the average value of the index of success for the last 6 surveys.

As for the people's opinion concerning political parties, the party "United Russia" remains the leader. In June – August the level of its support did not change significantly (33–34%). The ratings of other parties are also stable: KPRF – 9%, LDPR – 7%, Just Russia – 4%. For the last two months there have been virtually no changes in the share of the oblast residents, who find it difficult to choose a political power that expresses their interests (11–12%).

In the course of 2014 there has been a steady increase in the people's support of United Russia (from February to June – from 28 to 34%). The positions of the rest of the parties from the beginning of the year do not change.

## Which party expresses your interests? (as a percentage of the number of respondents)

Party	2007	Election to the RF State Duma 2007, fact	2011	Election to the RF State Duma 2011, fact	2013	Oct. 2013	Dec. 2013	Feb. 2014	Apr. 2014	June 2014	Aug. 2014	Average for the last 6 surveys	Dynamics (+/-), the last 6 surveys in comparison with		
													2013	2011	2007
United Russia	30.2	60.5	31.1	33.4	29.4	26.9	29.5	28.3	29.5	32.7	34.3	30.2	+1	-1	0
KPRF	7.0	9.3	10.3	16.8	11.3	11.9	11.8	10.9	10.7	9.8	9.1	10.7	-1	0	+4
LDPR	7.5	11.0	7.8	15.4	7.2	8.4	8.1	8.9	8.3	6.2	6.9	7.8	+1	0	0
Just Russia	7.8	8.8	5.6	27.2	4.6	4.0	4.4	3.5	3.3	3.3	3.7	3.7	-1	-2	-4
Other	1.8	–	1.9	–	0.6	1.0	0.8	0.4	0.2	0.1	0.1	0.4	0	-2	-1
No party	17.8	–	29.4	–	34.9	37.3	34.4	35.2	34.8	36.0	35.0	35.5	+1	+6	+18
It is difficult to answer	21.2	–	13.2	–	10.2	10.5	10.9	12.7	13.1	11.8	10.9	11.7	+2	-2	-10

The indicators of social condition have remained stable since April 2014: the share of positive assessments of social mood is 71%, the share of positive assessments of the stock of patience in 81–83%.

Since December 2013 the social self-identification of the population has not changed significantly: the proportion of the oblast residents who consider themselves “people of average income” is 42–44%, the share of those who consider themselves to be “poor and extremely poor” is 47–50%.

At the same time, despite stable assessments of the social condition of the population, August 2014, compared with June, witnessed a noticeable decrease in the index of consumer sentiment (from 91 to 87 p.), which indicates the decrease in consumer activity in the region. More likely, it is due to the tense economic situation in the region associated with the debt burden of the regional budget, as well as the uncertainty of the population about the consequences of Russia’s sanctions (mainly, the ban on the delivery of a number of key food products (beef, pork, vegetables, fruits, poultry, fish, seafood, cheese, milk and dairy products) from Australia, Canada, Norway, the USA and EU countries) for the consumer market.

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

Indicator	2007	2011	2013	Oct. 2013	Dec. 2013	Feb. 2014	Apr. 2014	June 2014	Aug. 2014	Average for the last 6 surveys	Dynamics (+/-), the last 6 surveys in comparison with		
											2013	2011	2007
<b>Mood</b>													
Usual condition, good mood	63.6	63.1	68.6	71.5	69.6	65.1	69.3	71.1	70.5	69.5	+1	+6	+6
Feeling stress, anger, fear, depression	27.8	28.9	26.2	24.0	26.2	27.1	24.9	23.7	25.1	25.2	-1	-4	-3
<b>Stock of patience</b>													
Everything is not so bad; it's difficult to live, but it's possible to stand it	74.1	74.8	79.3	81.6	83.1	79.8	81.3	81.0	82.5	81.6	+2	+7	+8
It's impossible to bear such plight	13.6	15.3	14.2	12.3	12.0	12.3	11.1	13.4	12.8	12.3	-2	-3	-1
<b>Social self-identification</b>													
The share of people who consider themselves to have average income	48.2	43.1	43.9	45.7	43.7	44.2	43.1	42.0	44.1	43.8	0	+1	-4
The share of people who consider themselves to be poor and extremely poor	42.4	44.3	46.9	45.4	46.7	46.9	49.1	48.4	49.6	47.7	+1	+3	+5
<b>Consumer sentiment index</b>													
Index value, points	105.9	89.6	90.3	90.4	87.9	91.5	90.3	90.5	87.1	89.6	-1	0	-16

## Assessment of the events in Ukraine

Most of the Vologda Oblast residents approve of the policy of Russia toward Ukraine. Their share has slightly increased in June – August 2014 (from 65 to 67%). 10% of the region's population has the opposite opinion.

For the last two months, the support of Russia's policy in relation to the events in Ukraine has increased in the majority of the socio-demographic groups, especially among women (from 64 to 69%), people aged under 30 (from 61 to 67%), persons with secondary vocational education (from 60 to 69%), also among 20% of the poorest (from 43 to 48%), and the residents of Cherepovets (from 73 to 77%).

Do you support Russia's policy concerning the events in Ukraine?  
(as a percentage of the number of respondents)

Categories of population	I support		I do not support	
	June 2014	August 2014	June 2014	August 2014
<b>Sex</b>				
Men	66.4	64.0	11.0	13.0
Women	63.8	68.5	9.2	8.2
<b>Age</b>				
Under 30	61.0	67.0	6.9	8.5
30–55	65.2	66.3	10.6	11.2
Over 5	67.5	66.4	11.3	10.3
<b>Education</b>				
Secondary and incomplete secondary	61.5	58.5	9.2	12.7
Secondary vocational	59.6	68.9	12.1	10.6
Higher and incomplete higher	74.0	72.7	8.9	7.5
<b>Income groups</b>				
20% of the poorest people	42.5	47.8	18.7	16.4
60% of the people with middle-sized income	68.1	69.3	8.9	10.3
220% of the most prosperous people	83.9	80.2	5.1	5.6
<b>Territories</b>				
Vologda	72.6	71.9	5.5	9.0
Cherepovets	72.9	77.0	8.5	7.1
Districts	56.5	57.6	13.2	12.8
<b>Oblast</b>	<b>65.0</b>	<b>66.5</b>	<b>10.0</b>	<b>10.3</b>

Over the past two months, the proportion of people, who learn about the Ukrainian events from TV programs, has increased from 80 to 87% in the Vologda Oblast and from 91 to 94% nationwide. 29% of the region's residents get the information about the development of the Ukrainian conflict from friends, relatives and neighbors. This is higher than in June (24%), and, in general, corresponds to the national average level (27%).

The region's residents get the information about the events in Ukraine from online newspapers and social networks on the Internet significantly more often than the residents nationwide (22% – in the Vologda Oblast, 11% – in Russia).

The proportion of the oblast residents, who are not interested in the development of the situation in Ukraine, decreased noticeably for the period from June to August 2014 (from 14 to 8%), but it remains higher than the national average value (1%).

What are your main sources of information concerning the events in Ukraine and the Crimea?\*(several answer options; as a percentage of the number of respondents)

Answer option	ISEDT RAS		Levada Center	
	June 2014	August 2014	June 2014	August 2014
TV	79.5	87.0	91	94
Friends, relatives, neighbors	24.0	28.5	26	27
Newspapers	27.9	21.8	9	11
Web-based social networking services	24.1	21.5	10	11
Internet media (newspapers, magazines, information portals)	13.6	14.7	17	18
Radio	14.9	11.9	11	15
Periodicals	4.5	2.6	2	2
Other	0.1	0.3	1	1
I am not interested in it	<b>13.9</b>	<b>7.5</b>	<b>1</b>	<b>1</b>

\* In order of prevalence in the Vologda Oblast according to the data as of August 2014.

In comparison with June, in August the proportion of the oblast residents, who believe that the federal media are objective in their coverage of the events in Ukraine, increased (from 56 to 58%). In Russia as a whole, the share of those, who think the same, decreased slightly (from 79 to 74%).

More than half of the oblast residents believe that the foreign media provide biased information about the development of the Ukrainian conflict. The proportion of those, who support this opinion, increased in June – August 2014 from 52 to 60%. This viewpoint is shared by 64% of the population nationwide (as of June 2014).

In your opinion, how impartial are the following mass media when covering the events in Ukraine and the Crimea? (as a percentage of the number of respondents)

Answer option	ISEDT RAS		Levada Center	
	June 2014	August 2014	June 2014	August 2014
<b>Federal Russian mass media</b>				
On the whole and mostly impartial	<b>56.2</b>	<b>57.6</b>	<b>79</b>	<b>74</b>
Not very impartial, completely biased	<b>26.8</b>	<b>25.4</b>	<b>14</b>	<b>17</b>
<i>Index, points</i>	<i>129.4</i>	<i>132.2</i>	<i>165</i>	<i>157</i>
It is difficult to answer	17.0	17.0	7	10
<b>Foreign mass media*</b>				
On the whole and mostly impartial	<b>22.4</b>	<b>18.1</b>	<b>18</b>	n.a.
Not very impartial, completely biased	<b>52.3</b>	<b>59.7</b>	<b>64</b>	n.a.
<i>Index, points</i>	<i>70.1</i>	<i>58.4</i>	<i>54</i>	<i>n.a.</i>
It is difficult to answer	25.3	22.2	18	n.a.

\* In July 2014 Levada Center did not ask the question concerning the impartiality of the foreign media in covering the events in Ukraine.

## Conclusion

The results of the surveys conducted in August 2014 show that the level of approval of the performance of Russian President (66%) and the federal authorities remains high, despite the tense situation on the international political arena. The role of economic factors in shaping public opinion is still crucial even under the conditions of bilateral sanctions (for example, according to WCIOM, 95% of Russians do not feel the impact of sanctions, although only 13% of the population have not heard about them).

The approval of Russia's policy in relation to the events in Ukraine continues to grow on the regional level (65–67%), as well as the support of the federal mass media in covering issues related to the development of the “Ukrainian conflict” (56–58%). Assessment of the Governor's performance for the last two months has not changed (the approval level is 39%), which, apparently, is connected with the upcoming election of heads of regions on September 14.

In August 2014, compared with June, consumer activism somewhat declined (the index decreased from 91 to 87 p.), however this has not affected the positive assessments of social mood (71%) and stock of patience (83%), which, as before, prevail over negative judgments (25 and 13%, respectively).

# THEORETICAL ISSUES

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## Political blackmail – the eve of the global catastrophe



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**Abstract.** The article by the leading Russian sociologist and political scientist, who has been studying Russia-U.S. relations for decades, raises an acute issue concerning the necessity of immediate cessation of confrontation between the U.S. and Russia and transition to joint control over the processes going on in the world, and establishment of the multipolar model of the global community.

The author provides numerous examples of interaction between the superpowers and the newly emerged countries, former Soviet republics; he shows that particular threat comes from the quasi-states of the former USSR, who seek to fuel the U.S.-Russian confrontation for their own selfish purposes. This policy was manifested especially clearly in the actions of the “Maidan” authorities in Ukraine, who launched the armed terror against its own people in the East of the country to accommodate the U.S. interests and the NATO alliance controlled by this country. The author believes that the response of Russia to such hostile actions of the USA and their Ukrainian proteges should be adequate; it should be composed and peacekeeping, but when the “red” line is crossed – hard and adamant.

The author believes that, in connection with the existing situation, the issue of myth-making is coming to the fore. One should be more resolute in reviewing the myths that have nothing to do with the truth, in particular, those concerning the “unbreakable Slavic unity”. The historical memory of inter-ethnic relations between the Russians and their neighbors should be restored in full, without ignoring the facts that are “inconvenient” for the mythology. It is time for Russia to abandon (at least temporarily) its missionary work and selflessness in its relations with Eastern European neighbors, and start building these relations solely on the basis of mutual benefit and respect of mutual obligations.

**Key words:** globalization, confrontation, intergovernmental relations, threat to the world, catastrophe, mythology, blackmail, superpowers, self-sufficiency, sanctions, aggression, partnership development, convergence, messianism, well-being, tradition, culture, paradigm.

In the late 20th – early 21st century human civilization has undergone certain qualitative changes inconsistent with the *old system of governance*. Current public administration that is based on a trial-and-error method both on the national and global scale is fraught with unpredictable social, economic, political and geopolitical consequences. These effects, according to scientists, can be *irreversible* for modern civilization. Under the circumstances, any experiments on countries and peoples must be excluded entirely.

Who poses a threat to peace and international security?

According to a poll conducted in November – December 2013 by the WIN/Gallup International, 54% of Russians consider the United States a dangerous country; 24% of the people of the world think the same. Those countries that are marked by world ideologists as “hotbeds of evil and threats” are much less dangerous in the opinion of the world community. Only 8% of respondents believe that the threat to peace is coming from Pakistan, and 6% think that danger nests in China. 5% consider Iran, Israel, Afghanistan and North Korea potentially dangerous countries. According to global estimates, only 2% of respondents think that Russia is a threat.

15% of citizens in Western Europe, 25% in Asia, and 33% in the Middle East regard the U.S as the dangerous country. The largest number of people, who consider the U.S. to

be dangerous, is in Pakistan (44%), Serbia (45%), Turkey (45%), Argentina (46%), Bosnia (49%) and China (49%).

Commenting on the survey, **Andrei Milekhin**, President of the research holding Romir, Coordinating Director of the WIN/Gallup International in Russia, the CIS and Eastern Europe, believes that its results reflect the real situation in the world in recent years.

“Granted, the West maintains (so far!) its economic and military advantage. However, the process of regionalization of the world is gaining momentum. “The unified center for global control” has proved ineffective and threatening to humanity. It will inevitably give way to multipolarity” [IA REGNUM. 12.08.14].

Of course, it will surrender peacefully, without confrontation. Any serious conflict between the two world superpowers can instigate a world war III.

The blackmail on the part of third countries is no less dangerous to the world and it is a serious problem in the relationship between the United States and the Russian Federation. This blackmail can be described, without exaggeration, as a path to *global catastrophe*.

The essence of the problem is as follows. The greatest geopolitical catastrophe, planned by Western intelligence agencies led to the collapse of the USSR. The United States of America claimed leadership in the unipolar world, and the U.S. Government disregards the two aspects of contemporary international reality.

The first is huge stockpiles of weapons of mass destruction, sufficient to destroy all life on the planet. The second is the growing claims of old and new emerging countries concerning the high level of the quality of life, corresponding to or, at least, approaching the socio-economic realities of the so-called developing countries.

But do the new countries have any objective basis for such claims? Experience shows that out of more than 190 nation-states that are current UN members and that form the modern civilization only few can be defined as truly self-sufficient.

The leading countries, to which we include Russia and the United States, have become such not only due to the presence of vital resources like hydrocarbons, natural gas, metal ores, coking coal, mineral fertilizers, etc. on their territories, but also due to a high level of technological and economic development.

Countries that are not self-sufficient economically and, therefore, politically, can not survive on their own. They have to look to the leaders of development in one way or another. This situation gives rise to new complicated problems for the leading countries themselves.

Confrontation between the great powers, which is largely negative in its essence, is provoked by those very countries that have not established themselves in the market of global division of labor and trade, and that can offer only political services to one superpower in its confrontation with another superpower.

This can be said not only about the former Soviet republics, but also a number of other

countries in Europe, Africa, Latin America and Asia.

While the USSR existed, its republics, except for Belarus and Azerbaijan, were subsidized largely at the expense of Russia; and now it is very hard for them to break off this habit, despite the fact that they have become independent nation-states. Therefore, Russia is experiencing continued pressure from the CIS nations and the former Warsaw Pact allies. They threaten Russia with plans to deploy NATO bases on their territory, and even with outright aggression, as it was during an armed invasion of South Ossetia by Georgia, when Russian peacekeepers, whose immunity was confirmed by the mandate of the UN Security Council, were killed together with Ossetians.

The U.S. is also blackmailed by unceasing demagogic appeals to defend “young democracies” from the “hand of Moscow”, by demands to supply modern arms and “humanitarian aid”. There emerged a new, outrageous in its shameless cynicism, pattern of building relationships between “independent” countries and superpowers – Russia and the United States, when these “independent” countries beg their overseas patron for political and even military protection and at the same time, demand that Russia give them economic privileges in exchange for dubious promises that they will slow down their movement in the Western direction, postpone their accession to NATO, back Russia in minor international issues, etc.

International security problems created over and over again by Eastern European and other “independent” countries for the whole

world community are quite comparable with the effects of growing religious extremism, primarily Islamic fundamentalism.

Blackmailing the U.S. and Russia could lead to a military conflict between the superpowers and, consequently, to a geopolitical catastrophe. In the case of U.S.-Russian military conflict there would be no winners, because the military actions between the superpowers will destroy all life on Earth including simple organisms. **Political blackmail is the eve of a global catastrophe. Political blackmail must be outlawed.**

It is time for the U.S. and Russia to reconsider their relationships and the principles, the methods of control, which they were guided by in their domestic and international policies, and to build new methods that would be clear and complying with mutual interests and modern outlook.

First of all, it is necessary to abandon the practice when one's allies are encouraged and even forced to confront the geopolitical rival. The U.S. in its global political game with Russia does not need to play the cards named "Poland", "Czech Republic", "Georgia", "Syria", "the Baltic States", etc. But Russia should also be more careful and correct in building its partnership and allied relations, in particular, with a number of Caribbean countries that are leaders in Latin America. These countries, although located in close proximity to the natural area of U.S. national interests, show obstinacy bordering on aggressiveness toward their Northern neighbor. So far, the obstinacy is verbal, but it is well known that battle of words often provokes hot conflicts.

Some initial strokes of a new road map of diplomatic relations between Russia and the United States have already been drawn on a clean sheet; and in order to continue this "cartography" that is crucial for the whole world, we should show respect to those steps towards our country, which were made by the administration of President B. Obama.

I have no intention to lessen the services of Russian diplomacy in general and the President of the Russian Federation Vladimir Putin in particular. They helped to prevent external aggression of NATO against Syria, to conclude long-awaited agreements with Iran, which not only lowered the threshold of nuclear threat in the Middle East, but also took Iran, the leading Middle Eastern power, out of humiliating economic isolation costly for Iran's economy. Again, for the sake of fairness, I note that it might be that the U.S. did not provide definite support to Russia's peaceful initiatives, but at least it showed reasonable willingness to refrain from strong-arm conflict that could lead to a tragic finale in the geopolitical confrontation between the great powers.

Not long ago all diplomatic activity and enforcement actions of the USA in the Middle East were carried out solely in the interests of the state of Israel and pro-American Saudi Arabia and Qatar. Now the Obama Administration is showing the Arab majority in the region that it will take into account their interests as well. Skeptics would likely to argue that "it is known where the road paved with good intentions leads". I would answer: "The one succeeds who tries; and the road, hard and dangerous as it may be, will rise to meet the one who walks it".

I am well aware that the changes in the U.S. politics, and often not the changes themselves, but, rather, a vaguely expressed *predisposition* to them, are so limited in every aspect and disguised from their domestic and world “hawks”, that perhaps, only the veterans of American politics, such as your humble servant, can notice these changes. I agree that geopolitical micro-concessions, which I am talking about, are dictated largely by protracted crisis phenomena in the U.S. economy and in its financial sector.

At any rate, for us it is important that American establishment, consciously or under the circumstances, albeit with obvious irritation, begins to realize that the role of the world’s only center of power and development, which was objectively assumed by the U.S. after the USSR had left the world arena, is going beyond the means of the first power in the world.

Granted, the global crisis has affected all nation-states without exception, so the rise of a second superpower is not expected in the foreseeable future. Nevertheless, both China that is steadily enhancing its key economic indicators and the Russian Federation that is restoring its unique power persistently and successfully will inevitably challenge America on the world stage. (Here it is worth recalling the series of meetings, which President V.V. Putin held November 28–29, 2013 in Sochi with developers and manufacturers of new high-precision weapons; a strict and clear task was set before them: to ensure in the shortest term the provision of the Armed Forces with the sufficient number of weapons, which will make Russia invulnerable to any aggression).

And they are followed closely by India, Brazil, and Indonesia. And of course, one should not forget about Japan that has survived phantasmagoric natural disasters with amazing firmness and nobility.

The international community is moving toward a multipolar world slowly, halting and backtracking, but moving anyway. Moving toward the situation where a permanent dialogue, rather than force pressure, becomes the main form of dealing with global issues. Although this road is long, we have to prepare ourselves for a new world political configuration right now.

The transition to a qualitatively new partnership between the two great powers, which was scientifically grounded by Pitirim Sorokin, a great American sociologist of Russian origin, in his work “Mutual convergence of the United States and the U.S.S.R. to the mixed sociocultural type” [*Pitirim A. Sorokin. 1961*], does not mean to harm third countries in any way. Moreover, a trust relationship between them will give a major impetus for many other countries in finding constructive solutions to their socio-political problems on the basis of the free democratic choice of market relations and real opportunities.

However, despite the efforts that Russian President Vladimir Putin makes to mitigate the confrontation between Russia and the United States of America in the international arena, this confrontation will not relent significantly. After making a step toward us, our American partner Barack Obama, as a rule, makes two steps backward or sideways. A typical example is the civil war in Ukraine, which was prepared, provoked

and supported by the U.S. and its globally dependent EU nations, although they are doing it reluctantly, often under coercion. They support America neither for the benefit of Ukraine, nor for the benefit of Europe, but only to annoy Russia. Is that decent?

We note that direct confrontation between the USA and the Russian Federation is observed infrequently, since there are virtually no serious geopolitical reasons for such confrontation. Geographically Russia and the United States are located on different continents and have no common land borders. Both countries are fully self-sufficient and their economies do not depend on the level of import-export relationship. We have no claims against each other in retrospective; on the contrary, the history of relations between our countries and peoples is a history of effective cooperation and military brotherhood during the periods critical for the international community. Suffice it to recall that in World War I (the Great War as it is called in the West), and in World War II, the Russian Empire and the USSR, on the one hand, and the United States of America on the other, were allies.

The peoples of Russia and the Americans have similar traits of character: friendliness, openness to the world, patriotism that are intertwined, sometimes quite peculiarly, with messianic aspirations.

Let me recall that uncertainty and increased propensity to conflict has emerged, first of all, because the new so-called “developing countries”, at least many of them, are trying to build their prosperity by using the contradictions between the USA and Russia.

One can understand the logic of Georgia, seeking by all means to keep Abkhazia within the borders of the single state. Having created a recreational and tourism cluster on the Black Sea coast of Abkhazia, the Georgians can live off the money coming from European tourists and almost do not have to work. But why should the Georgians thrive at the expense of the territory belonging to the Abkhazian people? Especially since it is not Abkhazia that was historically part of Georgia, but it is Georgia that was part of the great Abkhaz State. One can understand Ukraine according to the same “logic”.

In reality, we should not forget that Kiev has never been a Ukrainian city, and Zaporizhian Sich joined Russia voluntarily, seeking a refuge from invaders from the South and West, from Muslim and Catholic countries.

Central and Western Ukraine was occupied by Poland for a long time and, most likely, would have still remained under that oppression, if not for the intercession of Russia.

Ukraine in its present form was outlined in the Treaty of Brest-Litovsk. The country even comprised part of the Voronezh and Kursk oblasts of Russia. After the denunciation of the Treaty, V.I. Lenin decided to preserve that ungrounded extension of the Ukrainian territory. Thus, the South, East, and much of the West of Ukraine never were Ukraine, with the exception of the troubled time at the end of World War I and Bolsheviks’ manipulations with the boundaries of the former Russian Empire. And despite this, the Russian Federation supports the integrity of the Ukrainian state.

But Russia cannot ignore the interests of 11 million Russian population of Ukraine and be indifferent to the attempts of Banderists to deprive our compatriots of their sovereign rights. Their *traditions, culture and language* must be preserved!

There was absolutely no logic in the transfer of Crimea to the Ukrainian SSR. It was a voluntaristic decision made by N.S. Khrushchev, who flirted with the political party association of Ukraine in order to get support in the struggle for power in Moscow. The behavior of the leaders of the USA and their satellites resembles that of the famous character from a book by Ilya Ilf and Evgeny Petrov, “whose whole being protested against stealing, yet it was impossible for him not to steal”.

It is well known that political ideas of the Ukrainian leadership in the modern period were as follows: Russia is to provide the industry and 30 million Ukrainian population with almost free gas, otherwise, Ukraine would lease Sevastopol, the city of Russian glory, to the U.S. Navy rather than to the Russian Navy. And what we see here, concerns not so much economic benefits (pragmatic Americans would not overpay a cent to their allies), as another attempt to humiliate and insult the Russian people.

The majority of the Ukrainians understand that sooner or later the issue of misappropriated territories will come to the fore, so in order to keep them, Ukrainian leaders are persistently stirring up Russophobic attitudes among the population, especially the youth. At the same time they do everything to join NATO and to strengthen their aggressive encroachments through the power of this aggressive military-political alliance.

One can also understand the viewpoint of the United States of America. They suffered humiliation from us, when the Soviet Union deployed its nuclear missiles in Cuba, when it successfully supported anti-American regimes in Nicaragua and other countries in Latin America, Northern and Central Africa. America has never forgiven those mortifications and is now trying to take revenge.

Simultaneously, the U.S. is experiencing the period of radical change in weapon generation. Against what enemy does America intend to use the latest weapons? Definitely not against Russia! But the U.S. cannot abandon the production of weapons anyway. Its military-industrial complex is the most powerful industrial and economic factor, the most important social component of the American economy. Even a partial reduction in weapons production will lead the country to a serious unemployment, reduction of economic growth, stagnation and inevitable crisis that would hurt the most vulnerable segments of the population. Thus, this criminal arms race, this road to nowhere, is continuing.

We are not saying that the train of American military-industrial complex, rushing at full speed, has to be stopped abruptly. The idea is to help our American partners to re-orient their powerful economic potential from the task of destruction to the task of creation.

Take, for instance, the participation of American corporations in the creation of the so-called “corridor of development” proposed by Russia, the concept and initial estimates and substantiation of which were prepared by the Russian Academy of Sciences.

This global transport corridor, complemented by powerful fiber-optic communication lines and developed infrastructure, would cover the Eurasian and North American (with the prospect to continue in South America) continents with a life-giving artery of high-speed communication, modern logistics and modern information systems. Its creation and subsequent development and maintenance will require millions of highly-skilled and well-paid jobs. The “corridor of development” will provide the Russian and American economies and their business partner states with guaranteed orders for decades.

But in addition to the land “corridor of development” stretching throughout Russia, we have another important strategic project that consists in the development of the Northern Sea Route at a qualitatively new technological and logistical level. This project will open the gate to the Russian Arctic, the richest and most promising depository of global hydrocarbon reserves.

It will also make the water transport route from Europe to Asia much shorter and considerably less expensive. If currently it takes more than one and a half months to travel along the most favorable route from European ports in the Baltic States to the Pacific region through the Suez Canal, then the trip along the Northern Sea Route will take only 21 days!

It is very important that all of our partners and opponents in the world community understand that Russia fundamentally rejects confrontation with the U.S., the leading power in the world. Yes, we oppose the desire of American elite to impose on all

the other countries the policy of post-modernization based on a limited sovereignty, sharp reduction of economic activity in these states, de-territORIZATION and abandonment of an independent foreign policy. Russia cannot agree with persistent attempts of the U.S. to accelerate the transition to a unipolar world in order to establish its world domination and submit other countries and peoples to its uncontrolled dictate.

The Americanization of the modern world, which is declared by the U.S. foreign policy as the most important global trend of world development, finds no support on the part of the Russian Federation and will find none of it in the future.

But we do not accept another extreme – the anti-Americanism, which had found its most vivid expression in the statement of A. Parfrey: “Wheresoever you may be, death will overtake you, even if you be in strongly built towers” [Parfrey Adam. 2003]. Russia’s foreign policy considers this extremist tendency a serious threat to world security, the threat that in some cases becomes dramatic and anti-human.

The status of allies in the World War II brought together the peoples of the Soviet Union and the United States of America. Our “today” originates in our victorious year of 1945. Neither the common citizens nor the establishment of our two countries must forget about this in any case.

Russia and its American partners have much in common, many similar problems that require urgent solving. For instance, global *non-proliferation* issues, whether it is nuclear weapons or the latest traditional military systems, dangerous biological

experiments (human cloning, genetically modified food), terrorism and racial extremism, aggressive forms of religion (Wahhabism, the Taliban, totalitarian sects), drug trafficking, moral perversion (pornography, sodomy, prostitution, organ trade), etc. **In principle, only Russia and the United States are able to solve these problems by uniting and targeting their efforts.** No other country on the planet has either political, or economic, or military capacity to do that. **The understanding of the situation should strengthen the responsibility of the two countries for the fate of the world.**

The Russian Federation and the United States of America are not only the centers of power of the human civilization, but also the leading countries in scientific research. It is science, as the basis of the modern worldview, as a significant (along with religion and art) source of the development of moral imperative, that can respond to increasingly expanding and deepening challenges of modernity.

Not much time is left to show it. Therefore, I urge supporters and helpers, of which I am part, of a new cardinal rapprochement between Russia and the United States to act in the national interest of Russia and the United States, in the interests of all mankind.

The Russian Federation is ready and open to this kind of cooperation, which has been voiced many times in the statements and clearly defined initiatives of the President of the Russian Federation V.V. Putin, in the statements of the Foreign Minister of the Russian Federation S.V. Lavrov and other top officials of the Russian Federation. But are American partners willing to support us in this

noble aspiration? As we can see, most often they are not. Selfish interests of American business, the desire to “bend” Russia, to force it to accept the role of the driven one in the international political configuration now and then win over sanity and commitment to a non-confrontational development of relations with natural partners of the U.S.

America has shown such attitude in relation to the crisis in Ukraine, which the vast majority of the Russian citizens consider their personal emotional pain. For them the tragedy of the neighboring brotherly people, who had been living in friendship and unity with the Russians and other peoples of Russia for centuries, is a personal tragedy.

Western leaders, having provoked a civil war in the South-East of Ukraine, tried to oppose the Slavic peoples once again and forever. Dostoevsky wrote about this: “They (*the Slavs*. – G.O.) will begin their new life by asking Europe – England and Germany, for instance – for guarantees and protection of their freedom, and even though Russia will also be part of the concert of European powers, they will do this precisely as a means of defense against Russia. They will certainly begin by announcing internally, if not openly, that they are not obliged to Russia in anything, but on the contrary, that they barely escaped Russia’s ambition thanks to interference of the European concert when making peace... [Dostoevsky F.M. 1877].

Overseas politicians see Ukraine, currently engulfed in civil war, as a prospective buffer area turned into a NATO military base, a raw materials supplier and a provider of cheap labor for the United Europe. That is why America, together with Europe established

in Kiev a government that advocates the ideology of neo-fascism in its most vile Banderist version. That is why they are so stubborn in their determination not to see the atrocities of gunmen of the Kiev junta in Odessa, Kramatorsk, Slavyansk and other towns and settlements in the South-East of Ukraine. That is why they ignore the convincing evidence of modern and effective Russian tracking systems that are watching over military actions in Novorossia and that prove clearly and unambiguously that the Ukrainian army is responsible for the crash of Malaysian Boeing 777. That is why they are trying to shift the blame for the committed atrocities on Russia without producing even the smallest proof to this cause, but with the use of the entire range of political demagoguery, blackmail, intimidation of civilians and pressure on the media.

What should the Russian government and society do in such a situation? The only answer is: *act adequately*. If the U.S. does not understand and take into account Russia's position with regard to Ukraine and other complex political, economic and defense issues, the Russian Federation will have to take a strong stand and make itself totally independent from the influence of third countries, even if they have such a colossus as the USA on their side. Avoiding confrontation, Russia will have to build its relations with the world solely on the basis of market principles and rationality. Without belligerent rhetoric and threats, our country should at least temporarily renounce its historical messianic role, abandon charity and unilateral assistance to those partners who have already expressed contempt and even hostility toward our country. In response

to the sanctions imposed by the U.S. and their satellites, Russia introduces its own sanctions, the consequences of which can affect the Western economy very badly.

Having taken such a tough position toward the outside world, and mainly, toward the U.S., which is the leader of the Western ideology, Russia must focus without delay and most seriously on its economy, finances and agriculture, with the goal of rapid and radical improvement of the social situation.

The success of our future development is impossible without changing its paradigm. First of all, Russia's leadership should completely eliminate certain remaining factors that drive the reforms to destruction.

In the contemporary history of the post-Soviet period Russia yielded to the pressure from the U.S. and the West several times, and each time there was deception and lie. One has only to recall the statement of M. Gorbachev: "I believe Chancellor Kohl: there will be no eastward expansion of NATO". As a result, Russia was forced to retreat because it was devastated after the ill-considered radical reforms of neoliberals inspired by American and Western politicians.

The present-day Russia is not what it used to be 20 years ago. Russia has risen from its knees! And now we must not cave in on the crucial principal positions, otherwise we can fall to our knees once again and stay that way for a long time, if not forever.

Kremlin's policy and the statements of the RF President V.V. Putin are encouraging and inspiring in this respect as well.

"Russia over many centuries supported strong and trusting relations between countries. This was the case on the eve of World War I too, when Russia did everything

it could to convince Europe to find a peaceful and bloodless solution to the conflict between Serbia and Austro-Hungary. **But Russia's calls went unheeded and our country had no choice but to rise to the challenge, defend a brotherly Slavic people and protect our own country and people from the foreign threat. Russia stayed true to its duties as an ally** (*emphasis added.* – G.O.).

The Russian offensives in Prussia and Galicia upset the adversary's plans and made it possible for our allies to hold the front and defend Paris. The enemy was forced to turn its attention and direct a large part of its forces east where Russian regiments put up the fiercest possible struggle. Russia withstood the attack and was then able to launch an offensive. The Brusilov offensive became famous throughout the whole world" [*V.V. Putin. 03.08.14*].

Can it be so that there is someone in the post-Soviet space, to whom this historical allegory ought to be explained? Of course not!

The President of the Russian Federation V.V. Putin in his usual reserved, respectful, and non-aggressive manner reminded the lessons of history to those, who have forgotten them. Russia has fulfilled its obligations as an ally.

It is high time, as long as the red line is not crossed, to abandon the confrontation, in whatever forms it may take place between the U.S. and Russia. The blackmail in foreign policy must be stopped by the United States and Russia, who owe it to humanity to develop jointly a new paradigm of world order and management that meets modern social realities.

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## Economic consciousness and behavior: state and trends (1990 – 2012)\*



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*"People consider that the main difference of the bygone epoch from the present is that it was bad earlier, but we moved forward, but now we mark time and even take bribes for this"*

*S. Leskov, publicist ("Izvestia", December 24, 2003).*

**Key indicators of economic consciousness and behavior.** In the Soviet Union the ideology predetermined the policy of social equality, social justice and social protection. Many provisions of this program were implemented. However, the 1970–1980s witnessed a paradoxical phenomenon: one issue was stated, another was implemented. Moreover, this conflict worsened, intensified and had a greater impact on people's consciousness and behavior.

Despite official propaganda, reassurance in advantages of the socialist way of life, Soviet people became more and more convinced that "it was impossible to live such a life" (S. Govorukhin).

The situation aggravated due to the opinion that in the West people lived richer, better, had opportunities to use so many goods and services, which were reachable only in the distant future, or not seen at all in our country.

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It was caused by the fact that innovation and pioneer spirit of the provisions declared in the USSR, as well as the fear of revolution forced the Western leaders to take into account the needs of the time and carry out many activities to provide a wide range of social services. Thus, consciousness of Soviet people combined these conflicting aspirations – formal, declarative and personal, individual, which ultimately manifested itself in the indifference to the fate of socialism in the early 1990s.

***Therefore, the main indicator of economic consciousness, in our opinion, is such a phenomenon*** that proved itself as a result of the long-term competition between capitalist (Western) and socialist (Soviet) development models: ***the initiators of socialist programs did not realize many progressive ideas, but their opponents, in fact, did it, according to their social programs*** (see: Toshchenko, 2009).

However, the indicated weaknesses and failures of the Soviet system and the tendency

to welcome the achievements of the Western countries soon turned into the belief that the expectation of positive change had not occurred or, at least, demanded another turning point in the understanding of the ongoing changes.

According to the All-Soviet/All-Russian studies, estimating the economic situation of the population for nearly a quarter of the century (supervised by I.T. Toshchenko, W.E. Boykov), people have been skeptical about the changes (*tab. 1*).

The analysis of these data shows that the negative estimates have dramatically increased, although the data of the late 1980s – early 1990s revealed optimistic expectations, hopes for the radical improvement in their well-being. People did not assess proclaimed promises, but the results achieved. Economic consciousness of people clearly recorded/records the current situation and caught/catches the main features of the functioning of the economic mechanism

Table 1. What were the consequences of the transition to market relations?  
(in % to the number of respondents)

Answers	1990	2012
Level of well-being has decreased	33	47.9
Inequity in remuneration has increased	12	45.5
Plundering of labor resources has increased	13	54.5
Inflation has increased	17	52.9
Number of economic crimes has increased	18	56.4
Only the rich has benefited	27	47.9

Note. The study was conducted May 24–31, 1990, 1525 people in 17 regions of the USSR were surveyed (Arkhangelsk, Ashgabat, Baku, Volgograd, Grodno, Zaporizhia, Irkutsk, Kishinev, Moscow, the Moscow Oblast, Orel, Riga, Rostov-on-Don, Semipalatinsk, Tbilisi, Chelyabinsk, Yakutsk).  
The study was conducted October 5–10, 2012, 1201 people of 18 and over in 12 subjects of the Russian Federation were surveyed (Krasnoyarsk, Stavropol, Khabarovsk krais, the Volgograd, Voronezh, Irkutsk, Nizhny Novgorod, Samara, Sverdlovsk and Chelyabinsk oblasts, Moscow and Saint Petersburg) by the sample representing the employees of major economic activities, employed in enterprises of different ownership forms.

that puts people in a paradoxical position – the rejection of certain vices of a system does not compensate the changes, which were even more hazardous.

***But the paradox remained a paradox: some just spoke, others took action.*** And as the story and the Marxist doctrine confirmed repeatedly, action succeeded.

At the same time, on the background of this global contradiction the current differences developed, emerged, aggravated, giving rise to new specific paradoxes inherent in both the Soviet and post-Soviet periods. As for the Soviet period, in the Soviet Union the property subject was extremely impersonalized: it was something amorphous and universal – the state and society. Despite constant talks that every Soviet person had the sense of the owner, as he/she was the owner and manager of the national wealth, the awareness of belonging to the solution of fundamental problems of life did not prove this statement. In the period of growing alienation from the socialist property, which, surprisingly, expended due to the increased efforts of official propaganda about the progress of developed socialism, the bitter joke was popular in the 1970–1980s: “There is the sense of the owner, but there is no owner”.

The Soviet economy failed to implement Lenin’s idea that socialism could only win due to advantages in productivity growth. And this performance in the period of “developed socialism” stagnated and even began to give ground in virtually all sectors of the economy. The lag in productivity became obvious at the last stage of development of the socialist economy. With all its distortions of

official statistics the productivity in industry decreased by one and a half–two times, in agriculture – by 3–5 times.

In modern Russia, this gap widened: labor productivity in industry comprised 20–25% of the world average, and in agriculture – about 15% (the data of the Ministry of Economic Development, 2014). The paradox of that time was quite vividly captured in the ironic phrase: “We do not sow, or plow, or build – we are proud of the social order”. And this “pride” without a solid financial base could lead only to frustration, bitterness, distrust and such contradictory attitudes of Soviet people as: “We have a better social system, but they have a better life”.

In the conditions of market economy there widely spread paradoxes. One of these paradoxes is an attitude towards market economy and its main leading actors – bankers, entrepreneurs, major owners, etc.

But, first of all, a little history. When the idea of the market began to penetrate into public consciousness, it was not necessary to persuade people – life did itself. First, during perestroika since the mid-1980s the expectations of the majority of people had been associated with the belief in a sudden breakthrough in the national economy development. But in the early 1990s the population was concerned about another fact: having assessed worthlessness of the economic policy implemented by the initiators of perestroika, people began to pay attention to other possible measures, in particular, those used by the countries with a high level of development and standard of living (Dushatskii, 1998; Il’ichev, 2005).

If we look back at the dynamics of changes of public opinion in relation to the market, the introduction of private ownership of land and some other market problems, just a few shared these ideas at first. By the end of 1989–early 1990 public consciousness experienced a significant shift. The All-Russian research under the author’s supervision in May 1990 showed that the market introduction (fully or partially) was positively assessed by 43% of the Communists and 28% of the population. By March 1991 there had been 57% of the market relations supporters. In 1991 and 1992 70–80% of the working population recognized the market acceptable for their life.

However, the growth of hardship in connection with Gaidar’s shock therapy resulted in the negative assessment of market reforms (up to 80% of people evaluate the economic situation in Russia negatively). People were disappointed and frustrated (*tab. 2*).

Thus, orientation on the market as a primary means to upgrade the economy and lifestyle has not become a key issue in public and private life. People compare failures of the Russian experience and the experience of countries that consistently and successfully

work in the market environment. The split in the understanding of market opportunities still exists, despite some increase in positive assessments of its forms and methods. That is why the stance of the Liberal Democrats (previously supporters of the “Democratic choice of Russia” and now of “Right Cause”) seems absurd and pretentious, as they try to present themselves as the only market reformers and the rest as their opponents.

The real situation is different: all political forces, from liberal to communist, from agrarian to patriot-national parties are market oriented. The discussion is about the price, people should pay for the transition to new economic and organizational forms of production.

But, unfortunately, this controversy continues to be dominated by old habits – “if you do not agree with me in everything without exception, then you are against me, my program, my ideas and views”. But people do not live according to laws (often far-fetched and absurd) of political struggle, not by preferences and morals of political parties and movements, not in accordance with socio-economic concepts and theories, but taking into account real life. And due to this they find themselves in an extremely

Table 2. Has the country gone in the right direction since August 1991?, %

Answers	2003	2005	2007	2011, October
In the right direction	30	25	28	42
In the wrong direction	47	50	37	39
Difficult to answer	23	25	35	19

Source: *Obshchestvennoe mnenie-2008* [Public Opinion-200]. Moscow: Levada center, 2008, p. 177. Available at: [www.Levada.ru/press/2009072202.html](http://www.Levada.ru/press/2009072202.html)

contradictory, paradoxical situation, when they can not make the right decision, feel confident in the environment, understand the contradictory situation, pushing them into mutually exclusive actions.

Public consciousness of people does not consider political and economic categories, no matter whether they are monetary, fiscal or social. In everyday life people ask themselves and others: “who is guilty and responsible for their plight, for the lack of social and legal protection and support?”

People often blame those who wield power: the President, the Government, the State Duma and bureaucracy as a whole. But this is some abstract criticism, for the situation changes frequently in the higher echelons of power and it is increasingly difficult to accuse a certain person; there is too uncertain situation with the so-called elite, the stagnation or leapfrog of high level temporary workers.

The situation is unusual, as approving the ideas of market economy; people begin to seek out those who have put them in this social stalemate, and try to find a way out, including taking measures to stop their humiliating status, the status of beggars and boarders. People have a desire to work, a clear head and hard-working hands: they should live a decent life.

But who prevents it?

Therefore, it is not surprising that dissatisfaction begins to focus on those individuals who actually represent the market, namely businessmen, bankers, entrepreneurs and all actors of the new economic theatre that are associated with

them and often called as “new Russians”. In fact, they pave the way for new economic relations and represent the triumph of new realities.

But since their rise as representatives of the market often involves the most shameless and criminal forms of profiteering and grabbing, international and domestic speculation, money laundering, these people are associated with criminals. It is often not far from the truth.

According to the experts, 25% of managers and entrepreneurs do decent business. According to the Levada center, in 2005 almost half of the citizens (44%) believed businessmen’s activity was harmful for Russia. This situation has changed little nowadays.

The sociological data analysis help to reveal the causes of the given assessment of the economic situation in the country and, therefore, to understand why the credibility of the subjects (actors) of economic activity is falling or being seriously questioned (*tab. 3*).

The data analysis shows that if in 1990 the distrust of state economic policy prevailed among the population (62%), i.e. people blamed the country leadership, in 2012 they started to blame the mechanism of the economy functioning – corruption, mutual protection, existence of mafia groups in governance and trade. It should be noted that the evaluation of such a vice, as corruption, does not differ much from the 1990 data, at first glance.

However, if we consider that the impunity of law violators was estimated as high by 35%

Table 3. Which of the following circumstances, in your opinion, hinders economic development in our country? (The sum of the responses does not equal to 100% because the survey methodology presupposes several options. The responses are listed in the descending order); in % to the number of respondents

Answers	2012	1990
Mutual protection and corruption	48.4	46
Impunity of law violators	36.8	-
Failures in economic policy	34.9	62
Mismanagement	30.4	-
Administrative arbitrariness of the authorities in the economy management	24.6	30
Lack of qualified managers	18.7	-
Lack of conditions for entrepreneurship	14.2	23
Monopoly of producers of goods and services	10.4	34
Leveling of employees' wages wage workers employed	7.8	44
Impact of gangs on the economy	7.4	-
Dependence of the economy on political and ideological dogmas	7.3	28
Transformation of production and services into the "hospice" for lazy people	4.8	34
Others	0.7	-
Difficult to answer	3.2	-
Note. The sign (-) means that this question was not asked in 1990.		

of respondents in the 2012 study; this is the same as mutual protection and corruption. So, the society believes that corruption in various forms of its manifestation almost doubled.

In modern Russia people are still concerned of administrative power abuse. Its estimates differ slightly in the last 25 years – 30% in 1990 and 24.6% in 2012.

Public consciousness can not apprehend the notion of new masters of life, which improves neither the Russian society, nor any of our notions of honor and dignity. People dislike flashy presentations, arrogance of wealth, excess and impudence of "new Russians", insolent behavior and a lack of any taste and ethical concepts.

Public consciousness (40–60% of the population) assesses market relations extremely negatively. In 1999, according to VTSIOM, 55% of the respondents estimated wealthy bankers and businessmen negatively. In 2006, according to the same research center, 84% of people responded positively to the criminal proceedings against the initiators of economic crimes (*Komsomolskaya Pravda*, June 9, 2006). The population considers these people as responsible for the collapse of the economy, poverty in the country, they can not be respected, supported, and some people advocate the use of repressive measures. Very often the surveys disclosed such opinions as: "they should be hanged, imprisoned, exiled to Siberia", etc.

In other words, the paradox is that public consciousness, supporting market transformations, is against subjects of these transformations, against those who really and actually represent the changes in the economic life of Russia. It is very true, as according to K. Stahlmann, no one believes that the Russian businessman is characterized by “fulfillment of the national principle, national objectives or national mission. Some people consider him/her as a combination of the worst sins: graft and disingenuity, greed, rudeness, “tough mafia style” (Stahlmann, 1999).

Further, the paradox of consciousness and behavior of people has emerged due to the official objective to “capitalize” consciousness – to make the private interest the principal, the leading. But life has shown that this objective has not brought the desired results.

On the one hand, the target to “work for the common good, for the good of society” is almost forgotten, faded in the public consciousness, although common, collectivist beginning, albeit in a distorted form, still exists. By the way, this factor is often ignored by the researchers who believe that the Western industrialized countries are the only example for Russia to follow.

On the other hand, the fund “Public opinion” gives a low estimate of such “capitalist” objectives, as acquisition of property (13%), and “investment in the enterprise” (5%).

Due to the problem of consciousness “capitalization” we should pay attention to the prevalence of such a paradoxical point

of view as comparison of the role and significance of private property with other forms of ownership. In public and private life of people, media, everyday life, and sometimes in scientific literature there is a simple, complementary approach to private property.

Sociological information, in particular the data of the Russian-Canadian studies, “Russia’s way to the market” (1992–1997) (supervised by J. De Bardeleben, J.T. Toshchenko, V.E. Boykov), indicated no significant differences in people’s attitudes to labor processes, production efficiency, growth in the productivity of work depending on the form of ownership (Toshchenko, Boykov, 1990).

And this becomes especially apparent in the assessment of the activities of joint stock companies where most workers continue to relate in the same vein, as in conditions of state ownership of the Soviet period. The evidence is protest movements in the number of enterprises, when the whole pathos of the struggle is directed against the state, but not against their leaders, responsible for enterprises with the specific form of ownership, isn’t it?

Analyzing this paradoxical situation, some researchers argue that under conditions of uncertainty, ambiguity, unpredictability of economic development the majority of shareholders are ready to delegate the powers to those who ensure stable and high salary and the solution of social problems in the enterprise. But it means that people want to waive the property right (Greenberg, 2012).

There is the indicative paradox, associated with the contradiction of social qualities of the consumer and employee in consciousness and behavior of people. Nowadays, they operate directly in the opposite direction, although it is well known that only when they are consistent with each other we can talk about the rational functioning of not only the economy, but of people’s economic behavior and way of life.

But in fact, the vector of efforts in these two roles mutually excludes each other. As a consumer, a person strives to meet his/her material and spiritual needs effectively and efficiently.

However, as an employee, a person faces a different situation. His/her work is not always paid for, or paid not adequately to the changing socio-economic environment. The production is often not popular. The results are often unnecessary and depreciated. The current economic situation is that more and more people – employees, peasants and specialists – are convinced that now neither mind nor talent nor skillful hands can guarantee success. Moreover, the prestige of labor, participation in the creation of material wealth and spiritual values are poorly paid and not supported by the state.

Today this view is shared by millions. For hard work and flawless and creative performance of duty do not determine people’s prosperity and confidence. The following data are indicate the decline in the labor significance indirectly (*tab. 4*).

So, we observe a certain, but still not decisive shift in the employee’s perception of his/her state. We can assume with a very high probability that the growth in positive estimates is achieved by those who had the opportunity to work on the basis of private initiatives or in private enterprises.

The “effective” means to maintain this contradiction-paradox is tax burden, which negates any manufacturing initiative. To sell and resell goods has become more profitable, than to produce them. It has become easier to buy cheaper and resell more expensive, using the “scissors” of prices between public and private sectors, between regions. And even it is better to speculate when selling foreign goods, including shuttles, delivering home everything that makes a profit – even defective and spoiled products. This massive shift to trade in all conceivable and criminal forms is not an evil intent, scourge or vicious intention; it is just more profitable than to manufacture goods.

Table 4. If you work more productively, will your wages increase? (in % to the number of respondents)

Answers	1990	2012
Yes, much	6	17,4
It will increase slightly	26	24,1
No/difficult to answer	68	58,5
Source: data of the Institute for Social Research.		

Thus, trade has become too exaggerated to the detriment of both production and distribution.

The special group of paradoxes, characterizing interaction between producers and consumers is formed by a widespread contradiction between the patriotic desire to support domestic producers through the purchase of Russian goods and products and the real behavior of these people when meeting specific needs – mostly personal and family. Its essence lies in the fact that domestic products give way to more quality and attractive goods, produced in the West. The declared desire contradicts real behavior. And this applies not just to one person or small groups – this is the real behavior of many Russian consumers, when the desire and intention does not coincide with actual activity.

However, in recent years there has been a shift in confidence to domestic products, which is especially evident in the situation regarding food products and light industry goods. In general, however, Russian goods lag behind foreign.

The significant paradox exists between the call to correspond to market democracy and everyday orientation on pathetic and primitive demands: how to survive.

Moreover, it is carried out in the conditions of the praised ability to make money in any way, the ability to swindle other people with the help of banks, funds and people who just like to make a fortune using all available, even unjust methods.

In August 1998 there was another robbery of people – the default that once again

undermined the credibility of the state and, at the same time, market relations.

The 2008 crisis was also shocking, seriously affecting the prosperity and confidence of people. It is, therefore, quite natural that after a long process of impoverishment people want to review the results of privatization, when those succeeded who managed to get a piece of the pie that belonged to the whole society. And when you take into account giant land speculation (and this is before the establishment of the institute of purchase and sale), theft of rare, unique natural resources and remains of state property, you think of lawlessness and chaos in the economic life in the country.

The paradox is that many people (50–60%) rely on the ability to suffer, adapt to the deteriorated situation, despite the fact that they are unhappy with their economic situation, assessing it as poor or very poor (70%). So, as in the case of paradoxes in the theory, there is a contradiction between imaginable and real world experience and they often contradict or oppose each other. Great dissatisfaction of the socio-economic situation, prevailing in the society, still coexists with positive or discreet personal assessment of the real situation.

Of course, we can talk about the process of primitivization of the needs, about the substitution of higher forms of needs satisfaction for lower, about the urge to survive in an extreme situation, but this does not negate the fact that people hope that these problems can be solved in a peaceful manner, but at a certain balance of political forces. Still people have an extremely unfavorable

Table 5. How do you assess the economic situation, in % to the number of respondents, N=1600

Answer	In the country	In the country	In the country	In the country	In the family	In the family	In the family	In the family
	1997	2000	2006	2012	1997	2000	2006	2012
Very good and good	0.7	2.2	9	13	3.8	5.5	9.0	18.0
Average	19.5	26	45	52	44.4	48.4	56	50
Bad and very bad	69.4	61.0	35	28	50.9	44.1	33.0	22.0
Difficult to answer	10.0	10.8	11.0	7.0	0.8	1.9	2.0	10.0

Sources: *Monitoring obshchestvennogo mneniya: ekonomicheskie i sotsial'nye peremeny* [Monitoring of Public Opinion: Economic and Social Changes], 2000, no. 4, p. 48; *Vestnik obshchestvennogo mneniya. Dannye. Analiz. Diskussii* [Bulletin of the Public Opinion. Data. Analysis. Discussion.], 2006, no. 6, p. 66; *Obshchestvennoe mnenie-2008* [Public Opinion-2012]. Moscow: Levada center, 2013. Pp. 38, 47.

historical background, which strongly reminds of the enormous costs for everyone, if the resolution of the contradiction between the actual and desired is forcible (Gorshkov, 2011).

Especially it is necessary to dwell on the paradox, which prevails in the public consciousness due to the current economic situation – of a person and the whole country. If in the Soviet times it was common to say “we live modestly, but our country gets richer every day, but now people tend to assess the situation in the country worse than their own. This trend was observed in the surveys of the 90s (*tab. 5*).

There are more real and not exalted ideas about the market in the public consciousness nowadays. The increasing number of people is convinced that the market does not provide social protection, eliminate unemployment and poverty and prevent social stratification. As for the specialists involved in the economic reforms, many of them changed their attitude from the enthusiastic to critical and even negative assessment, because it became

apparent that the market by itself can not make rational structural changes in the long term, be socially efficient (provide social services, social needs) or prevent the process of monopolization of production and pricing. Public consciousness can not but respond to these processes. The result is “the cure”, i.e. release of failed expectations and hopes, and return to real life.

\* \* \*

The proclaimed advantage of market relations can not win way by itself. If they are not socially oriented, people (or a significant part of the population) face poverty, deprivation and despair. And this, in turn, is associated with potential social disasters.

So, the Russian society has a very little choice: either the way of original (bloody, nasty and very long) capital accumulation with the hope for a bright future after an unknown period of time or the way of market regulation, upgrade of forms and methods of the economic policy. And if choosing the first

war, you do not have to do anything (you let the history bring you to a prosperous life), then choosing the second you will make a great effort to become a decent man of the 21st century (see: Greenberg, 2012).

Thus, the economic paradoxes are based on huge shifts that have occurred in the society in general and in the life of every person. The Russian society experiences a radical change of the situation, based on the relations of property, ownership, use and disposal. We witness a change in the essential features of economic consciousness and behavior that during the Soviet period were not only regulatory requirements, but also became a tradition, stereotypes of thinking and activity of many millions of people.

The gap between the imaginary and real, between the official policy and socio-economic realities, between the orientations and results of the changes underlies the paradox that we observe in everyday life today.

It is worth noting that this paradoxical confusion was also caused by confused, self-contradictory concepts of the scientists representing various dogmatic, populist or second-hand ideas.

The economic management of the 1990s has revealed that, firstly, it is impossible to accelerate the transformation and ignore the lessons of international experience, even having best intentions. Secondly, scientific and political extremism, taking into account the absolutism of monetarist methods, does not consider the entire spectrum of modern beliefs, thus, it can not succeed.

Hence, the paradox of the current and future socio-economic situation, and, therefore, of economic consciousness and behavior of people, presupposes that the objective and subjective forces of the historical process act in different and sometimes opposite directions, that is why they ensure neither stability nor confidence in the speedy solution of urgent problems of the Russian society.

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# DEVELOPMENT STRATEGY

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## Post-industrial technological mode of production: time of emergence



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**Abstract.** The article characterizes a postindustrial technological way of production, an indicator, a set of technologies and connection with the pre-industrial and industrial technological methods of production. The development of the sixth technological mode is treated as the beginning of formation of the postindustrial technological way of production. The author reveals possibilities and prospects of post-industrial technologies. Many countries are conducting research on the application of post-industrial technologies despite industrial production, leading in the world. The article draws attention to the strengthening of measures on development of post-industrial technologies in our country.

**Key words:** technological mode of production, pre-industrial, industrial, post-industrial, indicator, technology, prospect.

Economists have been discussing the basic directions of development of Russia's economy such as neo-industrialism and post-industrialism.

Adherents of post-industrial development believe that "great concentration of industries that used to be the pride of the industrial period, is now a heavy burden (both economic and social) in the current early post-industrial society; and greater importance is attached

to indicators characterizing the development of high technology, the rate of renovation of production, the level of development of the social sphere (especially education and healthcare) and the services sector in general" [16].

Supporters of the first trend of economic thought have sharply criticized the ideas of post-industrial society, calling them false targets "used for justifying de-industrialization

of the national economy". Industry in the era of the formation of neo-industrial society, in their opinion, is turned into automated, robotic and "digitized" [30].

The paradox consists in the fact that the alternative concepts have a common original basis: the achievements of science and technology, the use of "smart technology". Then why do the conclusions on economic development diverge so radically? It seems that the reason lies in the differences in the choice of priorities of economic development. It is not a coincidence that publications on this topic contain concepts such as "neo-industrial society" and "post-industrial society". On the other hand, there is an opinion that "clear scientific criteria of post-industrial economy, in contrast to industrial economy, have not been developed so far" [15]. D. Bell, the founder of the conceptual framework of post-industrial society, pointed out: "The term "post-industrialism" relates primarily to changes in the social structure (technological-economic system) of society" [2]. D. Bell made a social forecast of post-industrial society using the analysis of achievements in the field of information technology of the 20th century industrial production (the emergence of electronic systems, miniaturization, conversion of data into digital form, software) and seeing them as tools of social change. But he and his supporters did not associate the characteristic of post-industrial society with the formation of post-industrial technological mode of production. Therefore, we can raise the question concerning the approaches to the disclosure of technological basis of post-industrial production, which, along with social features, can have its specific technology, and mode of production that is

basically different from industrial production.

To identify the essential features of post-industrialism, we build our analysis upon the core economic concept of "production" in the technological aspect<sup>1</sup>, and attempt to substantiate the criterion on the basis of which we could analyze the structure and status of post-industrial production. Especially since in this regard there is evidence that support the emergence of a set of technologies beyond the framework of industrial methods of production of goods and services<sup>2</sup>. The issue of post-industrial production can not be considered as complete and dealing with its nature and composition; it can be also viewed as an object of scientific analysis, substantiation and addition to the preliminary results.

#### Criteria of technological eras

Post-industrialism as the era following the industrial society is recognized by many scientists. However, its characteristic as a *technological* community is ambiguous and too general<sup>3</sup>. If pre-industrial and industrial technological eras differ in some typical set of food production methods, then it is difficult to distinguish the technology of post-industrial production from that of industrial production. They are often referred to either industrial or post-industrial modes of production. It is not clear why certain post-industrial technologies cannot be classified as industrial.

<sup>1</sup> The technological mode of production means the unity of the equipment and its technological settings [23].

<sup>2</sup> The object of the research in the article is limited only by technological specifics of production of goods and services, and it is in no way related to its social form.

<sup>3</sup> "The post-industrial [sector] is a *processing* sector. Here the exchange of information and knowledge is going on mainly by means of telecommunication and computers". "Post-industrial society is formed under the influence of *intelligent technology*" [2].

Thus, it is possible to speak about the criteria of technological eras<sup>4</sup>. Obviously, the methodological approach to their establishment can be the *consideration of technology as a means of production-related attitude of man to nature with the purpose of obtaining consumer products that sustain people*. It is the difference between the means of exchange of man with the natural environment that can be the basis for identification of the technological era and its inherent set of technologies.

When the formulated approach is applied in analyzing the historical path of the origin and development of technologies, we can suggest the following criteria of the methods of exchange between man and natural environment. The first one is the use of the fruits of nature. The second method is the use of discovered laws of nature and creation on their basis of “the second, transformed nature” that is a system of machines (machine industry) for production and consumption of vital products and services. The third method is the use of processes occurring in nature itself, when products and services are produced by managing natural processes.

The first criterion identifies the technological era of gathering. Its basic technology includes harvesting, hunting, fishing, the beginnings of handicraft, followed

<sup>4</sup> Traditionally, the change in technological modes of production is considered in connection with the delimitation of civilizational stages of social development. Their most accepted differences are characterized in accordance with the method of use of technological tools: basic hand and instrumental technology (Savagery and Barbarism), advanced instrumental technology (Cosmogonic civilization), machine technology (Technology-based civilization), information technology (Anthropogenic civilization) [23]. Differentiations of such kind characterize the link between social eras and historically developed technology, whereas our task is to consider the development of technology itself.

by the technology of agriculture, animal husbandry, utilization of wind energy and water flows (mills) that are the germs of basic technologies of other epochs. The combination of the aforementioned technologies can be classified as the technological basis of pre-industrial production.

The second criterion can describe technologies related to industrial production. Its characteristic features include: 1) application of equipment systems, machines, mechanisms, devices, and 2) operation of large industrial complexes: metallurgical, chemical plants, machine-building giants and other companies focused on serial and mass production. Industrial production is the processing of resources provided by nature: wood, hydrocarbons, ore and non-metallic minerals, and their ultimate destruction (consumption) in the production process. The industrial type of production is accompanied by a huge amount of waste (up to 50% from the weight of natural raw materials), by environmental pollution dangerous to human life, by approaching the limit of growth of productivity of traditional industrial technologies and the necessity of upgrading them according to new technological principles. It is believed that the era of the industrial mode of production – the use of machines – began with the domination of the steam engine in the mid-19th century.

According to the third criterion of the means of exchange with the natural environment we can define the technologies of the post-industrial type of production; they are based on the use of processes occurring in nature itself, when products and services for human activity are derived from controlled natural processes.

An example can be found in technologies for obtaining renewable energy, atomic and molecular technology, laser processing, computer-modelled production of articles from powdered metal without cutting, milling and welding. Today it is hardly possible to characterize the set of technologies that form the technological basis of post-industrial production. However, “the difficulties and limitations arising out of the present state of knowledge (or, rather, ignorance) of the nature of post-industrial society should not be considered as fragments in favor of abandoning its study” [16].

We would like to draw attention to the fact that the development of new technology is regarded, though not often, as the onset of post-industrial production. It is noted that the most fundamental changes connected with biotechnology, gene and cell engineering, nanotechnology, computer designing of molecules of the substance are integrated into the base of the new *post-industrial production* [10].

In our opinion, the available facts show that the use of internal natural processes in the production of goods and services can be interpreted as the initial position that expresses the qualitative basis of post-industrial production. Nowadays, human impact on nature with the use of mechanical instruments of production created by man is decreasing, and now the characteristic feature is the management of natural processes in order to obtain the necessary products and services. Thus, we can conclude that post-industrial production that comes after industrial production is the production of goods using natural processes.

Following this approach, it is difficult to agree with the statements that the leading countries of the West already have a post-industrial society [2, 12].

From the viewpoint of technological aspect, the industrial mode of production still prevails in the world.

According to Eurostat, the share of energy produced from renewable sources in the total energy consumption of the European Union is 10.3% (data for 2008). It is forecasted that by 2020 the contribution of renewable energy sources will have achieved 20%. These figures are differentiated significantly in different EU countries: for example, in the UK – from 2.5% in 2008 to 15% in 2020. In Sweden, which is the leader in renewable energy they range from 44.4% to 49% [21].

The share of energy derived from renewable sources in the U.S., according to the plans of President Barack Obama, should reach 25% by 2025 [13]. According to the forecast of the International Energy Agency, if the current trends in the global energy sector remain the same until 2020, the share of hydrocarbon fuels in the global energy structure should reduce to 83% by this time and to 64% by 2050 [19]. Hydrocarbon raw materials, which are the reserves of solar energy stored in the earth’s crust millions of years ago will remain the main source of energy for the coming decades.

Atomic and molecular technologies and nanotechnologies are in the initial stage of scientific research, design, creation of laboratory samples and small-volume production. Western experts say these technologies are not yet ready for wide industrial application<sup>5</sup>.

<sup>5</sup> “The time has not yet come for the industrial development of the construction “atom by atom” on the basis of self-organization of matter, in which the components will form a structure through their natural process” [28]. The article [15], along with recognition of the rapid development and growth of the influence of nanotechnology in science and industry, provides just a few specific applications of nanotechnology in the near future.

The same can be said about laser technology of growing products from powdered metal by computer models completely eliminating final finishing.

First steps in the development and application of post-industrial production technologies in the leading Western countries do not afford ground to conclude that they have already formed the technological basis of post-industrial society. We can talk about the new wave of technology (in Russia it is called the sixth technological mode), which can be attributed to the technology of formation of post-industrial production.

The onset of the new (sixth) technological mode is associated with nanotechnology, biomolecular technology, information and communication technology [6]. C. Perez, who studies long waves of techno-economic development, says that “biotechnology, nanotechnology, new energy, new materials, bioelectronics, etc. (in varying combinations) can become the main driving forces of the emerging new wave [24]. The sixth technological mode is identified with the post-industrial technological mode of production: “the sixth technological mode will be fully adequate to post-industrial society” [10].

Although technologies of the sixth technological mode relate to the post-industrial technological era, the first applied achievements in this sphere are oriented toward the industrial mode of production. They become, to a greater or lesser extent, a breakthrough technology in the neo-industrialization of the domestic economy. Large-scale development up to the level of the leading technological basis will already match the post-industrial mode of production.

The above characteristics of technological eras, technological modes of production, are their core characteristics, their technological core. Technologies of other eras, which are not separated from each other, are applied together with them. For instance, post-industrial production can include segments of industrial technologies involved in supporting post-industrial technological processes. To a certain extent, “post-industrial society” (let us say “post-industrial production”) is a continuation of trends that arise from industrial society” [2]. On the other hand, the principle of post-industrial production, i.e. the use of natural processes, is inherent to some extent in different technological eras. For example, agriculture, which is based on a relatively inexhaustible resource of land, has been the primary sector of economy for thousands of years; and large hydropower engineering based on the use of the water flows energy defines the image of industrial production, along with other sectors.

#### **Transition to the post-industrial mode of production**

Being concerned with the present day situation and with neo-industrialization of economy, we should not neglect the origin and development of technologies of the post-industrial era. Intensive work is being carried out in this sphere all over the world. It is important that our country should also keep pace with the formation of a new technological basis. There are certain encouraging results in scientific research, but the lag in the creation of new industries and in the manufacture of nanoproducts is beginning to take shape. Unfortunately, we will soon face the problem of catching-up development in this sphere. The time factor is becoming more and more important in

the scientific and technological race. We cannot allow the lag to be repeated, like it happened, for example, in microelectronics, the consequences of this lag have to be overcome at present due to the fact that Russia had not joined the global system of development of microelectronics in due time.

Experts forecast that the technologies of the post-industrial mode of production, based on discovered methods of use of renewable energy, application of nanometric material particles, atomic and molecular structures will transform the basic industries of national economy: power, metallurgy, machine building, transport, agriculture and the environment and conditions of human life. Post-industrial technologies give rise to the hopes that depletion of economically acceptable hydrocarbon resources can be delayed, that the environment can be improved cardinally, that large enterprises and a number of industries can be abandoned in favor of technology close to natural processes, that growth of labor productivity can be achieved.

The main post-industrial technologies (excluding large hydropower, nuclear industry, information technology that were developed in the industrial era) in Russia are at the beginning of their formation. Current generation of power from renewable sources is less than 1% of the total power balance in the country. The target for 2020 is set at 4.5%. However, given the planned growth of generating capacities based on renewable energy sources, we note that the share of renewable energy in the country's energy mix by 2020 can be increased only up to 2.5%. For comparison: in Ukraine it is planned to increase the share of power from renewable energy sources to 12% by 2020 and to 15%

by 2030 [34]. The development of renewable energy technologies in our country that does not experience a shortage of energy resources will improve the quality of life in the regions remote from power networks, which make up more than half of the country's territory; it will also optimize the structure of power generation. Advantages of renewable energy have been studied quite thoroughly [3, 19], but their implementation is currently constrained by its high production costs compared to hydrocarbon energy. It is estimated that energy from power systems, due to cheap fuel, costs one and a half times less than energy obtained through the use of wind, solar and biomass in the south of Russia; as for its central part, renewable energy resources are 20–40% more expensive there than in the south [17]. A century of experience shows that qualitatively new technological principles, as a rule, are at first less efficient than the old ones. Russia, like other countries, carries out intensive scientific-technological research and industrial development of a new generation of solar panels, wind turbines, including those of a closed type; the research aims to extend the operational properties of power units and compatibility with the existing power networks, to increase the efficiency of energy facilities, reduce energy costs per unit of power.

Other countries demonstrate a steady tendency towards the reduction of costs for renewable energy. For example, specific capital investments in wind-driven power plants decreased from 4000 U.S. dollars/kW in 1980 to 900 US dollars/kW in 1999. During the same period, the unit cost of photovoltaic modules has dropped from 50 thousand to 4–5 thousand U.S. dollars. At the same time renewable energy capacities are developed

at high rates. Industrialized countries are planning to increase the share of renewable energy in their total energy balance up to 20–50% in the first half of the 21st century. The USA and Japan are planning to create space-based solar power plants that transmit power via microwave beam. The Vatican is planning to create a photovoltaic plant that will cover the needs for power through solar energy.

Experts are concerned about the fact that intensive development of renewable energy sources can deprive Russia of the foundation of its development, i.e. oil and gas export, and leave it alone with its hydrocarbon energy [7]. In addition, “the duration of the trade in oil and gas depends more on the reaction of Western countries to the market situation, rather than on the actions of Russia” [25].

The development of renewable energy sources is usually associated with the desire of European countries to reduce its dependency on Russian and OPEC’s hydrocarbons and to diversify energy sources. Simultaneously with the solution of this problem a new industry is being formed for the production of high-tech equipment with the development of new technologies, experience and professional competence in this area. A global technological superiority of a group of countries is being established. Their high-tech companies, enjoying intensive state support, become leaders of the new power engineering and enter the markets of developing countries. The richest countries can direct huge subsidies to support their own high-tech companies [20]. Currently, for example, German companies have gained strong leadership positions in the global solar energy market. Almost 40% of solar panels produced in Germany are exported.

The annual turnover is several billion euros. Germany is a world leader in the number of constructed wind power stations [7]. Siemens AG has installed more than 6400 wind turbines in the world. It produces equipment for small hydropower plants, installations for conversion of solar energy, which operate on all continents. Vintec (Germany) and NIBE AB (Sweden) are leaders in the production of heat pumps on the markets of Eastern Europe and Scandinavian countries. In Russia the share of foreign equipment in the development of renewable energy sources is 70% [7].

For our country that does not experience a shortage of hydrocarbon raw materials the development of technology and production of equipment for the use of renewable energy is relevant not only for the solution of current problems of energy supply to the population, but also for achieving technological independence in the generation of new energy based on renewables. According to Academician A. Koroteev, the main problem of power in Russia lies in the extreme backwardness of domestic power engineering [7].

According to experts, it is dangerous for Russia to stay away from global trends, since the country has a huge potential of renewable energy of all kinds. “One-sided reliance on basic traditional power threatens us with not just economic, but, rather, military-political problems... There is an enormous gap between Russia and the rest of the world concerning the development of renewable energy sources”. A report of the RF State Duma Committee on Energy, Transport and Communications points out: “Due to the depletion of oil and natural gas deposits, Russian energy has to undergo significant structural changes in the course of the 21st century” [7].

It is believed that sustained interaction of hydropower facilities and natural environment, as well as nuclear and wind energy will be the most effective and important spheres for development of renewable energy using the principle of natural-and-technological systems for Russia in the near future [18, 19, 33].

Nanotechnology, the second basic component of post-industrial technologies is the cutting edge of modern research in the natural sciences; today it offers fundamental achievements in the creation of materials with unique properties for many types of products and services, including renewable energy sources. A specific feature of nanoparticles consists in their high activity and ability to join other particles and attach particles of various materials. These properties are effectively used to create new materials with extremely important characteristics [14]. For example, polymers created from nano-components have super-properties: they are harder than diamond and 100 times harder than steel, they have greater smoothness than teflon coating, they are super light and super elastic and have thermal and electrical conductivity even greater than that of copper [28]. Post-industrial technologies implement controlled synthesis of atomic and molecular structures, which is used for producing objects for any purpose not from common raw materials, but directly from atoms and molecules using assembling machines. Machines that are able to perform the necessary operations with atoms are already being created. The foundations are being laid for a technology of atomic and molecular-level assembly to be used in electronics, communications, optics and robotics [27]. Technology of

manipulating the smallest particles up to 100 nm can be used almost indefinitely in various sectors of industrial production, agriculture, medicine and information systems.

For instance, R&D carried out at the Central Research Institute of Structural Materials (CRISM) "Prometey" (Saint Petersburg) resulted in the production of semi-finished metallurgical products, in which the structure of steel is crushed down to the nanoscale level. Such materials were used for constructing the offshore ice-resistant platform *Prirazlomnaya* and the drilling platform *Arcticheskaya*. The research institute also developed a method of manufacturing components from powdered metal using computer-controlled laser sintering, which excludes industrial technology of machining and welding of materials. This technology was used for making complex components for JSC Klimov and OJSC Kaluga Turbine Works. "The development of a number of new breakthrough technologies may constrain and then close the classical metallurgy, including mining, coke production, blast-furnace metallurgy and converter processes" [8]. According to expert estimates, Russia has established a solid foundation for further development of research into nanotechnology [1]. However, the application of nanotechnology is going on slower than abroad. One of the reasons lies in a small demand for nanoproducts and products created on the basis of nanotechnology, except for the demand on the part of government-controlled strategically important industries (like aviation, aerospace, and nuclear power) [11]. The development of demand is directly connected with necessity to overcome the technological backwardness of a significant

part of production capacities, to carry out large-scale neo-industrialization, including that with the use of nanotechnological components in technological processes. The issue of ecology and effects of new technologies on people remains underexplored. On the one hand, post-industrial technologies exclude contamination typical of industrial production methods; on the other hand, they require the research into possible effects of application of new technological principles.

The main spheres of nanotechnology are still at the stage of research or laboratory specimens. Industrialized countries make enormous investments in this field. For instance, in the USA the amount of budget funding for nanotechnology research is little more than 1 billion U.S. dollars per year [32]. Russian corporation RUSNANO has allocated 64 billion rubles and 180 billion rubles of government guarantees against loan. The main problem is to identify an opportunity and to transfer laboratory nanotechnology developments into industrial technology, which will require high-tech industrial production. Its absence arouses concern among domestic researchers with regard to application of achievements of nanoscience. For example, “the initiators of production of solar converters are faced with a problem that consists in the absence of related materials in the country” [26]. Therefore, the launch of neo-industrial processes in our country in the aspect of transition to post-industrial technology is becoming relevant.

Post-industrial technological line in Russia’s economy is based not only on internal, but also on external factors. Scientists warn that the leading countries consider

nanotechnology as a lever for gaining global economic, financial, political and military domination [9]. The creation of a post-industrial form of production is associated with extensive research in different fields of science. It requires considerable financial resources. It is estimated that further research on nanotechnology in solid-state physics at the Russian Academy of Sciences requires over 40 billion rubles [1]. Considerable investments will be necessary for its industrial development. Neo-industrialization and care about the future technological foundation of production set out the tasks of accumulation and distribution of funds (neo-industrialization) and strategic directions for post-industrial technology. It is very difficult to solve this problem in the economy with limited budget investments.

Biotechnology as a technology of the post-industrial technological era begins to penetrate into every sphere of modern life. Based on the methods of genetic engineering, it becomes one of the key areas in the development of the world economy [29].

Its progress is marked in the study of biological systems (proteins, microorganisms), biomolecular phenomena (identification of DNA and biological processes), other issues, including the creation of a molecular computer, development and delivery of medicines, surgical techniques, biocompatibility, diagnostics, implants, and prosthetics. “Scientists have realized that they can control the processes designed by the Creator and by millions of years of evolution. They can now create and adjust genetic programs inscribed by nature” [29]. However, this puts forward the issue of bioethics and responsibility for the consequences of the use

of new developments and technologies and the problem of avoiding irreversible adverse effects [22].

Scientific advances suggest possible future dramatic changes in technology of producing goods necessary for human life. Forty years ago, American sociologist A. Toffler wrote: "Today a new science based on the principle of harnessing the development of microorganisms is rapidly emerging and it promises to change the very nature of industry as we know it" [31].

Information technology plays an increasingly important role in the development of neo-industrial and post-industrial technology. The functions of information technology are continuously expanding. Now they are becoming part of material production technology. Information technology is embedded in technological processes of industrial production; it also participates in the creation of complex objects, such as the simulation of airflow about a real aircraft using supercomputing technology. It is noteworthy that in the USA supercomputing is considered a priority area along with alternative energy sources and nanotechnology. Russia has a computer network founded on an academic base. It links the main centers into a single unit. There is a supercomputer with the peak processing capacity of 94 million floating-point operations per second at the Russian Academy of Sciences, and a supercomputer with the capacity of 47 million floating-point operations per second at Lomonosov Moscow State University. The system of education has at least six fairly large supercomputers. The country has created prerequisites for the solution of practical problems. Supercomputers help solve the

problems of interaction of substances at the atomic level [4]. Post-industrial technologies will be based on information technology more and more extensively. Therefore, it is hardly justified to associate microelectronics only with the fifth technological mode. The use of information production technologies will require creation of new microelectronic devices in the post-industrial era as well.

Nano-, bio-, and information technology proclaimed as the key directions of the sixth technological mode, are intended to become crucial in geopolitical competition until the middle of the 21st century [5]. Performing this role, they can participate in neo-industrialization by transforming the industrial sector, and also in the formation of an independent part of post-industrial production, i.e. production based on atomic and molecular technology. Gradually its growth in the future, together with the dominance of renewable energy, will mean the transition from industrial to post-industrial production.

The present article considers the development and change of technological eras from the perspective of the evolution of the means of exchange of man with the natural environment with the purpose of receiving consumption products. Using this characteristic we can select the criteria of pre-industrial, industrial and post-industrial technological modes of production. A widespread concept of post-industrial society does not reflect its inherent technological basis, technological mode of production other than industrial. The transition from industrial to post-industrial production marks the use of controlled natural processes as the basic technology.

One of the priority spheres for Russia is neo-industrialization as the necessity to overcome technological backwardness, to catch up with the global technological level and as a condition for the creation of material prerequisites for the emergence of post-industrial technology.

However, already at present we must not allow our country to fall behind in the formation of the scientific-and-technological base for post-industrial production. Insufficient (according to world standards) public funding provided to scientific research and to the formation of post-

industrial production can in the near future set a permanent task of catching-up development. We can talk about the coordination of ongoing research in this area in the institutions of the Russian Academy of Sciences, universities, sectoral associations, and research supported by JSC RUSNANO, Research Center SKOLKOVO and investment funds. The set of measures that are implemented at the federal level is intended to prevent our country from lagging behind in its scientific development and to create the material base for the future post-industrial production.

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## Law on strategic planning in the Russian Federation: advantages and unresolved issues (expert evaluation)



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**Abstract.** The article substantiates the necessity to adopt the Federal Law “On strategic planning in the Russian Federation” as of June 28, 2014, No. 172-FL and reveals its advantages. At the same time, it draws attention to a number of strategic planning issues, not stipulated by the law, and suggests measures for further improvement of the legislation.

**Key words:** strategic planning, legislation, implementation mechanisms.

## 1. General provisions

So far, not all the regions and municipalities of Russia have adopted strategies for long-term socio-economic development. In many cases there is no integration and coordination between various planning documents (strategies, concepts, programs, and others); this fact leads to the disruption of their implementation and negatively affects administration effectiveness in the territories. It is necessary to define clearly the general lines of development for the defence, social, technological and economic spheres of the country in the long term.

In connection with the above circumstances, the adoption of the Federal Law “On strategic planning in the Russian Federation” dated June 28, 2014 No. 172-FL (hereinafter – FL No.172) is a necessary step toward the formation of an integrated system of strategic planning that covers federal, regional and municipal levels.

Several Russian economists highlighted the advisability of introducing this law into the regulatory framework. For instance, E.V. Zhirnel, the Deputy Director of the Institute of Economics, Karelian Research Center of RAS has noted that “the law actually changes the situation in the public and municipal administration. If earlier the territorial strategic planning was chaotic and “everyone was doing whatever he felt like”, then in the coming years the country will establish a new strategic planning system. Strategies at all levels will be linked”<sup>1</sup>.

<sup>1</sup> Zhirnel E. *Uslovii dlya investitsionnogo buma v Karelii net* [There Are no Conditions for Investment Boom in Karelia]. Available at: [http://vesti.karelia.ru/kapit/uslovij\\_dlya\\_investitsionnogo\\_buma\\_v\\_karelii\\_net/](http://vesti.karelia.ru/kapit/uslovij_dlya_investitsionnogo_buma_v_karelii_net/)

O.S. Sukharev, Doctor of Economics, Professor of RAS Institute of Economics believes that with the adoption of the Federal Law No. 127 Russia got an opportunity for the “revival and efficient functioning of the system of planning”<sup>2</sup>. At the same time he draws attention to the fact that the positive impact of the law in the future is determined by how it will be implemented.

According to O.S. Sukharev, the formation of the proportions and structure of the socio-economic system by its elements and directions involves the participation of analysts, economists, modellers, mathematicians, scientists and others in this process. And if such work is organized, it will contribute to the development of Russia’s economy.

Political consultant A. Wasserman believes that, if FL No. 127 is executed at all the levels of power in Russia, it will be possible to enhance economic efficiency. According to his viewpoint, this is conditioned by the fact that the “single plan” contains information about the processes occurring throughout the whole technological chain. Therefore, the determination of the planning landmarks allows a manager to make well-grounded decisions with less effort and greater accuracy<sup>3</sup>. However, A. Wasserman emphasizes that “the state has insufficient resources for strict planning”. Currently,

<sup>2</sup> Ermakova A., Ignatova K. *Vypolnyat' i perevypolnyat': vernetsya li pravitel'stvo k "pyatiletkam"?* [To Fulfill and Overfulfill: Will the Government Return to “Five-Year Plans”?]. Available at: <http://rosinform.ru/2014/07/12/vypolnyat-i-perevapolnyat-pravitelstvo-vozvrachaetsya-k-pyatiletkam/>

<sup>3</sup> *Vse idet po planu* [Everything Goes according to Plan]. Available at: <http://nakanune.ru/articles/19178>

when production capacities are mainly divided between numerous owners, and the state has direct control only over a small part of them, it is impossible to provide the level of planning, like that, for example, of the USSR. Therefore, there is no certainty in the implementation of the plan. This viewpoint is supported by M. Delyagin, the Director of the Institute of Globalization Problems, who supports the very fact of V.V. Putin's approval of FL No. 127. At the same time, according to the expert, it will be impossible to improve the efficiency of the economy without appropriate organizational work, and the law will remain wishful thinking, like many others before it<sup>4</sup>.

In our opinion, the sceptical attitude of some experts regarding the participation of business structures in the implementation of the strategy is not quite justified. We are talking about the indicative form of strategic planning, the use of which by advanced Western countries (Japan, South Korea, France and others) has proved its effectiveness. Unlike planning directives coming from above, which are typical for centralized economies, indicative plans do not contain mandatory tasks for economic entities, and they are developed in consultation with and consideration of the proposals of business community and scientific community. The very procedure for preparation of the plan aims to form a national consensus on the priorities of the country's socio-economic development and relies on the functioning of the institutions of social partnership. Indicative plans do not impede independent

<sup>4</sup> *Ibidem.*

goal-setting by economic entities, and perform for them the function of "beacons that cast light on promising areas of economy and government policy"<sup>5</sup>.

In addition, the urgent necessity to create a strategic planning system covering all levels of government was proved many times by the leading Russian scientists (S. Glazyev, P.A. Minakir and others)<sup>6</sup>.

## 2. Summary of materials submitted

FL No. 127 sets the legal standards for strategic planning, coordination of public and municipal strategic administration and budgetary policy in Russia. It defines the powers of the federal and regional public authorities and local government bodies, types of strategic planning documents and requirements to their content.

The approach to the formation of the state strategic planning system proposed by the law can be considered successful from the viewpoint of the detailed regulation of the process of approval of the list of documents on the state strategic planning, coordination of documents of the federal and regional levels, distribution of power between the participants of this process, and from the viewpoint of control.

<sup>5</sup> Glazyev S.Yu. Sostoitsya li v 1999-m perekhod k politike rosta? [Will There Be a Transition to the Policy of Growth in 1999?]. *Rossiiskii ekonomicheskii zhurnal* [Russian Economic Journal], 1999, no.1, pp. 22-39; no.2, pp. 14-32.

<sup>6</sup> Glazyev S.Yu. O strategii modernizatsii i razvitiya ekonomiki Rossii v usloviyakh global'noi depressii [On the Strategy of Modernization and Development of Russian Economy in a Global Depression]. *Ekonomika regiona* [Economics of the Region], 2011, no.2, pp. 14-27; Minakir P.A. Mify i real'nost' prostranstvennykh ekonomicheskikh disproportsii [The Myths and Realities of Spatial Economic Disproportions]. *Federalizm* [Federalism], 2011, no.1, pp. 43-56.

The undoubted advantage of the project is the consolidation of the status of sectoral strategic planning documents (Article 11 of Chapter 3), to which there have been no uniform requirements developed by the current legislation up to this time.

It is important that FL No. 127 contains provisions, according to which the draft documents on the state strategic planning are subject to public discussion and placement on the Internet (Article 13 of Chapter 3). Thus, the role of public and scientific organizations, employers' associations, trade unions, and other active participants of civil society becomes more important in the development of these documents.

### 3. Comments and suggestions

Certain provisions of the document under our analysis require clarification and improvement, in our opinion.

- We believe it is necessary in Article 3 of Chapter 1 **to clarify the concept of the strategy for socio-economic development** of the Russian Federation (the subject of the Russian Federation, the subject of municipal administration), defining it as a strategic planning document, which reflects not only the priorities, goals and objectives of administration, but also *the mechanisms and activities to achieve them*.

- It is advisable **to expand the powers of the state authorities of the RF subjects** in the sphere of strategic planning in terms of providing coordination and balance of strategic planning documents developed at both regional *and municipal levels* (Article 5 of Chapter 2). Otherwise, the basic principles

of development of a unified planning system are violated.

- It is advisable **to explain what the developers of FL No. 127 mean by socio-economic policy and socio-economic development**, because in Article 8 of Chapter 3 these categories are separated.

- We believe it is necessary **to eliminate the “fuzziness” of the powers of the supreme executive authority of the RF subject** by specifying *the exact content of its participation in ensuring the implementation of the unified state policy* in the sphere of strategic planning (Article 10 of Chapter 3).

- It is important **to specify** in the text of the law, **what the scheme of development of economic sectors represents** (Article 19 of Chapter 5) **and what information this document should contain**.

- To comply with the principle of the unity and integrity of the system of strategic planning documents, we believe it is necessary **to amend** Article 28 of Chapter 7 of FL No. 127 by *clearly defining the period for which the RF state programs are adopted*. We also believe it is appropriate **to expand the list** of strategic planning documents developed at the level of the RF subject by including the sectoral strategic planning documents in the list.

- In our view, it is necessary **to eliminate the contradiction** consisting in the fact that short-term documents (the annual Address of the President of the Russian Federation) in accordance with Article 15 of Chapter 4 are the basis for defining strategic goals and priorities of socio-economic development.

- We consider it necessary **to bring the content of Article 11 of Chapter 3 in line with the provisions of Chapter 11**. In particular, Paragraph 5 of Article 11 of Chapter 3 of FL No. 127 states that the strategic planning documents developed at the municipal level include the strategy for socio-economic development, the plan of measures for its implementation, the forecast of socio-economic development in the medium and long term, the budget forecast and the municipal program. However, Chapter 11 mentions only the first two types of the above documents.

There is no information about the content, procedure of development and approval of the other documents.

#### **4. Conclusions and recommendations**

The adoption of the Federal Law No. 127, which establishes the legal framework for strategic planning in Russia and ensures the coordination of public and municipal administration and budgetary policy, is an imperative of these days. At the same time, we believe that the improvement of the law in order to eliminate the identified drawbacks will enhance the effectiveness of the strategic planning system in the Russian Federation.

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## Saint Petersburg in the post-Soviet time: economic strategies and development



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**Abstract.** This paper studies the main features and results of economic development of Saint Petersburg in the post-Soviet period. The purpose was to determine the extent of influence of urban development on the results of development of Saint Petersburg during this period. The method used in this study consists in the processing of a large array of statistical and analytical materials and regulatory framework; determination of the mutual relationship between the achieved results and the implementation of the program-planning documents that define the objectives, priorities and tasks of socio-economic development of Saint Petersburg.

In the course of work the authors have highlighted seven key stages in the development of the city’s economy for the past 22 years, and six stages of development of the socio-economic planning system. The research into the specifics of Saint Petersburg economy within these stages shows that external conditions have a decisive influence on the results of its economic development.

The results of this work can be used for improving the practice of state and municipal management, including the implementation of socio-economic development planning of regions and cities of Russia.

The study has concluded that the cycles of updating of the program-planning documents and changing approaches to public planning are set in Saint Petersburg rather from the outside, and they are connected with changes in the external conditions for development. The elaboration of urban strategic, conceptual and other program-planning documents has an insignificant impact on the development of the city.

**Key words:** economic development, Saint Petersburg, long-term planning, reforms, strategy, economic structure.

A little more than 20 years have passed since 1991, a year marked by the collapse of socialist economy, breakup of the Soviet Union and beginning of radical economic reforms. The term is not so big by the standards of the 310-year history of Saint Petersburg. However, this period witnessed revolutionary changes in the political system, economy and social sphere, the changes that in many other countries required more than a century. Demonopolization of economy and support of competition contributed to the emergence of a large number of new enterprises, including those related to small and medium business. The city's economy has rapidly integrated into the world economic system. Real estate markets, securities and financial and banking services markets have emerged and are now actively developing.

The structure of Saint Petersburg economy has changed dramatically over the past two decades. It has become more similar to the structures of the economies in the cities of the same scale in developed countries. At the beginning of the 1990s more than half of the city's economic potential was concentrated in heavy industry, mainly in the military-industrial complex. Now a leading role in the economy of Saint Petersburg belongs to the services sector, represented

mainly by trade, transport, construction, property management, tourism, banking and insurance activities. The laws of the market worked, and the sectors that were more efficient under the conditions of a large city supplanted less efficient ones.

Changes in the economy resulted in dramatic changes in the image of Saint Petersburg and the way of life of its residents. The historic center of the city is used more as a tourism zone, an area of business and administration, leisure and cultural activities. The scale of housing construction and construction of public and business objects has increased. Significant transformations have been carried out in the suburban areas with the creation of new production and public and business objects, recreation zones and low-rise housing blocks. In all the areas of the city there are several major zones of retail trade, represented by modern shops. The growth of the residents' incomes in the foreign currency equivalent, and the accessibility of consumer lending allow the citizens to buy quality imported goods, including durables, and to go on holiday abroad.

However, the reforms have not improved every sphere of the city life. Problems in the housing and utilities sector, public and personal safety, and traffic still remain, or

have become even more acute. There has been a decrease in the availability of free services provided to the population by health care, education, culture, social facilities, physical culture and sports. One witnesses the manifold financial and property stratification of the residents, the reduction in the level of scientific and technological potential and in the level of food security. Rapid urban building development has led to the reduction of the area of public space.

What is the role of urban planning in these dramatic changes? Was this planning reasonable; was it possible to achieve more? Did urban planning have any influence on the market forces stirred up by the reforms? We will try to answer these questions by comparing chronologically the dynamics of development of economy and planning in Saint Petersburg.

Economic development of Saint Petersburg over the last 22 years can be divided into several key stages (*figure*). **The first stage covers 1992–1996.** This period is the most difficult and controversial in the contemporary history of Saint Petersburg and Russia as a whole. These years witnessed liberalization of prices and foreign economic activity, mass privatization, demonopolization, promotion of competition and entrepreneurship. Troublesome reforms were accompanied by deep crisis phenomena: rising unemployment, falling incomes, economic decline, political instability, hyperinflation, raging crime.

We can understand the scale of the crisis, if we compare the statistics for 1996 to the corresponding indicators in the pre-reform 1991. The volume of industrial production in Saint Petersburg decreased by almost 70%.

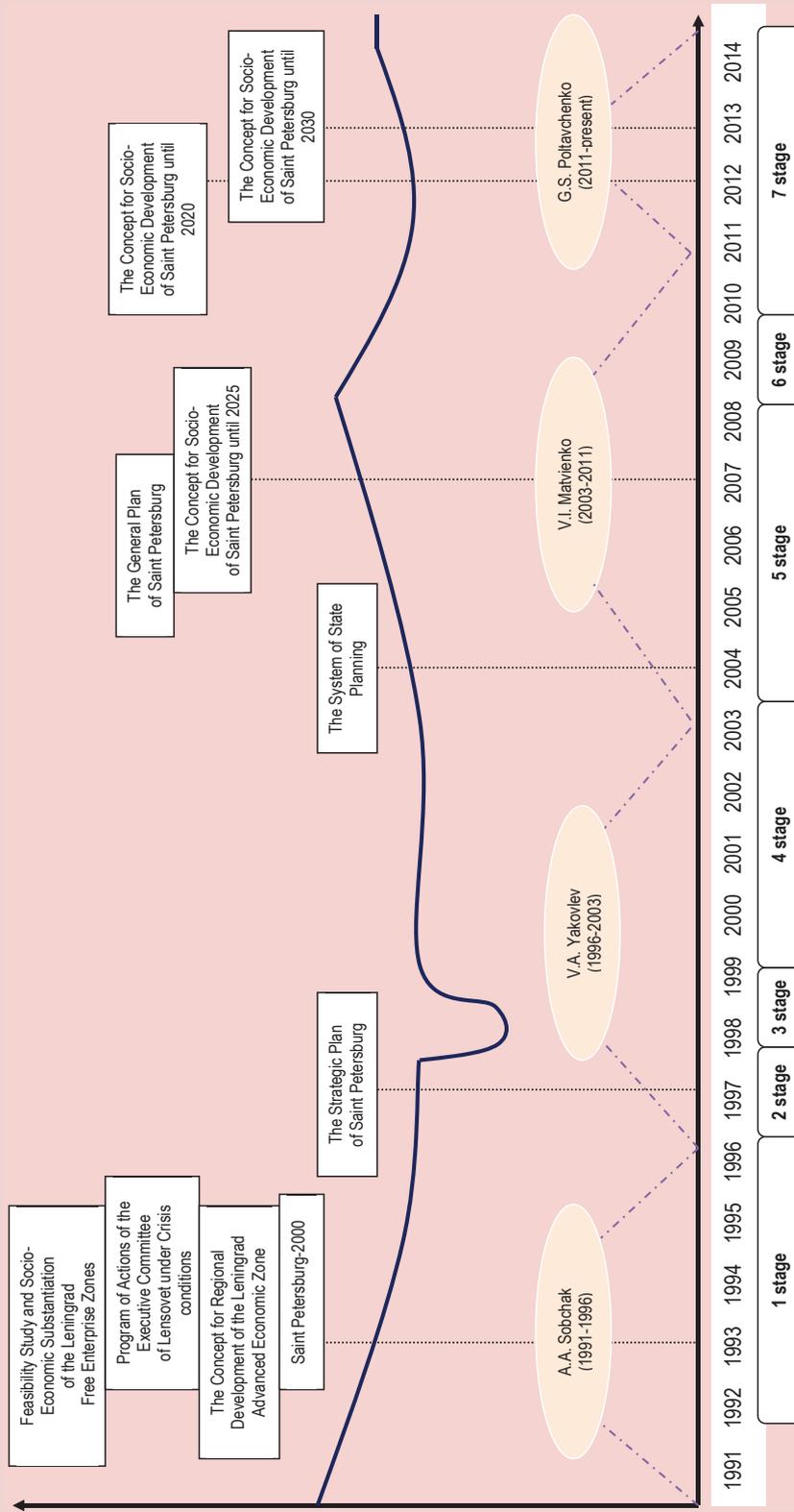
Consumption of basic food products per resident decreased: for example, consumption of meat and meat products – from 78 kg to 56 kg, consumption of milk and dairy products – from 419 kg to 217 kg. The resident population of Saint Petersburg reduced from 4 971 thousand people (end of 1991) to 4 746 thousand people (end of 1996) [1, p. 46, 47]<sup>1</sup>. Due to a decline in the standard of living, people started to buy fewer consumer goods, placing a priority on foodstuffs. All this caused a negative reaction from a considerable part of the population, who related their plight to the ongoing economic reforms.

Despite all these difficulties, Saint Petersburg has become the main ideological center for economic reform and leader by the rate of their implementation. For example, rapid economic restructuring helped to cope with large-scale job cuts at industrial enterprises and state-financed organizations. Part of dismissed workers was able to find a job in the rapidly developing sector of commercial and business activity and in the sphere of small business. Markets of securities and real estate were established as a result of privatization. The property of a huge number of privatized enterprises became involved in economic turnover.

Economic development in this period was influenced by the documents elaborated in the early 1990s. They comprised general documents on socio-economic development of the city as a whole. These include

<sup>1</sup> Here and elsewhere the number of resident population up to 2010 is given on the basis of the data of Petrostat (Territorial Body of the Federal State Statistics Service in Saint Petersburg and the Leningrad Oblast), calculated according to the methodology used at that period of time.

Stages of economic development, Saint Petersburg in the post-Soviet period



“The program of action for the Executive Committee of Lensovet (the Leningrad City Soviet of People’s Deputies) under the crisis” and the program “Saint Petersburg-2000”. In addition, some documents were elaborated on certain reform directions, for example the Program for privatization of state and municipal enterprises.

**The second stage covers 1997 and the first half of 1998.** It is characterized by the stabilization of the situation, low inflation, and slight improvement in the number of other economic indicators. For instance, for the first time in the whole period of reforms in 1997 industrial production increased by 7%. The volume of gross regional product (GRP) reduced only by 1.4%<sup>2</sup>. The indicators of attraction of investments, including foreign, improved. Investments in fixed capital increased by 17%. Consumer price index grew by only 13%, which is significantly lower than in previous periods of the 1990s (for comparison: consumer prices in 1992 in Saint Petersburg grew 21.8-fold, in 1996 – by 25.2%) [1, pp. 46-48]. These positive trends remained in the first half of 1998 as well.

Stabilization of the situation and a certain improvement of economic performance created favorable conditions for the resumption of planned approaches to the development of Saint Petersburg, in the long term as well. In January 1997, the Government adopted the Program of action of the Administration aimed at stabilization and further development of Saint Petersburg’s economy in 1997–2000.

<sup>2</sup> Here and elsewhere the data on the changes of the value indicators are given in comparable prices, unless indicated otherwise.

At the end of 1997 the work on the Strategic Plan of Saint Petersburg, which had been going on for half a year, was completed. Saint Petersburg became the first Russian city, which adopted a strategic plan.

Among the most negative trends prevailing in the economy in the period under consideration one should highlight the growth of domestic and external debt. In the mid-1990s the borrowing powers of the territories were expanded. This opportunity was exploited actively by Saint Petersburg authorities. This period is characterized by increased issuing of regional and municipal securities. As of the end of 1996, the largest volume of government bonds (6 trillion rubles)<sup>3</sup> in the Russian regions was released in Saint Petersburg. The increase in the volume of borrowings at the state level, exceeding their redeemability, became one of the main causes of a profound financial crisis in August 1998.

**The period of the crisis in 1998 can be considered the third stage of economic development of Saint Petersburg.** The onset of financial crisis was characterized by dramatic deterioration of economic situation in the city. According to the results of 1998, the volume of GRP decreased by 5.3%, industrial production declined by 1.5%, consumer price index increased by 78% [2, pp. 353-899]. This difficult situation required urgent anti-crisis measures on the part of the authorities. In September 1998 the Program of Saint Petersburg Government for overcoming the financial-economic crisis and normalizing the situation in the economy and social sphere of the city was adopted.

<sup>3</sup> Pre-denomination rubles.

These measures helped to prevent the development of events by the most negative scenario. Repeated devaluation of the ruble, which was considered as a purely negative phenomenon, on the one hand, the result of which was the fall of the standard of living of population, the imbalances in foreign trade and public finance system, has created important conditions for overcoming the crisis, on the other hand.

**The fourth stage of economic development of Saint Petersburg covers 1999–2003.** This stage is characterized by transition to sustainable economic growth due to the effect of devaluation of the ruble. In 1999–2000 enterprises were adapting to new economic conditions caused by repeated devaluation of the ruble, high inflation and sharp decline in imports. It was during these years that the economy began to revive and grow. The elimination of imported goods from trade led to the growth of production output at Saint Petersburg enterprises; for the first time since the beginning of the reforms, the share of goods production in the structure of Saint Petersburg GRP began to increase. Price growth rates were slowing down. If at the end of 1999 consumer price index rose by 41.1%, in 2003 it grew only by 12.2% [2, p. 899]. The period of 1999–2003 experienced significant increase in such macroeconomic indicators as GRP – by 156%, investments in fixed capital – in 2.39 times, industrial production – in 1.9 times<sup>4</sup>.

The responsible financial policy of Saint Petersburg authorities had positive effect on

<sup>4</sup> The authors' calculations based on the data of the statistical digest *Regiony Rossii. Sotsial'no-ekonomicheskie pokazateli. 2005: stat. sb.* [Regions of Russia. Socio-Economic Indicators. 2005: Statistical Digest]. Rosstat. Moscow, 2006. 982 p.

the improvement of the situation in the city's economy. Within several years the city authorities adopted a deficit-free budget, fulfilled all domestic and international obligations on repayment of loans and redemption of bonds. Reduction of arrears in wages and social benefits contributed to the expansion of consumer demand in the consumer market. Preparation for celebrating the 300th anniversary of the founding of Saint Petersburg helped improve the economic situation in the city, because the event attracted significant investment from the federal budget for improving infrastructure. The main long-term plan in the period was the 1997 Strategic Plan of Saint Petersburg. Positive dynamics of economic growth achieved in 1999–2003 has created the basis for transition to a fundamentally new stage of development of Saint Petersburg.

**The fifth stage of the city's economic development (2004–2008) became the most successful in its recent history.** After the effect of devaluation of the ruble expired, economic growth in Saint Petersburg was promoted mainly through consumer demand and significant inflow of investment. For 2004–2008 GRP increased in 1.55 times, investments in fixed capital – in 1.64 times, revenues of consolidated budget – in 3.6 times<sup>5</sup>. The scope of integration of Saint Petersburg into the world economic system expanded. In 1992 foreign trade turnover was only 0.4 billion U.S. dollars (including export –

<sup>5</sup> The authors' calculations based on the data of the statistical digest *Regiony Rossii. Sotsial'no-ekonomicheskie pokazateli. 2010: stat. sb.* [Regions of Russia. Socio-Economic Indicators. 2010: Statistical Digest]. Rosstat. Moscow, 2010. 996 p. Here and elsewhere the increase of the revenues of consolidated budget is given in comparable prices (prices set in the corresponding years).

0.2 billion U.S. dollars), and in 2008 it was 49.4 billion U.S. dollars (including: export – 23.7 billion U.S. dollars, import – 25.7 billion U.S. dollars). The amount of foreign investments in Saint Petersburg economy increased from 175.2 million U.S. dollars in 1996 to 5927.5 million U.S. dollars (including direct investments – 1373.7 million U.S. dollars) in 2008 [2, p. 894; 3, p. 16; 4, pp. 949-984].

A significant growth of cash income in the currency equivalent and the extension of the scale of lending had a great influence on the increase of consumer activity among Saint Petersburg residents. In 1995, the currency equivalent of average per capita monetary income of Saint Petersburg population was about 160 U.S. dollars per month, in 2007 – 661.8 U.S. dollars already<sup>6</sup>. Due to the rise in the standard of living of the population, the share of foodstuffs in total household expenditures begins to decrease. In 2007 it was 24.6%. For comparison: it was 37.8% in 1990, and 59.5% in 1995. The extent of housing construction began to exceed manifold the volume achieved in the last years of the pre-reform period. For instance, 1172 thousand square meters of total area of housing was commissioned in 1985, the figure for 1990 was 1064 thousand square meters, for 1991 – 1047 thousand square meters; the total area of housing was 2273 thousand square meters in 2005, and 3212 thousand square meters in 2008. The year 2008 was a turning point in the depopulation trend. For the first time in 17 years the resident population of

Saint Petersburg increased by 14 thousand people due to positive migration balance [1, pp. 46-47; 4, pp. 60-634].

At present, Saint Petersburg performs new international and national functions; it seeks to create a favorable business climate, and support entrepreneurship. These factors, together with the first results of the budget and administrative reforms, have a significant positive influence on the city's development. Since 2004, Saint Petersburg has a system of state planning. Due to certain administrative and political factors, Saint Petersburg has become the seat of the Constitutional Court of the Russian Federation; moreover, the headquarters of several leading Russian companies of national importance are also situated here. In 2006 Saint Petersburg hosted the G8 Summit. Saint Petersburg was among the largest centers of international cooperation in the Baltic Sea region.

The successful development of Saint Petersburg was impeded by the global financial and economic crisis which influenced **the sixth stage** of the city's development.

According to the results of 2009, the values of the main indicators of socio-economic development have decreased. The volume of GRP decreased by 5.7%, the revenues of consolidated budget – by 6.8%, industrial production – by 16.6%, investment in fixed capital – by 16.7% [5, pp. 119-191]. Saint Petersburg is integrated considerably into global economic relations, and it fulfills national federal functions; consequently, it experienced the impact of the global financial and economic crisis to a greater extent in comparison with other Russian regions.

<sup>6</sup> The authors' calculations based on the data of state statistics and the official exchange rate set by the Bank of Russia.

Since the early 2000s, Saint Petersburg has managed to create a powerful economic basis which helped mitigate negative effects of the crisis. Swift implementation of a set of anti-crisis measures had certain positive effect. The main activities aimed at overcoming the consequences of the economic and financial crisis (approved by the Government of Saint Petersburg) were launched in April 2009.

**Saint Petersburg entered the seventh development stage in 2010.** It is characterized by the efforts to overcome the effects of the global crisis, gradual recovery of economic growth rates and enhancement of citizens' standard of living. According to the results of 2010, industrial production grew by 9.4%, revenues of consolidated budget – by 9.9%, investment in fixed capital – by 6.4% [5, pp. 139-191]. The achievement of sustainable development is promoted by the significant potential accumulated during the period of extremely favorable external conditions for the city's development. This fact made it possible, in comparison with the 1990s and early 2000s, to make a significant step forward in attracting investment and in integration into global economy. However, due to the impact of global financial and economic crisis, a number of important economic development parameters in 2009–2010 turned out much worse than in the pre-crisis period of 2000–2008.

Some effects of the crisis still linger. In 2011–2013 there was a sharp slowdown in the city's development. In 2011, GRP of Saint Petersburg grew by 8.3%, in 2012 – by only 4.3%. The index of industrial production increased by 13.3% in 2011, and by 4.1% in

2012. By the end of 2013 the total volume of industrial production has decreased in comparison with 2012 (according to preliminary estimates) by 1.2%. Investments in fixed capital declined by 13% in 2011 and by 7% in 2012 [5, pp. 139-191; 7].

In the coming years Saint Petersburg is unlikely to reach the same high rates of economic growth, as in 2001–2008. Attention in this period should be focused on technological modernization, economy restructuring and achievement of significant qualitative results in the city's development. It is necessary to implement a long-overdue transition to innovation development and to enhance the indicators of human capital, the tasks that are set out regularly as development objectives in urban planning documents.

**This periodization of Saint Petersburg's socio-economic development allows us to match the stages of the city's development with the periods of validity of corresponding planned documents and with the general evolution of Saint Petersburg's planning system in the post-Soviet period.** Did the planning have any impact on the development of the city or it was going on under the influence of more powerful factors?

The multidirectional plans of 1990–1994 can be highlighted as the first period. The first post-Soviet concept for the development of Saint Petersburg dates back to the end of the Soviet period, and it was published as a working document of the Committee for Economic Reform under the Executive Committee of Lensovet in the beginning of 1991 under the title “**Feasibility study and socio-economic substantiation of the Leningrad free enterprise zones**”. The

document contained the analysis of the state of urban economy and alternative possibilities of its development with the assessment of prospects for the period up to 2000.

Three strategies of the city's socio-economic development were considered as alternatives; they varied according to the degree of integration into the external market: from an open, export-oriented strategy, to an almost closed one. The authors showed quite convincingly that it is the degree of openness that is the determining factor in the formation of the sectoral structure of economy and the depth and nature of the reforms that the city requires. The document made a choice in favor of an open strategy. This strategy opened up certain opportunities for some industries, tourism sector, and for the development of the city as a major transport center; the strategy also facilitated the emergence of modern trading and storage facilities, communication systems and information services, financial and advisory services, providing a basis for modern economy.

The document became the subject of wide public discussions typical of that period. It was, in fact, a program for economic policy of the city administration elected in 1990; it was set out in the **“Program of actions of the Executive Committee of Lensovet under crisis conditions”**. The document focused on the development of foreign economic relations and private business. The dominance of the private sector, which required the launch of privatization, was recognized as a necessary condition for successful development of the city's economy. The main task was to create a stable and strong tax base, to attract private,

including foreign, investment in the sectors that were traditionally funded by the state, to promote labor-intensive industries in the services sector. Target social programs were to be implemented.

The issues of the city's economic development were considered in a number of independent studies. In particular, in April 1991, the French bank “Lazard Frères Banque” presented a report “The concept for regional development of the Leningrad advanced economic zone”. In November–December 1991, the British company “Coopers & Lybrand” and Leontief Centre with the participation of the Scottish Regional Development Agency conducted a research resulted in the publication of “The business plan of a free enterprise zone in Saint Petersburg”. These works are interesting because they are an example of involvement of Western specialists in the elaboration of the strategy for Saint Petersburg. They supplemented, developed and formulated new ideas of the city's development.

The implementation of strategic programs developed by the city depended to a great extent on the policy of federal authorities. Therefore, when in 1992 market reforms in Russia slowed down, the hopes for a swift realization of the plans, which conformed to the interests of residents and city authorities, vanished. They could not be carried out due to weak political influence of supporters of radical reforms and, consequently, due to the lack of proper legislation and pro-inflation selective economic policy, and also due to general political instability and unpredictability of central government policy on the whole.

Another attempt to work out city development prospects, which was comparable in scale and significance, was undertaken by the Committee on Economic Development under Saint Petersburg Mayor's Office in 1993 and resulted in the release of an extensive (400 pages) program "**Saint Petersburg–2000**" for official use only. This program was designed to provide a package of anti-crisis measures, outline strategic directions for the city's development and specific tasks of city policy up to 2000.

The authors focused on the active economic policy carried out by the city administration and on strong government regulation. Sectors such as industry, transport, communication and information, culture, science and education, tourism, and financial sector were named as the priorities for the city's development. In general, the program proved to be cumbersome and non-uniform. Statements on liberal market contained in the preamble were not disclosed in the main sections. The proposed implementation mechanism turned out unworkable. Due to reorganization processes inside the Mayor's Office, the work on the program remained unfinished.

Leontief Centre participated in the work in 1993 at the stage of elaborating the concept for this program; the Centre released a report "**Elaboration of the program for socio-economic development of Saint Petersburg up to 2000**". This document set out the ideas of liberalization of the city economy, promotion of the private sector, reduction of the sphere of direct government intervention in economic life more clearly and consistently.

The analysis of the developments that were carried out in the early 1990s allows us to state that Saint Petersburg authorities understood the importance of the strategic vision of the future city very well. The implementation of strategic plans of the city authorities was impeded by inefficient relations with the central authorities. The development of Saint Petersburg is inseparable from the whole country and it depends on the twists and turns of the federal policy. The implementation of radical variants of rebuilding relations with the center in the framework of the strategy of creating a free zone turned out impossible and then unnecessary. The main disadvantages of strategic developments of that period were: vagueness of the ideas about the goals of the development and mechanism of using the strategy in the system of city management, insufficient transparency for the city community, and incompleteness. These shortcomings were overcome in the next period.

**1996–1998** can be distinguished as the **second period**, when "The strategic plan of Saint Petersburg" was developed and its initial implementation stage began. The preparation of the plan became the first full-scale experience of application of a new technology of communicative territorial planning in Russia. The work was carried out in 1996–1997 with the methodological supervision of Leontief Centre. The emphasis was placed on two aspects.

First, the abandonment of quantitative specification and complexity, which are traditional for the Soviet planning, in favor of concentrating on essential features

for survival, adaptation and sustainable development of the city in a competitive market environment.

Secondly, the inclusion of stakeholders into the planning process, and organization of an agreement between them that concerns the future of the city in the framework of multilateral and constructive dialogue between business, authorities and society.

A special organizational structure based on 14 thematic commissions was created for the elaboration of the plan. The commissions consisted of the city administration officials, representatives of business, research institutions and public organizations. During the preparation of the Strategic Plan the following activities were carried out: three representative surveys of citizens, more than 50 meetings, 15 public meetings of thematic commissions and Expert Council, three city-wide conferences, which were attended by almost two thousand people. The web-site of the project was maintained and updated. The plan contained a minimum of the number of quantitative landmarks – about ten integral indicators. The plan's validity period was not defined, since it was assumed to be updated on a regular basis. 2003, the year, when Saint Petersburg celebrated its 300th anniversary, was marked as the first interim milestone. Strategic plan of Saint Petersburg did not have the status of a legal act; it was adopted in the form of an agreement of public consent, it was signed by 144 members of the specially established General Council headed by the Governor of the city [8, pp. 16-18].

In 2002 the results of the five years of implementation of the Strategic Plan of Saint Petersburg were summed up; they

showed that 75% of planned measures were being implemented successfully. The creation of the Strategic Plan was undoubtedly beneficial to the city. The plan improved the business image of Saint Petersburg, facilitated the receipt of World Bank loans and technical assistance grants. The plan changed management culture, helped create a space for open discussions between the authorities and society on the issues of strategic significance, defined the directions, which were followed by the city administration and its main partners and which were embodied in actual large-scale projects. Such projects include the construction of the ring road, development of Big Port Saint Petersburg, reconstruction of the city's historic center, and preparations for the 300th anniversary of the city and so on.

**The third period covering 2002–2003 was associated with the elaboration of the Concept for socio-economic development of Saint Petersburg until 2025.** The preparation of a long-term Concept for socio-economic development and the new General Plan of Saint Petersburg started simultaneously in 2002. The Concept was to replace the Strategic Plan of Saint Petersburg. The General Plan was to replace the document of the same name adopted in 1987, which concerned Leningrad and the Leningrad Oblast for the period up to 2005. For the first time in the recent history of the city, the development of two important documents on socio-economic and urban planning was conducted in synchronous mode, using coordinated methodological approaches and integrated information-analytical basis.

The preparation of a draft long-term Concept was completed in the second half of 2003. By this time a long-term forecast and the Main Provisions of the concept of the General Plan of Saint Petersburg had also been ready. These documents were approved by public authorities of Saint Petersburg and went through public consultation. Due to several organizational reasons, the Concept did not immediately obtain the status of a legal act (it was approved by the decision of Saint Petersburg Government in July 2007). Nevertheless, both the Concept and the forecast were used in the daily work of public authorities and scientific and expert community of Saint Petersburg.

**The fourth period that covered 2004–2007 was marked by the formation of the system of state planning of Saint Petersburg.** At the end of 2003 it was decided to create a system of state planning that would include several interconnected program-planning documents determining the quantitative parameters of the city's development. In March 2004, the City Government approved "The regulations on organization of activities of executive bodies of Saint Petersburg in the sphere of state planning". The Regulations defined state planning as a set of measures for the development, adoption and implementation of program-planned legal acts in order to ensure sustainable socio-economic development of Saint Petersburg.

The planning system, which had been formed, turned out to be cumbersome and internally inconsistent. Difficulties with its implementation emerged immediately after its adoption. In 2004, the preparation of the following documents was started: "The

program for socio-economic development of Saint Petersburg for 2005–2007", "The provisional list of standards of living", "The goals, objectives, main activities and indicators of efficiency of performance of executive state authorities of Saint Petersburg aimed at ensuring the regulations of the standards of living". Initially, the Program for 2005–2007 was seen as a voluminous document containing a detailed analysis of the situation, results, tendencies, problems and prospects of development, a summary of the main goals and objectives, means to achieve them and results expected.

However, it turned out that such a Program was extremely difficult to coordinate with all the interested state authorities of Saint Petersburg. As a result, it was cut down substantially, and was submitted for consideration and approval in the form of a very short document (5 pages). It contained the main goal, objectives, targets and their values. The implementation period of the Program in the process of its finalizing was extended for one year (until 2008).

The work on modifying the system of state planning and on updating the long-term Concept and providing it with the status of a legal act has begun in 2006. In the end, the system of state planning has undergone significant changes in the direction of simplification and greater adaptation to existing realities, which was legally established by the approval of the Concept and the new provisions on state planning (Resolutions of Saint Petersburg Government of July 20, 2007 No.884 and No.885). The number of constituent documents of the planning system was reduced to five. Two of them (the

Concept and the General Plan) are adopted for the long term, the other two (the Program and the Budget Law) – for the medium term, and one (the Annual Address of the Governor to the Legislative Assembly) – for the short term.

Even after the introduction of the above modifications, the planning scheme that was formed in Saint Petersburg in 2004–2007 bore the “birthmarks of socialism”. The work on planning and reporting became in many ways an end in itself, occupying a substantial part of the working hours of officials. The validity of quantitative indicators remained doubtful, forecasting was reduced to extrapolation, and the connection between activities and objectives was far from obvious. The planning process became more closed, a dialogue with the public was minimized.

**The fifth period (2008–2012) was connected with the attempts to modernize the system of public planning.** “The Program on socio-economic development of Saint Petersburg for 2008–2011” was prepared in connection with the implementation of the Program on socio-economic development for 2005–2008; the former was approved in 2008, retaining the current format. At the end of 2011, the set of documents on state planning was modified once again. It included: the forecast of socio-economic development; the program on socio-economic development; the main directions of activity of Saint Petersburg Government; the list of indicators of socio-economic development of Saint Petersburg, which included objectives, indicators of tasks fulfillment, and standards of living.

The list of the documents contained neither the concept, nor the strategic plan. Nevertheless, the work on updating the Concept continued. Since 2008 the attempts were made to revise it according to the RF President’s instructions to all the RF subjects that they should have documents that adhered to the Concept for long-term development of Russia till 2020 and that were calculated for the same period (up to 2020). The revised draft Concept that had been prepared and passed in 2009 the procedure of public discussions contained the necessary amendments while preserving the format and ideology of the document. However, it was suspended at the stage of coordination due to another change of leadership in the City Committee in charge of economic development. The new head offered to introduce radical changes into the format of the Concept on the basis of Western standards, to make the document bright, concise and focused on a small number of priorities.

The new Concept was worked out over two years, it was subject to a number of formal and informal discussions and was approved by the City Government in March 2012. The Concept was modified substantially in the course of its elaboration, the results of Internet polls were also taken into consideration in this respect. At the same time, its main parameters, such as conciseness and a limited number of priorities, were preserved. The latter include urban environment and transportation, education, culture, healthcare, and urban land improvement. It is important that the document highlights the issues concerning the quality of living in the city, rather than its economic specialization.

**The sixth period in the evolution of the state planning system in Saint Petersburg started in 2013.** Its initial stage was marked by the creation of the Committee for Economic Policy and Strategic Planning in the structure of Saint Petersburg state executive authorities. In 2013 in the framework of the activities of this Committee some proposals were prepared concerning the improvement of the system of state planning; besides, the project “The Strategy of Saint Petersburg: priorities and targets for economic and social development up to 2030” (hereinafter – the Strategy) was elaborated. Scientific and educational institutions, economic entities associations, and public organizations of Saint Petersburg took active part in public discussions on the project.

The Strategy contains the main conclusions of the analysis of development of Saint Petersburg, the priority directions of the city’s development, the mission, functions, vision of the future, provision with resources, the system of goals, and implementation mechanism.

The main goal is the sustained improvement of the quality of life of citizens and enhancement of global competitiveness of Saint Petersburg based on the implementation of national development priorities, provision of sustainable economic growth and use of the results of innovation-technological activity. It is planned to give the Strategy the status of a state planning document (after its approval by Saint Petersburg Government), and also to make it an agreement of public consent (after it is signed by all the interested parties to the corresponding agreement). Thus, this document will improve mutual understanding

between the authorities, on the one hand, and business, public organizations and population, on the other hand.

The Strategy will become the central link in the system of state planning. It is proposed to include other documents, together with the Strategy, into a package of documents on state planning of Saint Petersburg; they are: The Main Guidelines for the Implementation of the Strategy (economic policy), The Program for Socio-Economic Development, The Comprehensive Plan to Implement the Program, Sectoral Concepts and state programs.

The research into the specifics of functioning of Saint Petersburg economy and the evolution of its state planning system shows that external conditions have a decisive influence on the results of the city’s development. These include, first of all, the state of the global and Russian economies, and the specifics of the public socio-economic policy. These parameters determine the basic vectors of development of Saint Petersburg. The elaboration of urban strategic, conceptual and other program-planning documents does not have any significant impact on the development of the city so far.

In Saint Petersburg the cycles of updating the program-planning documents and changing the approaches to planning are set rather from the outside and are associated with the changes in external conditions. The aggravation (improvement) of the situation in the country’s economy or certain new trends in Russia’s government policy cause a feedback on the level of management of socio-economic development of Saint Petersburg.

The changes in the approaches to strategic planning become part of this feedback. The content and basic approaches to planning in Saint Petersburg vary in accordance with the external environment. Sharp aggravation of crisis phenomena (the beginning of the autumn of 1998 and 2008) is accompanied by the development of emergency plans and programs.

Stabilization and improvement of the situation in the Russian economy contributes to the transition to a long-term and more comprehensive planning. For example, the launch of administrative and budget reforms in Russia facilitated the works on the creation of state planning system in Saint Petersburg in 2004.

The global financial and economic crisis, which brought ardent planners down to earth, was a factor that simplified the system of state planning in Saint Petersburg in 2011–2012 and served as an incentive to make public participation in the development of future plans more extensive.

These external factors are complemented by internal ones, among which we should name, first of all, political cycles and the change of heads of the city or committees responsible for economic development, which is confirmed by the chronology of changes of the planning documents and planning system of Saint Petersburg in 1992–2011.

The reasons and causes for changes in plans and the twists and turns of the approaches to planning in Saint Petersburg did not differ essentially from the obvious set of factors stimulating administrative activities:

- ambition and will of the head of the city, ambitions and career plans of the heads

of the economic subdivision of the administration;

- desire to utilize budget funds, which is enhanced by advisory firms, specializing in planning services;

- pressure from above in the form of direct or indirect (seminars, methodological recommendations) schemes aimed at boosting the city authorities activity on the development of plans of certain types from the relevant ministries (the Ministry of Economic Development of Russia, the Ministry of Regional Development of Russia);

- information on the presence of such documents in competitor cities in Russia and abroad.

Long experience of observing the practice of strategic planning in various cities leads to the conclusion that the main value of planning lies in the openness of this process. The dominance of bureaucracy, transformation of the plan into an end in itself, keeping business and society away from the process make the planning a waste of time and justify the existence of officials and their advisers. It is useless trying to make a comprehensive and detailed plan of city development. It is more important to turn strategic planning into a public institution that will make it possible, through multilateral dialogue, to involve experts and society in the planning process, to achieve improvements in economic climate, growth of cooperative capital of the city, and improvement of managers' qualification. Such planning has a greater positive impact on development than the administrative struggle of officials for influence and finances, the struggle that is interesting only to themselves.

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## Single-industry towns of the Russian Arctic: development strategy on the case study of the cities/towns in the Murmansk Oblast\*



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**Abstract.** The article is devoted to the problems of strategic management of single-industry towns' development in the Russian Arctic. It presents brief characteristics of the government policies in relation to single-industry towns of the Russian Federation as a whole, and, particularly, of its Arctic zone. On the example of single-industry towns of the Murmansk Oblast it studies strategies of their development, typical problems to shape and implement strategic development plans.

**Key words:** single-industry towns, the Russian Arctic, development problems, city-forming enterprises, strategic planning, comprehensive investment plans.

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## Introduction

A specific feature of the Russian Arctic is the presence of a large number of mono-towns – urban settlements with the dominant position of one or several technologically related enterprises, i.e. a single-industry structure of the economy.

Under the conditions of the market economy and globalization, characterized by significant market fluctuations and periodic crises affecting the entire industries and countries, the risks concerning sustainable socio-economic development of single-industry towns are especially high. This happened in Russia during the 2008–2009 global financial and economic crisis. It is the aggravation of the crisis situation in many Russian monotowns in this period that attracted the attention of federal authorities to this issue for the first time. In 2009 the Government of the Russian Federation has taken a number of measures aimed to address the socio-economic problems of single-industry towns within the framework of an anti-crisis program: a special interagency commission was established; the criteria of monotowns were worked out; the official list of single-industry settlements, which can be provided with government support, was made; the list of the most problematic single-industry towns (their number was 27) requiring priority support measures was compiled [2, p. 13].

In the framework of the federal government measures, a decision was adopted, according to which it is necessary for single-industry towns, applying for financial aid from the federal budget, to work out comprehensive investment plans (CIP) for their modernization. This became a powerful external

stimulus for the introduction of strategic planning in such cities.

This article gives a brief characteristic of single-industry towns in Russia and its Arctic zone, the general state of affairs in them, analyzes the state policy in relation to single-industry towns in the Russian Federation in general and especially to those that are located in its Arctic regions. By example of the Murmansk Oblast single-industry towns and using the *case study* method, we examine development strategies of the Arctic monotowns in the Russian Federation, identify and analyze the main common problems in the development and implementation of strategic plans for long-term development of single-industry towns in the Russian Arctic.

### **Single-industry towns in Russia and its Arctic zone, and the government policy in their respect**

The criteria of single-industry settlements are of key importance for Russia's public policy with regard to single-industry towns, which concerns, among other things, the provision of targeted financial support from the government. The criteria, first adopted by Russia's Ministry of Regional Development in 2009, included the following: (1) the share of people working at one backbone enterprise or group of enterprises linked by a single technological chain is at least 25% of economically active population; (2) the production output of such enterprise or group of enterprises is not less than 50% in volume of shipped production of this settlement [6].

We note that according to the decision of the Government of the Russian Federation, adopted in December 2013, the authority in coordinating the activities for development

of single-industry towns is vested in the Ministry of Economic Development of the Russian Federation. Currently, the Ministry intends to change the criteria of single-industry settlements that can be provided with federal support. In particular, it is proposed to retain only the criterion of employment; this will cause significant reduction in the number of single-industry towns included in the official list [1]. However, by the time of writing this article (May 2014) new criteria have not been adopted.

In accordance with the specified criteria, Russia's Ministry of Regional Development first compiled a list of Russian single-industry towns in 2009. It includes 358 settlements. The last List of July 26, 2013 comprises 342 settlements [13]. 18 monotowns from the List are located in Russia's Arctic zone, a new composition of which has been recently established by the Presidential Decree of May 2, 2014<sup>1</sup>. The total number of urban settlements in the Russian Arctic is 71, out of which the share of single-industry settlements is 25.4%, while the national average indicator is 14.1%<sup>2</sup>. It means that the share of single-industry settlements in the Russian Arctic is almost twice higher than the national average. This proves the urgency of the issues of monotowns for the macro-region of the Russian Federation [14, p. 35]. If we look at the regional distribution of monotowns in the Arctic zone of Russia, we see that most of them (eight settlements, or almost

half of their total number) are located in the Murmansk Oblast.

Development risks typical of all single-industry towns in Russia under the Arctic conditions are aggravated by additional adverse factors such as extreme climate, remoteness from economic centers, underdeveloped transport, engineering and social infrastructure. These factors raise the cost of living and expenses of local budgets, exacerbate social problems and constrain the development of entrepreneurship and innovation [16, pp. 21-24; 3, pp. 58-59]. For resource-based single-industry towns of the Arctic one of the main risks lies in the possible depletion of resources, threatening the shutdown of the main enterprise followed by the decay of the city.

The impact of these adverse factors leads to the tendency towards a significant population decline in most of the monotowns of the Russian Arctic, which also indicates the presence of socio-economic problems. Since the beginning of market reforms (from 1990 to 2013) the population in the cities and towns of the Russian Arctic included in the 2013 List of Russia's Single-Industry Towns, has declined by almost 30%, i.e. by about 300 thousand people. Single-industry towns in Yamalo-Nenets Autonomous Okrug and town-forming enterprises of the oil and gas industry are the only exception. High profits of oil and gas companies provide a relatively better socio-economic situation in the regions and cities, where such enterprises are located. A more detailed description of the current socio-economic situation and, in particular, social problems of the single-industry towns of the Russian Arctic is presented in the article published

<sup>1</sup> *O sukhoputnykh territoriyakh Arkticheskoi zony Rossiiskoi Federatsii: Ukaz Prezidenta RF ot 02.05.2014 № 296* [On the Land Territories of the Arctic Zone of the Russian Federation: the Decree of the RF President of May 02, 2014 No. 296]. Available at: <http://www.kremlin.ru/acts/20895>

<sup>2</sup> The number of urban settlements in Russia in 2009 was 2417 [10].

according to the findings of the study carried out with the participation of the authors in 2013 [14].

The financial support for the implementation of investment plans that were submitted on a competitive basis by applicant monotowns has been the main tool in Russia's public policy aimed to resolve the issues of single-industry towns; this tool has been applied by the Government in the framework of the anti-crisis program since 2009.

An applicant monotown should have a comprehensive investment plan (CIP) worked out in accordance with the methodological guidelines of the Ministry of Regional Development of Russia, it was a mandatory condition for the earmarking of targeted federal investments. CIP is a strategic planning document, because, in accordance with the guidelines, it should cover a period of more than ten years and include an in-depth analysis of the socio-economic and financial situation in the single-industry town using the SWOT-analysis methodology, elaboration of objectives and priorities for future development, as well as a mechanism for their implementation.

In 2010–2011 almost all the Arctic monotowns in the Russian Federation developed CIPs thus fulfilling one of the main conditions for receiving state support to implement them. Russia's federal budget allocated funds to 50 single-industry towns in 2010–2011 (to 35 towns in 2010 and to 15 towns in 2011); however, only three of the Arctic single-industry settlements actually received support: the town of Kovdor, urban-type settlement of Revda in the Murmansk Oblast and the city of Severodvinsk in the Arkhangelsk Oblast [14].

In spite of a reasonable approach to the conditions of allocation of state support for single-industry towns providing for a necessity to proceed from the principles of strategic planning and management of their development, the organization of the process and practical implementation of the plans in most cases did not ensure the implementation of these principles.

Here we mean the following circumstances. First, the government authorities demanded that monotowns submitted CIPs on short notice without giving them the necessary time for preparation (especially those monotowns that were included in the list of the 27 most problem-plagued settlements that were to do it in only a couple of months). Obviously, it was impossible in such a hurry to ensure involvement of all interested parties in the strategic planning process and wide public participation, which should be an important part of strategic planning. Second, Russian municipalities, due to the current system of tax and budget regulation in the country, are very limited in their economic self-sufficiency. This does not allow them to define and implement the directions of promising development and, to a great extent, current functioning, because more than half of their budget is often formed by state grants and subsidies.

Third, the methodological recommendations of the Ministry of Regional Development of Russia on the elaboration of the comprehensive investment plan of a single-industry town applied an excessively theorized approach (especially in the calculation of the balance of cash flows and capital of monotowns) that did not fully take into account the real situation on the ground.

This led to technical difficulties in the preparation of CIPs due to the absence of the necessary information base at the municipal level and practice of such calculations.

Consequently, fewer opportunities remained for the implementation of other major components of strategic planning – the coordination of the positions of interested parties, public discussion, etc.

As a result, an essentially positive process of implementation of strategic planning in the Russian monotowns initiated “from above” in the framework of public policy to support them, became largely formal. In most cases the process was focused more on the preparation of the document and its submission in time, and less – on the elaboration of a substantial development strategy. In addition, single-industry towns and regional authorities often turn the process of drafting of CIPs into a kind of “hunting” for federal budget funding. However, the first experience of strategic planning has

been useful for many single-industry towns. It made it possible to analyze the potential development of single-industry towns, to identify priorities for further development, and to evaluate the need for resources for the implementation of projected plans.

#### **The strategy for development of single-industry towns in the Murmansk Oblast: the content and implementation issues**

The Murmansk Oblast has the largest number of single-industry towns in the Russian Arctic – eight out of the eighteen included in the official List (*tab. 1*).

In 2009 two monotowns of the region, Kovdor and Revda, were included in the list of 27 Russian single-industry towns that have the most difficult socio-economic situation. These settlements were the first ones, for which the comprehensive investment plans were elaborated and submitted to the interdepartmental commission for single-industry towns under the Government of the Russian Federation. The Murmansk Oblast Ministry of Economic Development provided

Table 1. Single-industry towns in the Murmansk Oblast (extract from the List approved by the Order of Ministry of Regional Development of Russia dated July 26, 2013 No. 312)

No	Town	Population (as of January 01, 2013)	Backbone enterprise
1.	Kirovsk	30484	OJSC Apatit
2.	Kovdor	20515	JSC Kovdorsky GOK (Kovdor Mining and Processing Works)
3.	Monchegorsk	47357	OJSC Kola Mining and Metallurgical Company
4.	Polyarnye Zori	17506	Branch of Rosenergoatom Concern OJSC Kola Power Plant
5.	urban-type settlement Tumanny	681	Serebryanskiy HPPs cascade of the branch Kolsky, JSC TGC-1
6.	urban-type settlement Zapolyarny	15800	Structural units of OJSC Kola Mining and Metallurgical Company
7.	urban-type settlement Revda	8101	JSC Lovozersky GOK (Lovozersk Integrated Mining and Processing Plant)
8.	urban-type settlement Nikel	12750	OJSC Kola Mining and Metallurgical Company

Source: Official website of the Ministry of Regional Development of the Russian Federation. Available at: <http://www.minregion.ru/upload/documents/2013/08/160813-p-m-1.pdf>

considerable support to the municipalities in the preparation of these documents with the involvement of research associates from the Institute of Economic Problems, Kola Science Center of RAS (Apatity). Comprehensive investment plans of the single-industry towns Kovdor and Revda successfully passed the competitive selection that allowed them to receive financial support from the federal budget for the implementation of the plans<sup>3</sup>. In 2010–2011 the rest of the towns in the Murmansk Oblast also prepared their own comprehensive investment plans and submitted them to the commission under the RF Government. However, none of them was supported at the federal level.

The content of the strategies for development of single-industry towns in the Murmansk Oblast, set out in CIPs, was formed under the influence of the requirements of the “Methodological recommendations on the preparation and implementation of comprehensive investment plans for the development of single-industry settlements” of Russia’s Ministry of Regional Development [9]. They envisaged the necessity to develop the entire range of elements of a strategic document, including in-depth analysis of the socio-economic situation; risk analysis; development scenarios; a system of objectives with indicators, timeframes for their achievement and decomposition into sub-goals; a complex of measures (projects) and also a system of managing the implementation of the comprehensive investment plans.

<sup>3</sup> Federal funds were allocated, as a rule, to the objects of engineering infrastructure contained in CIPs. Available at: <http://asninfo.ru/se/article/37759>

Despite the fact that the recommendations are theoretically correct, their practical application has proved very problematic for municipalities. This was mainly because the recommendations gave too much attention to the analysis of financial flows in the diagnostic part of the CIP.

In particular, they stipulated the necessity to calculate the balance of payments for each of the seven groups of counterparties of the monotown (backbone enterprise, population, local government and others), to estimate the dynamics of the capital of the monotown, and combine the results of these calculations. In addition to the technical complexity of the recommended methodology of analysis, the practical advantage of its results is questionable, since the reliable initial data for such calculations are virtually unavailable to municipalities. The comprehensive investment plans developed by the single-industry towns in the Murmansk Oblast used the recommendations on the analysis of financial flows in a simplified form; nevertheless, they executed the sections of goal setting and planning for their implementation at a rather high level.

The analysis of the strategies for the development of single-industry towns in the Murmansk Oblast, as set out in their CIPs, showed that, despite their diversity due to peculiarities of each town, they have several common and typical features.

First, it is their focus on reducing the risks of dependence on economic activities of the backbone enterprises through diversification of the town’s economy. The most common way to diversify the monotowns in the Murmansk Oblast is to develop small and medium businesses, especially in the tourism sphere.

Second, it is the presence of modernization and the diversification of the activities of the city-forming enterprise itself. In most cases, CIPs contained the projects for reconstruction and modernization of production facilities planned by the backbone enterprises themselves for the purpose of enhancing their productivity, reducing costs and developing new technologies and products. In some cases, backbone enterprises initiated the projects aimed not only to diversify their major production, but also to develop new activities, thus contributing to the diversification of the towns' economies.

Third, all the plans stipulated the improvement of the urban environment, development of social, engineering and transport infrastructure, enhancement of the standard of living and quality of life of the local population.

However, most of the comprehensive investment plans of single-industry towns in the Murmansk Oblast for the period up to 2020 retain the dominant role of backbone enterprises in the economies of monotowns. Of all the cities and towns in the oblast, only the town of Revda, one of the three single-industry towns in the Russian Arctic, which received federal financial support, focuses its development strategy on the diversification of production in the foreseeable future. The development strategy of the town of Revda stipulates that by 2020 the share of people employed at the backbone enterprise (Lovozerky GOK) in the total number of working-age population of the town will have decreased to 9% (from 13.9% in 2009), while the share of shipped products of the backbone enterprise in the city-wide volume will have decreased to 40% (from 60.2% in 2009). Such

results are planned to be achieved through the development of small and medium business primarily in the tourism sector [8, p. 43].

The Murmansk Oblast organized the work on the regional level with the monotowns that did not receive support from the federal budget. The working group on modernization of single-industry settlements was created under the Murmansk Oblast government to coordinate the implementation of CIPs of single-industry towns within the opportunities available at the regional level. They include the funding of investment projects on a competitive basis, promotion of small and medium business in single-industry towns and other measures within the framework of existing regional programs. However, the influence of the regional government on the implementation of CIPs in single-industry towns is very limited. This is caused mainly by the fact that the need for funding in the implementation of the measures set out in CIPs, as a rule, exceeds to a great extent the capacity of the regional budget.

*Table 2* provides the data on the volume and structure of investment sources that were planned in the CIPs of the four single-industry towns of the Murmansk Oblast.

As we can see from the above data, the volume of planned investments for these single-industry towns ranged from 1.6 billion rubles (for Revda) to 37.7 billion rubles (for Monchegorsk). At that, the share of planned funding for this purpose from the regional budget did not exceed 8.6%, and that from the municipal budget – 1.6% (for Kirovsk) of the volume required. On this basis, the investment strategies of the Murmansk Oblast monotowns were focused mainly on attracting extra-budgetary sources (own

Table 2. Planned size and structure of financing sources for Comprehensive Investment Plans of the single-industry towns in the Murmansk Oblast

Planned sources of investment	Kovdor		Revda		Monchegorsk		Kirovsk	
	Sum, million rub.	Share, % to the total	Sum, million rub.	Share, % to the total	Sum, million rub.	Share, % to the total	Sum, million rub.	Share, % to the total
Federal budget funds	6721.9	56.5	242.5	14.6	3765.4	10.0	2325.8	34.4
Regional budget	361.6	3.0	136.2	8.2	858.9	2.3	578.5	8.6
Municipal budget	45.3	0.4	25.2	1.5	166.4	0.4	107.9	1.6
Own funds of organizations, loans and other sources	4761.8	40.0	1254.0	75.6	32962.1	87.3	3752.8	55.4
<b>Total</b>	<b>11 890</b>	<b>100</b>	<b>1658.3</b>	<b>100</b>	<b>37752.8</b>	<b>100</b>	<b>6765.7</b>	<b>100</b>

Source: comprehensive investment plans for single-industry towns available at the official website of the Ministry of Economic Development of the Murmansk Oblast. Available at: [http://minec.gov-murman.ru/content/devel\\_city/sub06/sub04/](http://minec.gov-murman.ru/content/devel_city/sub06/sub04/)

funds of organizations and bank loans). Their share ranges from 40% in Kovdor to 87.3% in Monchegorsk. The monotowns pinned great hopes on financing from the federal budget. The share of funding from this source ranged from 10% (Monchegorsk) to 56.5% (Kovdor). As noted above, it was only Kovdor and Revda that received funding from the federal budget to implement their CIPs.

*Case 1. Kovdor and Revda: federal support have been obtained, but their own efforts are also necessary*

After a positive decision had been made concerning the provision of single-industry towns Kovdor and Revda with federal support for the implementation of CIPs, the regional Government developed and adopted long-term target programs (LTTP) for development of these monotowns<sup>4</sup> in 2010. They identify the activities and resources for the implementation of the programs for development of these single-industry towns, taking into account all the sources of funding (tab. 3).

<sup>4</sup> During the elaboration of the LTTP, the regional government made adjustments to the CIP concerning the scope of the projects and their funding.

When comparing the data in tables 3 and 2, we notice that for Kovdor the amount of funding required for the implementation of its CMP and subject to be received from the federal budget (tab. 2) is almost an order of magnitude lower than the amount that was actually allocated (tab. 3), as for the single-industry town of Revda, these sums of money are comparable. But given the fact that the amount of requested funding from the federal budget in the initial drafts of CIP for Revda, as in the case of Kovdor, was significantly higher than the amount that was subsequently allocated, we can say that public funding, as a rule, does not satisfy the needs of single-industry towns in implementing their plans to the full.

While drafting the development strategies and CIP, Kovdor was in a less difficult situation as compared to Revda, whose backbone enterprise Lovozersky GOK LLC is engaged in mining and processing of ores of rare metals.

Because of the problems in the distribution of their products and problems in management due to the change of ownership, the company

Table 3. Volume and structure of funding sources of the Murmansk Oblast long-term target programs for the development of single-industry towns Revda and Kovdor

Funding sources	Kovdor		Revda	
	In million rub.	In million rub.	In % to the total	In % to the total
Federal budget	541.92	205.05	13.0	10.6
Oblast budget	40.16	95.68	6.1	0.8
Municipal budget	10.43	16.79	1.1	0.2
Own funds of organizations	3392.74	1255.08	79.8	66.1
Bank loans	1150.00	-	-	22.4
<i>Total:</i>	<i>5135.25</i>	<i>1571.90</i>	<i>100</i>	<i>100</i>

Sources: *Postanovleniya Pravitel'stva Murmanskoi oblasti "Ob utverzhdenii dolgosrochnoi tselevoi programmy "Razvitie monoprofil'nogo gorodskogo poseleniya Revda Lovozerskogo raiona Murmanskoi oblasti" na 2010–2015 gody" ot 10.11.2010 №508-PP* [Resolution of the Government of the Murmansk Oblast "On the Approval of the Long-Term Target Program "Development of Single-Industry Urban Settlement Revda of Lovozersky District of the Murmansk Oblast" for 2010–2015" of November 10, 2010 No. 508-PP]; *"Ob utverzhdenii dolgosrochnoi tselevoi programmy "Razvitie monoprofil'nogo goroda Kovdora gorodskogo okruga Kovdorskii raion Murmanskoi oblasti" na 2010–2015 gody" (v redaktsii Postanovleniya Pravitel'stva Murmanskoi oblasti o vnesenii izmenenii №506-PP ot 4 oktyabrya 2011 g.) ot 10.11.2010 №509-PP* ["On the Approval of the Long-Term Target Program "Development of Single-Industry Town Kovdor of Kovdorsky Urban District of the Murmansk Oblast for 2010–2015" (as Amended by the Resolution of the Government of the Murmansk Oblast on the Introduction of Amendments No. 506-PP of October 4, 2011) of November 10, 2010 No. 509-PP].

found itself in a crisis economic position, which had a negative impact on the socio-economic situation in the city. As for Kovdor, one of its two companies that used to be its backbone enterprises, namely JSC Kovdorsluda, was in a deep crisis situation, while another company, JSC Kovdorsky GOK, which was generally successful, experienced temporary difficulties due to the impact of the global financial and economic crisis.

Development strategies of these two single-industry towns and, accordingly, the events set out in their CIPs included diversification of their economy and the activities of their backbone enterprises. Along with that, the list of investment projects scheduled for implementation on the territory of these single-industry towns included the construction and reconstruction of urban utility infrastructure. This part stipulated the allocation of funds of the federal co-financing of investments.

Currently the long-term target programs and CIPs of single-industry towns Revda and Kovdor are being implemented. Kovdor is more successful in the implementation of the long-term target programs. For example, a section of the main water conduit with a length of 3950 m has been built, and sewage treatment facilities have been replaced and reconstructed [11].

In 2012 in the framework of CIP, Revda developed design specifications and estimates on the objects of city infrastructure, and prepared tender documentation for projects of the tourist complex "Russian Lapland", which envisages the construction of seven tourist objects ("the Sami village", alpine ski complex "Alluaiv" and others) and creation of 362 new jobs.

However, in spite of the strong informational support of this competition in local and regional media, it was not held due to the lack of applications from investors [12].

In addition to the objective difficulties that caused a breakdown of the number of scheduled program activities and CIPs in Revda, there were also certain shortcomings in the implementation of the comprehensive investment plan at the city level. As a result, the Ministry of Economic Development of the Murmansk Oblast petitioned for the redirection of part of the federal funds allocated to the single-industry town Revda (118.1 million rubles) to the creation of the industrial Park in Monchegorsk [12], but the decision has not been made so far.

*Case 2. Monchegorsk: no federal support, the implementation of the plans requires investment*

Monchegorsk is the largest monotown in the Murmansk Oblast in terms of population. Its backbone enterprise is OJSC Kola Mining and Metallurgical Company, which is part of the holding group of MMC Norilsk Nickel. This company is backbone for another two monotowns of the Murmansk Oblast – urban settlements Zapolyarny and Nikel in Pechengsky District.

The “Comprehensive investment plan for the modernization of single-industry town Monchegorsk in the Murmansk Oblast” is the main document that defines the long-term development strategy of Monchegorsk [7]. Its first draft was developed and approved in 2010. The comprehensive investment plan was developed by the town’s Administration with the participation of the autonomous nonprofit organization “Kola Academic University” (Apatity). Subsequently, the document was updated twice, and its new versions were approved in 2011 and 2013, which indicates the interest of the city Administration in the implementation of the planned development strategy.

The set of targets in the CIP of Monchegorsk comprises the main goal and three subgoals. The main goal is “stable socio-economic development of the territory, provision of employment and enhancement of the standards of living” [7].

The subgoals include: (1) reduction of dependence of the city on its backbone enterprise; (2) improvement of the quality of life and comfort of the urban environment; (3) modernization of the activities of the city-forming enterprise. The main target indicators provided by the CIP, as well as the progress of their implementation, according to the town’s Administration, are presented in table 4.

As we can see from table 3, the target indicators of the CIP of Monchegorsk include the promotion of production diversification through the development of small and medium entrepreneurship. Already by 2012 it was planned to reduce the share of people employed at the backbone enterprise below the level, according to which a settlement is classified as monotown (25%), but the information about the actual implementation of this plan is not available yet. At the same time, according to the criterion “shipment of products”, it is assumed that the role of Kola Mining and Metallurgical Company as the backbone enterprise will remain virtually unchanged: the corresponding proportion was 96.7% in 2010; and according to the forecast in the CIP by 2020, it will decline by only 1.6 percentage points (to 95.1%)<sup>5</sup>.

<sup>5</sup> These figures are taken from the latest edition of the CIP adopted in 2013 [13]. In previous versions, including that available on the website of the Ministry of Economic Development of the Murmansk Oblast, the share of shipped products for the backbone enterprise were, obviously, calculated incorrectly (around 50%).

Table 4. Target indicators of the comprehensive investment plan for the modernization of single-industry town Monchegorsk

Indicator	Report					Forecast	
	2009	2011		2012		2015	2020
		plan	fact	plan	fact		
Share of people employed at the backbone enterprise in the number of able-bodied population, %	25.4	25.2	н/д	24.8	н/д	19.5	17.5
Share of people employed at small and medium enterprises in the number of able-bodied population, %	4.2*	17.1	9.9	18.8	8.5	19.4	20.2
Level of registered unemployment, %	4.8	2.4	2.6	2.3	2.3	1.3	1.1
Average monthly wages of employees, rub.	26 133	31 607	32 623	36 212	36 664	46 018	66 140
Number of small and medium enterprises, units	368	405	406	418	414	420	450

\* Share of people employed at small enterprises (excluding medium enterprises).

The indicator “proportion of employees at small and medium enterprises” is not only far behind the planned values, but it even decreased in 2012 compared to 2011. This suggests that the strategic objective to develop economic diversity in the town through the development of small and medium entrepreneurship is not implemented.

The comprehensive investment plan of Monchegorsk has the following “anchor” projects: the creation of an industrial park, construction of a plant for the production of grinding balls, establishment of a tourist industry complex.

The initiators of the project for creation of an industrial park in Monchegorsk were OJSC Kola Mining and Metallurgical Company and the town’s Administration. It is planned that this project will bring the greatest positive multiplier effect in comparison with other projects of the CIP. The industrial park project provides for the creation of a multifunctional industrial site to accommodate 20–30 small and medium enterprises on the basis of engineering and technological objects not used by the backbone enterprise.

However, despite the fact that the Murmansk Oblast Government is promoting this project, so far its implementation is still at the design stage, and the requests for support from the federal budget were not supported. Kola MMC, one of the project initiators, is not offering an adequate assistance in its implementation.

In general, though the quality of the CIP as a strategic planning document is rather high, its implementation is going on slowly. The main reasons are the lack of adequate financial support of the planned projects from the government (federal and oblast) and private actors (primarily OJSC Kola MMC).

This situation has led to a “cool” attitude of the town administration to the formation of the originally planned institutional mechanism for the implementation of the CIP: the council on its implementation was not established, neither were other bodies of organizational structure of management and monitoring of the plans.

*Case 3. Kirovsk: investment support is provided by the regional government and the backbone enterprise*

The town of Kirovsk is the second largest town in the Murmansk Oblast in terms of its population. It was founded in the early 1930s, during the period of Soviet industrialization, due to the development of apatite-nepheline ores in the Khibiny massif. The extraction and primary processing of the ore was carried out by the state enterprise Apatit (now OJSC Apatit, a part of PhosAgro Group) which became the backbone enterprise for the then rapidly growing town and its surrounding settlements.

A comprehensive investment plan for the modernization of Kirovsk was developed in 2010 among the first in the Murmansk Oblast, and submitted to the Ministry of Regional Development of Russia. Federal support for its implementation was not received. Development of the tourism industry was considered the main strategic direction of diversification of Kirovsk economy because the town has good opportunities for development of tourism, primarily, winter sports. Kirovsk has been famous throughout the country for its ski resorts since Soviet times. If they are upgraded, if the town develops modern infrastructure and new types of tourism, including year-round tourism, it will be a strong impetus for sustainable socio-economic development of the town. These directions of diversification form the basis for its development strategy and for the CIP of modernization of this single-industry town.

To date, despite the lack of federal support, certain progress has been made in the implementation of some of the planned projects. For example, the Murmansk Oblast Government and the city-forming enterprise OJSC Apatit participated as co-founders in the establishment of JSC

Kanatnaya Doroga (Aerial Cableway), which constructing a modern ski-lift near Kirovsk with a total investment of 406 million rubles and a completion date being 2015<sup>6</sup>. Thus, the backbone industrial enterprise is becoming one of the engines of diversification of the town's economy [15, p. 104].

However, along with achieved success, Kirovsk is facing new problems related to the implementation of a program of major changes in the internal organizational structure of OJSC Apatit that was launched in April 2013. The reorganization involves the dismissal of 2420 employees of the enterprise<sup>7</sup>. Taking this into consideration, in 2013 the Working Group on modernization of single-industry towns under the Federal Government Commission on Economic Development and Integration included Kirovsk into the new List of single-industry towns of the Russian Federation that have the most difficult socio-economic situation<sup>8</sup>.

These examples show that problems exist and they can occur in every single-industry settlement of the Murmansk Oblast, including those where the backbone enterprises are quite successful at present. This confirms the high relevance of the strategic approach to the management of the development of such towns. Strategic management envisages flexible response to the changes in

<sup>6</sup> The list of investment projects planned for implementation in single-industry municipalities in the Murmansk Oblast. Available at: [http://minec.gov-murman.ru/opencms/export/sites/mineconomy/content/devel\\_city/sub06/6/1.pdf](http://minec.gov-murman.ru/opencms/export/sites/mineconomy/content/devel_city/sub06/6/1.pdf)

<sup>7</sup> Information about socio-economic status of single-industry territorial formations of the Murmansk Oblast (Kirovsk). Available at: [http://minec.gov-murman.ru/content/devel\\_city/sub06/sub03/](http://minec.gov-murman.ru/content/devel_city/sub06/sub03/)

<sup>8</sup> Official website of the Ministry of Regional Development of Russia. Available at: [http://www.minregion.ru/uploads/attachment/documents/100913/100913\\_p\\_1.pdf](http://www.minregion.ru/uploads/attachment/documents/100913/100913_p_1.pdf)

environmental factors; it helps to find timely responses to new challenges and threats to their development.

At the same time, practical implementation of strategic management in single-industry towns of the Russian Arctic requires certain economic and institutional conditions, which at present are, in most cases, poorly developed in Russia in general and in its Arctic zone in particular. Institutional problems in the implementation of the strategies are associated with underdevelopment of formal and informal institutions necessary for successful strategic management. The underdevelopment of formal institutions is manifested in the weakness of legal and methodological support to this process. For example, the draft Federal Law “On the state strategic planning”, the discussion of which has been going on for several years, has not been adopted so far (in November 2012 it was reviewed by the State Duma in the first reading). Informal institutions are underdeveloped, particularly with regard to the availability of necessary cooperation networks of municipal, public and business structures. In addition to institutional factors, the level of human development (knowledge and experience of interested parties involved in the drafting and implementation of strategies) is also crucially important; however, it is usually not high enough [see, e.g., 4, 5].

### Conclusions

Analysis of strategic planning in single-industry towns of the Russian Arctic exemplified in the case of the Murmansk Oblast allows us to formulate the following conclusions.

1. The process of elaborating the strategies for the development of single-industry towns

in the Russian Arctic was initiated in 2009 by the federal authorities, i.e. the approach “from above” was applied. The fact that the Federal Government turned its attention to the problems of single-industry towns is very positive. However, the haste, with which the development of strategic planning documents of single-industry towns (comprehensive investment plans – CIPs) was organized, and the flaws in the methodological recommendations of Russia’s Ministry of Regional Development related to their elaboration in many cases did not contribute to the drafting of high quality strategies.

2. Although there is no doubt that certain benefit was obtained in the process of developing strategic documents of single-industry towns (their development potential was analyzed, priorities of their development were defined, need for resources to implement the plans was estimated), their implementation is still hampered by a number of problems of economic and institutional nature.

3. Economic problems in the implementation of strategies for single-industry towns in the Russian Arctic are connected, first, with insufficient provision of municipalities with resources (mainly financial), which hampers the realization of their development prospects; and second, with insufficient participation of the government authorities (even in the cases when state support is provided) and backbone enterprises in the implementation of the strategic plans of monotowns.

4. Institutional problems in the implementation of the strategies are connected with the underdevelopment of both formal and informal institutions necessary for successful strategic management.

The underdevelopment of formal institutions is manifested in a poor legal and methodological support of this process. Informal institutions (networks of cooperation between municipal, state and business structures) are not developed enough. In addition, the level of human development (knowledge and experience of the parties involved in the formation and implementation of strategies) is crucially important, but, as a rule, it is not high enough.

5. The analysis of the strategies for the development of single-industry towns in the Murmansk Oblast, outlined in their comprehensive investment plans, shows that the following objectives are typical for them. The first objective is the reduction of the risks of the town's economic dependence on its backbone enterprise by diversifying the town's economy. The most common direction of the diversification of monotowns is the development of small and medium business, especially in tourism. The second objective is modernization and diversification of the activities of the backbone enterprise. In most cases, CIPs include the projects for reconstruction and modernization of production capacities of backbone enterprises aimed to enhance their productivity, reduce costs, develop new technologies and products. Sometimes backbone enterprises also initiate the projects for the development of new activities, thus helping to diversify the economies of towns (as in the case of

OJSC Apatit that develops the ski resort in Kirovsk). The third objective is to increase the comfort of the urban environment, the development of social, engineering and transport infrastructure in the town, and to improve the standard of living and quality of life of the local population.

6. Despite the fact that the Murmansk Oblast monotowns are strategically focused on diversification, their CIPs, except for Revda, for the period up to 2020 forecast that the single-industry nature of the economy will be preserved. A sufficient resource base, relatively stable economic situation of the majority of backbone enterprises and the slow processes of diversification suggest that such forecasts are in many respects justified. At the same time, if the goals are implemented consistently, the degree of diversification of the towns' economy in the future can be significantly enhanced, and the risks of their development, associated with single-industry nature of their economies, can be reduced.

In conclusion, it should be noted that successful implementation of strategies for the development of single-industry towns in the Russian Arctic, their sustainable socio-economic development requires, along with the need to overcome the above problems, the ability of local governments to unite the urban community, to coordinate and mobilize the efforts of the representatives of the town's main social groups for achieving the jointly developed goals.

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# SOCIAL DEVELOPMENT

**Editorial note.** This and subsequent sections continue the series of articles, devoted to the role of sociological knowledge and its practical use in the development of the Russian society, associated with the all-Russian research-to-practice conference “Society and sociology in modern Russia”, scheduled for November 2014, Vologda.

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## Assessment of the impact of the social reproduction process on economic development of the region (case study of the Sverdlovsk Oblast)\*



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**Abstract.** When a human person is perceived not only as a key factor in social development, but also as its objective, there appears the understanding that the qualitative shifts in the reproductive process, most valuable for the society, occur not in the material sphere, but in the sphere associated with the development of a person and satisfaction of his/her needs. This fundamental postulate helps to prioritize the goals of

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economic development. Economic growth without social reproduction defeats the purpose of economic development, as economic growth, which does not enhance the level and quality of life, contradicts its primary purpose.

Financing of social reproduction of the population is not forced diversion of financial resources from the production process, but social investment that improves the quality of life and attracts skilled workforce to the region. The rise in salary of the economically active population has a positive effect on the formation of a profitable part of the budget, which is a prerequisite for its economic and social development on a more innovative base. It is of fundamental importance to identify the optimal ratio of financial resources allocated to social and production spheres.

Social development in the Russian Federation is partly caused by the inability to assess financial implications of the increasing social sector. This occurs, in particular, due to the difficulty to measure socio-economic efficiency of investments. The impact on all sectors of production and social spheres is taken into account. The social sphere is embedded in the economic system of the country. Its development, like the development of any other manufacturing industry, directly affects the economy of the country and its regions.

The methodology of the system of national accounts (SNA) provides an opportunity for a comprehensive assessment of the impact of social budget expenditures on the regional economy. On the basis of SNA tools the financial maintenance of social processes can be considered from different sides: from the perspective of revenue dynamics and patterns of goods and services consumption, including social; from the perspective of the influence of social processes on the economic development of the region; from the perspective of the efficiency of socially oriented budget expenditures.

The authors have studied the effect of social expenditures on GRP of the Sverdlovsk Oblast on the basis of the 2011 data. Budget expenditures include financing of budgetary institutions of the social sphere from federal, regional and local budgets. The research has revealed that in the Sverdlovsk Oblast in 2011 one ruble of social budget expenditures from all sources (federal, regional and municipal) was equal to 65 kopecks of GRP. Thus, the study has clearly showed that budget expenditures on social services have not only a social, but also significant economic impact on the region's development.

**Key words:** Social reproduction, social impact, multiplier economic effect, system of national accounts, revenue, social budget expenditure, gross regional product.

The upgrade of the Russian economy and its integration into the world economy have determined the need to revise the approach to the selection of new factors of progressive development. Building an effective model of economic development should be based on the global trends to form sustainable socially-oriented self-developing territorial systems which provide conditions for social stability and economic welfare of the population.

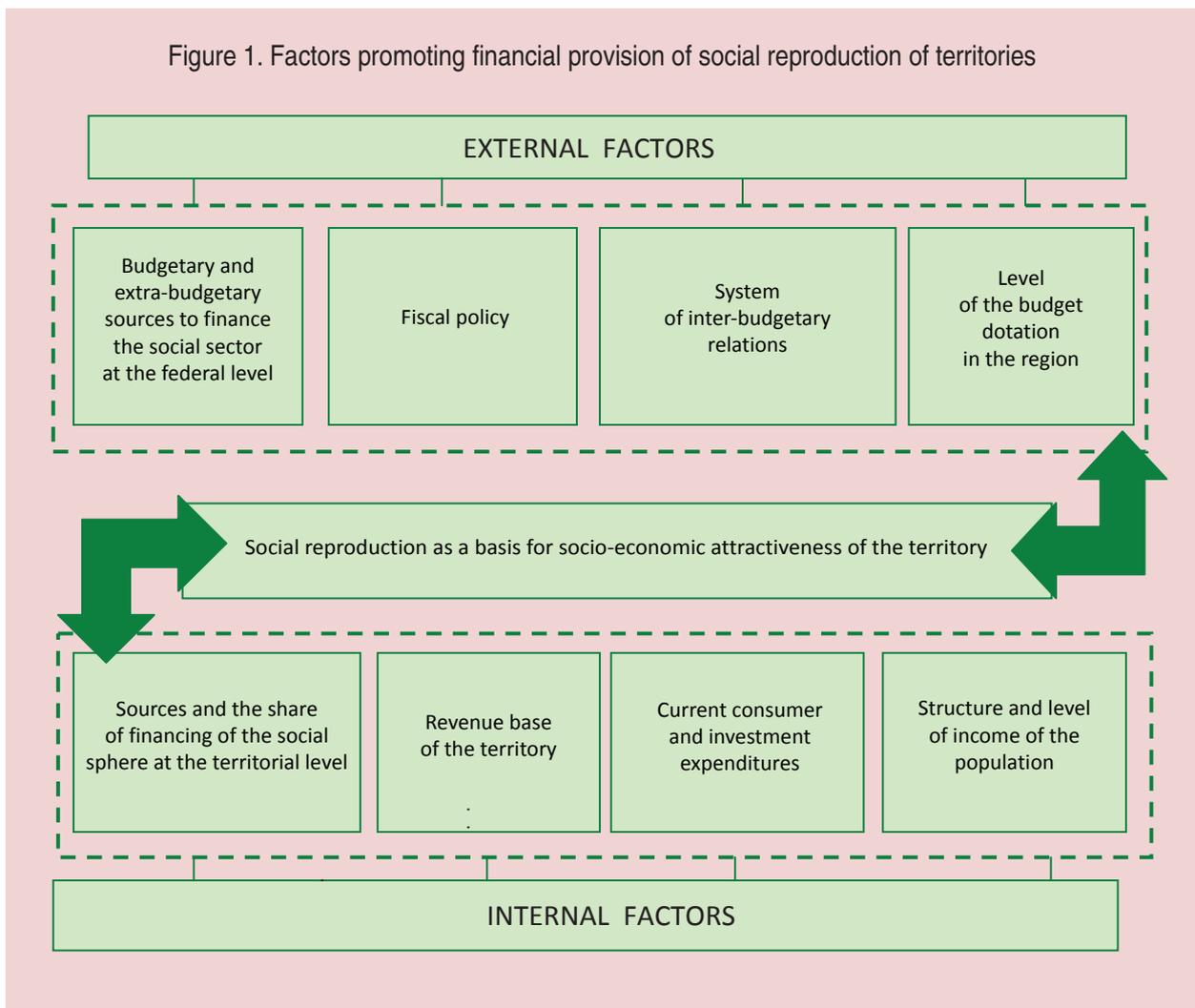
Nowadays society begins to consider that the main wealth of any country is its human potential. It recognizes that the most important valuable qualitative shifts in the reproductive process of leading world economies do not occur in the material sphere but in the sphere associated with the development of human and his/her needs. This statement is reflected in the concept "social orientation of the economy in the

region” and development of the mechanism of financial support for human potential development.

However, due to the complexity of the issues, there are unsolved questions, such as interaction between financial development and efficiency of the social reproduction process. The costs on social development of the territories are often viewed as a forced diversion of financial resources from the production sphere. It is not surprising that in the conditions of economic instabi-

lity and growing budget deficit in many developed countries, the evaluation of the effectiveness of social budget expenditures is very important.

The financial support of the social reproduction system is a set of financial flows of the territory associated with the formation of the population income, consumption of social services by the population, financing of recurrent and investment expenditures in the social sphere of budgetary and extra-budgetary sources (*fig. 1*).



Improved life quality and positive processes in the social sphere attract highly skilled workforce to the region. The inflow of economically active population and the increase in wages have a positive effect on the formation of a profitable part of the budget, which is a necessary condition for economic development on a more modern and innovative basis.

The integral elements of the social reproduction process are consumption of social goods and services and financial assurance of the social sector, including education, health, culture, environment and public utilities.

The important characteristic of the social reproduction process is the level of consumptive use of goods and services by the population, including social, and the level of gross fixed capital.

The structure of these indicators distribution reveals the development strategy, implemented in the country:

1) either human-oriented, boosting domestic consumption of goods and services;

2) or oriented to production development, investment growth at the expense of high savings rates. Moreover, the fundamental point is a ratio of the roles of state and private business in the social services provision.

Currently, the Russian social sphere is being mainly developed on the state basis. However, the business sector begins to play an increasingly prominent role in social policy. The two-tier system of production and distribution of social services is being formed. The state guarantees minimum social standards according to a certain situation.

They are the following: minimum wages, minimum pensions, regulations of budget spent on health, nutritional standards, norms and requirements of preferential provision with medicines, standards of the total floor area of the accommodation, etc. The private institutions offer additional services on a fee basis.

Despite positive changes in the financing of the social sphere, today Russia lags behind Western countries and, as a consequence, has a non-competitive level of social reproduction of the population.

The estimate of social development of the Russian Federation, in comparison with developed countries, has revealed its significant gap. Russia ranks last by the level of consumption of social services, even lagging behind former Soviet republics.

At the same time, the state costs on social services provision are quite high – 17% of GDP.

Russia ranks second last by the development of the sphere of paid social services – 3.3% of GDP, only ahead of the Republic of Belarus (2.7% of GDP). By this indicator we lag behind Western countries by 2–3 times or more: Japan – 6.9% of GDP, Germany – 7.4%, Canada – 7.6%, USA – 20.7% [6, p. 128; 7, p. 256; 9; 10].

To assess the situation we consider an indicator such as a share of social expenses in the total budget expenditures. In Russia it amounts to 60%. The significant part of the budget funds to finance social expenditures is allocated by the EU. In 25 countries the share of social expenses in the total budget expenditures has recently amounted to more than 70%.

Taking into account the extremely low level of GDP per capita, the lowest social indicators in GDP and their poor dynamics, it is possible to draw a conclusion about the lack of the clearly defined socially-oriented economic policy in this country. Increased opportunities in social reproduction of the population and rapprochement with developed countries require a significant increase in the pace of social development.

One of the factors contributing to the lag in social development of the country is the inability to assess financial implications of increased amounts of the social sector. It is caused by the complexity to measure socio-economic efficiency of current spending and investment in the industry with regard to the conjugated effects in all sectors of production and social sphere. The complexity and diversity of this category perception predetermine the lack of consensus on the nature and efficiency measures.

The functioning of social sphere has a double effect: on the one hand, it is connected with the fulfillment of social functions; on the other hand, it is a factor of economic growth. The social effect is to meet the needs of society in the most important social services – education, health, culture, etc. The economic effect is manifested in increased gross domestic product and in the change of crucial economic indicators. The social sphere as a basis for social reproduction of human potential provides reproduction of qualified labor force, health maintenance of the population, increase in the intellectual potential of the society, thereby having a qualitative impact on socio-economic development of the society.

What is more, the social sphere is embedded in the economic system of the country where people work, wages are paid, profit is made, investments are carried out and taxes are levied. Its development, like the development of any other manufacturing industry, affects the economy of the country and regions directly.

The methodology of the system of national accounts (SNA) helps to carry out a comprehensive assessment of the influence of social budget expenditures on the economy of the territory. The use of the SNA tools provides an opportunity to consider the financial maintenance of social processes from different perspectives: on the basis of incomes dynamics and patterns of goods and services consumption, including social; from the perspective of the influence of social processes on the regional economic development; with respect to the efficiency of socially oriented budget expenditures.

Budget costs have two main forms of the impact on regional economy and create a multiplier effect in the formation of GRP:

1) they participate in the generation of the population's income (of the public sector employees) through the payment of wages and social benefits, which are then consumed by households for final consumption and savings;

2) budget financing provides the demand for work and services in some sectors of the economy. By undertaking the maintenance and development of the property complex, authorities increase demand and, therefore, launch a number of industries, primarily housing and utilities, construction and some others.

The authors have calculated the effect of social expenditures on GRP of the Sverdlovsk Oblast on the basis of the 2011 data. The budget expenditures include the financing of budgetary institutions of the social sphere from federal, regional and local budgets.

*In Stage I of the study*, we, using the functional classification of budget expenditures, single out the articles aimed to fulfil social functions of the state.

They include education, culture, health, social policy and sport. Then the relevant articles of the functional classification of expenditures are further divided according to the classification of the operations in the public sector.

In the Sverdlovsk Oblast in 2011 the expenditures of budgets of all levels region totaled 257.4 billion rubles, including 67.5 billion allocated from the federal budget. It should be noted that in this research the federal budget expenditures include the costs for maintenance and operations of institutions under the jurisdiction of the federal government that operate in the region. The expenditures on social services equaled 141.2 billion rubles or 54.8%. The large part of this amount was allocated to education (61.6 billion – 43% of the total expenditure on social services), health (35.8 billion rubles – 25.3%) and social policy (33.4 billion – 23.6%). The expenses on culture and cinema, physical education and sport amounted to 5.9 (4.1%) and 4.5 (3.1%) billion rubles, respectively [3; 4].

Then we divide budget expenditures in accordance with the classification of the government operations.

The most significant items of expenditure are the following: salaries and charge on payroll amounted to 110.7 billion rubles (43% of the total budget); the increase in the fixed assets value – 29.5 billion rubles (12%); social assistance allowance – 24.3 billion rubles (9%); the maintenance of property – 19 billion rubles (7%).

However, the closer study of individual budget expenses reveals a significant change in the structure. For example, the prevailing costs on wages remained in education (63.2%), culture (53.2%) and health (44.9%), while the share of costs in social policy, physical culture and sport was 12.4 and 12.2%, respectively. Major funds in social policy were allocated to social service benefits (67.8%), in physical culture and sport – to the increase in the value of fixed assets (49%) [3; 4].

The analysis shows that the structure of budget expenditures in accordance with the government operations varies greatly depending on the sphere where these funds are allocated. Consequently, it can be assumed that the changes in the funding of different items of social spending will have different impacts on the region's GRP. To determine the impact of budget expenditures on regional economy it is necessary to clarify the distribution of resources. *Stage II of the study* presupposes the grouping of budget expenditures.

The first group comprises the expenses that are allocated to the enterprises serving the public sector in the form of yield (growth in the number of related industries); therefore, they are a source of added value.

The second group includes costs, which directly increase disposable income of the population. In addition, there is a group of costs, which impact on the regional economy is impossible to estimate, since the actual final distribution of these costs cannot be determined with a sufficient degree of probability. So, the first group accounts for 21.8% of all budget expenditures on social services, the second group – 61.5% and the third – 16.7%. Each of these groups has a different impact on the economy of the region.

The first group includes the following articles of budget expenditures: communication; transportation; utility services; rent for the property use; payment for works, services for the property maintenance; other works and services; the rise in the value of fixed assets.

In order to determine the impact of budget expenditures on a particular industry we can compare the items of budget expenses with the economic activities. For example, the budget expenditures for transport and communications form a certain share of economic activity “transport and communications”. The utility costs form the share of economic activity “production and distribution of gas and water”, etc. So, we get the following distribution of budget expenditures by economic activities:

- transport and communication – 563.4 million rubles;
- production and distribution of electricity, gas and water – 6129 million rubles;
- operations with real estate, rent and services – 12052 million rubles;

- construction – 8414 million rubles.

Besides, we should pay attention to the allocation of the increased fixed assets to the construction sector. Obviously, this cost item also includes a number of other areas of investment – machinery and equipment, vehicles, etc. So, the study assumes that only 70% of the costs to increase the value of fixed assets have been allocated to the construction and repair of buildings.

Allocating funds in certain sectors of the economy, the authorities form part of the gross output of the industry. According to the SNA, gross output consists of two components: added value and intermediate consumption. Added value, in turn, consists of wages, profit and other taxes on production. The further analysis is conducted on the basis of existing proportions in the regional economy (*tab.*).

For example, in the sector of production and distribution of electricity, gas and water there is the following ratio: the share of added value in gross production was 31.7%. In this industry added value consisted of 43% of wages, up 53.6% of enterprises’ profit and 3.4% of other taxes on production.

The calculations based on the table data indicate the following amounts of gross added value in the related sectors at the expense of budget expenditures:

- transport and communication – 336.8 million rubles;
- production and distribution of electricity, gas and water – 1943.2 million rubles;
- operations with real estate, rent and services – 7583.3 million rubles;
- construction – 4004 million rubles.

Structure of gross added value in the Sverdlovsk Oblast in 2011\*

Economic activity	Gross output, million rubles	Gross added value, million rubles	The share of gross added value in the total production, %	Structure of gross added value in %		
				Remuneration	Other taxes on production	Gross income
Agriculture, hunting and forestry	69308	39643	57.2	27.2	0.5	72.3
Fishing, fish farming	68	43	63.2	26.9	1	72.1
Mining	98901	51894	52.5	27.6	3.8	68.6
Manufacturing	1137397	359934	31.6	44	2.5	53.5
Production and distribution of electricity, gas and water	190508	60402	31.7	43	3.4	53.6
Construction	162936	77535	47.6	48.3	0.5	51.1
Wholesale and retail trade; repair of motor vehicles, motorcycles, household goods and personal items	381261	246177	64.6	29.1	1.7	69.3
Hotels and restaurants	36346	15922	43.8	33.9	1.1	65
Transport and communications	245019	146482	59.8	27.5	2.6	69.9
Financial activities	11133	7093	63.7	40.8	0.1	59.1
Operations with real estate, rent and services	165318	104069	63.0	39.6	1.1	59.3
Public administration and military security, compulsory social security	77993	52464	67.3	97.7	0.2	2.1
Education	52331	39370	75.2	91.8	0.7	7.5
Health and social services	81317	52838	65.0	92	0.3	7.8
Other community, social and personal services	19806	11815	59.7	77.8	0.6	21.6

\* Calculated by: Natsional'nye scheta Rossii v 2004–2011 godakh: stat. sb. [National Accounts of Russia in 2004–2011: Statistics Digest]. Rosstat, Moscow, 2011. Pp. 251–259.

Thus, the total increase in gross value added (GVA) in the related industries due to the social sphere financing from the budgets of all levels was **13867.3** million rubles.

On the basis of the table data we calculate the amount of remuneration, gross profit and other taxes on production, formed due to demand from the state budget. In the result, the amount of remuneration, formed at the expense of budget expenditures in all four

sectors accounted to 5866 million; gross profit – to 7822 million rubles; other taxes on production – 178 million rubles. On the basis of total amount of remuneration we calculate the amount of real income formed at the expense of budget expenditures financing.

According to the SNA, the indicator “wages” includes taxes on profit and other payments to employees, even if they are actually withheld by employers in admi-

nistrative interests or by other reasons and paid directly to the state social non-budgetary funds, tax services on behalf of the employee. Thus, employees' remuneration consists of two components: (a) wages; (b) employers' contributions to the state social non-budgetary funds.

Therefore, to calculate the amount of funds which employees get in fact, it is necessary to single out the amount of compulsory social contributions and individual income taxes. The calculations show that the amount of employees' real incomes has amounted to 3809 million rubles.

Then, households will save the part of the given sum and spend another part on consumer needs. It will result in the effective demand for food and non-food goods and services. In other words, in the SNA terms the payment of wages provides the launch of enterprises and organizations that sell goods and services to the population in the region.

These industries will form added value, i.e. will create a multiplier effect. The available statistics take it into account partly. It should be noted that the yield of the enterprises serving the public sector will also create a multiplier effect, as part of this amount after profit or dividends distribution will be at the disposal of the owners of the enterprise. Another part can be directed to investment. Unfortunately, this statistics does not take into account this effect.

*Stage III of the study* is to calculate the impact of the second group of budget items on the regional economy (remuneration, social service benefits, etc.). As it has been noted above, the primary effect of

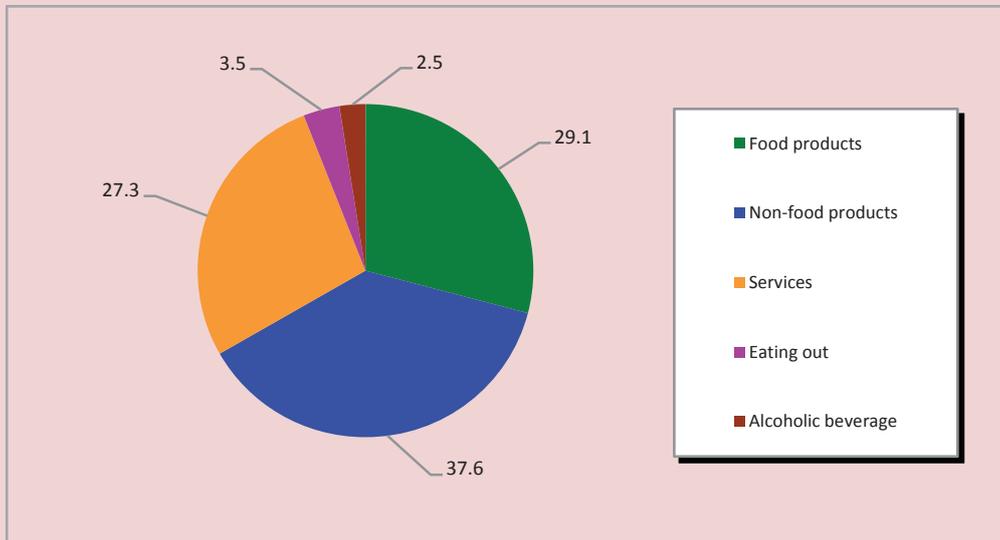
these industries is associated with the population's incomes, which are further used for consumption and accrual. After necessary calculations, we get the following value of real income received by households as a result of implementation of the budget expenses – 68571 million rubles (taking into account monetary income of employees of the enterprises serving the public sector).

As the households spend only part of disposable income on consumptive use and save another part, it is necessary to calculate the marginal propensity to consume (MPC) in the Sverdlovsk Oblast in 2011. For this we compare consumer spending and income of the population. The initial data are taken from the sample survey of household budgets, quarterly conducted by the statistical agencies in all regions of the Russian Federation. In particular, in the Sverdlovsk Oblast such survey considered about 1000 households with a different income level, place of residence, etc. [1, p. 126; 8].

The calculations show that the MPC in the Sverdlovsk Oblast in 2011 amounted to 0.706, i.e. on average the households spent 70.6% of disposable income on consumption. Thus, the amount of real income, aimed at consumer spending, amounted to **48411** million rubles.

Then, it is required to consider the structure of household consumption. On the basis of the same data we single out major items of household expenditure (*fig. 2*). As you can see in the chart, almost all consumer expenditures are part of three groups: the purchase of food-products, the purchase of non-food products and the payment for services. They together accounted for 94% of

Figure 2. Structure of consumer expenditures of the population in the Sverdlovsk Oblast in 2011



Source: *Struktura ispol'zovaniya denezhnykh dokhodov naseleniya v Sverdlovskoi oblasti: analiticheskiy material Rosstata po Sverdlovskoi oblasti* [Structure of the Use of the Population Income in the Sverdlovsk Oblast: Analytical Material of Russian Statistics of the Sverdlovsk Oblast]. Available at: <http://www.fedstat.ru/indicator/data.do?id=31502&referrerType=0&referrerId=1292867>

all expenses. Expenditures on eating out and purchase of alcoholic beverages comprised the remaining 6%.

With the available data on the marginal propensity to consume and the structure of consumer expenses in the Sverdlovsk Oblast being taken into account, the purchase of food products required 14087 million rubles, the purchase of non-food goods – 18202.5 million rubles; the payment for services – 13216.2 million rubles; eating out – 1694.3 million rubles and the purchase of alcoholic beverages – 1210.2 million rubles.

Each of these groups is optionally divided into more specific elements. For example, the payment for services includes the following articles: utility services – 8.3% (of total

consumer expenditures), household services – 3.4%, culture – 4.5%, education – 1.1%, medicine – 2.3%, health resort treatment – 0.5%, passenger transportation – 2.4%, communication – 3.2% and other services – 1.4% [8].

The purchase of food, non-food products and alcoholic beverages is made through a network of shops; therefore, the costs of households on these goods are treated as revenue of the industry of wholesale and retail trade. Expenditures on eating out are considered as production of the sector “hotels and restaurants”, etc. Having compared the data of the table and figure 2 on the structure of household consumption, we calculate gross value added, formed at the

expense of households' income, obtained in the course of the budgetary financing of social expenditures. It amounted to 15675 million rubles, with 6311 million rubles being remuneration, 9112 million rubles – gross profit of enterprises and 259 million rubles – other taxes on production. On the basis of the obtained values of remuneration, we can again calculate the re-growth of real incomes – 4098 billion rubles

*Stage IV (final)* includes the calculation of the total multiplier effect of public financing of social sectors. For this purpose it is necessary to sum added value in the related sectors, calculated during Stage II of the study, and added value, and received at Stage III. The total sum amounted to **29542** billion rubles.

To get a clearer idea of the size of the multiplier effect, it is necessary to compare it with the total amount of funds allocated to finance the social sphere from budgets of all levels. To do this, one should calculate the amount of gross regional product produced at the expense of budget costs.

As you know, GRP can be calculated by three methods: production, a method of revenues use and a method of GDP formation by the sources of income. For research purposes, the calculation is based on the assessment of the direct effect of financing social budget expenditures, equal to the remuneration costs of employees of state and municipal institutions. This approach approximates to the GRP calculation based on the method of generating income sources. In this case, GRP as part of the budgetary

expenditure includes the remuneration of employees (residents and nonresidents), gross profit in all industries or institutional sectors and net taxes on production and import. As a result, the direct effect of budgetary financing of social expenditures is estimated at **62831** million rubles of added value.

Thus, having added the direct and indirect effect, we have found out that in the Sverdlovsk Oblast in 2011 added value amounted to **92373** million rubles at the expense of the budgetary expenditure on social services. Correlation of the total effect and the total budget expenditures on social services at the rate of 141258.4 million rubles revealed the value of the multiplier equal to **0.65**. So, one ruble of social budget expenditures from all sources (federal, regional and municipal) creates 65 kopecks of GRP in the Sverdlovsk Oblast. Thus, the study clearly shows that the budget expenditures on social services had not only a social, but also significant economic impact on the region's development.

It should be noted that the proposed approach does not fully reflect the impact of budget expenditure on the GRP formation in the region. The main reason for this is a lack of statistical information and research in the field of the structure of costs on production and services, profit distribution and consumer preferences of different population groups. However, it can be assumed that in case of further development of this approach the total value of the multiplier will be even higher.

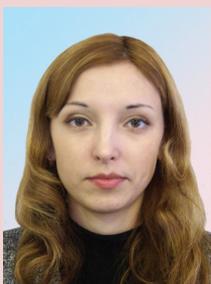


8. *Struktura ispol'zovaniya denezhnykh dokhodov naseleniya v Sverdlovskoi oblasti: analiticheskii material Rosstata po Sverdlovskoi oblasti* [Structure of the Use of the Population Income in the Sverdlovsk Oblast: Analytical Material of Russian Statistics of the Sverdlovsk Oblast]. Available at: <http://www.fedstat.ru/indicator/data.do?id=31502&referrerType=0&referrerId=1292867>
9. *Society at a Glance 2011. OECD Social Indicators: Analytical Material of OECD*. Available at: <http://www.oecd.org/els/soc/societyataglance2011.htm>
10. *Society at a Glance 2014. OECD Social Indicators. The Crisis and Its Aftermath Analytical Material of OECD*. Available at: <http://www.oecd-ilibrary.org/docserver/download/8113171e.pdf?expires=1403171952&id=id&acname=guest&checksum=7357A8CE8F69299C776EEE5D1AF10B2C>

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## Middle class in the regions of the Northwestern Federal District: quantity and reproduction capabilities \*



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**Abstract.** The priority of the government policy in the current economic and social situation is to maintain constant innovation development in all social spheres; therefore, the formation of middle class as the guarantee of social stability appears to be particularly relevant due to certain characteristic features of middle class representatives. These features include responsibility, high social activity and consciousness. Therefore, research into the size and structure of middle class is one of the main goals of modern sociology.

The article analyses the middle class in the region on the basis of sociological surveys conducted in 2008–2013 in the Vologda Oblast and in the Northwestern Federal District. The authors present approaches to studying and assessing the middle class, and make an attempt to determine its size. The article proposes

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\* The work was executed in the framework of the project 4.9 “Challenges of modernization: social and cultural stratification and mobility in the regions” Draft informational Letter of the Presidium of the Russian Academy of Sciences No. 31 “The role of space in the modernization of Russia: natural and socio-economic potential”.

an internal structure of the middle class in the region and draws a portrait of a typical representative of this category. The authors have found out that social mobility of the middle class in the region is low due to a number of socio-economic factors; this fact hampers the growth of the middle class up to the quantity determined in the Strategy for Socio-Economic Development of the Vologda Oblast for the Period up to 2020.

**Key words:** social structure, middle class, self-identification, social mobility.

Social stratification is one of the most discussed and important issues in modern economics. Society is a hierarchical structure in the form of a pyramid, consisting of groups with higher status on the top and lower status at the base. In general, we can distinguish three social strata – the upper, the middle and the lower, among which the middle layer is seen as the most significant for the development of society and the state.

Many researchers are of the opinion that it is the middle class that can become the foundation for the promotion (implementation) of modernization reforms [6, 7, 9, 17], since the people constituting the middle class have considerable creative potential and high social activity, i.e. characteristics that play an important role in the formation of high-quality human capital required for the formation of innovation economy. The middle class consists of highly qualified personnel, professionals with stable income, which they spend on purchasing goods and services with the best price/quality ratio, thereby forming the market by their demand and stimulating the development of industry and services. At the same time, the middle class “is the main producer and consumer of mass, urban culture that represents the basis of national culture” [5].

Experts point out that the formation and development of strong civil society should be based on “public policy aimed to strengthen

the position of the middle class able to act as a guarantor of Russia’s stable and progressive development, as well as the bearer of its innovation potential. The pace of economic, political, and social transformation will largely depend on the possible rapid formation of the middle class, which is the basis for any developed modern state” [13].

Continuous increase in the size of the middle class, which by 2020 should be at least 55–60% of the RF population, is one of the important targets set out in the Concept for long-term socio-economic development of Russia till 2020 [12, p. 7]. The importance of the study of the middle class for Russia’s society, which is on its way to modernization, is defined by its ability to act as the foundation for stable development of Russia and to increase its innovation capacity.

The necessity to form the middle class has been substantiated many times in the Presidential Addresses to the Federal Assembly of the Russian Federation since 1998 (*tab. 1*). V. Putin in his pre-election article published in 2012 pointed out that in Russia the middle class “should grow further and become a majority in the society, to grow at the expense of those who drags the country on their backs: doctors, teachers, engineers, skilled workers” [16].

Understanding of the importance of the middle class and care about its well-being is a priority of state policy in many developed

Table 1. Objectives and importance of the middle class in the Addresses of Russia's President to the RF Federal Assembly

President	Understanding of importance of formation of the middle class
B.N. Yeltsin	A large and stable middle class is the foundation of civil society and stability of the constitutional system; improvement of the country's economy and formation of the middle class are closely interrelated objectives; it is the middle class that is able to become the backbone and driving force of Russia's economic recovery [1998 Address].
V.V. Putin	It is necessary to form the middle class through the growth of small and medium business, which needs state support [2007 Address].
D.A. Medvedev	An "ideal" representative of the middle class (i.e. the ideal, which we should try and reach in the future, according to D.A. Medvedev), is largely similar to the representative of the middle class in Western countries. It is a talented individual capable of critical thinking, in a spirit of intellectual freedom and civic activeness, a responsible citizen who appreciates social stability and respects the law and at the same time is willing to assume responsibility for the situation in his/her own village or town, and realizes that only an active position can set the heavy machine that is government bureaucracy in motion. [2009 Address].
Source: Address of the President of Russia B.N. Yeltsin to the Federal Assembly of the Russian Federation: "With joint efforts – to the rise of Russia". 1998. Available at: <a href="http://www.intelros.org/lib/elzin/1998.htm">http://www.intelros.org/lib/elzin/1998.htm</a> (accessed March 24, 2014); Address of the President of Russia V.V. Putin to the Federal Assembly of the Russian Federation. 2007. Available at: <a href="http://www.rg.ru/2007/04/27/poslanie.html">http://www.rg.ru/2007/04/27/poslanie.html</a> (accessed March 24, 2014); Address of the President of Russia D.A. Medvedev to the Federal Assembly of the Russian Federation. 2009 Available at: <a href="http://www.rg.ru/2009/11/13/poslanie-tekst.html">http://www.rg.ru/2009/11/13/poslanie-tekst.html</a> (accessed March 24, 2014).	

countries. In his 2013 Address to the U.S. Congress B. Obama pointed out that "the main long-term objective of the current U.S. Government is to restore the role of the middle class as the driving force of American economy" [21]. French President F. Hollande in his election campaign proposed "to put France back on its feet" by creating a public investment bank financing the development of small and medium enterprises, promoting environmental and energy conversion of industry, the transformation of small and medium enterprises into economic priority for France, support of new technology and "digital economy" [8], focusing on the strengthening of the middle class in the country.

However, the recognition of the importance and understanding of the need for the formation and support of the middle class has not formed a clear theoretical and methodological approach to the assessment of its scale.

Let us refer to the essence of the category of "middle class". The formation of the concept "middle class" has a long history, but the meaning embedded in it at different stages of the development of scientific knowledge varied depending on the socio-economic conditions of society. Aristotle divided society into three parts: the rich, the poor and those between them. He noted that "the state where the middle class is more numerous and powerful than the other two classes combined, is the most stable and better manageable" [2, pp. 148-151]. Basic approaches to the understanding of this category are presented in *table 2*.

The task of identifying this stratum is no less difficult. There are several options for determining the size of the middle class, which differ by the content of evaluation criteria. Experts in different countries identify the middle class according to various, although largely similar, criteria (*tab. 3*).

Table 2. Main approaches to the interpretation of the term “middle class”

Author	Middle class is
K. Marx, V.I. Lenin, M.I. Tugan-Baranovsky and others	A social stratum located between the two main opposing classes (bourgeoisie and proletariat).
M. Weber	A status group formed by the life chances of individuals: their individual abilities (education, qualification, worldview) and characteristics of their lifestyle, way of obtaining education and profession.
L. Warner, K.Davies, W. Moore, P. Sorokin	An element of social structure that performs social functions specified by that structure (functions of social stabilizer, conductor of social mobility, the main consumer of goods and services, integrator of public interests, etc.).
J. Goldthorpe, D. Lockwood, D. Grusky	A “service class” (professionals, managers, administrators), the main characteristics of which are mental labor and trust in work relationships, and the sources of its replenishment are the chances of social mobility and personal qualities of individuals.
E.M. Avramova	A social group located at the intersection of main identification features, which include: material wellbeing, higher professional education and social identification with the middle stratum.
M.K. Gorshkov, N.E. Tikhonova, S.V. Mareeva	A class characterized by “high social attitudes and consumption practices”.
Sources: Marx K., Engels F. Rabochii parlament [Working Parliament]. <i>Sochineniya</i> [Works]. 2nd ed. 1958. Vol. 10. P. 124; Weber M. Osnovnye ponyatiya stratifikatsii [Basic Concepts of Stratification]. <i>Sotsiologicheskie issledovaniya</i> [Sociological Studies], 1994, no.5, pp. 169-183; <i>Srednii klass v sovremennoi Rossii</i> [Middle Class in Modern Russia]. Executive editors: M.K. Gorshkov, N.E. Tikhonova; RAS Institute of Sociology. Moscow, 2008. 320 p.; Warner L. <i>What is Social Class in America</i> . New York, NY: Irvington Publishers, 1949; Tikhonova N.E., Mareeva S.V. <i>Srednii klass: teoriya i real'nost'</i> [Middle Class: Theory and Reality]. Moscow: Al'fa-M, 2009. 320 p.; Avramova E.M., Grigor'ev L.M., Kosmarskaya T.P., Maleva T.M., Mikhailiuk M.V., Ovcharova L.N., Radaev V.V., Urnov M.Yu. <i>Srednii klass v Rossii: kolichestvennye i kachestvennye otsenki</i> [Middle Class in Russia: Quantitative and Qualitative Assessment]. <i>BEA</i> [Bureau of Economic Analysis]. Moscow: TEIS, 2000. 286 p.; Davies K., Moore W. Nekotorye printsipy stratifikatsii [Some principles of Social Stratification]. <i>Sotsial'naya stratifikatsiya</i> [Social Stratification], 1992, issue 1, pp. 160-177; Goldthorpe J., McKnight A. <i>The Economic Basis of Social Class. Sociology Working Papers</i> . University of Oxford, 2003. 245 p.	

During the panel session “The BRICS’s Middle Class Starts to Flex Their Muscles” carried out within the framework of Saint Petersburg International Economic Forum-2013 the chief economist of Renaissance Capital investment group Charles Robertson noted that “representatives of the middle class, regardless of their country of residence, are characterized by the desire for better standards of education and health. In addition, the middle class is interested in the transparency of relationship between business and authorities and, therefore, in the fight against corruption” [19].

Thus, the concept of “middle class” is characterized by a rather broad set of criteria, however, the basis, upon which an individual

can be referred to a particular stratum, is his/her financial situation and level of education. At the same time, representatives of the middle class should be considerably involved in social and cultural life.

In our opinion, the middle class should be understood as busy, socially active people with higher and secondary vocational education, who identify themselves with the middle class, and who possess significant cultural capital and stable income to satisfy a wide range of needs.

The size of the middle class in Russia, according to expert assessments, ranges from 3% (“ideal middle class”) to 30–60% (“promising middle class”), depending on the method of assessment [1, pp. 28-36].

Table 3. Comparison of the criteria for selection of the middle class

Country	Criteria for defining the middle class	Quantitative values
Russia	High level of professional education Level of income Patterns (level of consumption) Lifestyle Level of self-identification	> 6 subsistence levels
Ukraine	Level of self-identification Level of education Financial wellbeing Type of employment	1000 U.S. dollars per month
Belarus	Property Level of income Level of education Prestige of the profession Level of self-identification Lifestyle System of values and mentality	2-3 minimal consumer budgets
Germany	Level of income Level of education Professional affiliation	1130-2420 euro per month
China	Level of education Level of income Professional affiliation	10-100 thousand yuan
USA	Level of income Level of education Level of self-identification The use of loans	25-100 thousand U.S. dollars per month

Source: Sokolova G. Sostoyanie i vozmozhnosti razvitiya srednego klassa v Belarusi [Current State and Opportunities for Middle Class Development in Belarus]. *Obshchestvo i ekonomika* [Society and Economics], 2010, no.7-8, pp. 199-218; Dobrova T.G. Srednii klass v Ukraine: sub"ektivnoe vospriyatie i real'nost' [Middle Class in Ukraine: Subjective Perception and Reality]. *Vestnik ONU im. I.I. Mechnikova* [Bulletin of the Odessa National University], 2012, volume 17, issue 2, pp. 67-75; Zhou Xiaohong. Zhongguo zhongchan jieji: xianshi yi-huo gouxiang. *Tianjin shehui kexue*, 2006, no.2. pp. 60-66; Grigor'ev L., Salmina A., Kuzina O. Rossiiskii srednii klass: analiz struktury i finansovogo povedeniya [Russian Middle Class: Analysis of its Structure and Financial Behavior]. Moscow: EkonInform, 2009. 148 p.; Dolya srednego klassa v Germanii [The Share of the Middle Class in Germany]. Available at: [www.dw.de/dw/article/0,14772101.html](http://www.dw.de/dw/article/0,14772101.html) (accessed March 24, 2014); *Who is the Middle Class?* Available at: <http://www.pbs.org/now/politics/middleclassoverview.html> (accessed March 24, 2014).

Specialists identify this category mainly by using the following criteria: financial situation (income, savings, property), education level, professional status, cultural values, etc.

Over the last 10 years the share of the middle class in Russia's population has increased from 29 to 42%. Researchers at RAS Institute of Sociology in their report "Middle class in modern Russia: 10 years later" point out that women constitute almost

two-thirds of it, and officials form its basis. The middle class in Russia can be considered as relatively young and urban, since most of its representatives are people under 40 (60% of its population), who live in cities and metropolitan areas. Representatives of the middle class feel more confident in the labor market, but in recent years their willingness to invest in their education and qualification has been declining, which is a national trend [18].

An increase in the size of the middle class (particularly its part formed by bureaucracy) is understandable, given the fact that in the recent years the salary of officials has been growing three times faster than that of the rest of the population. As a result, the income gap between civil servants and average Russians has almost tripled [11].

An important source of information on the middle class is sociological research in the regions; therefore, we will build our further reasoning and conclusions on the results of such research conducted by the Institute of Socio-Economic Development of Territories of the Russian Academy of Sciences in the Northwestern Federal District and in the Vologda Oblast<sup>1</sup>.

According to the survey, performed by ISEDT RAS in 2013, a significant share of residents in the NWFD regions consider themselves to be the middle class (*tab. 4*).

In the scale “city/village → region → country” there is a noticeable decline in the proportion of the population, identifying themselves as the middle class (from 42 to 59%), and an increase in the values of indicators characterizing people’s identification as the lower strata of the society (from 5 to 13%).

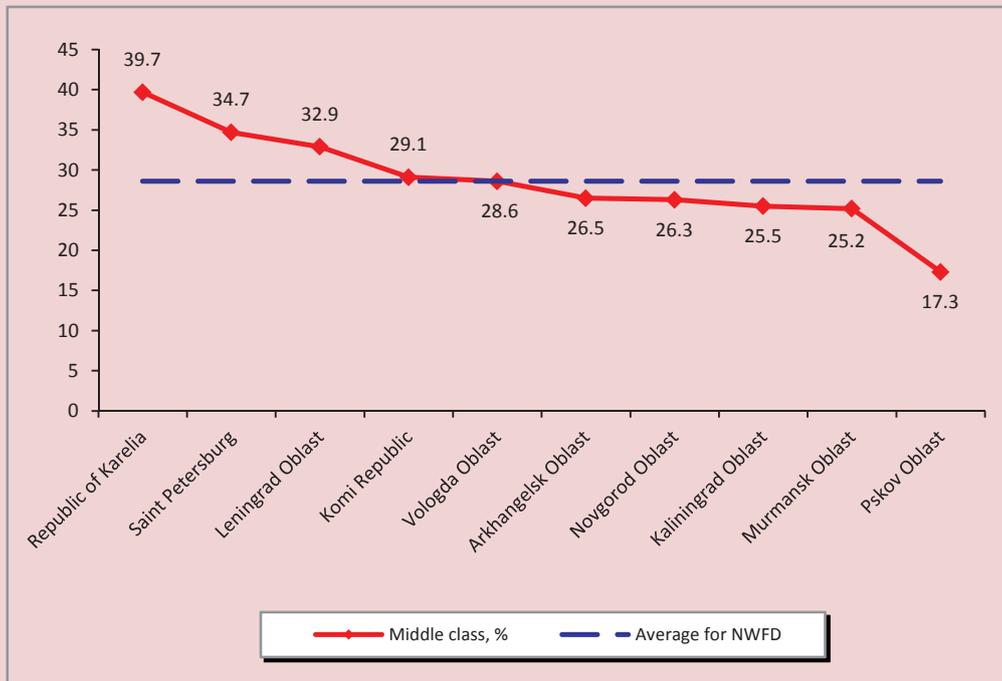
The middle class most representative for its region is noted in the Komi Republic (70%) and Karelia Republic (67%), and least representative – in the Murmansk Oblast (52%). The size of the middle class in the Vologda Oblast is approximately equal to the average district value – 56–58%. The representation of the upper social strata (upper and above middle) is the most extensive in the Leningrad Oblast, and Saint Petersburg (15–22%). It should be noted that the share of those, who are not sure which category they belong to, increases in

Table 4. Distribution of answers to the question: “What social strata do you belong to: in your city (village), in the region and in your country?”, NWFD (in % of the number of respondents)

Answer options	In your city/village	In the region	In the country
Upper class	1.7	0.9	0.9
Class above middle	9.4	6.5	4.7
Middle class	58.8	51.7	42.2
Class below middle	17.9	22.6	24.5
Lower class	5.0	6.9	13.2
It is difficult to answer	7.2	11.5	14.6

<sup>1</sup> The sample is more than 5000 people in ten regions of the Northwestern Federal District (the Arkhangelsk, Vologda, Kaliningrad, Leningrad, Murmansk, Novgorod, Pskov oblasts, republics of Karelia and Komi, Saint Petersburg). The sample size for each region is not less than 400 respondents, which ensures a high degree of confidence (sampling error does not exceed 5% with a confidence interval of 95%) in evaluating the situation in a particular region and in conducting cross-regional comparisons.

Figure 1. Representation of the middle class in the NWF D regions in 2013



proportion to the size of the territory, within which the self-identification is made (from 7% for their own locality to 15% nationwide) [20].

The selection of the middle class is more accurate, when it is based on the intersection of several criteria, for example, by the methodology of L.A. Belyaeva<sup>2</sup>, using the data on material wealth, self-identification,

<sup>2</sup> According to the methodology of L.A. Belyaeva, the boundaries of the middle class and its size in the region are defined using three criteria: 1) self-identification with the middle stratum of society; 2) financial wellbeing at the level of the wealthy and prosperous; 3) at least secondary vocational education. **The intersection of these criteria allows us to select a group that can be identified as middle class.** You can find more information on the subject in: Lapin N.I., Belyaeva L.A. The program and standard tools “Socio-cultural portrait of Russia’s region” (Modification – 2010); Russian Academy of Sciences, Institute of Philosophy. Moscow: IFRAS, 2010. Pp. 60-61.

professional status and educational level of the population (*fig. 1*). In general, the scale of the middle class in the Northwestern Federal District is about 30%. The Republic of Karelia (about 40%), Saint Petersburg (35%) and the Pskov Oblast (17%) distinguish themselves among the rest of the regions. This is caused by a higher self-evaluation of financial situation and level of self-identification with the middle class in Karelia and Saint Petersburg and, consequently, lower indicators in the Pskov Oblast.

Using different methodological approaches, each of which assumes a certain set of criteria, let us take a closer look at the size of the middle class on the example of the Vologda Oblast (*tab. 5*).

Table 5. Share of the middle class in the Vologda Oblast in accordance with various approaches (in % of the number of respondents)

Approaches to estimation of the middle class and their criteria	Share in %*		
	2010	2012	2013
<b>I. Criterion of self-identification of the population with the middle class</b>	51	54	50
<b>II. Criteria according to the methodology of L.A. Belyaeva</b> 1. Self-identification 2. Financial wellbeing 3. Level of education (not lower than secondary vocational)	30	25	29
<b>III. Criteria set out by the Foundation of the Bureau of Economic Analysis (BEA)</b> 1. Financial and property situation 2. Educational and professional status 3. Self-identification of an individual with the middle class	3.2	n/a.	3.5
<b>IV. Criteria set out in the Concept for long-term economic development of the Russian Federation</b> 1. Average per capita income over 6 subsistence levels 2. Motor car 3. Savings in a bank 4. Affordability of annual vacation abroad	1	n/a	1
<b>V. Criteria set out by the All-Russian Center of Living Standards</b> 1. Higher education 2. Comfortable dwelling of two types (in town and in the country) 3. Motor car 4. Half of the income goes to savings 5. Healthy lifestyle 6. Ability to provide children with higher education, necessary treatment, the initial capital for the purchase of housing	0.1	n/a	0.1
* Hereinafter the calculations are performed by A.N. Gordievskaya, ISEDТ RAS Research Engineer			

The calculations were carried out using the data from surveys of the population, conducted by ISEDТ RAS in 2010–2013<sup>3</sup>.

Depending on the applied methodology, the representation of the middle class in the Vologda Oblast is from 0.1 to 50%, which

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

corresponds to the nationwide data [6]. In accordance with the first approach (identifying oneself with one of the social classes) about half of the Vologda Oblast residents say they belong to the middle class. Moreover, in the scale “city/village → region → country” there is a reduction in the proportion of people who identify themselves as the middle class, and an increase in the proportion of the population, who think of themselves as the lower strata of the society (*tab. 6*). The indicators obtained on the basis of public opinion, as a rule, have high values, because a rather complex process of social identification is influenced by socio-economic conditions of life of an individual.

Table 6. Distribution of answers to the question: "What social strata do you belong to: in your city (village), in the region and nationwide?", 2014 (in % of the number of respondents)

Answer option	City/Village	Region	Country
Upper class	0.7	0.5	0.7
Class above middle	7.3	5.1	3.7
Middle class	55.8	50.9	41.7
Class below middle	20.1	23.9	24.8
Lower class	6.1	6.3	12.7
It is difficult to answer	10.1	13.2	16.5

Table 7. Dynamics of the middle class in the Vologda Oblast (% of the number of respondents)

Year	Indicator		
	City/Village	Region	Country
2010	13.7	11.6	8.5
2012	24.5	23.5	17.7
2013	28.6	26.5	20.7

Most people identify themselves not so much as the middle class in the classical sense, but rather as a middle economic stratum.

By increasing the number of indicators to three (self-identification, financial wealth and level of education (not lower than secondary vocational education), we calculate the size of the middle class in the Vologda Oblast: this figure for the locality is 29%, for the region – 27%; for the country – 21% (tab. 7). This means that in the direction from settlement to country there is a reduction in people's self-identification with the middle class. However, over the last five years this indicator within each territory has increased steadily, with the exception of 2010, when there was a sharp decline in self-identification of the population with the middle class in the aftermath of the global financial and economic crisis.

Calculations according to the methodologies that take into account more narrow

criteria (savings, own car, education not lower than higher, etc.) show that the share of the middle class in the region does not exceed 3%. The main factor limiting the expansion of this category is a low level of income, which entails a low level of savings and provision with material goods, the inability to fully meet the needs of recreation and entertainment.

The middle class in the Vologda Oblast is more often represented by women (tab. 8). Age interval is 30–55 years. Education is essentially higher and postgraduate. The middle class, as a rule, is represented by family people, most of whom live in cities. The backbone of the middle class consists of "wealthy" people not in a position of authority, who have obtained secondary and higher professional education, and are satisfied with their lives.

In general, this "social portrait" coincides with the data of RAS Institute of Sociology, according to which a typical representative of the Russian middle class is "a young female

professional, who lives in a big city, has higher education, works in her professional specialty, is satisfied with her social position, income, career and increase of opportunities for entrepreneurship. However, the proportion of entrepreneurs among the Russian middle class is small (as well as in the whole country)” [15].

The socio-demographic structure of the middle class in the Vologda Oblast has undergone some changes for the period of 2008–2013 (*tab. 8*). First, the proportion of pensioners has increased significantly (15% in 2008; 23% in 2013), especially women of retirement age (twofold increase). Secondly, the share of people with higher education has increased 1.5 times; consequently, the representation of persons with secondary vocational and incomplete higher education has decreased (1.2 and 2.2 times).

In 2010 ISEDT RAS developed its own algorithm for identifying representatives of the middle class, including the following criteria:

- average monthly income equal to 2.5 subsistence levels per person (more than 20 thousand rubles for the Vologda Oblast in the sixth quarter of 2013);
- self-evaluation of income (“I have enough money to buy necessary food and clothing”, “the purchase of durable goods is not a problem”);
- level of education not lower than secondary vocational;
- job status (worker, specialist, head) [10, p. 51].

The composition of the middle class was determined with the use of cluster analysis by the method of k-means, excluding iteration. In compliance with all criteria out of the whole

Table 8. Socio-demographic characteristics of the middle class in the Vologda Oblast, 2008–2013 (% of the number of respondents)

Socio-demographic characteristics	Middle class			
	2008	2010	2012	2013
	21.1	13.7	24.5	28.6
<b>Sex/age</b>				
Men aged under 30	13.3	11.7	11.2	11.7
30–60	26.6	25.4	22.4	23.8
over 60	4.4	4.4	7.3	6.1
Women aged under 30	15.5	14.1	11.6	12.6
30–55	32.0	33.7	31.7	28.7
over 55	8.2	10.7	15.8	17.2
<b>Education</b>				
Secondary vocational (technical school, etc.)	40.5	55.6	48.3	33.3
Incomplete higher (not less than 3 years at college)	15.5	7.8	7.3	7.0
Higher	41.5	35.1	42.1	59.7
Postgraduate (second university degree, graduate school, etc.)	2.5	1.5	2.3	–
<b>Type of settlement</b>				
City	83.0	74.2	72.2	83.0
Village	17.1	25.9	27.8	17.0

array of the population a category was selected, amounting to about 10% of the population, broken down into three subgroups, similar in certain features that do not go beyond the bounds of the values of the criterion that separate one cluster from another. It resulted in the formation of cluster centers, which showed the dominating features of the representatives of each group (tab. 9).

The methodology allows us to define three strata in the structure of the middle class:

1. The upper stratum is the “organizers” that make up about 10% of the total number of the middle class. Representatives of this group have higher education, an income of about 35–65 thousand rubles per person, and they hold leadership positions. As a rule, these are entrepreneurs, men aged 30–60, who have their own business.

2. The most representative is the middle stratum – “intellectuals” (62%) with higher education, income of 25–35 thousand rubles, and high purchasing power. These include mainly highly qualified specialists of social sphere (doctors, teachers, journalists, etc.), engineering and technical personnel.

3. The lower stratum, comprising 28% of the population, is called “workers”. It includes people with secondary vocational education, income of 20–25 thousand rubles, engaged primarily in manufacturing or in the services sector.

In case of a sharp deterioration in the financial position the representatives of the middle class twice as often as the population in general state their willingness to work. In addition, the provision with material goods in this category is significantly higher than that among the general population: twice as much people have private plots and property, which they can dispose of, foreign-made cars, and savings. The middle class is characterized by a higher cultural capital: they visit museums, exhibitions, and theatres 2–3 times more often. They do sports regularly; they keep to a balanced diet and go on vacation abroad 2 times more often.

As we can see from table 9, there has been a reduction in the representation of the upper stratum of the middle class in the Vologda Oblast under the impact of the global financial and economic crisis (in 2008 – 19%;

Table 9. Number of strata of the middle class and their cluster centers in the Vologda Oblast, 2008–2013

Criterion	Strata of the middle class		
	Lower stratum, “workers”: 2008 – 33%; 2010 – 19,8%; 2013 –28,2%	Middle stratum, “intellectuals”: 2008 – 48%; 2010 – 69,3%; 2013 – 61,6%	Upper stratum, “organizers”: 2008 – 19%; 2010 – 10,9%; 2013 – 10,2%
1. Average monthly income per person, rub.	20 – 25 thousand	25 – 35 thousand	35 – 65 thousand
2. Assessment of their own income	I have enough money to buy necessary food and clothing	Purchase of durable goods is not a problem	Purchase of durable goods is not a problem
3. Level of education	Secondary vocational	Higher	Higher
4. Job status	Worker	Specialist	Head

in 2013 – 10%), an increase in the number of representatives of the stratum of “intellectuals” (in 2008 – 48%; in 2013 – 62%), with a simultaneous sharp reduction in the number of “workers” (from 33% in 2008 to 20% in 2010) and its subsequent growth in the post-crisis stage (up to 28% in 2013).

Proceeding from the above understanding of the category “middle class”, the financial wellbeing of individuals who constitute the middle class should be sufficient to satisfy their vital needs; thus, we have added financial ability to buy food and pay for services to the list of criteria for estimating the size of the middle class. However, the inclusion of these criteria has not significantly changed the internal structure of the middle class in the Vologda Oblast.

Consequently, the use of a larger number of criteria reduces considerably the representation of the middle class in the region – from 30% when using three parameters to 0.1% if the number of parameters is increased to six.

Socio-economic differentiation violates the homogeneity of the middle class, which is divided into separate subclasses depending on the financial level and social status of individuals. Experts often associate the high level of inequality with greater opportunities for social mobility. In this regard, it is necessary to assess the scale of the middle class “in conjunction with the indicators of social mobility, i.e. with opportunities of transition from one class to another. The reduction of the penetrability of social boundaries is one of the primary reasons for deterioration of the position of the middle class, because otherwise, by shrinking, it is not able to reproduce at the expense of the influx of the poor strata of population” [6, p. 19-28].

In 2013–2014 ISEDT RAS carried out a study of social stratification and social mobility of the population in the Northwestern Federal District<sup>4</sup>; its results show that the level of mobility of the entire population three times exceeds that of the mobility of the category related to the middle class (*fig. 2*).

<sup>4</sup> The study was conducted on the basis of the survey of the population in the NWFD regions in the second quarter of 2013. The volume of sample was 5113 people.

The total coefficient of mobility and the resulting indicators were calculated by the question: “Mark the changes in your social status in the society” (it became higher/lower, it did not change). The system of the following indicators was used for measuring social mobility:

1. The general coefficient of mobility is equal to the ratio of the number of persons who made transitions to the total number of population:

$$Q_0 = n_0 / N_0 * 100\%.$$

2. The indicator of upward mobility is equal to the share of people, who make transitions with the rise of their social status:

$$V_p = \sum \sum N_{ij} / N_0; (i < j).$$

3. The indicator of downward mobility is equal to the share of people, who made transitions with the decrease of their social status:

$$V_n = \sum \sum N_{ij} / N_0; (i > j).$$

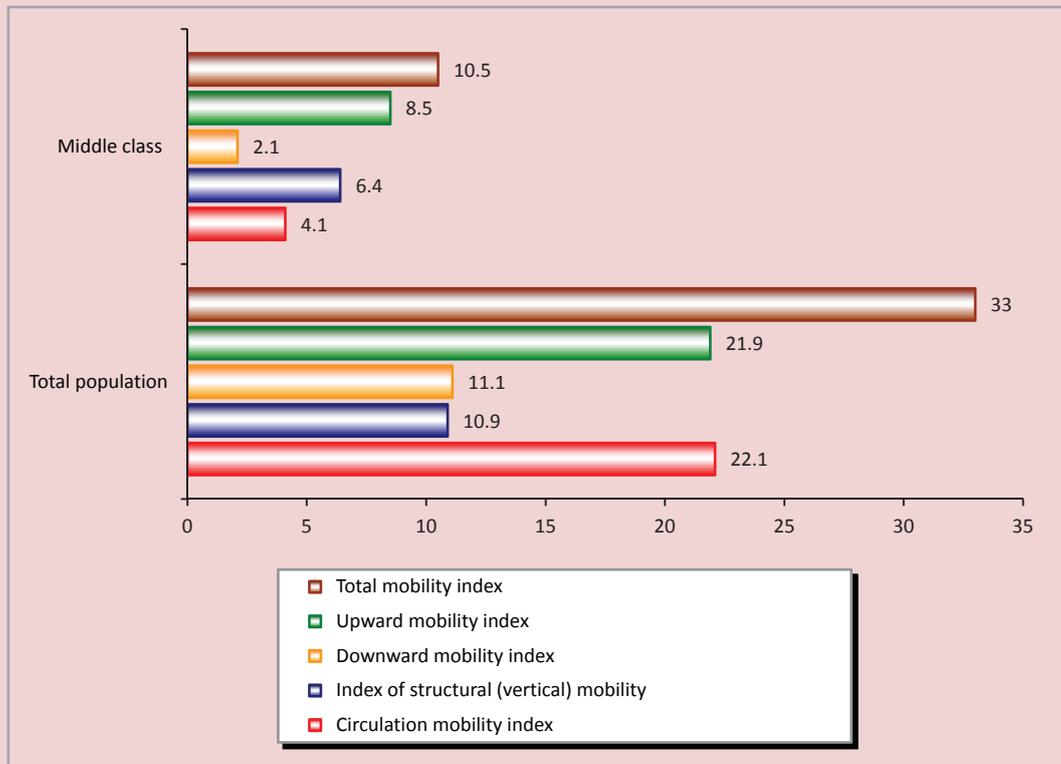
4. The indicator of structural (vertical) mobility is equal to the difference between the rates of upward and downward mobility:

$$C_v = V_p - V_n.$$

5. The coefficient of exchange mobility is equal to the difference between the total coefficient of mobility and the coefficient of structural (vertical) mobility:

$$P_0 = Q_0 - C_v.$$

Figure 2. Indices of social mobility of the Vologda Oblast population



In general, it should be noted that social mobility of the Vologda Oblast population is 33% ,which is on average by 5–10% lower than in most regions of the NWFED (the Republic of Karelia is the leader – 47%). It is most likely that the level of social status, which the middle class in the Vologda Oblast has reached, is at the moment the upper limit, and it is difficult to reach beyond it. In this case, it would be more reasonable to talk about mobility within the middle class – from its upper to lower groups and vice versa. Exchange mobility shows the degree of openness of the group – the smaller the mobility, the more closed the group and it is difficult to enter it [4, pp. 205-212].

This indicator in the strata of the middle class is only 4%, which proves that the transfer to this group is difficult. This raises concerns in relation to the reproduction of the middle class and further reduction in its number.

We can conclude from the above that the task to increase the share of the middle class up to 65% set out in the Strategy for socio-economic development of the Vologda Oblast for the period up to 2020 [14] is difficult to accomplish. In order to increase the penetrability of the middle class and enhance social mobility, it is necessary first of all to reduce the impact of factors that hamper the movement of people from lower

to higher strata. One of the main “brakes” in the growth of the middle class is the low level of income, which reduces the availability of different goods and makes it difficult to meet the demands of individuals.

Besides, a representative of the middle class should have a high level of cultural capital, active cultural leisure; he/she should advocate certain socio-political positions, have motivation to achieve definite goals, possess individual freedom, etc. The impact of restrictive factors leads to the fact that the means of social mobility work only for wealthy or very gifted people; as for the rest of the population, the level of actual wealth and, consequently, the possibility of transition to a higher social stratum reduces.

Thus, the middle class in Russia and, in particular, in the Northwestern Federal District, has not been formed properly. However, the social structure of the territorial community has a group of people (about 29%) that meets certain requirements, allowing us to refer them to the middle class, although it is very heterogeneous; nevertheless, under certain conditions it can become the basis for the formation of a strong middle class.

To distinguish the category of “middle class” in the classical sense, Russia should, first of all, overcome a large gap between the rich and the poor. This can be achieved by carrying out the following activities in the field of social policy:

- reduction of the gap between extremely low and extremely high incomes;
- increase of the real disposable income and the minimum wage;
- increase of the subsistence level up to the value of the real consumer basket;

- development of national mechanisms for regulation of prices for low-end apartments and increase of the availability of mortgage for all segments of population;

- introduction of progressive taxation.

However, it is not enough just to increase incomes; it is necessary to provide access to quality vocational education, and to strengthen small and medium business. The latter can be done through the implementation of the following measures: redistribution of net product by introducing a maximum (marginal) rate of return; introduction of the standard for breaking down the growth of net income from the business into the growth of wages and growth of profit; establishment of the legal foundations for remuneration, including through the establishment of social standards of remuneration of workers of basic professions in tariff agreements and collective agreements, etc. [3]. Social and labor mobility is essential in the formation of the middle class. However, its enhancement is impeded by the underdeveloped housing market, flaws in the system of housing loans and pension system (absence of large pension capital), the institute of registration, etc. In order to solve these problems, it is necessary to reduce barriers to mobility: to improve the efficiency of the educational system, to diversify production, to optimize the budget sector, to enhance retirement savings, to develop the institutions of civil society, i.e. to conduct an effective socio-economic policy. Only then the people from lower strata will have an opportunity to “join” the middle class, and the people belonging to the middle stratum will be able to become a full-fledged middle class.

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## Development of marriage and family relationships in the northern regions of Russia\*



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**Abstract.** The article deals with the mechanism of modern demographic development in Russia's northern regions. The article studies the dynamics of marriage processes in the North in the post-war period, and reveals the current specifics of marriage and family relations. The authors analyze in more detail the situation in the two big northern republics: the Komi Republic and the Republic of Sakha (Yakutia). They identify factors that determined a significant decrease of marriage rate in the 1990s and the relative normalization of marital and family processes in recent years. The article outlines the main directions of demographic policies in the northern regions.

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**Key words:** Northern regions, population reproduction, marriage and family relations, level and structure of nuptiality, demographic policy.

Demographic studies pay great attention to the processes of fertility and mortality. At the same time, the research into the development of matrimonial relations is also an integral part of the demographic analysis: family circulation is included in a broad interpretation of the concept “reproduction of the population”. The presence of certain forms of marriage and family, and consequently, relations between men and women, between spouses, between parents and children provides stability to the process of human reproduction and its continuous renewal [1, p. 100].

What is more, all demographic processes are interconnected and interdependent. The trends to develop marriage and family relations influence not only fertility, but also mortality and the extent of migration mobility of the population.

In the midst of the protracted demographic crisis, from which the country is only just emerging, but already anticipating a structural reduction in the birth rate, the study of modern regional specificity of mating behavior of the population is of undoubted interest.

This article considers the features of matrimonial relations in the northern regions of Russia (the areas of the Far North and equated localities). It pays special attention to two large national republics of Komi and Sakha (Yakutia), which, on the one hand, are characterized by a number of common patterns of demographic development in the North and, on the other

hand, are different in their own specificity, mostly due to the ethnic composition of the population and the degree of completion of the demographic transition in the titular ethnic groups.

The current patterns of demographic development in the North are the following: significant amounts of the population decline due to large-scale migration outflows over the past two and a half decades, and, consequently, higher paces of ageing of yet younger population of the North [2].

The natural movement of the population in the northern territories should be also assessed, despite the apparent relative success, reflected directly in the dynamics of the natural increase indicator in these regions during the demographic crisis period. In some northern regions the natural population loss began later than in Russia in general and ended earlier. For example, in the Komi Republic the natural decline was first observed in 1993, a year later than in the country. And in 2011, on the contrary, one year earlier than in Russia, the republic was the first to witness a positive natural increase, in urban areas – even in 2008. At the same time, in the depopulated northern regions, the total rate of natural decline, as a rule, was significantly less than the average, with the only exception being the Republic of Karelia and the Arkhangelsk Oblast.

In some Northern regions only certain territories experienced natural decline over time. For example, in the Sakha (Yakutia)

Republic depopulation was first recorded in 1993 in Aldansky District and in 1995 in Ust-Maysky District. In 2006 eight districts out of 35 experienced the decline [3].

What is more, some northern regions had a stable natural increase during the depopulation period in Russia. They were the following: Nenets Autonomous Okrug of the Arkhangelsk Oblast in the Northwestern Federal District; Khanty-Mansi and Yamalo-Nenets Autonomous okrugs in the Ural Federal District; the Tuva Republic in the Siberian Federal District<sup>1</sup>; the Sakha (Yakutia) Republic as a whole, Chukotka Autonomous Okrug and Kamchatka Krai (since 2007) in the Far Eastern Federal District. In Usinsk Urban Okrug of the Komi Republic there was natural growth during the whole period of depopulation.

There are several reasons for such processes. *First*, it is a younger age structure of the population (*table 1*), characteristic of the North. Its maintenance in the conditions of the long-term negative migration balance is caused not only by age potential of the population, accumulated due to long-term migration inflows, and by inflow and outflow of different age groups threads and also by relatively high levels of fertility of the indigenous peoples of the North. *Ceteris paribus*, the young age structure preconditions relatively high fertility and low mortality. Therefore, the increased amount of total mortality in the Republic

<sup>1</sup> Unfortunately, there is no possibility to analyze the situation in Taymyr (Dolgano-Nenets) and Evenk Autonomous okrugs, as the information on only the overall demographic situation in Krasnoyarsk Krai has been recently provided.

of Karelia and the Arkhangelsk Oblast, also characterized by the young population structure, reveals a negative tendency. However, the Republic of Karelia since 2003 has had different and low total fertility rate, i.e. the significant decrease in the period of depopulation has been predetermined by mortality and fertility.

*Secondly*, the higher level of fertility is characteristic of the majority of indigenous Northern Peoples due to the incomplete demographic transition: almost all regions with a positive natural increase are autonomies with a noticeable percentage of the indigenous peoples of the North.

*Thirdly*, it is “export of mortality” from the North to southern regions. To the greatest extent, it is characteristic of territories with the resource-orientated economy. It leads to the increased life expectancy of the population of Khanty-Mansi and Yamalo-Nenets Autonomous okrugs, as well as Usinsky District of the Komi Republic.

These rates are ensured both by the low mortality rate from endogenous causes among men of working age due to significant territorial rotation and by the low mortality rate among older people who often leave the North. In all other Northern regions the rates of life expectancy of the population are lower than in Russia as a whole.

Thus, the lower depth of the demographic crisis in the Russian North is a mere formality due to the young age structure of the population, incomplete demographic transition among the indigenous peoples of the North and “export of mortality” to southern regions. In fact, the demographic sphere in northern regions is more troubled.

Table 1. Share of the population under and of working age in the Northern regions of Russia, according to the population census, % [4; 5; 6]

Region	1989		2002		2010	
	Under working age	Of working age	Under working age	Of working age	Under working age	Of working age
<b>Russian Federation</b>	24.5	57.0	18.1	61.3	16.2	61.6
<b>European North</b>						
Republic of Karelia	25.6	58.4	18.0	62.9	16.0	61.2
Komi Republic	28.0	62.1	19.8	66.1	17.7	64.7
Arkhangelsk Oblast	26.6	58.0	18.7	62.7	16.7	61.6
including Nenets Autonomous Okrug	<i>30.9</i>	<i>61.4</i>	<i>25.4</i>	<i>63.0</i>	<i>22.7</i>	<i>63.0</i>
Murmansk Oblast	27.4	64.0	18.1	68.4	16.2	65.5
<b>Asian North</b>						
Khanty-Mansi Autonomous Okrug	33.2	63.3	22.8	70.4	20.4	69.0
Yamalo-Nenets Autonomous Okrug	32.8	65.2	24.9	70.5	22.0	70.2
Tuva Republic	37.3	54.9	33.9	59.8	30.5	59.7
Sakha (Yakutia) Republic	32.5	61.0	26.5	63.5	23.3	64.0
Kamchatka Krai	28.2	66.5	18.8	68.9	17.1	65.6
Magadan Oblast	29.4	66.9	19.1	69.8	16.8	66.5
Sakhalin Oblast	27.2	62.7	18.6	66.5	16.7	63.7
Chukotka Autonomous Okrug	30.6	67.5	23.2	70.1	22.4	67.3

The critical demographic problems of northern territories are the following: low life expectancy of the population, especially of men, and especially in rural areas; the young age structure of the dying and the significant proportion of mortality from external causes and diseases of exogenous etiology; low fertility rates in traditionally Russian northern regions and territories with the completed demographic transition among indigenous ethnic groups;

connection of the incomplete demographic transition among the indigenous peoples of the North with the adverse qualitative characteristics of fertility (particularly, with the significant percentage of non-marital births) and high levels of infant mortality [7].

Matrimonial relations in the North can be estimated as adverse. Due to a younger age structure, a high percentage of the working age population, which is also the age of

marital activity, the northern regions have an increased crude marriage rate (*tab. 2*).

However, in some areas (for example, in the Komi Republic, Nenets Autonomous Okrug, the Sakha (Yakutia) Republic) the level of marriage rate is currently slightly higher than the Russian average, and it is often even lower.

In the Republic of Karelia and the Arkhangelsk Oblast the crude marriage rate is consistently below the national average rate. In the Tuva Republic its value is significantly lower than the national average level. On the one hand, it is caused by the fact that, unlike other territories of the Far North and equated localities, the young age

Table 2. Dynamics of the crude marriage rate of the population of the RF Northern territories in 2000–2011, marriages per 1000 persons [9; 10]

Region	Year											
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>Russian Federation</b>	6.2	6.9	7.1	7.6	6.8	7.5	7.8	8.9	8.3	8.5	8.5	9
<b>European North</b>												
Republic of Karelia	6.0	6.4	6.8	7.0	6.7	7.2	7.7	8.4	8.5	8.3	8.8	9
Komi Republic	5.7	7.3	7.3	7.7	6.2	7.5	7.7	8.7	8.0	8.6	9.0	10
Arkhangelsk Oblast	5.2	6.4	6.6	7.3	6.0	7.5	7.6	8.9	7.9	8.4	8.9	9
<i>including</i>												
<i>Nenets Autonomous Okrug</i>	6.2	7.0	7.3	6.9	5.1	6.3	7.6	8.9	8.4	8.0	8.1	8
Murmansk Oblast	7.0	7.9	7.9	8.7	7.4	8.4	8.5	9.3	8.6	8.9	9.3	9
<b>Asian North</b>												
Khanty-Mansi Autonomous Okrug	8.7	10.8	10.4	10.0	8.4	9.7	10.5	11.5	10.6	10.7	11.3	12
Yamalo-Nenets Autonomous Okrug	8.4	9.9	9.9	10.1	8.6	9.2	8.9	10.1	8.8	9.4	9.8	10
Tuva Republic	3.7	4.9	5.4	6.6	5.2	5.3	5.6	8.7	8.7	8.5	6.8	7
Sakha (Yakutia) Republic	6.1	7.7	7.8	8.2	6.8	7.4	7.4	8.4	7.8	8.5	8.7	9
Kamchatka Krai	7.1	8.0	8.5	8.7	7.5	8.9	9.0	9.6	9.5	10.1	10.3	10
Magadan Oblast	7.4	8.3	8.9	9.0	7.4	8.8	9.1	10.0	9.8	9.5	9.6	10
Sakhalin Oblast	6.2	6.9	7.6	8.0	7.2	8.2	8.8	9.7	9.6	9.7	9.9	9
Chukotka Krai	6.9	7.8	9.7	9.3	9.5	10.0	9.7	10.0	9.7	10.1	9.1	7

structure of the Tuva population (with a high percentage of children ages) is characterized by a relatively low, below the national average proportion of the working age population (see table 1). But, in addition, the low crude marriage rate correlates with a high percentage of non-marital births that is more than twice higher than the national average level and with a low level of crude divorce rates. It is obvious that this region has very strong features of matrimonial relations of the indigenous population that have a negative impact on the level of official regulation of marriage rates.

The trends in marriage processes in the northern regions are close enough to the national average; still there is some time lag.

The national average decline in the marriage rate began almost immediately after the war, after a significant, but very short compensatory rise.

In 1946, the crude marriage rate of the Russian population doubled the pre-war value; however, in the conditions of significant postwar gender imbalance, the marriage processes experienced a decline since the following year [8, p. 18–20].

This time there was a fundamentally different situation in the northern regions. Already in the pre-war period the need to attract natural resources in the economic turnover had led to the influx of population to the North.

However, in the first postwar decade the amount of migration growth was unprecedented. As the majority of migrants were young, mostly unmarried men, the

migration improved the age-gender and marital structure of the population in the northern territories significantly, setting apart from the current situation in the country.

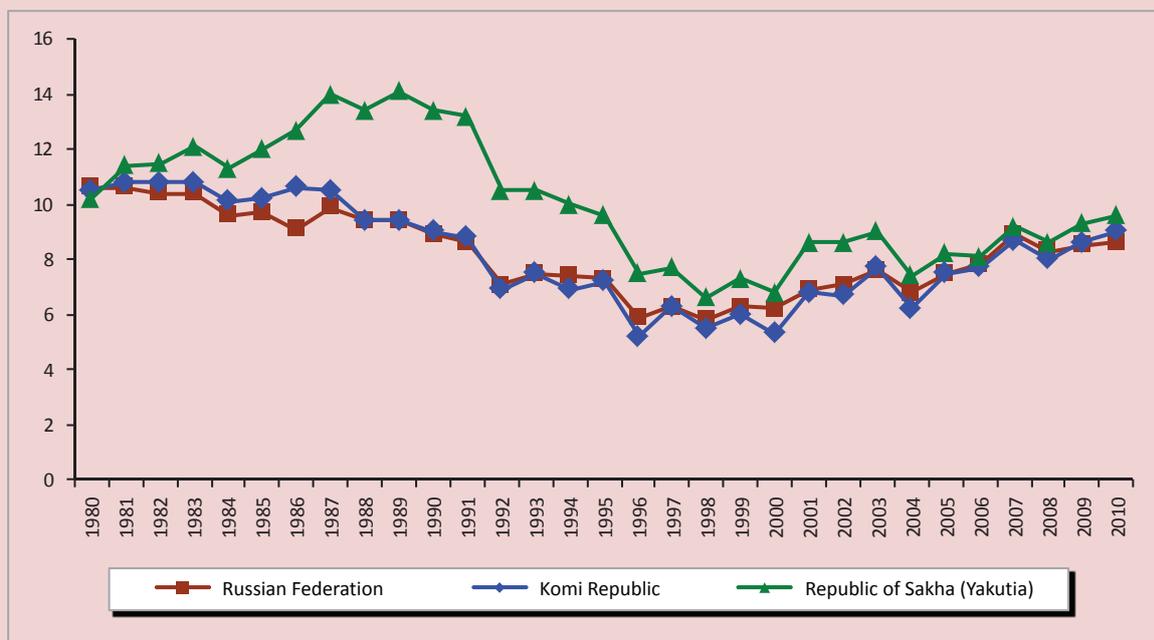
In the Komi Republic, for instance, in 1945 the crude marriage rate was also more than two times higher than in the prewar 1940–10.7 and 4.6 per 1000 persons, respectively. However, it continued to rise at a rather high rate during the first postwar decade.

The most significant growth was in the first half of the 1950s, when there was a maximum migration rate in the republic. Having reached the peak (28.4‰ in 1955), apparently, due to “Komsomol” weddings in the regions of new development, the marriage rate in the Komi Republic began to decline gradually. For three decades this trend was slow and gradual, changing only at certain periods, primarily due to unfavorable changes in the age structure of the population. So, the small number of people, born during the war, and the migration outflow resulted in low values of the crude marriage rate of the population in the Komi Republic in the 1960s – early 1970s.

Obviously, the same was true for the Sakha (Yakutia) Republic, as by the early 1980s the values of the crude marriage rate in these republics had almost equaled to the national level (*fig. 1*). The relatively young age structure of the population of the considered regions indicates a greater problem of the development of the official marriage and family relations during this period.

The first half of the 1980s in the Northern regions observed some improvement in marital processes, especially, the Sakha

Figure 1. Dynamics of the crude marriage rate of the population in the Russian Federation, the Komi Republic and the Sakha (Yakutia) Republic in 1980–2011, marriages per 1000 persons



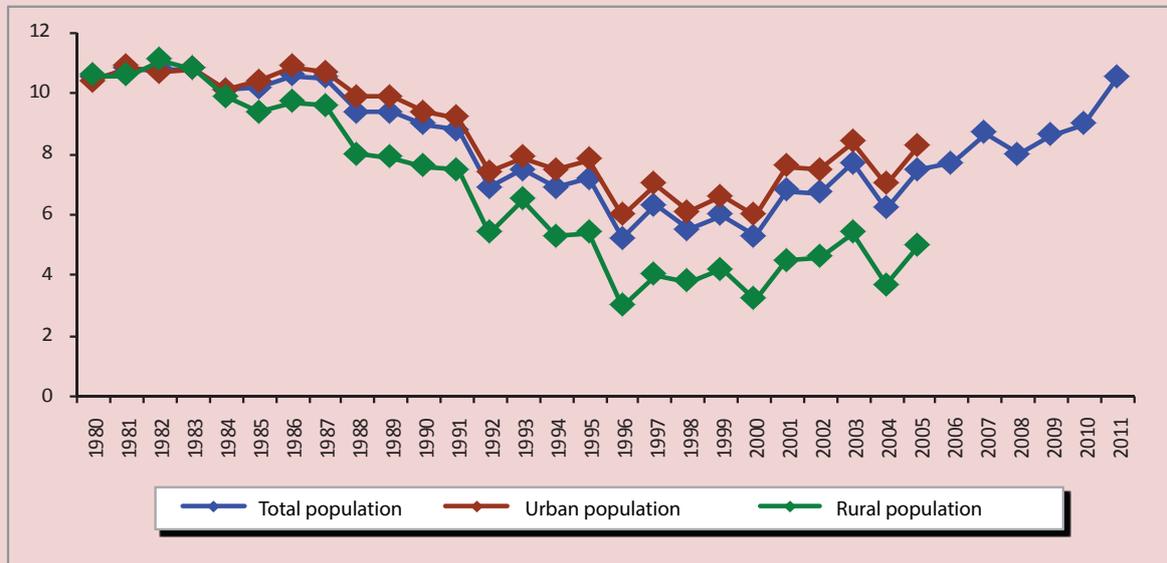
(Yakutia) Republic where in 1980–1987 the increase of the crude marriage rate amounted to 37.3%. Apparently, this was a consequence of the 1981 Regulation “On measures to strengthen support for families with children” [11], which played a prominent role in the normalization of the demographic situation in the country in the first half of the 1980s, especially in the regions with higher fertility rates.

There was no noticeable growth in the marriage rate in the Komi Republic; there was rather stabilization of its level. Although it should be noted that in 1981–1983 the republic had the highest indicators since the mid-1960s (10.8 marriages per 1000 persons). What is more, almost till 1991 the

crude marriage rate in the republic exceeded the all-Russian level. However, in the second half of the 1980s, the decline rate in its level in the Komi Republic increased significantly (*fig. 2*).

The main reason, like two decades ago, was a decrease in the share of the population of the marriageable age due to the low birth rate of the 1960–1970s and another migration outflow. And at the end of the 1980s marital processes were influenced by changing standards of marriage and family behavior due to sexual revolution, which had been popular in the West two decades ago. Democratization of social norms, regulating gender relations, led to a gradual shift from traditional marriage and family norms, causing earlier sex life,

Figure 2. Dynamics of the crude marriage rate in the Komi Republic in 1980–2011, marriages per 1000 persons



widespread premarital sexual relations, trial and de facto marriages, the increase in the number of marriages caused by out of wedlock pregnancy, the increase in the share of non-marital births occurring in de facto marital unions and in single-parent families, Besides, people started to marry and have children earlier.

Due to a younger age structure of the marriage rate half of men under 24 got married in the early 1990s. One should pay attention to quite a significant increase in the marriage rate of rural men of 20–24 years in the republic during this period. It indicates normalization of marriage processes in rural areas due to mitigation of the problem “shortage of brides”. Significant outnumber of men of the age of the maximum marriage rate complicates their activity on the marriage market.

Therefore, the female indicators of the marriage rate in the Komi Republic are traditionally higher than the male ones, especially in rural areas.

However, during the 1980s and early 1990s there was noticeable improvement in gender proportions in the most active marriageable ages: if in 1981 there were 63 women per 100 men of 20–29 in rural areas, after 10 years there already 76 women. As a result, at the beginning of 1990s the Komi Republic observed a significant reduction in the difference between the levels of the marriage rate of rural men and women. Mitigation of gender disparities in the age of maximum marriage activity, leading to the convergence of male and female marriage potentials, further continued. So, ten years later in 2001 there were 89 women per 100 rural male of 20–29 years.

However, the early 1990s experienced the significant decrease in the level of the marriage potential fulfilment due to severe deterioration of the socio-economic situation. Therefore, men failed to take full advantage of the improved gender ratio on the marriage market.

The dramatic decline in living standards due to the crisis in the reforming Russian economy resulted in postponement of demographic events in the early 1990s. It should be noted that the marriage rate is the least subject to significant changes of external conditions. Its level is greatly influenced by conflicts and crises. Therefore, almost instantly the marriage processes reacted to the deteriorated socio-economic situation: in 1992 the reduction in its level everywhere had a disastrous nature. At the same time, in the postwar period the level of the crude marriage rate of the population in the Komi Republic exceeded the national average due to the younger age structure of the population; since 1992 it has become stably lower than the all-Russian level, despite the fact that the age structure of the population has still been relatively young.

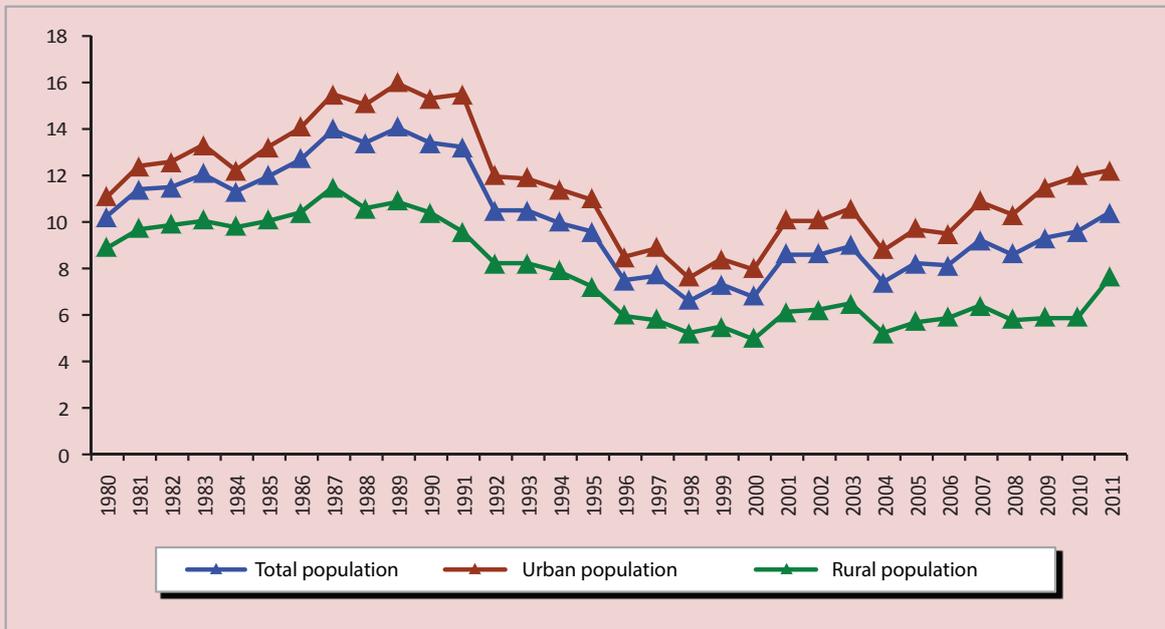
In the Sakha (Yakutia) Republic the marriage rate, having increased considerably during the 1980s, remained quite high almost till 1991. However, it fell sharply since the beginning of socio-economic reforms. In 1992 the crude marriage rate decreased by 20.5%. In 1991–1996 the decline amounted to 43.2%; in 1998, with the minimum crude marriage rate being recorded (6.6 marriages per 1000 persons), there was a twofold decrease, compared to 1991 (*fig. 3*).

The instability of the socio-economic situation and raising inflation forced many potential wedding couples to postpone the wedding. Evidently, the 1992 recession was largely associated with the inevitable decline in the marriage rate due to the leap year. May and the leap year are not popular for marriage among people. The year before a number of people get married in December not to start a family in a leap year.

However, the monthly number of marriages in 1992 discloses that the most significant reduction in the marriage activity occurred from April, when the marriages, planned already in 1992, were registered. At the same time, the figures show that the period in the marriage activity of the population in the Komi and Sakha (Yakutia) republics has been reduced by half since that time. The decline in the marriage rate is now observed not once in four years, and in each even-numbered year. In Russia as a whole the four-year period remained mostly unchanged.

In the 1990s the marriage rate level in the Komi Republic and the Sakha (Yakutia) Republic experienced fluctuations determined by the descending trend: each subsequent recession was deeper than the previous one and the increase became increasingly small. In the first decade of the economic reform (1992–2001) the average crude marriage rate in the Komi Republic was more than one third below the level of the previous decade (1982–1991). In rural areas of the republic it was reduced by half, in urban – by more than 30%. There was the same trend in the Sakha (Yakutia) Republic. In urban areas the decline

Figure 3. Dynamics of the crude marriage rate in the Sakha (Yakutia) Republic in 1980–2011, marriages per 1000 persons



was exactly the same as in the Komi Republic; in rural areas it was not as significant as in Komi (37%).

Another indicator of the reduced marriage potential of the population in the 1990s is the dynamics revealing the probability to get married by a certain age. It is calculated by summing the age-gender marriage rates by a certain age on the basis of a total demographic factor. Such calculations are only performed for the Komi Republic due to scarce data. At the 2001 marriage rate 76% of men and 81% of women could get married by the age of 50 (including re-marriage), while in 1991 98% of men and 121% of women could. Unfortunately, the calculation of many demographic indicators after 1996 is impossible as Rosstat stopped

to publish some demographic data (the list was expanded in 2006; Figure 2 clearly demonstrates it: crude marriage rates separately for urban and rural population in the Komi Republic have recently become unavailable for researchers). So, it is impossible to assess the reduction in the probability to marry for the first time in general during this decade.

However, this assessment can be carried out for the initial period of socio-economic reforms. In the Komi Republic in 1991 75% of men and 90% of women could marry for the first time by the age of 50, while in the middle of the decade (1995) 64% of men and 68% women could. At the same time, since the beginning of the 1990s all odd-numbered years have been characterized

by the increased marriage activity of the population, so the 2001 and 1995 indicators reflect not the most unfavorable situation of those years.

Marriage potential of the population is higher nowadays. The figures reveal that in the early 2000s in the Komi Republic, the Sakha (Yakutia) Republic and in the whole country, there was an increase in the marriage rate: the last decade demonstrated a clear increasing trend. Since 2004 the northern republics have been again characterized by the four-year period of marriage activity. At the end of the decade, the marriage rate in the Komi Republic was equal almost to the 1991 level, and in 2011 – to the 1987 level, close to the maximum level of the early 1980s. In the Sakha (Yakutia) Republic in 2011 the marriage rate equaled the 1992–1993 level, but the increase was also very noticeable. Apparently, in many respects this growth was a result of the improved age structure of marriage cohorts. Numerous generations, born in the middle and a second half of the 1980s, attained marriageable age. However, the state demographic initiatives to support family fertility have contributed enough in recent years.

Figure 2 shows that the crude marriage rate in the rural areas of the Komi Republic started to lag behind the urban ones significantly in the second half of the 1980s. In the Sakha (Yakutia) Republic where the marriage rate in the rural territories has been traditionally below the urban ones, in the second half of the 1980s this difference between urban and rural areas increased (fig. 3).

The low marriage rate in rural areas of the Komi Republic was mostly caused by significant ageing of the rural population. However, since 1994 the crude marriage rate in rural women has dropped even below the city level, which was the only rural indicator of the marriage rate, compared favorably with the urban. As it has been already mentioned, such a good indicator was based on very favorable gender ratio on the marriage market. “Shortage of brides”, existing in the rural areas of the republic, has traditionally determined both the reduced marriage rate of the male population and the increased one of the female.

Over the past three decades the gender ratio in rural areas of the Komi Republic has levelled off significantly, contributing to the convergence of male and female marriage potentials.

However, their realization decreased in the 1990s considerably. Despite the decline in the crude marriage rate and the total marriage rate of women below the urban level not only of the crude marriage rate, the first marriage rate of the rural population in the Komi Republic still remained above the urban. If in the urban areas 62% of men and 66% of women could marry for the first time in 1995, in the rural ones 69% of men and 74% of women could. Hence, rural people realized their marriage potential better. The higher marriage rate of the urban population was determined by the re-marriage rate, a consequence of the high divorce rate.

Thus, the situation with the official marriage rate in the rural areas could be considered more favorable than in the urban.

However, it is necessary to study a more significant reduction in the marriage rate among rural people. In our opinion, it can be considered as an indicator of changes in patterns of marriage and family behavior of the Russian population in the second half of the 1980s due to the spread of de facto marriages. De facto marriages, unlike extramarital sexual relations without stable family relationship that are more spread in the city, become more popular in the rural areas, and, especially, in the Komi Republic, where indigenous ethnic groups comprise more than a half of the rural population. They have had some specifics of marriage and family behavior, recognizing de facto marriages along with registered ones. It is obvious that de facto marriages came into wide practice in the second half of the 1980s—early 1990s in the village again as in the 1920—1930s. Later they became typical for the urban population, especially for re-marriages.

The lack of legal regulation of marital relations, traditionally more common for re-marriages had involved the spread of de facto marriages since the end of the 1980s. Till the early 1990s there was an increase in the share of re-marriages in all age groups except the youngest. This growth was especially vivid in the urban areas where for a long time the share of re-marriages in their total number had been one and a half – two times higher than their share in the rural areas. But since the early 1990s in the rural areas and since the middle of the decade in the urban areas the share of re-marriages declined and then stabilized. Only recently (in 2007—2008) this share has again grown in the overall structure

of registered marriages. The increased government attention to demographic problems was encouraged by the Presidential Address to the Federal Assembly in 2006. As the great importance was attached to the normalization of matrimonial relations, registered marriages began to strengthen their positions again.

The important point is a ratio of re-marriage rates among women and men. Usually men remarry more often than women. Researchers usually explain such psychological factors as women's higher demands to a new partner if they have children from the first marriage, low competitiveness of women with children on the marriage market, etc. At the same time, insufficient attention is paid to gender proportions. However, apparently, more frequent re-marriages among men are caused by a greater number of women. In the Komi Republic gender disparity in favor of men results in a high value of brides of any marital status on the marriage market, that is why the above pattern has not been observed until recently.

But since the beginning of the 2000s in the conditions of significant alignment of gender proportions and numerical predominance of men in the most active breeding ages the share of re-marriage among men in the Komi Republic has exceeded the female rate. Obviously, women's increased demands to a new husband with children and reduced competitiveness of women with children on the marriage market also play an important role in distribution of re-marriages among men and women.

As it has been already mentioned, in the late 1980s—early 1990s on the background of the indicators decrease in almost all age groups often people under 20 got married. However, in the first half of the 1990s this tendency came to an end.

So, in the Komi Republic the highest percentage of marriages among people under 18 was recorded in 1992 (1.2% of men and 6.3% of women), and among people under 24 in 1993 (53.8% and 64.2, respectively). Since 1994 the decrease in the average marriageable age in the Komi, the Sakha (Yakutia) republics and Russia, as a whole, changed in its growth. The increase in the share of marriages among people over 25 has been recently very vivid. Apparently, due to the government and society's attention to the family issues people who have delayed their marriage for some reason get married nowadays. As a result, in 2009–2011 in the Komi Republic the share of marriages among men over 25 exceeded 72%, among women almost reached 60%.

On the other hand, taking into account that in most developed countries the reduction in the average marriageable age changed into its growth in the early 1970s after the sexual revolution, one may consider this as a natural long-term historical trend, which can involve a more significant reduction in the marriage rate and a further increase in the level of the single state. Apparently, people retreat from the traditional model of early marriage. The sexual life of young people begins earlier, and the marriageable age rises.

At the same time, public opinion is increasingly sympathetic to de facto marriages. Their number grows, putting aside registered marriages.

In other words, the recent increase in the average marriageable age, the significant lag of the rural marriage rate, stabilization (until recently) of the re-marriages share and the high share of non-marital births (about a half is registered at the joint request of the parents) reveal wide spread of de facto marriages. Quite significant orientation of young people on unregistered marriage, early premarital sexual relations on the background of the low contraceptive culture and contraceptive responsibility contribute to further strengthening of alternative forms of family organization.

Popularity of de facto marriages is confirmed by the comparison of the results of 1994, 2002 and 2010 censuses. So, during the second half of the 1990s and the early 2000s, the share of men of the marriageable age in a de facto marriage increased from 6.3% in 1994 to 8.7% in 2002 and to 12.6% in 2010, the share of women from 5.5 to 7.6% and to 10.7%, respectively [12, 13] in the Komi Republic.

It should be noted that in the Komi Republic the share of the population in de facto marriages was significantly above the national average of the same indicator. The de facto marriage rate of the Russian population in general even in 2002 was lower (6.1% of men and 5.1% of women over 16 who reported their marital status) than this rate the Komi Republic in the mid 1990s.

In Russia in 2010 the de facto marriage rate for men and women was 8.4 and 6.9%, respectively [6], that was lower than in the Komi Republic in 2002. In the Sakha (Yakutia) Republic the de facto marriage rate was also higher than in the whole country. The share of men in a de facto marriage increased in the republic in 2002–2010 from 8.0 to 10.6%, the share of women – from 7.3 to 9.6% [6, 12].

In addition, registered marriages are often preceded by either de facto marriages or premarital pregnancy, with it being more or less stable premarital relationships between future spouses. For a more detailed study of some aspects of the official marriage rate, not reflected in the current statistics, at the end of 2002 we conducted the study of all cases of marriage registration in 3 rural settlements of the Komi Republic in 1992–2001 [14]. The criterion to select these rural settlements was the possibility to get reliable retrospective information. In small communities, where everyone knows each other, additional information can be obtained from interviews with the experts, registering demographic events.

The study has showed that in the period under consideration at least in the rural areas of the Komi Republic the majority of registered marriages were preceded by de facto marriages of varying duration. More than 20% of marriages were registered after the birth of children. The great share of marriages was registered due to premarital pregnancy of the bride (30–45%). It is considered to be one of the factors of instable family life.

Besides, not all cases of non-marital births fall within the statistics of illegitimate births, which in the Komi Republic in 2011 was 32.7% of births and 41.8% in rural areas, even after six years of decline, i.e. the level of illegitimate birth was, in fact, even higher than that, reflected in the official statistics.

Regulation of de facto marriages often ends the process of demographic development of the family. The study has disclosed that in approximately 40% of marriages, registered during the decade, children were not born later: either they had been born by future spouses before marriage (more than 20% of marriages), or were not planned due to the age of spouses, the presence of children from previous marriages, etc. (almost 20% of marriages).

Thus, in the last two decades along with the officially regulated form of the family, de facto marriages have been widespread in Russia, with only part of them being registered later. This is true for the Komi and Sakha (Yakutia) republics to a greater extent. And even it is more characteristic of the Tuva Republic that has traditionally had low marriage rates and a very high level of extra-marital fertility.

It is known that not only single-parent families but also de facto marriages are characterized by a smaller number of children in the family. Moreover, de facto marriages are less stable in terms of divorce rates: obstacles to the official registration of the relationship strengthen centrifugal tendencies in unstable unregistered marriage.

It predetermines lower fertility rates.

In other words, the family structure of the past two decades predetermines low birth rates.

The increased government attention to the problems in the demographic sphere in 2006–2007 led to betterment in the processes of officially registered marriages. In the early 2000s the growth in the marriage rate was caused by the improvement of the age structure of marriage cohorts in recent years, recently it has been intensified by “postponed marriages” – older age at marriage. The decline in the share of non-marital births since 2006 indicates the enhanced situation in this sphere.

This reveals that trends in the development of marriage and family relationships can have a positive impact. That is why it is necessary to promote the family values revival, expand measures to strengthen the institution of family and moral traditions of family relationships.

For northern regions of Russia the objective to consolidate the institution of the family, revive and deepen spiritual and moral traditions of family relationships is very important. Indeed, in many respects the crisis of family values and prevalence of extrafamilial interests are responsible for the low level of reproductive attitudes of the population, their insufficient implementation, and for the fact that fertility is becoming more and more “extrafamilial activity”. And in the northern regions

these negative aspects are amplified due to more substantial disorganization of family life.

It is caused by large migration (non-indigenous and, especially, non-permanent population has lower levels of social control and self-control, that is why migrants increase likelihood of different kinds of deviations, including in the matrimonial sphere), and by some features of matrimonial behavior of indigenous peoples (residual effects of polygamy as in the Tuva Republic, traditionally loyal attitude to the illegitimate birth as in the Komi Republic, or disorganization of matrimonial relations on the basis of long-term marginalization of some indigenous peoples of the North).

To sum it up, we emphasize the critical demographic problems of the northern regions that require intensified regional measures of demographic policy.

- Almost all northern territories of Russia face a very acute problem of mortality, particularly, premature male mortality from external causes, especially, in rural areas. Khanty-Mansi and Yamalo-Nenets Autonomous okrugs are not an exception: life expectancy of the population there is also very far behind developed countries.

- In most northern territories of Russia it is necessary to significantly reduce infant mortality: in the republics of Tuva and Sakha (Yakutia), in Nenets, Yamalo-Nenets and Chukotka Autonomous okrugs, Kamchatka Krai, the Magadan and Sakhalin oblasts.

- In the Republic of Karelia, the Murmansk and Arkhangelsk oblasts it is highly relevant to improve fertility. In recent years, the quantitative aspects of fertility have become urgent in Kamchatka Krai and the Magadan Oblast.

- In the republics of Karelia, Komi, Sakha (Yakutia) and the Arkhangelsk Oblast attention should be paid to the promotion of marriage and births in a registered marriage.

- The extremely significant level of extra-marital fertility, correlated with high values of the infant mortality rate, characteristic of the Tuva Republic, Nenets and Chukotka Autonomous okrugs, Kamchatka Krai, the Magadan and Sakhalin oblasts challenges these regions to improve the quality of birth.

- In the Magadan Oblast, Chukotka and Khanty-Mansi Autonomous okrugs the issues to improve stability of the family are topical.

- In the Tuva Republic it would be better to strengthen moral traditions of family relations and improve official regulation of matrimonial processes.

In our opinion, for the regions of the Russian North the demographic policy objective should be defined as creation of conditions for sustainable and high quality development of the population, provision of stable natural growth based on the convergence of the life expectancy rate in the region with that in the country, enhancement and improvement of the quality structure of fertility, based on the strengthened moral traditions of family relationships.

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## Transformation of gender power disposition in modern families as a driving force of institutional changes



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**Abstract.** The article uses the synthesis of the institutional theory tools and synergetics for analyzing the need to optimize the existing system of gender power institutions in the modern Russian economy. It is known that the performance effectiveness of the projected institutions is determined by the fact that economic agents are in need of such changes. In this regard, the article is focused on a study of the processes of transformation of the traditional type of gender power disposition in Russian families. It has been determined that they are characterized by a more equal distribution of functions in the organization of household. Therefore, currently, along with the traditional type of gender power, we define two more types: the egalitarian type, when the interests of both spouses are considered and there is symmetry in the distribution of household responsibilities, and the transitional type (interim version of gender interactions between spouses). The family is considered as a closed and an open system for determining the efficiency of reproduction of these gender power types in the modern economy. In the first case, using the synergy postulates, we can distinguish two types of gender interaction in the family: coordinated interaction – if the conditions of power disposition, defined by the power institution represented by the head of the family and the institute of internal power, are coherent; and uncoordinated interaction. From this perspective, traditional and egalitarian types have been referred to coordinated types of interaction. The transitional type admits both variants of interactions. The author has determined the number of families that implement each type of gender interaction between spouses. It is found that mismatch between gender power disposition in Russian families is increasing. The representation of a family as an open system with external influence factors has made it possible to determine that this trend is caused by the incoherence of the purposes of functioning of gender power institutions in the family and gender power institutions that are at higher levels

of the hierarchy: the power of social environment, the power of an organization, the power of the state and region. In such conditions, all the basic mechanisms necessary for ensuring the institutionalization of behavior standards such as stability, coordination, integration, learning and inertia are not observed, which confirms the need and willingness of economic agents to modernize the gender power institutions in Russia's economy.

**Key words:** system of institutions; institutional changes; gender power institutions; gender relationships in the family.

As we have discovered in [3, 5, 6], the current system of gender power institutions<sup>1</sup> is of very low quality, it does not meet the requirements of modern economy and reduces the performance of the entire socio-economic system. Following the standards of behavior (institutional roles) established by this system of institutions is very costly for economic agents at all its levels [2]. All this determines the necessity of modernization of the existing system of gender power institutions towards increasing the degree of its egalitarianity<sup>2</sup>.

<sup>1</sup> According to the chosen research methodology, the gender power institution is understood as a special kind of socio-economic institute, which was formed under the influence of objective conditions of material production (social division of labor) and which can be represented as a system of relatively stable power relations, set out in legislative acts, contracts and informal rules that regulate the forms of interaction between the subject and object of power and that define objectives and choices of a model of their own life behavior [3].

<sup>2</sup> Let us remind that the system of gender power institutions of egalitarian type implies that gender power is limited by the sphere of freedom of another economic agent, thus the degree of its concentration is negligible. It is characterized by the following features: 1) equal access of men and women to productive resources and income sources, including state management; 2) provision of state-granted childcare benefits to both parents; 3) levelling of gender stereotypes in the economy of family and society; 4) the same return on human capital for men and women; 5) gender expert review of normative-legal program-target documents and management decisions.

In our opinion, in order to define possible ways to optimize this institutional system one should use the tools accumulated by economic theory for the analysis of institutional change.

In this regard we remind that at present "there is a significant number of structuring processes of institutional design that differ in details"; most of them represent a special case of the general logic of decision-making process and its principles (see, e.g. [25, p. 18]). Among them we can distinguish the approach by O.S. Sukharev, who believes that institutional planning should be based on the following principles (criteria): setting of goals; identification of areas for application of efforts; functional diversity; the costs of the actions of institutions and agents, arising from the introduction of new institutions; the period of functioning of an institution and the time before its modification, substitution, elimination or correction; resistance to external changes and resistance to spontaneous mutations, as well as financial aspects of functioning of a newly established institution.

Besides, the latter principle is not the same as the cost of functioning of an institution, but rather the increment of financial opportunities that occur or do not occur with the introduction of this institution, or the

required amount of cash collateral per unit of time, necessary for the most effective functioning of an institution [24, p. 109]. Note that the above mentioned institutional planning criteria practically correspond to the set of qualitative characteristics of effective functioning of an institution, in other words, its functionality.

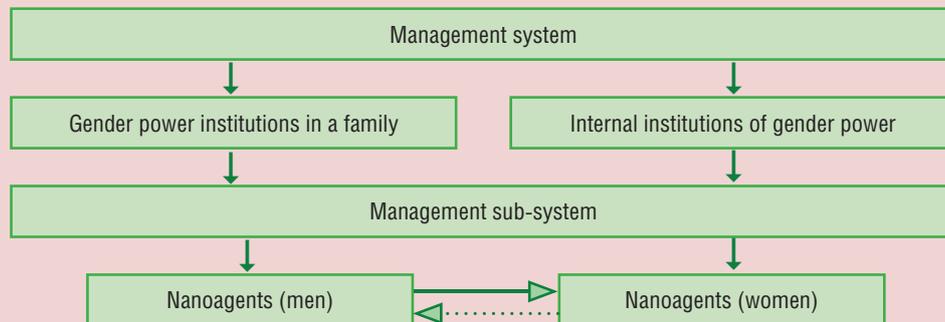
The author clarifies that the application of these principles will help to reduce the number and depth of dysfunctions in the economy. Therefore, one of the first stages of institutional planning should be “definition of initial institutional quality of a system, the extent of its dysfunctionality according to basic institutions (rules), and also clarification of the necessity for any changes, institutions, including the possibility of borrowing institutions, transferring them from a different socio-economic environment” [24, p. 110]. The approach to the stages of institutional design has been used in this study.

The quality level of Russia’s system of gender power institutions and the costs associated with its functioning for economic agents at all its levels have been studied in previous works of the author in [2–6], therefore, in this article we shall take a closer look at the definition of economic agents and the extent of their demand for the introduction of the system of gender power institutions of egalitarian type. We emphasize that according to the logic of the process of institutional changes proposed by D. North and developed at present by representatives of institutional economic theory, the degree of coincidence of reformers’ intentions in the creation of new institutions and beliefs of economic agents will determine the effectiveness of performance of a projected institution [18, pp. 80-93].

In this regard, we recall that in the modern Russian economy the maximum degree of gender power concentration is achieved at the lower levels of the hierarchy of the system of gender power institutions – in the institution of family power as represented by its head and the institution of internal power (see more on the subject in [3]). It is no coincidence that family economy is called as the “social space, in which gender roles are distinguished to the greatest extent” with the highest degree of interdependence of men and women due to their marital status or blood relation [16, p. 97]. However, as A. Toffler points out, a new civilization brings with it a new economy, new political conflicts, changed ways of working, loving, and living and beyond all this an altered consciousness and new family styles. [26, p. 31, 34]. We shall see if it is really so. For this purpose we shall imagine a family and its gender power institutions as a closed system, i.e. we shall eliminate the influence of external institutions of gender power on the determination of the disposition of power within the family. This interaction process is presented as a scheme in *figure 1*.

The figure shows that the objectives of life behavior of men and women in the family are determined by the management system that consists of a family’s gender power institution represented by its head and internal institutions of gender power. We remind that each of them in accordance with their own disposition of power determines the institutional role that the subjects of gender interaction must implement within the existing institutional environment. The content of the disposition of gender power by the head of the family includes: 1) clear division

Figure 1. Structure of subordination of the purposes of life behavior of men and women in a family\*



\* Solid line denotes real connections of power impacts, dotted line denotes nominal connections that are characteristic of a minor part of modern Russian families.

of household responsibilities on the basis of gender; 2) conformity with the stereotype of family breadwinner when choosing the type of family, forms of leisure and spheres of professional activity by the object of power. This type of gender power disposition, in the terms used by genderologists, corresponds to the traditional type of family, when the man acts as the subject of gender power, and the woman – as its object. Consequently, the disposition of gender power assumes the following distribution of roles: the man is the breadwinner in a family, the earner of market capital, and the woman focuses her efforts on the accumulation of “family” capital. It is acceptable that a woman is employed in the public sector of the economy. However, household management is her priority. It should be noted that such distribution of household chores, according to G. Becker, contributes to the stability of marriage, since the expected utility from housekeeping in women is greater than the utility of their work in market production. On the one hand, this can be explained by lower wages of women in the labor market, and on the other hand, by the illiquidity of housework in the absence of

generally accepted criteria for evaluating this type of employment in society. Therefore, housekeeping is valuable only for a specific family, which fundamentally distinguishes it from the type of resource such as money that the “breadwinner” can offer for exchange. However, even in the given family, the value of time spent on housework, compared with working time, will be always lower, because this type of employment is carried out in free time (at weekends or in the evening), when “the relative importance of lost earnings proves to be lower” [9, p. 171]. Though at present, according to many studies, Russian families are going through the process of transformation of this type of gender power disposition. The results of our longitudinal survey of families in Perm Krai in 2001–2011 confirm this trend<sup>3</sup>.

<sup>3</sup> A longitudinal study “Social-and-market economy of the family” was held according to the guide, developed under the supervision of I.N. Novikova, Academician at the Academy of Social Education in 2001, 2006, 2009 and 2011. Annual survey covered 300 residents of Perm Krai, out of them 35% of the total number of respondents were men and 75% – women. The representativeness of the sample was ensured through participation of respondents with different levels of education, income, conditions and place of residence, type and form of family. Read more about the methodology of the study in [4].

Table 1. Dynamics of modernization of the traditional type of gender power in family economy in 2001–2011

Variants of distribution of housework	2001	2006	2009	2011
1. There is a clear division of labor by gender and age	12.30	15.92	39.70	30.40
2. The whole family is equally involved in household chores	41.04	46.02	31.90	48.63
3. The main burden falls on the woman – mother	41.90	34.36	26.06	15.90
4. All housework is done mostly by parents of the husband or wife	0.00	2.42	0.00	3.13
5. Father and mother prefer to do most of the housework themselves	4.76	1.38	2.34	1.94

The dynamics of distribution of functions on the distribution of household chores between members of respondents' families is presented in *table 1*.

The table allows us to say that modern families in Russia and its regions are characterized by a tendency toward a more even distribution of functions in the household, on the one hand, by reducing the proportion of families in which these functions are performed only by women, and increasing the share of families with a clear gender division of labor in the family economy; on the other hand, by the increase in the share of families with proportional load on all of their members. The wave-like change in the data presented in the table is due to the dynamics of indicators of the national economy development: when Russia's economy is in the stage of moderate growth, families are characterized by a more even distribution of functions on the organization of family economy, including by increasing opportunities of obtaining these services in the public sector. And conversely, a decline in living standards of households increases the time spent by men and women on household chores in a family. Then let us carry out a detailed analysis of the time spent on housework in families of respondents; it is presented in *table 2*. It ranks

prevailing positions of each family member depending on his/her contribution to the performance of household chores. The table confirms the above conclusion concerning a more balanced distribution of domestic chores in Russian families through increased participation of men and children. As a result, the ratio of time spent on housework by men and women has decreased almost twice over ten years – from 2.95 to 1.75. Let us highlight *positive trends* in the redistribution of household chores between spouses.

*The first trend:* there has been a twofold reduction in gender imbalances concerning the time spent on cooking and washing dishes. In our opinion, this is connected with servicization of economy in Russia and its regions; more specifically, the development of fast food network. Note, also, that within a household the amount of time that men spend on cooking in 2001–2011 increased by 9 minutes a day, while for women, on the contrary, it decreased by 9 minutes. In our opinion, this is a positive change, though it is little; this change can gradually break the traditional gender stereotype that “a woman's place is in the kitchen”.

*The second trend:* the ratio of time spent by men and women on the purchase of goods and products has reduced. Moreover, it increased more rapidly in men than in

Table 2. Dynamics of distribution of chores in households of respondents, hours a day

Time spent on the chores	2001					2006					2009					2011				
	Women	Men	Children	Prevailing position	Ratio of the time spent on the chores, women/men	Women	Men	Children	Prevailing position	Ratio of the time spent on the chores, women/men	Women	Men	Children	Prevailing position	Ratio of the time spent on the chores, women/men	Women	Men	Children	Prevailing position	Ratio of the time spent on the chores, women/men
1. Purchases	0.56	0.16	0.15	wife	3.50	0.28	0.17	0.12	wife	1.65	1.06	0.21	0.09	wife	5.05	1.03	0.36	0.12	wife	2.86
2. Cooking	1.25	0.14	0.13	wife	8.92	0.54	0.19	0.17	wife	2.84	1.27	0.22	0.08	wife	7.14	1.14	0.23	0.10	wife	4.96
3. Laundry, garment care	0.35	0.13	0.09	wife	2.69	0.32	0.11	0.10	wife	2.91	0.46	0.20	0.08	wife	2.30	0.56	0.28	0.11	wife	2.00
4. Cleaning up the rooms	0.20	0.18	0.13	wife	1.11	0.27	0.16	0.10	wife	1.69	0.38	0.29	0.09	wife	1.31	0.36	0.32	0.12	wife	1.12
5. Taking care of the children	0.57	0.25	0.00	wife	2.28	0.26	0.30	0.00	мык	0.87	1.29	0.36	0.00	wife	3.58	1.25	0.38	0.05	wife	3.29
6. Other chores	0.08	0.12	0.09	husband	0.67	0.25	0.23	0.11	wife	1.09	0.38	0.37	0.14	wife	1.03	0.32	0.33	0.16	husband	0.97
7. Helping the relatives	0.31	0.15	0.05	wife	2.07	0.13	0.18	0.08	husband	0.72	0.36	0.49	0.16	husband	0.73	0.31	0.36	0.18	husband	0.86
8. Total	4.52	1.53	1.04	wife	2.95	3.15	2.14	1.08	wife	1.47	6.40	3.34	1.04	wife	1.92	6.09	3.45	1.24	wife	1.75

women in the 10-year period. Such changes are connected with the emergence of supermarkets and hypermarkets, where, like in the West, they buy food together for a longer period, for example, for a week.

*The third trend:* modern families gradually abandon the feminization of children's education due to the formation of an institution of "new fatherhood". As S.A. Orlyanskiy points out, the duties of the "new father" include child care, moral and intellectual education of the child from the moment of his/her birth. However, the author stresses that a father is not a "householder". He works, earns money and devotes his free time to the child. A man assumes part of household chores related to family communication, i.e. a man, along with implementation of his institutional role of breadwinner in the family, is actively engaged in education of the children [20].

For example, the amount of time, which men spend on education of their children in 2001–2011 increased by 13 minutes. However, we note that the intensification of men's participation in education of children that we pointed out in 2006, when men devoted their attention to their children even by four minutes per day more than moms, slowed down under the impact of the state and regional policy aimed at stimulation of birth rate. So, for example, as a result of implementation of the regional project "Provision of allowances for families with children of 18 months – 5 years old, who do not attend a municipal preschool educational institution" more than 60% of mothers of children aged under 5 do not go back to work when their child care leave is over.

*The fourth trend:* the data obtained in the course of our research refute the assessments of many scientists, who indicate that women, rather than men, are more likely to render assistance to their relatives. For example, according to the time spent on this kind of housework, men have retained leadership since 2006, though it is not significant.

*The fifth trend:* in 2001–2011 the ratio of time spent on laundry, sewing, taking care of linen, clothing and footwear slightly decreased (from 2.69 to 2.00). At that, the time that men, as well as women, spent on this type of housework has increased over 10 years (16 and 21 minutes, respectively). In our opinion, the reduction in the amount of time spent on these chores is hampered by poor development of consumer services sphere in Russia's regions and also by high prices for already existing types of consumer services.

*The sixth trend:* the increase in the level of mechanization of family economy is accompanied by greater participation of men in cleaning the rooms, taking care of furniture and household appliances. For example, in 2011 men and women spend almost the same amount of time on this type of housework (the ratio of time spent amounted to 1.12).

After highlighting the above positive trends in redistribution of household responsibilities between spouses, genderologists define transitional and egalitarian types of gender interactions along with the traditional type. Families with egalitarian internal structure are characterized by fair, proportional distribution of family responsibilities, interchangeability of spouses in solving everyday problems. Under

egalitarian conditions there are no gender-differentiated responsibilities; decisions are discussed and made by all family members.

This type of gender interaction is possible only in conditions similar to those of competitive environment, when the degree of concentration of gender power is insignificant, since it is limited by the freedom of another economic agent. In this case the market becomes the subject of gender power, and men and women are rationally acting individuals in the marriage market. In the light of methodology of institutional economic theory this means the presence of the best marriage market, which provides all its participants with imputed income or “prices” that serve as incentives for entering an appropriate marriage. “Imputed prices” are also used when selecting the “quality” of a future partner.

G. Becker notes that “men and women of higher quality marry their own kind and they do not choose partners of lower quality when these qualities are complementary. The choice based on similarity is optimal, when the characteristics are complementary, and the choice based on difference is optimal, when they are interchangeable, since the partners of high quality in the first case reinforce each other’s characteristics, and in the second – duplicate them.

G. Becker explains further: “...When the characteristics are complementary, the benefit from marrying the woman of this quality is greater for a high-quality man; and the benefit is greater for a low-quality man, when the characteristics are interchangeable” [9, p. 390]. We use this concept to study the ratio of egalitarian to traditional types of

gender power that women and men have in a family. In accordance with the gender research methodology, low-quality men and women are those, who prefer the traditional disposition of gender power. In turn, high-quality men and women prefer the egalitarian type of gender interaction.

We agree with G. Becker, who states that a set of equilibrium incomes is the criterion of optimal sorting of economic agents in the marriage market. In this case there are no opportunities for the formation of costs associated with the presence of elements of power in the transactions between them (costs of subordination and costs of refusal; see more on the subject in [3]). This is possible due to the reduction (or impossibility of formation) of costs of subordination and costs of refusal in the levelling of the influence of internal institutions of gender power in men and in women, the operation of which results in “understatement of one’s own price” in the marriage market in women and, on the contrary, “overpricing” in men, when women initially choose lower quality men (with the traditional type of gender power disposition). In this regard, Becker points out that “some participants choose partners that are of the worst “quality” because they believe the partners of “the best quality” are too expensive” [9, p. 381], in other words, unaffordable.

And now let us define the number of women who have an opportunity to do an optimal sorting of economic agents in the marriage market according to the criterion of balanced incomes, and hence to form the disposition of gender power of the egalitarian type. We begin with the fact

that the main source of income of men and women in contemporary Russia is salary that is segmented by gender.

Therefore, it is necessary to determine the economic agents, for which an independent activity has become more effective. In our opinion, they can include women employed in top management with high salaries. For example, according to a monitoring of the labor market for top managers in Russia (2000–2007) carried out by the Laboratory for Labor Market Studies at the Higher School of Economics, the share of women in senior leadership positions in 2000–2007 was growing steadily – this indicator in Russian companies increased from 5.2% in 2000 to 20.1% in 2007, and in foreign companies – from 14 to 23.2%, respectively [20, p. 53].

The category of women able to conduct their own activity independently from their husbands, in our opinion, can also include female employers. According to a population survey of employment issues, their share among employed women in the Russian labor market in 2010–2012 was about 1%. In addition, modern families with average and high incomes commercialize everyday life (care)<sup>4</sup> by using hired labor (babysitters, housekeepers). For example, according to a research by O.B. Savinskaya, in 2010 16.1% of respondents were using and are using the services of babysitters [15, p. 84].

It appears that the tendency towards egalitarianization of gender interactions between spouses will only increase in the future, because at present, according to numerous studies, there is an increase in the share of

<sup>4</sup> The term proposed by E. Zdravomyslova. See more on the subject in [12].

citizens (especially young ones), who support individualism, and focus on the pragmatic ideal of a self-sufficient and successful person able to achieve material well-being and good social status. For example, according to the Public Opinion Foundation there are 18% of such people in Russia<sup>5</sup>.

Note that these ideals correspond to the characteristics of the Y-matrix, based on a high level of autonomism of economic agents, i.e. the priority of “I” over “We”, when there is a primacy of an individual, his/her rights and freedoms with respect to the values of communities of a higher level. The subjects in such conditions are dissociated and can function on their own, separately from each other [13]. This autonomism of economic agents implies a high level of development of civil society, which, in the opinion of many genderologists, is a prerequisite for the development of gender-parity relations in national economy.

As for the transitional type of gender power disposition typical of contemporary Russian families, we think that it represents an intermediate option of gender interactions between spouses, when the effect of the institute of internal power is reduced through the weakening of stereotypes of the condition and changes in gender status of economic agents.

This type of gender power disposition is characterized by the following: 1) reduction in the concentration of gender power of

<sup>5</sup> Note that it is these respondents that were called “People of the 21st century” by the specialists of the Foundation. This group of social activists differs significantly from the rest of the Russian population. They design their own future and demonstrate ability to accumulate and mobilize social and material resources; they show independence and social sustainability (see more on the subject in [17]).

Table 3. Dynamics of priorities in the formation of income in families, %

Whose incomes form the major part of your family's budget?	2001	2006	2009	2011
1. Husband	29.7	44.6	39.8	43.6
2. Wife	34.2	26.9	27.2	31.6
3. Children	13.9	8.9	10.2	4.5
4. Retired parents	9.2	3.1	5.5	2.9
5. Support from our relatives	8.6	2.2	2.4	1.51
6. The incomes are similar	4.4	14.3	14.9	15.89

men in the family economy as a result of their greater involvement in housework; 2) enhancement of the role of women in making decisions that are important for the family (matriarchal family pattern).

In the first case, in our opinion, the object-subject type of gender interaction can be determined individually in each family (biarchial type of gender power disposition). In this regard, for example, V.A. Ramikh notes that “today the ideals of masculinity and femininity are more contradictory than ever: their traditional and modern characteristics are intertwined, they take into account the diversity of individual variations much better than before. The general trend of development in this sphere consists in weakening the polarization of gender roles and socio-cultural stereotypes associated with them. In these conditions, social roles of men and women do not seem polar and mutually exclusive any longer, the possibility of various individual combinations is emerging” (cit. from [20]).

Institutional roles of economic agents in the matriarchal type of gender power are redistributed; women in such families act as the subject of gender power, and men – as its object. In this case, women become main

breadwinners in the market of capital; as for men, they are mostly engaged in accumulation of specific “family” capital. Maximization of utility is achieved in the case, when the man’s wage is significantly lower than that of the woman<sup>6</sup>. Our study shows that there are about 30% of such families in Perm Krai (*tab. 3*). A common situation for the matriarchal type of family is when it is men, who take a childrearing leave. According to HeadHunter company, nowadays in Russia the share of such families is about 7% [8].

Next, in order to determine the quantity demanded for the institutions of gender power of egalitarian type among economic agents, we shall use one of the basic principles of synergetics, which assumes that a highly synergetic system should have indispensable mutual cooperation and assistance, i.e. the coherence of behavior between its individual components [10, p. 387]. From this perspective, two main types of interaction are possible: 1) coordinated interaction, provided that there is coherence in the conditions of power disposition defined by

<sup>6</sup> Moreover, according to the institutional economic theory, the basis of specialization in the accumulation of the market or family capital is the differences in the level of education of partners; it is the main factor in the formation of wages. However, statistics show that in the conditions of modern Russia this provision is not observed so far.

the institution of power represented by its head and the institution of internal power; 2) uncoordinated interaction that implies their inconsistency. We think that traditional and egalitarian types of gender power in a family from these positions are coordinated, and the transitional type admits both variants of interactions.

Under the traditional type of gender interaction both women and men must be satisfied with gender-differentiated division of labor in the family economy. Research results show that 26% of respondents prefer the traditional family model, among them 15% are young women and 85% – young men [21]. At the same time, if we process this data using the ratios of positional consent, then consonant positions (coordinated patterns of gender behavior) will be characteristic only for 3% of respondents' answers. In view of the above and taking into account the results of other studies, we can point out that the traditional type of gender power is established not more than in 20–25% of contemporary Russian families.

The model of egalitarian relations is gender-balanced (coordinated), since the interests of both spouses are taken into account, and there is symmetry in the distribution of household responsibilities. At that, the choice made by each family member concerning what to do (to work in the market sector or in the household), depends on the ratio of earnings in the labor market, the opportunity cost of production of goods in the household and egalitarian attitudes of spouses' behavior. According to our estimates, the share of such families in contemporary Russia is about 15%.

The “transitional” type of coordinated relations is observed in families where both spouses are satisfied with the reduction in the degree of concentration of gender power of men in the family economy as a result of their greater involvement in the household or enhancement of the role of women in making decisions important for the family (matriarchal family model).

The disagreement in the transitional type of gender power disposition can be manifested in the case when at least one of the spouses is not satisfied with participation in the accumulation of a specific market or “family” capital, i.e. the internal attitudes of nanoagents do not coincide with the disposition of gender power imposed on them by the head of the family. According to many studies, this type of gender interactions is, unfortunately, typical of the majority of Russian families. Apparently, as M.Yu. Arutyunyan points out, the “gender misfortune” of Russian families consists in a contradictory combination of patriarchal (in men) and egalitarian (in women) gender agreements [1]. As a result, young couples in particular have a low degree of satisfaction with marriage and, consequently, high rate of divorce, by which Russia ranks first in the world. Moreover, the mismatch between gender power disposition in Russian families is intensifying. For example, the content analysis of 32 projective compositions “My future family” carried out by S.V. Zaev in 2005 shows that almost 40% of female respondents prefer egalitarian gender contracts in the family, where relations are based not on material wealth and clear division of power resources, but on a high level of psychological compatibility.

In contrast, the majority of young men (75%) have traditional understanding of family economy: they assume the role of head and breadwinner, and they expect to receive psychological, emotional and sexual support in return [11, p. 28-29].

The data obtained in the course of research by T.G. Pospelova and processed using the program Kobra-KD<sup>7</sup>, show that 87% of girls preferred the egalitarian type of gender interaction in 2008 [21, p. 48].

However, most women and men, who prefer the egalitarian type of gender power in family economy, are characterized by a mismatch in the general system of institutional roles due to the incoherence of the disposition of power at each level of the hierarchy in the system of gender power institutions (see more on the subject in [3, 5]).

For example, the findings of our research into gender characteristics of personality<sup>8</sup> carried out from the 2011–2012 academic year onward and used annually as input control of knowledge in the study of the course “Gender studies and feminology” show that the majority of young women and men, on the one hand, believe that a desire to make a career, high professionalism, success in business, leadership in any field should be typical both for women and men; they emphasize that “the established tradition of promoting men to senior positions is deprecated, and it is both men and women

that should be able to take managing positions on an equal basis”; and they do not agree that “a woman is first of all a mother, and her most important purpose is to give birth and to raise children”. This role is more important than all of her other roles”.

On the other hand, they point out that “biological sex determines the differences in the opportunities for men and women in different spheres of life; consequently, some gender-related limitations are still necessary, “it is right that there are such spheres, in which the participation of women should be limited (for example, in politics, diplomacy, and others) and, as a consequence, “for women the most important thing is family”. Moreover, the attitudes of girls in their answers are more controversial than those of young men.

As a result, psychologists state that modern men and women in Russia experience crises of gender identity of personality: the crisis of achieving consistency of gender identity, the crisis of self-actualization of gender identity, the crisis of external confirmation of gender identity<sup>9</sup>; according to research by S.B. Kokhanova, these crises have been detected in 76% of girls and only in 30% of young men [14, p. 108].

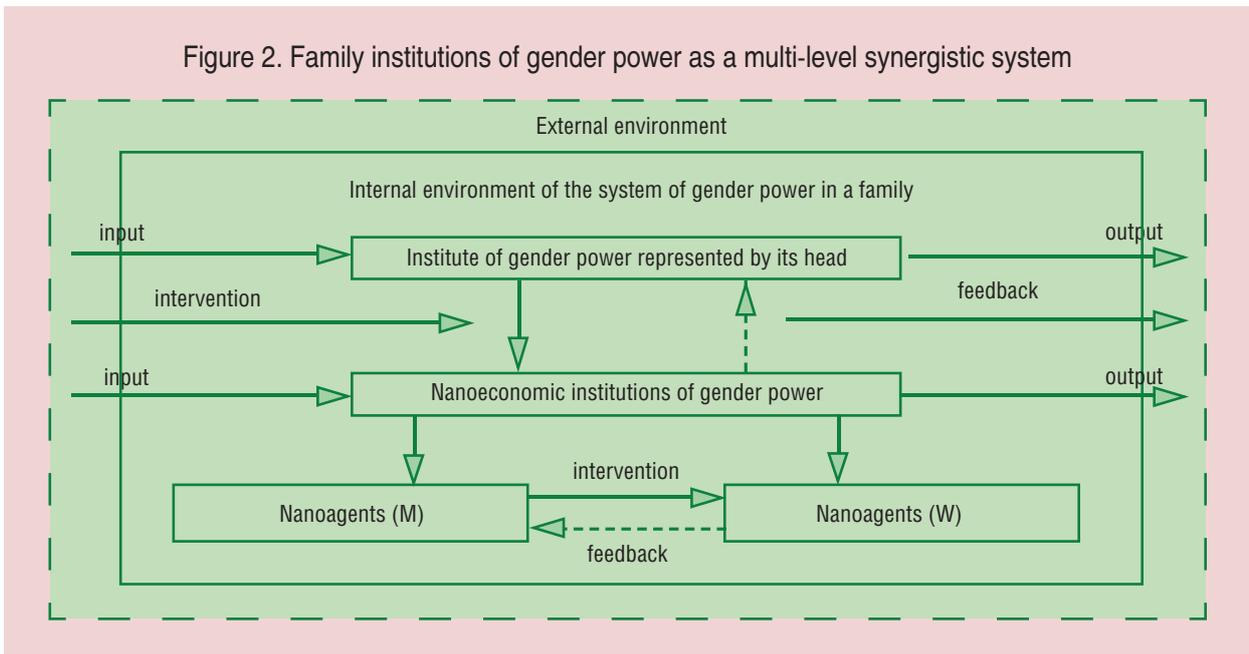
In addition, the uncoordinated type of gender interaction is possible in matriarchal families. For example, this happens in a family, in which the woman is the main breadwinner. It is assumed that the man, who

<sup>7</sup> The program “Kobra-KD” was developed at the Research Institute for Complex Studies under SPbSU specifically for conducting a more detailed gender analysis of sociological information.

<sup>8</sup> Over 150 students of legal, economic, and philosophical-sociological faculties of Perm State National Research University participated in this study that was carried out using the questionnaire developed by I.S. Kletsina.

<sup>9</sup> Gender identity is a representation (cognitive component), attitude (affective component) and implementation of one’s gender in behavior (conative component) by an individual in the gender space of personality existence: the space of environment, activity and organism. See more on the subject in [19, p. 151].

Figure 2. Family institutions of gender power as a multi-level synergistic system



is not so much employed in the labor market or not employed at all, should do certain housework in exchange for economic support from the woman. In fact, however, studies show that the more economically dependent a man is on his wife, the fewer amount of housework he does [7]. This pattern is most evident in families with low income. Accordingly, there is a clear mismatch in this type of family relationships.

In our opinion, the above transitional types of gender interactions correspond to the current conditions and the results achieved in the development of the institutions of gender power of liberal type, which, as we note in [3], are characterized by extensive network of subjects of gender power: men, social environment, organizations and the state. In this case the family acts as an open system with external factors (*fig. 2*). We point out that due to intensive (streaming) exchange between substance, energy, information

and the environment in non-equilibrium conditions [10, p. 387], the system of gender power institutions, according to the second postulate of synergetics, could become a highly efficient synergistic system.

It turns out that the tendency towards disagreement in relations between spouses within a family is caused by incoherence of objectives of functioning of gender power institutions in the family and institutions of gender power at higher levels in the hierarchy: the power of social environment, organizations, power of the state and region (see more on the subject in: [3, 5]).

In such conditions it is much more difficult to achieve the balance, since the standards of behavior are destabilized, therefore, their sustainability is low, there is no consistency in their performance, transaction costs associated with their use are growing, coordination with other rules of behavior is difficult; certain agents appear, who want to

change gender behavior stereotypes. Thus, stability, coordination, integration, learning and inertia, defined by V.M. Polterovich as the main mechanisms for institutionalization of codes of conduct [22, p. 73-76] are not complied with.

In addition, if we consider the impact of the socio-economic system on the system of gender power institutions, as we determined in [6], the levelling of concentration of

gender power in family economy (which corresponds to the egalitarian type of coordinated interaction between spouses) is the most optimal at the modern stage of society development. Establishment of this type of balance is only possible in adequate institutional conditions; this fact confirms the necessity and willingness of economic agents to modernize the system of gender power institutions in Russia's economy.

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## Assessment of performance of the head of a socially-oriented establishment



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**Abstract.** The estimate of efficient corporate governance, as well as professional activity of the subject of this process – a Manager – is one of the most important tasks of modern management. Meanwhile, more often only the performance of an enterprise or its employees is evaluated. A number of methods are applied and optional technologies are developed. But at the same time the managers' professional activity is still assessed insufficiently, the specific indicators of this procedure are not identified; as a rule, they do not reflect specific features of the sphere and the industry. The paper proposes indicators to evaluate efficiency of the heads of socially-oriented establishments (on the example of the health sector), describes levels of results achievement. The empirical approbation of the indicators was held during two researches conducted by the ISEDT RAS in 2013 on the basis of the elaborated methods "Analysis of conditions for the functioning and development of health care institutions in the context of the industry modernization" and "Assessment of the quality and accessibility of medical services". The sociological survey method to distribute questionnaires was applied for their implementation. The research resulted in the proposal on mandatory accounting of managers' self-assessment and external evaluation of their activity on the part of services consumers – the population. The article offers recommendations to the state executive authorities, the Department of Health Care of the Vologda Oblast and medical institutions to make decisions regarding the improvement of the management of human resources sector in general and private medical institutions.

**Key words:** management, effectiveness, head, assessment of professional activity, quality, performance evaluations.

The study of management efficiency is one of the most important trends in modern management. It is based on the following approaches: “management by objectives” (MBO), “management by results” (MBR), “the balanced scorecard” (BSC), “performance management” (PM) and “total quality management” (TQM).

The efficiency depends on group and individual results and is defined as “...an ability to achieve a certain result...” [10]. It is a complex category that includes the following indicators [ibidem]:

- effectiveness;
- cost;
- performance;
- quality (of governance, processes, services or manufactured products, working conditions, etc.);
- productivity;
- innovation;
- balance of interests of the key groups interested in the enterprise’s state of affairs that needs to strengthen its positions in the society, etc.

We consider management efficiency as a level of achievement of strategic objectives, qualitative and quantitative indicators. Unfortunately, the theory and practice of management do not pay enough attention to its consideration, the detailed study of individual actors’ activities, including heads of organizations, the assessment of their professional results.

The evaluation of employees’ activity is a systematic study of the process of their work and achievements [15]. Thus, it takes into account results and factors determining the degree of their achievement.

There is another definition of the term “assessment”: it is an analysis of correlation between professional, personal characteristics (competencies) of the individual and requirements of the position he/she occupies by means of certain indicators [15].

The analysis of theoretical sources on the problem to estimate the performance of heads of enterprises leads to the conclusion that the business evaluation indicators are divided into three categories:

- characteristics of personality traits: personality traits are considered as the potential to achieve the goals of a particular employee;
  - professional behavior: motivation for professional development; lifelong learning; ability to work in a team and independently; ability to make decisions; willingness to accept additional workload and responsibility; initiative;
  - labor performance: productivity of an employee; qualifications; knowledge skills, etc.[14].

There is a specific evaluation of the activities of heads of enterprises in connection with the specific performance of their professional managerial authority. This evaluation is performed:

- 1) through the effectiveness and efficiency of the entire subordinate system;
- 2) evaluation of the manager’s professional activity as a team leader, a leading organizer of the process of functioning and development of the industry or enterprise.

In the first case the assessment includes the following items:

- quality of management of the industry or enterprise (impact on basic and servicing processes);

- quality of management of various types of resources (material, labor, information, etc.);
- quality of management of functional areas (research and development, processes, services, finance, etc.).

In the second case the following indicators are considered [5]:

1. Social portrait of the head:
  - gender;
  - age;
  - education;
  - work experience (including as a head);
  - performed managerial roles (a head of the industry; a team leader; an economic executive; a researcher; a experimenter, etc.);
  - quantitative and qualitative composition of the team;
  - self-esteem;
  - professional plans;
  - job satisfaction;
  - social feeling (social and material conditions of life).
2. Level of general culture.
3. Performing management actions (functions).
4. Performing advanced functions: cultural; social; financial; legal; economic; design, consulting.
5. Rational management style.
6. Public image.
7. Ability to conduct a dialogue with different structures (communication skills).
8. Ability to perceive and generate new ideas, actively participate in their implementation. Focus on innovation.
9. Personal contribution to the development prospects of the industry or enterprise (the own evidence-based management

concept as a relatively coherent and stable aggregate of the most important beliefs, ideas about managing a growing industry or an enterprise and current processes, etc.).

#### 10. Ability to accomplish reforms.

Due to the stated above, the business evaluation indicators “characteristics of personality traits” should be accompanied by the estimate of the head as a team leader, a leading organizer of the process of functioning and development of the industry or organization; “labor performance” – by the efficiency and effectiveness of the subordinate system and quality management.

Our research has proved that the effective performance can be achieved by four levels of obtaining results:

- I – a level of performance;
- II – a level of conscious activity;
- III – a level of the management system transformation;
- IV – a level of the author’s management system.

Their description can be presented in the following table (*tab. 1*).

The table reveals that the transition from one level to another occurs continuously and gradually – from the level of performance to conscious activity, then to the management system transformation and, finally, to the level of the author’s management system.

Better results are achieved gradually on the basis of professional and personal characteristics, acquired skills. The research level is based on operational, tactical and strategic levels. The efficiency of administrative work increases, professional behavior demonstrates positive changes, management quality improves.

Table 1. Characteristic of the levels of professional competence development and the head's ability to achieve results

No.	Level of professional competence development and the head's ability to achieve results	Characteristics of the head's activity and achieved results
1.	Level of performance (operational level)	Initial level of development of the professional competence to manage the industry (enterprise). It is based on acquiring experience of practical management activity. <b>Head – a contractor</b>
2.	Level of conscious activity (tactical level)	The head gains management experience. He/she operates on the basis of the scientific approach and experience of conscious practical activity. His/her competence includes the application of knowledge in a significant range of complex and non-standard work, carried out in different circumstances. He/she becomes autonomous. <b>Head – an autonom</b>
3.	Level of the management system transformation (strategic level)	The head's activity is creative, based on the systematic scientific approach and experience to solve strategic problems of the industry (enterprise). <b>Head – a reformer, strategist</b>
4.	Level of the author's management system (research level)	Methodologically sound management. Combination of academic and professional interests. Initiative to develop the author's management system <b>Head – a researcher</b>
Source: compiled by the author.		

The managerial performance was empirically validated in two studies conducted by ISEDT RAS in May–June and December 2013 in the framework of the research in the quality management in the social sphere of the region.

The research was based on normative legal acts and policy documents of the Russian Federation and the Vologda Oblast; data of the Federal State Statistics Service and its Territorial Body for the Vologda Oblast, departmental statistics of the Department of Healthcare of the Vologda Oblast; the database of the monitoring, revealing functioning of health care institutions,

carried out by ISEDT RAS (2001–2012) [2, 3, 17]. We considered the results of the head's self-assessment and the estimate of efficiency of management activities.

Two methods were used:

1. For self-assessment – “Analysis of the conditions of functioning and development of health care institutions in the context of the industry modernization”. The method is based on the survey of heads of urban and rural medical institutions, which was conducted by distributing questionnaires. The respondents rated 7 blocks of questions, including the definition of indicators of the quality of management activities.

2. For the external evaluation – “Evaluation of the quality of and access to health services”. This method is based on the survey, carried out in the Vologda Oblast. It takes into account the managers’ performance:

- openness and accessibility of information about enterprises;
- comfort of conditions and availability of services, including those for people with disabilities;
- waiting time in a queue to receive services.

Both self-esteem and evaluation include two indicators: professional conduct and work performance.

Forty-three head physicians of rural and urban health establishments in the Vologda Oblast took part in the survey. The “respondent portrait” revealed personal and professional characteristics of the surveyed managers. They got a medical degree, 55.8% of respondents completed internship and 11.6% – residency. Many heads obtained the second university degree in management (65.1%). At the same time, it can be noted that no manager completed a graduate program and had a degree.

The most important characteristics of the heads’ performance, in our opinion, are obtained from their responses associated with an indicator such as innovation. It includes both functioning and development of medical institutions.

This indicator is analyzed through the assessment of modernization changes in the health care industry. The reform implementation requires the estimate of its

demand and its direct participants, in this case healthcare institutions. Half (51%) of the respondents give a positive assessment to the reforms, undertaken in the last 3 years in the healthcare system, of which 62% were heads of medical institutions in Vologda and Cherepovets and only 35% – heads of district hospitals. Thirty-seven percent of the respondents find it difficult to give an estimate, predominantly head doctors of district hospitals (47%). This situation can be related to the working conditions of rural and regional medical institutions.

In general, according to the survey, 54% of the respondents (50% of heads of municipal medical institutions and 59% of rural hospitals) believe that the reforms are based on the strategic goal to improve the quality of and access to medical services. Moreover, 23.3% of all respondents mark the objective to save health resources.

The head doctors’ idea to improve the functioning of health facilities is of particular interest. These conditions promote their development. The respondents consider the following priority actions to ensure medical institutions development: focus on result, improved types of wages, standardization of medical services, development and introduction of new medical technologies, quality control (*tab. 2*).

However, it should be noted that the survey of heads of medical institutions lacks scientific justification and support for the development of the health care industry:

- development of fundamental and applied biomedical research (0%);

Table 2. Distribution of answers to the question: "Please, indicate what immediate measures should be taken so that your institution can not only function, but also develop?", %

Answers	Vologda, Cherepovets	Districts	Oblast
	in %	in %	in %
Concentrate financial resources and human resources on priority and innovative directions of medical science development	34.6	5.9	23.3
Implement standards of medical care and clinical protocols	38.5	58.8	46.5
Develop new medical technologies for prevention, diagnosis, treatment of illnesses and rehabilitation of patients, substantiate the scope of their implementation, implementation algorithms and monitoring of their application	42.3	47.1	44.2
Create a system of corporate responsibility for the quality of medical care	34.6	41.2	37.2
Evaluate the performance of each member of the medical staff depending on their performance	65.4	70.6	67.4
Use new forms of remuneration	53.8	76.5	62.8
Develop high-tech medical care	34.6	17.6	27.9

Source: compiled by the results of the survey of head physicians and their deputies working at the medical institutions in the Vologda Oblast, conducted by the ISED T RAS Department for Studies of Lifestyles and Standards of Living in May–June 2013.

- planning and forecasting of biomedical research (0%);
- formation of the medical services market based on the competition of scientific organizations of all forms of ownership (0%);
- development of the innovation infrastructure of medical science (2.3%);
- application of basic research results, aimed at broadening and deepening of new knowledge about nature and man, etiology, patho- and morphogenesis of the most common human diseases and carried out on the basis of interdepartmental interaction (4.7%);

- creation of the system to implement the results of scientific-technological activity in public health practice using different forms of public-private partnership, support for small and medium business in medical science (11.6%).

The analysis of the results has indicated a low level of scientific support for the development of medical institutions. On the one hand, it discloses inactivity of the personnel: head doctors underestimate the role of the research approach in the institutions management, and, therefore, are not aware of its significance for

the development and improvement of their professional competence.

On the other hand, it indicates the lack of an institutional framework of medical research activities: in the Vologda Oblast there are no medical higher education establishments and scientific research institutions.

What is more, the analysis has revealed another problem. According to 32% of the respondents, innovative management technologies are not used in their institutions. The heads do not develop their management competence; they remain at the level of performance. And only 39% of the respondents tend to be at the level of conscious activity and strive for higher levels.

The characteristics of the levels of results attainment (see table 1) and the managers' self-esteem indicate that the doctors in the hospitals of the Vologda Oblast and their deputies remain at the first level of managerial competencies development out of four levels identified at the beginning of this article. And most of them do not seek to develop and achieve better results.

To confirm this conclusion, it is necessary to pay attention to how the head doctors and their deputies evaluate the activities of medical institutions and answer the questions regarding the working conditions of medical institutions and the obtained results.

Most head physicians believe that the conditions in medical institutions are "satisfactory". This trend has continued for three years and it will remain the same in the short term. The conditions improved in urban medical establishments in 2012 compared to 2010 (30.8% of the responses indicate it), but

in 2013 the conditions in medical institutions were "rather satisfactory than unsatisfactory" (19.2%). The situation in regional institutions is characterized as satisfactory and it will not change in the near future (*tab. 3*).

The performance of hospitals is evaluated higher than their conditions (*tab. 4*). And again, the urban health institutions have high ratings nowadays (57.7% of the respondents). The district hospitals have satisfactory estimates; this trend will not change in the short term (64.7% in 2010 versus 58.8% in 2013). Almost no one characterizes the efficiency of their institution as unsatisfactory. Thus, according to the heads, they achieve the results possible in the conditions of limited funding, insufficient logistical support and low wages.

More than 76% of the heads of institutions assess the availability of medical care provided by their institution to the population as satisfactory, while 11.8% of them give an unsatisfactory estimate (*tab. 5*). This demonstrates uneven development of health facilities and availability of a greater range of services for the urban population.

The assessment of medical care quality reveals the same trend: 53.8% of the heads of urban medical institutions and 94.1% of the heads of district ones characterize it as satisfactory, and a quarter of the respondents (by general data of the Vologda Oblast) argue that the quality of the services, provided by their institution, can be considered as high, but it does not meet international standards (*tab. 6*).

Table 3. Distribution of answers to the question: "How do you assess the general conditions of functioning and development of your institution in 2010–2013?", %

Answer	2010		2011		2012		2013	
	Vologda, Cherepovets	Districts	Vologda, Cherepovets	Districts	Vologda, Cherepovets	Districts	Vologda, Cherepovets	Districts
Good, promote normal functioning and development	19.2	5.9	19.2	5.9	30.8	11.8	23.1	5.9
Satisfactory	42.3	41.2	46.2	35.3	26.9	52.9	26.9	58.8
Rather satisfactory than unsatisfactory	15.4	17.6	7.7	47.1	15.4	35.3	19.2	23.5
Rather unsatisfactory than satisfactory	19.2	35.3	19.2	11.8	19.2	0.0	11.5	5.9
Extremely unsatisfactory	3.8	0.0	3.8	0.0	7.7	0.0	15.4	0.0
Difficult to answer	0.0	0.0	3.8	0.0	0.0	0.0	3.8	5.9

Source: data of ISED T RAS sociological research, 2010–2013.

Table 4. Distribution of answers to the question: "Evaluate the overall results of your institution's activity to provide services to the population in 2010–2013?", %

Answer	2010		2011		2012		2013	
	Vologda, Cherepovets	Districts	Vologda, Cherepovets	Districts	Vologda, Cherepovets	Districts	Vologda, Cherepovets	Districts
Good, promote normal functioning and development	53.8	23.5	57.7	23.5	61.5	23.5	57.7	29.4
Satisfactory	38.5	64.7	38.5	64.7	30.8	64.7	30.8	58.8
Rather satisfactory than unsatisfactory	3.8	11.8	0.0	11.8	3.8	11.8	0.0	5.9
Rather unsatisfactory than satisfactory	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0
Extremely unsatisfactory	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Difficult to answer	3.8	0.0	3.8	0.0	3.8	0.0	7.7	5.9

Source: data of ISED T RAS sociological research, 2010–2013.

Table 5. Distribution of answers to the question: "Please, assess the level of access to medical assistance provided by your institution?", %

Answer	Vologda, Cherepovets	Districts	Oblast
High	19.2	11.8	16.3
Satisfactory	76.9	76.5	76.7
Low	0.0	11.8	4.7

Source: data of ISEDT RAS sociological research, 2013.

Table 6. Distribution of answers to the question: "Please, assess the quality of medical assistance provided by your institution?", %

Answer	Vologda, Cherepovets	Districts	Oblast
High, it meets international standards	3.8	0.0	2.3
High, but it does not meet international standards	38.5	5.9	25.6
Satisfactory	53.8	94.1	69.8

Source: data of ISEDT RAS sociological research, 2013.

The critical problems, singled out by the head doctors, indicate that they do not consider the introduction of innovations as a way to develop their institutions and are only concerned of current functioning.

The reasons can be rather objective, however, the heads have to make decisions how to attain strategic goals in the current conditions.

The head doctors and their deputies mention the following problems:

- 1) lack of funding (70%);
- 2) insufficient logistical support (63%);
- 3) personnel shortage (63%);
- 4) low motivation of the specialists (53%

of the heads of district hospitals consider it as a key problem);

5) high level of demand and burden on institutions (26% of the respondents).

The second research was devoted to the access to and quality of medical services, and, hence, to the external evaluation of the performance of the heads of medical establishments.

The study involved 1.500 people, including the residents of Vologda (385 people), Cherepovets (391 people), districts (724 people). Moreover, it took into consideration the results of the ISEDT RAS surveys, carried out in 2010–2012.

According to the population's estimates, the access to medical services has remained unchanged for a long time. In 2011 and 2013 77% of the region's residents were satisfied with the availability of the provided medical services.

At the same time, the sum of low rates (22% for the region as a whole) exceeds the amount of high rates (14%) significantly. Sixty-three percent of the residents assess the access to medical care as satisfactory (*tab. 7*).

The residents of districts and cities give similar assessments, but the villagers are less likely to give a high estimate of their access to medical care than citizens (8% for municipalities against 18% for Vologda and 13% for Cherepovets).

People single out the following common current problems:

1. Difficulty to get an appointment with a doctor at a convenient time without

standing in a queue (more than half of the region's population till 2010, in 2012 and 2013 the number dropped to 50% and 36%, respectively).

2. Poor use of information and communication technologies. The vast majority of the region's residents (82%) do not use informats to arrange a visit to a doctor and only slightly more than half knows about their existence. While 62% of the respondents admit that they do not have an opportunity to get an appointment with a doctor via the Internet.

3. Payable services. Fourteen percent of the population is dissatisfied with the need to pay for medical services. The prevalence of private medical establishments is demonstrated by the significant share of people (44%) who have spent money for treatment in the current year. Thirty-seven percent of the region's residents recognize that they do not spend money on treatment.

Table 7. Distribution of answers to the question: "Please, assess the overall access to medical services", % (2013)

Answers	Vologda	Cherepovets	Districts	Oblast
High	4.2	0.5	1.9	2.1
Rather high	17.9	13.0	8.3	12.0
Satisfactory	54.8	66.5	65.2	62.9
Rather low	15.8	12.3	14.6	14.3
Low	5.5	5.9	8.8	7.2
Medical services are completely unavailable	1.0	0.5	0.4	0.6

Source: data of ISEDT RAS sociological research, 2013.

4. Personnel shortage. Thirty-four percent of the population in 2012 and forty-two – in 2013 indicated the shortage of necessary specialists. In addition, people remain concerned about doctors' rude behavior (18% in 2012 and 13% in 2013), inattentiveness (24% against 16%, respectively).

5. Territorial remoteness of health facilities. Seven percent of the residents of municipalities and one-two percent of the residents of large cities indicate it (*tab. 8*).

The important characteristic of medical care is its quality.

The assessment of the medical services quality in the Vologda Oblast has undergone significant changes during the period of the Modernization Program implementation (2011–2013). In 2011 78% of the population was more or less satisfied with the medical services quality; in 2013 this figure rose to 82%. Sixty-four percent of the region's residents estimated it as satisfactory (*tab. 9*).

Table 8. Distribution of answers to the question: "How much time does it take you to get to a doctor?", % (2013)

Answers	Vologda	Cherepovets	Districts	Oblast
About half an hour	49.1	57.0	36.2	44.9
About an hour	32.2	34.5	34.9	34.1
One–two hours	9.1	4.3	4.6	5.7
More than two hours	2.1	0.8	6.9	4.1
Difficult to answer	7.5	3.3	17.4	11.2

Source: data of ISED T RAS sociological research, 2013

Table 9. Distribution of answers to the question: "How do you assess the quality of medical care?" (in % of the number of respondents), 2013

Answer	Vologda	Cherepovets	Districts	Oblast
Very good	2.1	1.3	1.2	1.5
Rather good	24.4	18.7	11.9	16.9
Satisfactory	57.1	60.1	69.2	63.7
Bad	14.0	16.1	15.1	15.1
Very bad	2.1	1.8	1.2	1.6

Source: data of ISED T RAS sociological research, 2013

The difference in assessments of health care quality between the population of large cities and municipalities is that the rural residents are less likely to give high ratings than the residents of the cities of Vologda and Cherepovets (13.1 and 46.5%, respectively).

Answering the questions about the quality of and access to health services, the population does not give a clear assessment of either the current situation in the health care or the performance of the heads of medical institutions. On the one hand, directly or indirectly people indicate structural problems in the Russian health care that have been hindering the access to health care. But, on the other hand, it is impossible not to notice positive changes in several areas of medical institutions' activity, in citizens' loyalty to health care in general and to each medical establishment in particular and, hence, to activities of the heads of these institutions.

Head doctors can solve the problems of accessibility and quality of medical services and encourage the use of information and communication technologies (infomats) in order to reduce the waiting time in a queue. They can attract personnel and define ethical norms of their interaction with patients – consumers of services.

The access to and quality of services provided by medical institutions can be enhanced by improved professional competence of doctors and their deputies, their mandatory transition from the operational level to the research one. This requires continuous training and retraining in the system of additional professional education, self-education, healthcare facility management in modern conditions, development of its academic programs and use of variable and multi-level approaches to learning.

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# ROUND TABLE: SOCIETY AND SOCIOLOGY IN MODERN RUSSIA

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## Importance of sociological knowledge at the present stage of development of the Russian society



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**Abstract.** The article considers the reasons that determine the importance of data obtained in the course of sociological research. The author shows the role of sociological knowledge as one of the key factors in consolidation and development of modern Russian society.

**Key words:** sociological knowledge, social development, consolidation, public opinion, public administration.

Modern Russian society is on the verge of fundamental changes. In our opinion, they touch upon not only economic, but also cultural, moral and ideological sides of life. Today sociology, the issues it considers and the information it gives, play a particularly significant role. Considering sociological knowledge as one of key factors in the country development, we mean a new milestone in the development of Russian sociology. The reasons are discussed in this article.

*First*, Russia experienced indigenous breaking of the development paradigm in the

1990s, when the Soviet Union collapsed. At that time the state did not need information about public perception of the state, the assessment of their reforms; there was no clearly formulated question for the scientific community. Sociological studies were often subject to marketing goals. The consequences of “the raucous 1990s” are still felt in the development of the economic and demographic situation, and largely due to this period the Russians have such social perception. For example, the modern idea of the Russian society development is mainly

In your opinion, how successful is the RF President in coping with challenging issues?  
(as a percentage of the number of respondents)

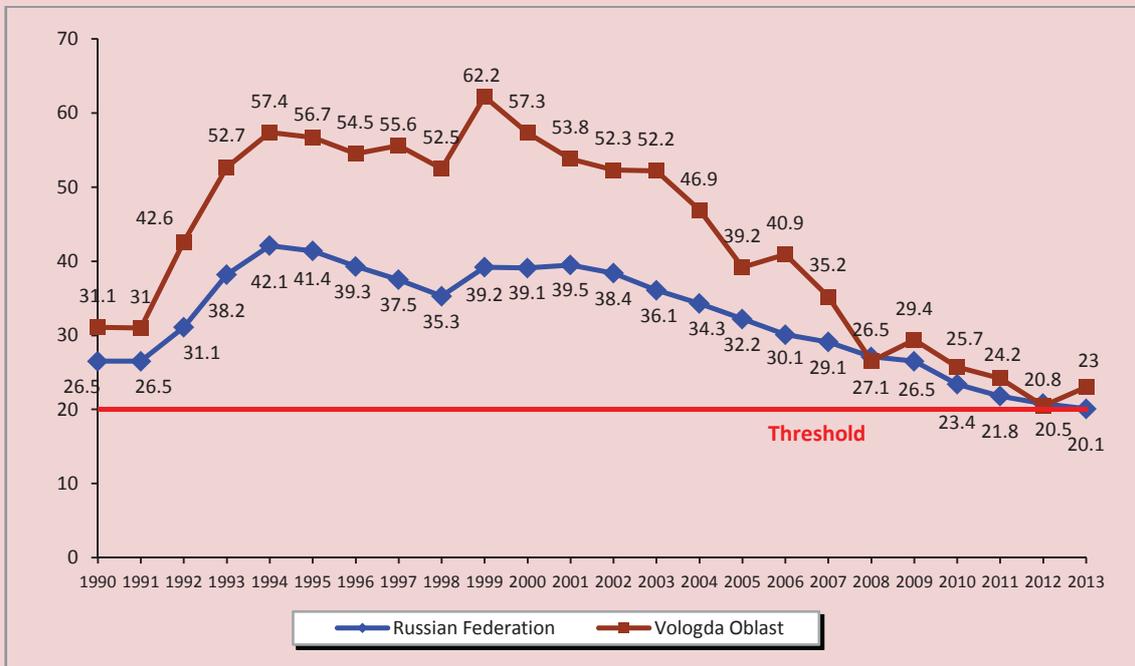
Indicator	2000	2005	2007	2008	2009	2010	2011	2012	2013	Change in 2013 +/- to	
										2000	2012
<i>Strengthening Russia's international standing</i>											
Successful	42.3	47.9	58.4	55.1	49.5	49.9	46.2	43.1	45.6	+3	+3
Unsuccessful	30.9	33.8	24.9	23.7	30.4	29.3	33.7	37.9	36.2	+5	-2
<i>Imposing order in the country</i>											
Successful	31.4	41.9	53.2	48.2	39.1	41.1	36.6	35.4	39.4	+8	+4
Unsuccessful	49.2	45.1	34.0	34.2	43.5	42.5	50.0	50.7	47.5	-2	-3
<i>Protecting democracy and strengthening the citizens' freedoms</i>											
Successful	23.5	33.6	44.4	39.9	36.7	36.3	32.4	28.8	31.8	+8	+3
Unsuccessful	43.8	47.0	37.0	35.9	41.5	42.6	48.3	52.3	51.0	+7	-1
<i>Economic recovery and increase in the citizens' welfare</i>											
Successful	25.6	35.1	47.2	36.7	31.6	33.5	30.7	28.5	31.3	+6	+3
Unsuccessful	52.9	50.8	39.1	46.0	52.4	51.6	56.1	57.9	56.8	+4	-1
Source: <i>monitoring obshchestvennogo mneniya ISERT RAN</i> [ISED T RAS public opinion monitoring].											

associated with the increased role of the state in almost all key areas of public life: social, economic, cultural, etc. (hence, the question appears about how to improve the efficiency of public administration). The anti-social results of the reforms in the 1990s and impoverishment of the population have become a basis for positive socio-political trends of the Russian society: the society is aware of the social hopelessness of radical reforms and the need to adopt new ways of development, taking into account the interests of most Russian citizens [4, p. 11]. V. Putin's policy, aimed at strengthening the vertical of power, got broad public support that was a logical consequence of the population's "fatigue" of economic instability and mistrust of government. Strong

government was popular in the early 2000s, and remains relevant in the present time. Not surprisingly, the President's actions to restore order in the country and enhance its international standing were always valued higher than the actions to defend democracy and facilitate freedoms of citizens (table). In addition, according to ISED T RAS surveys<sup>1</sup>,

<sup>1</sup> ISED T RAS has been carrying out the Public opinion monitoring since 1996 once in two months in Vologda, Cherepovets, and in eight districts of the oblast (Babayevsky District, Velikoustyugsky District, Vozhegodsky District, Gryazovetsky District, Kirillovsky District, Nikolsky District, Tarnogsky District and Sheksninsky District). The volume of a sample population is 1500 people aged from 18 and older. Representativeness of the sample is ensured by the observance of the proportions between the urban and rural population, the proportions between the inhabitants of settlements of various types (rural communities, small and medium-sized cities), age and sex structure of the oblast's adult population. The method of the survey is a questionnaire poll by place of residence of respondents. Sampling error does not exceed 3%.

Mortality rate from suicide in Russia and the Vologda Oblast (per 100 thousand people)



Source: Baza dannykh Federal'noi sluzhby gosudarstvennoi statistiki [Database of the Federal State Statistics Service]. Available at: [www.gks.ru](http://www.gks.ru).

in 2000–2013 20–28% of the Vologda Oblast population considered the issues to restore order in the country as priority for Russia’s President, 26–35% – the issues to strengthen Russia’s international standing. Only 6–10% of the population in the region believed that the head of state was concerned with the problem of democratic rights and freedoms, however, more than 60% of the region’s residents supported the President during the period under study.

It is also important to note that the Soviet Union collapse was primarily a problem of psychological character. There is the following evidence: a dramatic increase in the number of social pathologies (including youth),

and, particularly, of suicides. Its rate still exceeds the critical indicator set by the World Health Organization (figure). The economic consequences of the crises, levelling off much faster than the consequences of social maladjustment of a person [3] are complex in nature and reflected in almost all spheres of public life.

The low level of trust to the public authorities, social atomism, social fragmentation, political indifference, the low level of civil society development, inactivity of civic and political participation are those problems that modern Russian society “inherited” from the 1990s. These problems would be avoided if the Russians

preserved the feeling that they could influence the situation in the country, they had their own voice and that voice could be heard in the higher echelons of power. Sociological science should and could solve the problems, if the state were interested.

Today sociology and authorities face mostly similar tasks. The President urges to strengthen the vertical of power, consolidate the society and strive for a national idea and increase the role of society in making management decisions.

Hence, the authorities are aware that the consolidation of society, overcoming of the “gap” between the population and the state is the only way to maintain order in the country and credibility to the current political course of development in general (which is especially important in the framework of modernization, but also on the background of instability on the international political arena).

*Second*, sociological knowledge, disclosing the relationship of social processes and phenomena taking place in the society, considers the subjective factor of social development, which, according to J.T. Toshchenko, “plays a significant and increasingly important role among the factors that determine the content and the vector of changes in the world and in our country” [6, p. 32].

It is obvious that the official statistics does not provide a complete picture of the society development. For example, numerous studies show that macroeconomic indicators do not always reflect the real level of the

state development; the high level of income does not always guarantee satisfaction with life; the growth of wealth is not always accompanied by the signs of increasing happiness [7, p. 137]. But this is a global practice.

In Russia, and especially at the present stage of social development, the role of the “subjective factor” and, accordingly, of sociological knowledge, reflecting its essence, is growing. This is facilitated by at least three simultaneously acting factors.

*The first one is specific features of Russian mentality.* As according to the RF President V.V. Putin, it is “our genetic code”, based on values, ideas of the highest moral purpose of a man, some higher moral principles [5]. In the last 20–25 years, these values were not popular in the Russian society: in the 1990s – due to the instable economic situation and the specifics of the spiritual and value priorities of that time; in the 2000s – due to the society’s striving for stabilization in the broad sense of the word (stabilization of the economy, quality of life, overcoming of negative trends in the demographic situation, social sphere, etc.).

However, being the essential features of the national character, they could not disappear, and existed at the latent level. As a result, according to M.K. Gorshkov, post-reform Russia concentrated a huge socio-psychological resource, serving as a basis for the modernization breakthrough, which the Russian society needs desperately today, [2, p. 6]. Only nowadays “the genetic code” of the Russian society (returning to the President’s

words) is considered as “one of our main competitive advantages in today’s world”.

*This awareness at all government levels is the second factor to make sociological knowledge relevant.* The ideology, based on scientific knowledge, can be regarded as realistic. Otherwise, it is illusory [8].

*The third factor* is a time factor. The public polls have revealed the rapid growth of the population’s support for the President’s activities. The positive trends (albeit less vivid) are observed in relation to other authorities. However, it is clear that public opinion today largely depends on how the situation is developing in Ukraine, what political stance the President has in relations with Kiev, the United States and some Western European countries. Russian and foreign organizations, engaged in the study of public opinion, note that the consolidation processes unfold against this background.

In other words, the Russian society is consolidated due to “external threats”, and the greater the threat, the more mass media provides information about the economic sanctions of the West or flagrant actions of Kiev authorities, the more cohesive the Russian society becomes, the more it supports the state. The society denounces the policy of Kiev and advances conceptual ideas about the contrast between Western and Russian civilizations.

But, in our opinion, no state should and can build long-term plans and forecasts, based on the figures of official statistics and, especially, the data of sociological surveys,

which take place in the conditions of the key factors that do not depend on internal political decisions. Consolidation of the Russian society under the influence of the “external factor” (the situation in Ukraine) is natural and obvious; however, in our opinion, this phenomenon is temporary.

To assess the actual convergence of the state and society, as well as representatives of various social strata, it is necessary to analyze the situation when the state is focused on solving urgent problems of the population, such as the increase in the standard of living and quality of life, social development, etc.

So, it is better to consider the trends of public opinion in retrospect. The sociological surveys results show that the assessment of the authorities before “Ukrainian events” was not so positive. During the 2000s when the population raised questions not about relations with the West, but about growth in salaries and pensions, the level of approval of key state institutions remained unchanged (increased support was not more than 5% per year) and during the presidency of D.A. Medvedev even decreased (from 76 to 64%, according to VTSIOM, from 73 to 52%, according to ISED T RAS).

The beginning of the third term of Putin’s presidency was accompanied by a slight increase in the level of approval, but it was short-term. As a consequence, in 2013 the level of approval of V. Putin was 54–56%, according to ISED T RAS, and 60–63%, according to VTSIOM, and this figure did not change significantly.

Thus, the data of sociological studies warn that after the resolution of the crisis in Ukraine, the problems of living standards growth, overcoming inequality, social protection and social justice will become relevant again and the government will have to manage them, because the social patience of the Russians may be not as great as in the early and mid-2000s.

The simultaneous impact of the above factors – specificity of sociological knowledge, its demand on the part of authorities and need to act “for the future” – gives an opportunity to speak about the conditions under which social science can and should become a key

element in mediating between the state and society and thus contribute to the further process of social development. According to M.K. Gorshkov, “we get used to a fairly mild formula “sociological support”... but I think that is not enough, we need a more deep and serious look at this interaction. This is not about support, but about real, meaningful inclusion. And not when we have to deal with inconsistent management decisions, but preferably in the earlier stages, when the solution is only ripening... We are talking about “social participation”, at least, we insist on this term now, and I think it should be even strengthened in the future” [1].

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## Possibilities of sociological knowledge to promote intellectual development of the region: experience of practical application in the Republic of Bashkortostan



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**Abstract.** Development of modern Russian society is based on intellectual potential and its capitalization. Knowledge and competence of its development play a key role in this complex system process. Competence possibilities of sociological knowledge should have a prospective nature of accumulation and be effectively applied in the regions of the country. State bodies realize the need for intellectual development. Strategic targets and program activities are developing to stimulate this process in the regions. In the Republic of Bashkortostan sociologists are involved in this process.

**Key words:** sociological knowledge, intellectual development, possibilities and limitations, practical application.

The modern development of the society is focused on the accumulation of intellectual capacity and its capitalization. It is recognized by the international community. The first phase of the World Summit in Geneva in 2003, devoted to the contradictions of information society as a global humanity goal in the third Millennium, resulted in the

adoption of the “Declaration of Principles”. It declares the common desire and commitment to build a people-centered, inclusive and development-oriented Information Society, where everyone can create, access, utilize and share information and knowledge, enabling individuals, communities and peoples to achieve their full potential in promoting

their sustainable development and improving their quality of life [1, p. 59-87]. People's social activity is becoming more intelligent. Knowledge becomes the main resource of human development. Being applied in the practical sphere in order to obtain economic, political, cultural, scientific-technological and social effect, it turns into innovations that stimulate the growth of new knowledge. Thus, the triad "knowledge—money—knowledge" is implemented in the society.

As sociological knowledge is to objectively correspond to, and sociological imagination is to stay ahead of the development processes of society, we should have the mechanism to attract investments in sociology, boost sociological knowledge and promote its transformation into sociological innovations that will lead to a new round. In this process there are certain limitations at all stages.

The possibilities of sociological knowledge give an opportunity to study, predict and design intellectual development. The uniqueness of cognitive sociological experience lies in the potential of retrospective and prospective study of complex phenomena in the framework of the self-developing professional competencies of sociologists. The limit of professional competences is enclosed in the phenomenon of their half-disintegration and the sociologists' ability for analysis, diagnosis and forecast. Despite a certain universality of sociological knowledge, the sociologists in the regions know their specifics and development characteristics better.

The Republic of Bashkortostan is a RF subject, located at the crossroads of Europe and Asia, rich in natural, infrastructural, human, social, cultural and other resources.

Over the last hundred years in the region, as in the country as a whole, the educational potential of the adult population has been developing. According to the 2010 census, the education level of the adult population has been growing, but the average growth rate is lower than in Russia and the Volga Federal District.

There is a gap between intellectual potential and its capitalization, as in the Republic of Bashkortostan there is asymmetry between the innovative activity of economic entities (position in the top ten regions of the Russian Federation) and the creation of advanced technologies and their use (position in the fourth ten regions of the Russian Federation) [2].

The sociologists of the Republic of Bashkortostan contribute to the intellectual development of the population. The rise of social science in the republic is associated with N.A. Aitov, who created a sociological laboratory at Ufa Aviation University in the early 1960s. On the initiative of Professor Dzh.M. Gilyazitdinov, the applicants of Bashkir State University can be admitted to a specialist program in Sociology since 1991 and a master degree program in Sociology since 1997. By 2000 the region has had four Dissertation Councils awarding degrees of Doctor of Sociology and Ph.D. in Sociology: three – in Bashkir State University, one – in Ufa State Aviation Technical University. All this contributes to the development of human potential in the field of sociology. Nowadays there are a number of sociological schools in universities and scientific institutions of the republic. In addition to social and liberal training, theoretical and applied sociological research is carried out, its results are published.

There are research-to-practice conferences and other events of international, national, interregional and republican level. Experts-sociologists participate in the development of state programs and strategies.

The possibilities of sociological knowledge and competencies of sociologists are implemented to promote intellectual development of the region. The Regional Centre for Innovation and employees of the Social Engineering Sector of the Center for the Study of Human Potential at the Institute of Socio-Political and Legal Researches of the Republic of Bashkortostan in November 2012 initiated the drafting of the strategy for the development of intellectual property market in the Republic of Bashkortostan. The Ministry of Industry and Innovation Development of the Republic of Bashkortostan formed the Advisory Council and the working group, but after several meetings the work was discontinued. The development of the state document “from below” did not succeed.

In January 2014 due to the Decision of the Intellectual Property Council for Chair of Federation Council and Article II “On the development and submission for approval to the Government of the Republic of Bashkortostan of the draft program “Development of the intellectual property market in the Republic of Bashkortostan for 2014–2030”, list of the Government decrees adopted at the session “On the development of science in the Republic of Bashkortostan” (December 18, 2013), participation of colleagues from the Republic of Tatarstan, a draft concept of the subprogram for development of the intellectual property market in the Republic of Bashkortostan was developed.

The concept is aimed at forming an ideology of development of the program “Formation and development of the intellectual property market in the Republic of Bashkortostan”. It pursues a number of objectives.

The goals are connected with the analysis of the level of development of the regional intellectual property market, with the elaboration of the system principles to foster innovation performance on the basis of intellectual property commercialization, with the formation of the approaches to create the system of intellectual property use, with the development of the infrastructure model and the staffing of market development, with the modelling of state-market intellectual property management and legal regulation, with the design of the mechanism to monitor the establishment and development of the intellectual property market.

Despite the mention of the development of intellectual property market in several legal documents of the Republic of Bashkortostan, which have already been adopted and are being implemented or developing (“Promotion of innovative activity in the Republic of Bashkortostan”, “Strategy for investment development of the Republic of Bashkortostan to 2020”, the project “Strategy for development of scientific and innovation activity in the Republic of Bashkortostan to 2020”, “Development of industry and increase in its competitiveness for 2014–2020” (currently is not developed), it is not clear, part of which program the subprogram “Formation and development of intellectual property market in the Republic of Bashkortostan” will be.

Thus, the region has not only sufficient capacity to target intellectual development, but also destructive limitations that can be eliminated by

means of a constructive dialogue and integration of the efforts of academic experts, representatives of state authorities and local communities.

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## Trust in the context of non-economic factors in modernization development



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**Abstract.** The article considers the problem of non-economic factors in modernization development of the region; in recent years this issue has attracted increasing attention of scientists.

Nowadays the importance of these factors has become generally accepted in economic science; these factors are studied by sociology. Trust can also be considered as a non-economic factor. It appears as one of the “expensive” non-economic assets.

Many economic processes, such as investment banking, marketing, etc., are based on it. Trust can be viewed as a comprehensive response to risk. It creates the environment in which various economic subjects interact.

The article assesses the level of trust in the region on the basis of the analysis of public opinion of the Vologda Oblast residents.

The author comes to the conclusion about the necessity to raise the level of trust in the region. It requires implementation of certain social policy. For this purpose a programme of measures can be developed based on socio-economic diagnostics of the region.

**Key words:** non-economic factors, modernization, region, trust, sociology.

The problem of non-economic factors in development has become acute [1, 2, 3]. The economic science has experienced fundamental changes due to this. In recent decades the researchers have been focused on the interdisciplinary approach and the connection of economic methods with methods of other sciences. As a result, political, legal, and psychological issues can be included in the analysis. Economic research correlates with psychological, cultural, political and sociological studies.

The “non-economic” variables, which comprise socio-political, structural, psychological, geographical factors, are taken into account, along with the key economic determinants of growth. The influence of non-economic factors is weaker, less stable, their effect is ambiguous. Limited rationality in human behavior is recognized. The mainstream of modern economics recognizes that people use not only the rational model of behavior, but other models, and make a valuable choice. The sociologists also pay attention to non-economic factors [2].

We single out one non-economic factor – trust. Nowadays it is among the most “expensive” non-economic assets.

Representing the total of socially sound and socially confirmed expectations on the part of individuals against other individuals, enterprises, institutions, norms and rules that constitute the fundamental substance of life, trust supports the sustainability and integration of the society. Trust predetermines important economic processes: investment, saving, lending, stock activity, funding, etc.

Lack of trust can block these areas. Trust is especially important, as the modernization processes in the regions acquire specificity due to their differences and features. So, it is possible to single out plural modernization.

The polyparadigmatic approach is applied to analyze the processes related to social trust. It uses the resources of classical and neoclassical sociology and postclassics – modernism. The most appropriate research approach to the study of the local environment is constructivism, which pays great attention to the study of consciousness and human behavior. This concept helps to consider the ways of creation of various social phenomena, including trust, that become traditions.

Different aspects of trust can be studied by means of specific sociological research, carried out at inter-country, national and regional levels [5, 6]. ISED T RAS conducts the monitoring of public opinion, revealing the state of social trust in the Vologda Oblast and the factors, influencing it<sup>1</sup>. First, we note that the Vologda Oblast is fairly well developed in economic terms; it is a region with high industrial potential. Its territory comprises 1190000 people, or almost 1% of the entire population in Russia.

<sup>1</sup> The article uses data for the 2000–2013 period. The survey was conducted by ISED T RAS by means of the representative sampling. The sampling is targeted and quota. Representativeness is ensured by the maintenance of proportions between rural and urban population, between residents of different types of settlements (villages, small and medium-sized towns), the age and gender structure of the population. The survey participants are the cities of Vologda and Cherepovets, and Babayevsky, Velikoustyugsky, Vozhegodsky, Cherepovetsky, Kirillovsky, Nikolsky, Tarnogsky and Sheksninsky districts. The sample size is 1500 people; the sampling error does not exceed 3%. The survey method is the questioning of respondents at the place of their residence.

Distribution of answers to the question “Please, describe your attitude toward current government institutions and social structures” (answers “completely trust” and “mostly trust”), in % of the total number of respondents

Answer	Survey date					
	2000–2006 (average)	2007	2008	2009	2010	2013
President	51.1	60.3	65.2	51.6	56.7	44.6
Government	38.9	41.9	60.2	46.7	52.3	38.6
Federation Council	29.1	34.9	47.6	35.9	38.3	32.7
State Duma	24.5	29.5	42.0	33.5	34.8	31.1
Regional government	30.8	40.6	48.6	34.9	41.1	36.4
Local government	26.6	32.3	40.9	33.1	34.3	31.6
Trade unions	26.5	28.6	35.9	28.1	30.2	25.3
Public organizations	20.0	24.4	32.6	23.8	27.7	24.1
Political parties	14.7	17.6	26.8	20.0	23.7	18.1

Source: Data of the monitoring of the economic situation and social wellbeing of the population, ISEDТ, 2010–2013

The phenomenon of trust is studied at the institutional and interpersonal levels. We consider interpersonal trust as a basis for institutional trust. But this article does not analyze it. Institutional trust is most clearly exemplified by trust in the state, because it generates and maintains the standards and rules that organize the life of society. Institutional trust at the level of a regional community manifests itself in the trust in regional and local authorities (*table*).

The analysis of the data of public opinion polls discloses that all institutions can be divided into groups.

The first group includes institutions with a high level of trust, which are represented by the President and the Government of the Russian Federation.

At the level of regional governments it is the Governor and the Government of the region.

The second group with an average level includes representative authorities – the State Duma and the Federation Council. Local governments present this group at the local level. The third group with a low level comprises public organizations, trade unions and parties. Moreover, it is clear that the institutions that perform administrative functions are mostly trusted. The institutions, promoting the citizens’ interests, are unattractive. The other institutions are also important for local communities, but their position is weakened by a lack of citizens’ trust. This, in turn, predetermines the weakness of regional civil society.

The influence of the executive institutions can be attributed to several reasons.

Firstly, these institutions have economic opportunities due to available material resources.

Secondly, they create norms and rules, control their execution, as they are eligible to impose sanctions.

Thirdly, they form single social space, consolidate society by means of setting goals and objectives, manage their execution.

Fourthly, historic memory indicates the importance of these institutions in crisis situations, which happened many times in the country.

Fifthly, the political culture of the Russian society tends to the paternalistic type and contains a few features of the civil type. These factors clarify the low level of other institutions.

Summing it up, we note that the evaluation of non-economic factors of development along with economic ones requires a comprehensive socio-economic analysis of the region [4], which should be based on the systemic, structural-functional, comparative analysis. This would help to assess the state of the regional economic system, identify the deviations from normal development and single out the blocking factors. This diagnosis should include economic diagnostics of the market, assessment of infrastructure, characteristics of social and economic entities.

The sociological monitoring is an important diagnostic method. All this will promote identification of the determinants of sustainable innovation development, which is an impetus for modernization in the region.

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## Sociological research in the Soviet period in the Republic of Bashkortostan



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**Abstract.** The article reveals the process of institutionalization of sociological research in the Soviet period in the Republic of Bashkortostan, in particular, the scientific contribution of the first researchers – professors F.B. Sadykov and N.A. Aitov.

**Key words:** society, sociology, sociological research, social relations and processes.

Considering society–sociology relations, we should recognize that their interdependence is very close. Society can not exist without sociological study; sociological doctrines “live” as long as they find confirmation in public organizations. In this regard, it is not quite correct to say that the Soviet society stood aside from sociology – the latter was represented by Marxism. That is another matter that Marxism, aimed to “utterly destroy the whole world”, did not approve sociological, especially empirical, research, as their results could hinder construction of a new world”.

The stated socialism foundations presupposed its further development on the basis of improvement of vital processes. Unfortunately, in our country the party could not meet the challenge of real life. Experiencing “hunger” of ideas, adequate to life, it still blindly followed the theory, proposing new slogans on the construction of communism, causing the population’s skeptic attitude to the values of socialism.

Meanwhile, the importance of the study of life processes is becoming more and more urgent. The researchers from the Republic of Bashkortostan made a significant contribu-

tion to the revival of social science in our country. One of the first pioneers is Fahim Beniyaminovich Sadykov (he was born in 1928, Novomuslimovo, Mechetlinsky District of the Republic of Bashkortostan, died in 1998), Doctor of Philosophy, Professor, Head of the Department of the Bashkir State University in 1969–1990. In the early 1950s he paid great attention to the study of the problems of efficiency of social institutions functioning in the socialist society. In 1953 he defended his thesis on “The role of Soviet science in the cultural and technical enthusiasm of employees”. It was one of the first works written on the basis of concrete sociological studies [1].

Over the years F.B. Sadykov studies the socialist society in general. In 1968 he published the work “Unity of the people and contradictions of socialism”, revealing contradictions of socialism.

The work by F.B. Sadykov was criticized by the Ideological Commission headed by Secretary of the CPSU CC M.A. Suslov as anti-Soviet and revisionist. After a few decades F.B. Sadykov writes: “Many of the ideas, put forward by me in the 1950–1960s and then officially criticized, were brought to life with the beginning of perestroika... but it was too late, the rooted processes of decay of nomenklatura and the stagnation of the barrack-type socialism had already ruled out the possibility of radical positive changes in the Soviet society” [1].

Since the mid 1960s the development of sociological thought in the Republic of Bashkortostan has completely been on a

scientific basis, that is, on the basis of research activities. Professor Nariman Abdrakhmanovich Aitov [2] is considered to be a pioneer. He headed the Department of Philosophy and Scientific Communism at the Ufa Aviation Institute in 1964–1988. On his initiative in 1965 the institute opened the first sociological laboratory in the republic.

The sociologists studied pressing social problems that require scientific understanding and development of practical measures for their resolution. One of the first areas of sociological research in the Republic of Bashkortostan is the development of scientific and practical issues of social planning. Social planning is a tool to solve problems of social development of labor collectives, communities and regions. It involves conducting research and making recommendations in all areas of their activity.

Thus, sociological research was not limited to one area, but had a complex character already at the initial stage of sociology development in the republic. For example, the plan of social development of the city stipulated activities in such areas as: optimization of the age and gender structure of the population; economic development of the city; welfare and improvement of life of the population; health promotion and development of physical culture and sports; development of education; regulation of the social structure of the urban population and social relations; growth of cultural and spiritual needs of the population; crime prevention; ideological work.

The results of the study were applied while preparing and implementing plans of social development of cities and agricultural districts of the Republic of Bashkortostan and other regions: Naberezhnye Chelny (the Republic of Tatarstan), Kamyshin (the Saratov Oblast), Magnitogorsk and Miass (the Chelyabinsk Oblast), Surgut (the Tyumen Oblast).

Then, a number of scientific studies, performed in the framework of social

planning, were transformed into independent areas of sociological research.

In general, the Republic of Bashkortostan conducted large-scale sociological research in the 1960–1980s. It became an independent branch of scientific activity. The emerged Bashkir sociological school was recognized not only in our country but also abroad.

The new stage in the development of sociological science in the republic began, as in Russia as a whole, in the early 1990s.

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# BRANCH-WISE ECONOMY

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## Ways to enhance the economic turnover of fruit and berry production in the region



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**Abstract.** Enhancement of the regions’ self-sufficiency in handling their socio-economic development issues predetermines their increasing importance in the search for new sources of economic growth and improvement of the quality of life, an important characteristic of which is nutrition, including the consumption of fruit and berries.

This issue is particularly relevant for the European North of Russia, where the development of its own fruit and berry production is constrained by climatic conditions. These territories can find a source of economic growth in the formation of the fruit and berry market with a significant potential for development based on the resources of wild fruits and berries that the northern regions are rich in.

The article describes the main spheres of functioning of the fruit and berry market in the northern regions through the development of integrated network structures that promote integration of fruit and berry production and processing, as well as support on the part of the authorities in creating appropriate conditions for the normal functioning of the market.

**Key words:** fruit and berry production, economic growth, region, territorial-industrial complex.

The revival of economic growth and the achievement of the goals of socio-economic development of the territory are the priority tasks for the regional government authorities. Economic growth can be achieved by directing all the available potential toward the enhancement of competitiveness and increase of production of competitive goods, effective and rational use of natural resources [9]. One of such natural resources is fruits and berries, the production of which is important for the regional economy, and for improving the quality of life of the population.

The transition of the Russian economy to market relations in the early 1990s has had adverse effects on the development of the fruit industry within the agro-industrial complex that is the main supplier of cultivated fruits and berries to the market. Their production was unstable during the whole post-reform period (*fig. 1*).

In the conditions of market relations, the majority of Russian enterprises specializing in the production of fruit and berry products have become unprofitable. The declining trend in the production is observed at fruit and berry processing enterprises. Only about 20% of gross yield of fruits and berries goes to processing. In the structure of manufactured products more than 90% falls on the processing of fruits and berries for canning, and the production of quick frozen and dried fruit is only 0.5% [2].

Serious problems are observed in the sphere of producing the means of production for all the parts of the fruit-and-berry subsector of agriculture. The domestic machinery lags behind its foreign counterparts in performance (in 2 times), has higher specific consumption of power, water, steam (by 12–18%) and metal consumption (30–40%).

Figure 1. Gross production of fruits and berries in the Russian Federation in all categories of enterprises, thousand tons [6]



The technical level of machines for washing containers, for preparation of raw and auxiliary materials for canning is characterized as extremely low. The situation is especially grave in the fruit-and-berry canning industry: most of the companies have outdated equipment for the packaging of products [2].

The above problems have led to the fact that currently the production does not fully satisfy the demand of the population for fruit and berry products, since it provides only 18–20 kg of fruit and berries a year per person, or 25–30% of the minimum amount required. The shortage of production is covered by its import (fig. 2).

The basis of import supplies of fruits is citrus fruits, apples, pears, apricots, peaches, cherries, sweet cherries, and bananas (fig. 3).

But even if we take import into account, the actual consumption of fruits and berries per capita (in terms of fresh fruits and berries, without those processed to make wine) in the Russian Federation is only 40–50% from the rational standard recommended by the Russian Academy of Medical Sciences.

The main reasons for the insufficient provision of consumers with domestic fruit-and-berry products are seen in the following.

The first reason is an extremely low state support of agriculture and its fruit and berry cultivation. The lack of investment in the industry, in the creation and development of agricultural infrastructure, including high-quality storehouses leads to the fact that Russia imports even apples.

The second reason lies in the immaturity of the market of Russian producers. The system of distribution of domestic products

Figure 2. Resources and the use of fruits and berries in the Russian Federation, thousand tons [6]

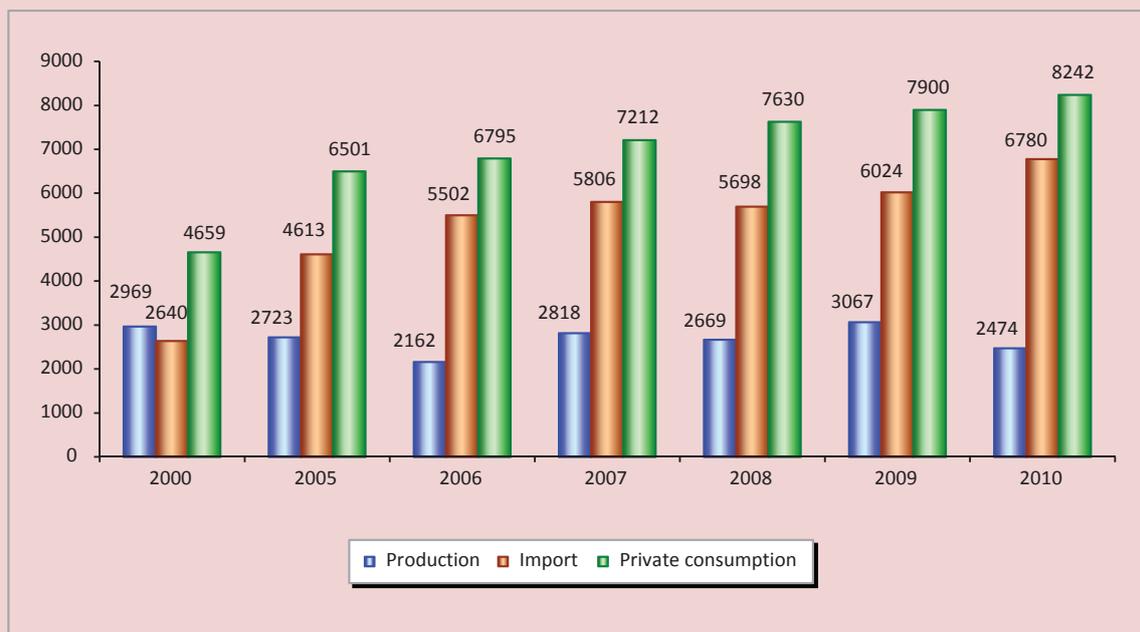
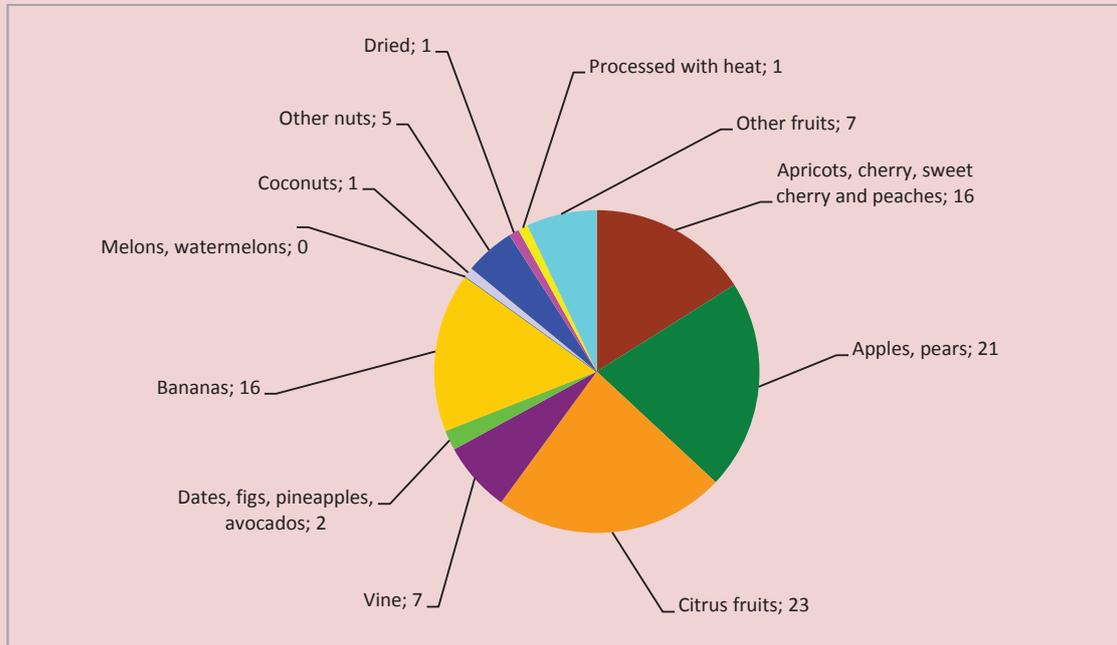


Figure 3. Commodity structure of fruit and berries import in Russia in 2012,% [8]



has not been created so far, while the channels for distribution of foreign fruits and berries are working effectively. As a result, substantial reserves for the development of domestic fruit and berry sector remain unused.

The problem of providing the population with fruit-and-berry products is particularly acute for the people, who live in the Northern territories of Russia, including the regions of the Non-Chernozem forest zone. Their climatic conditions are not suitable for cultivating fruit and berry crops dynamically; in this regard, a significant share of fruits and berries is imported from abroad and from the southern regions of the country.

At the same time, even the Non-Chernozem zone has a significant potential for providing the people with fruit and berry

products. A good resource base for this can be found in significant reserves of wild berries: cranberry, cowberry, bilberry, blueberry, which are very important in the food balance of the country.

In recent years three leading centers for the harvesting and processing of wild crops have developed (*tab. 1*).

Involvement of wild berries, which are the traditional local natural resources, in the economic turnover should be considered as one of the sources of growth for the economy both in the region and European North of Russia, where the biological reserve of cranberry is 160 thousand tons per year, blueberry – 372 thousand tons, blueberry – 37 thousand tons, cranberry – 214 thousand tons.

Table 1. Russia's leading regions in the harvesting and processing of wild berries

Region	Specifics
Northwestern	The impetus for the development of gathering in the Republic of Karelia, in the Pskov, Arkhangelsk and other oblasts can be found in direct investment from interested Swedish, Finnish and Norwegian companies. The reasons for the interest on the part of foreigners are clear: this Russian region is very close to the borders of the countries, where the consumption of wild plants (primarily berries) is at a very high level. In fact, the companies engaged in berry processing are now working with the relatively cheap Russian market of raw materials. Today in Karelia there are already up to 40 companies involved in the gathering and delivery of wild crops to Northern Europe. They all have full funding from Western partners. But the processing of wild raw materials in the region is not being developed: the vast majority of participants in this market gather berries and deliver them for export "as they are". There emerged a fairly developed system of procurement centers; and the local population is actively involved in the procurement process as well.
Central	Procurers from the Ivanovo, Vladimir and other oblasts focus on the Moscow market. Several large companies such as Ecoproduct, Bogorodskaya Trapeza, Wimm-Bill-Dann engaged in the canning of mushrooms, berries and juices have formed their own procurement base. According to the available data, the Ivanovo Oblast-based company Cantarella that specializes in the production of frozen berries and mushrooms remains the leader in the region.
Siberian	So far the dominant position belongs to the Tomsk Oblast: local procurement companies are successfully working in the Altai and Krasnoyarsk Krai. In addition, the region has developed a range of companies that position themselves not only as producers but also as the raw material processing enterprises: the remoteness from the boundaries naturally stimulates the development of deeper processing in order to minimize costs of the products' delivery to foreign markets. This factor urges the Siberian companies to work more seriously in the domestic market.

Table 2. Forecast revenues of the Vologda Oblast budget system from harvesting berries by forestries [3]

Indicator	2014	2015	2016	2017	Total for 2014 – 2017
Planned volume of procurement of berries in forestry sections, tons	499.2	504.3	509.2	514.3	2027.0
Average pay for harvesting berries, rub.	4.84	4.84	4.84	4.84	–
Inflow of revenues to the budget from the harvesting and collection of non-timber resources, thousand rub.	300	304	307	310	1221
Inflow of revenues to the budget, from harvesting of forest food resources and medicinal plants, thousand rub.	3651	3691	3725.1	3765.3	14832.4
Total budget revenues from harvesting and collection of non-timber resources, forest food resources and medicinal plants, thousand rub.	<b>3951</b>	<b>3995</b>	<b>4032.1</b>	<b>4075.3</b>	<b>16053.4</b>

It should be emphasized that the development of these resources requires an efficient communications system that makes it possible to purchase fresh berries in all the territories of the region.

Consumer cooperatives and forest industry enterprises remained the main gatherers of wild berries for a long time [4]. However, their plans for gathering berries are very small.

One of the main reasons why forestry lost its position in the market of wild forest foodstuffs can be found in the collapse of the former distribution system.

It should be noted that, according to forecasts, the implementation of estimated procurement of berry resources by forestry sections will allow the Vologda Oblast budget system to earn additional revenue. On average it will be about 4000 thousand rubles per year (*tab. 2*). Total inflow into the budget for the period from 2014 to 2017 will reach nearly 16 million rubles.

However, one should bear in mind that we are talking only about the revenues of the region's budget system that come from harvesting activities of forestry sections, i.e. from organized collectors. At the same time, more significant amounts of wild berries are gathered by the local population and are taken to the reception stations under district departments of consumer cooperatives, and in most cases – to the buyers-up of berries; therefore, the regional budget loses quite a substantial sum of money.

These data show that at present the issue associated with the development of market infrastructure that ensures the sales of fruit-and-berry products, is rather acute in the region. The years of market transformation resulted in actual destruction of the system of berry products distribution. This caused a decrease in the volume of sales to the state, the emergence of unregulated food markets, the formation of new, mainly market, distribution channels and the increase in the share of such sales.

Studies show that in modern economic conditions the innovativeness of fruit-and-

berry cultivation and the enhancement of production efficiency can be facilitated through the application of new effective forms of cooperation by combining the production and processing of fruit-and-berry raw materials, logistics and other services on the basis of the development of integration processes.

A motive stimulating the integration processes is the effect received through the increase of the scale of production, the connection of separate stages of a single technological process and the opportunity to have a complete cycle of production, processing and distribution of diverse and competitive products, as well as the achievement of resources' savings in the joint sphere of activity, coordinated actions and a more effective distribution of products on the market.

In our opinion, the promotion of innovation activity and involvement of wild fruit and berry resources in the economic turnover in the Vologda Oblast requires the formation of the territorial-production complex as a special integrated structure based on the regional non-profit partnership – an association of individuals and legal entities for the purpose of mutual cooperation while preserving their autonomy and independence.

This integrated structure can combine different economic entities, including investors, intermediaries, leasing organizations, customers, information and advisory organizations, government authorities, investment-innovation institutions, financial and credit institutions, insurance and research organizations, etc.

The creation of a territorial-production complex is a priority in the development of the region (the point of economic growth), contributing to the concentration of the necessary resources in those areas that bring maximum return and increase the efficiency and competitiveness of the products of agriculture and processing enterprises [1].

In our opinion, an important principle of the formation of the territorial-production complex consists in the competitiveness of the products and the demand on foreign and domestic markets. At present, the analyzed market is in a stage of gradual growth and has a significant potential.

There has been a steady demand for berry products on the Russian market. For instance,

in 2008–2012 the sales of frozen fruits and berries increased by 37%. 76 thousand tons of frozen fruits and berries were sold in 2012. According to the forecast, the sales of these products will have reached 87.5 tons by 2015.

We add that during this period the retail price of frozen fruits and berries increased by more than 50% (196.38 rubles per kg in 2012 against 128.96 rubles in 2008), and it will have risen up to 268.87 rubles per kg by 2015 (fig. 4).

Fruit and berry products are in great demand abroad. For the period between 2007 and the first half of 2012 the Russian enterprises exported 35 847.4 tons of frozen fruits and berries, which is equal to 132252 thousand dollars (fig. 5).

Figure 4. Sales of frozen fruits and berries and their retail price

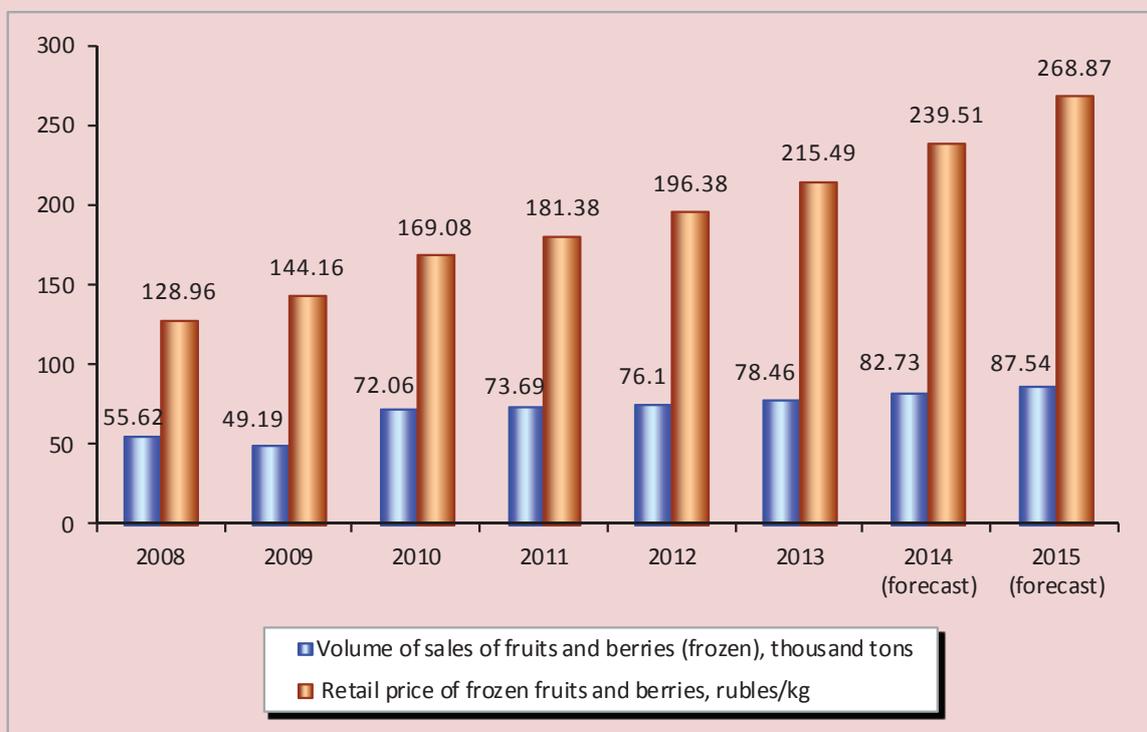
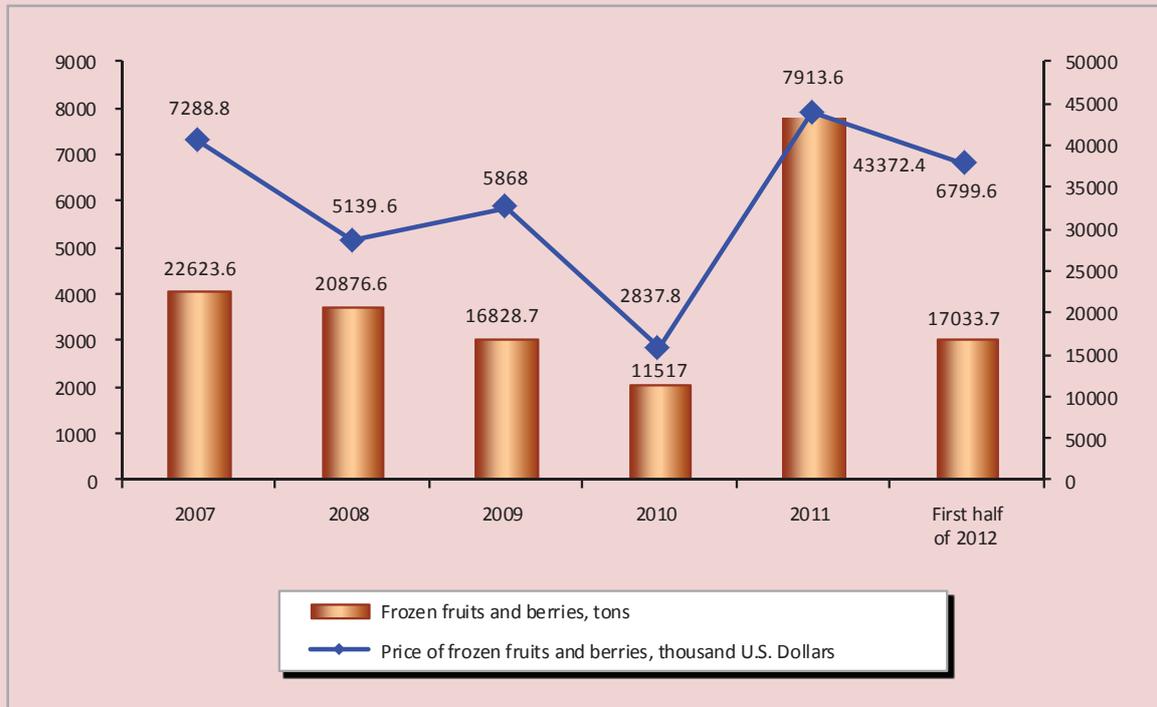


Figure 5. Volume of export of frozen fruits and berries and their retail price



The presence of the prime company that produces ready-made (non-primary) products is essential for the formation of the territorial-production complex. In our opinion, LLC Vologodskaya Yagoda (Vologda berry) that is engaged in the processing of berries, can be considered the main enterprise of the fruit-and-berry territorial-production complex in the Vologda Oblast; the company has facilities in Ust-Kubinsky and Velikoustyugsky districts of the oblast.

The current turnover of LLC Vologodskaya Yagoda has reached 8 billion rubles; the company has a network of procurement centers – stationary points, to which anyone can bring berries. It has its own bank in order to effect prompt payments to the people for the berries delivered, its own logistics – warehouses and vehicles. For 2006–2012

LLC Vologodskaya Yagoda has increased its turnover from 2.2 to 8 billion rubles (fig. 6).

Currently, LLC Vologodskaya Yagoda is the leader in the Russian market of berry products. The company’s share in the market of frozen berries, berry puree, and berries in modified-atmosphere packaging varies from 85 to 100% (tab. 3).

In general, the volume of production and sales of fruit-and-berry products of LLC Vologodskaya Yagoda is growing continuously. The revenues from sales increase every year; the only exception was 2010, when the sales declined due to adverse weather conditions caused by the unusually hot summer and, as a consequence, a sharp decline in yield and berrying.

The finished products of the company go to distributor networks such as “Auchan”,

Figure 6. Turnover of LLC Vologodskaya Yagoda, billion rubles

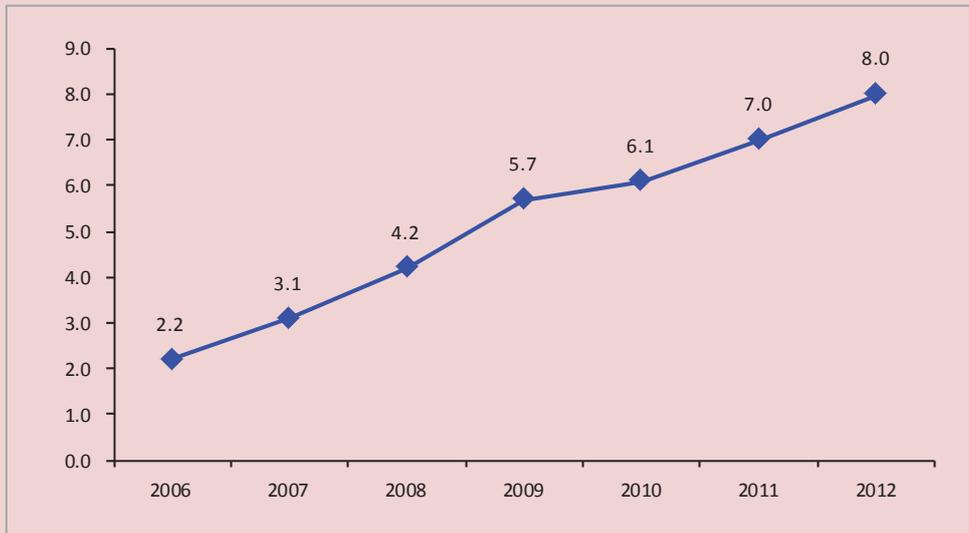


Table 3. Some performance indicators of LLC Vologodskaya Yagoda

Goods	Current production output, tons/year	Share of LLC Vologodskaya Yagoda in the Russian market, %	
		wild berries	cultivated berries
Frozen berry	35000	85	10
Berry puree	4000	85	10
Concentrated berry puree	4000	-	-
Berries in modified-atmosphere packaging	0.5	100	
Juice concentrate of cultivated fruit and berries	0.5	1	
Bilberry (pharmacy)	4000	5	

“Metro”, “Dixie”, “Lenta”, “Globus Gourmet”, etc.; semi-finished products and berry concentrates are sold to the juice, milk, confectionery and pharmaceutical companies. The major consumers of the products of LLC Vologodskaya Yagoda are OJSC Lebedyansky, OJSC Wimm-Bill-Dann Beverages, LLC Agrana Fruit – Danone, LLC SKFruit and others. These companies are the largest buyers of finished products such as fresh and frozen berries, concentrated juices and purees, and they intend to continue their cooperation with the enterprise; besides,

due to the steady growth of the Russian market of juices and baby food (in 2009 consumption growth amounted to 18.5%), they are planning to increase purchases of raw fruit and berries for the production of juice and juice products.

Thus, LLC Vologodskaya Yagoda has a chance to become the parent company of a future fruit-and-berry territorial-production complex. Its participants may include specialized horticultural and small processing enterprises of the region, such as LLC Vologda Plant of Forest Foods, and Integrated

Agricultural Production Company Plemzavod Maysky, the largest producer of cultivated fruits and berries.

Small enterprises act as participants of the network structures. At present, those enterprises located in small towns and rural areas and engaged in the processing of agricultural products from locally available fruits, berries and herbs are becoming especially important. These facilities play a key role in the solution of social issues such as the increase in employment, creation of new jobs, and improvement of the quality of life. Besides, they solve the problem of stable supply of products at prices that are affordable for different social groups. The importance of this role of small businesses is evidenced by the fact that the production of canned mushrooms, vegetables and fruit by these enterprises reaches 45–50% of the total production [7].

The presence of substantial reserves of wild berries in almost all the districts of the Vologda Oblast makes it possible to create a network of small enterprises for processing fresh berries, in particular, in the towns Vytegra, Krasavino and rural settlement Maysky.

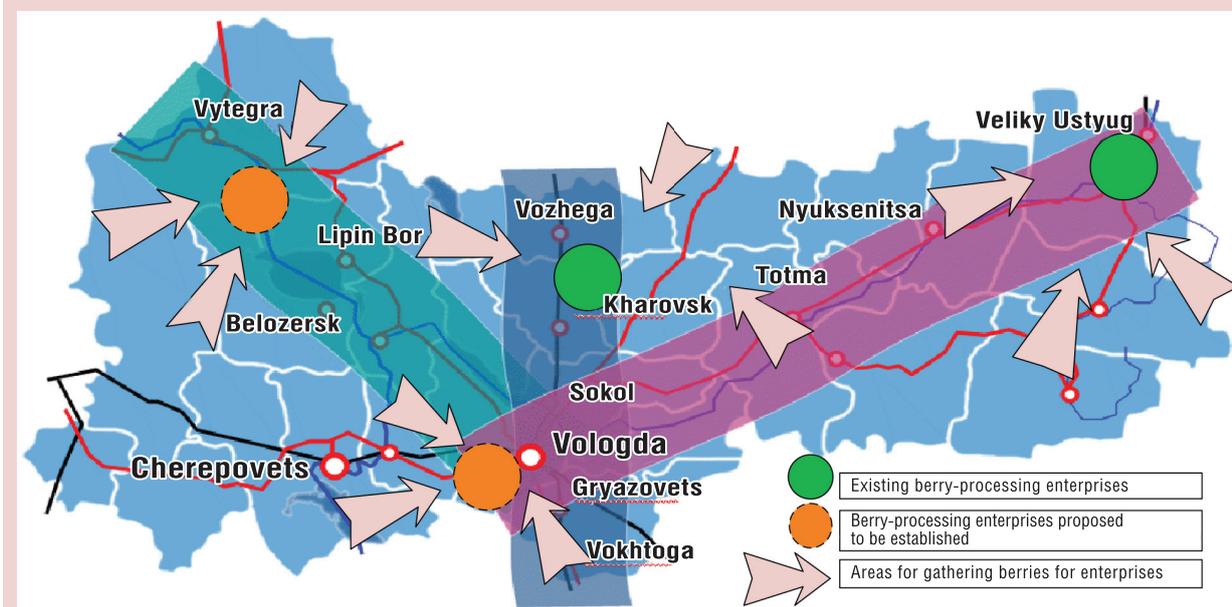
The on-site processing of berries will reduce the cost of production by reducing transport costs. The feasibility of establishing small enterprises for processing berries is pointed out in the Strategy for socio-economic development of the Vologda Oblast for the period up to 2020. These enterprises should be created in the region's development corridors (*fig. 7*): the Western corridor – “Kirillov – Belozersk – Lipin Bor – Vytegra”; the Northern corridor – “Vokhtoga – Gryazovets – Sokol – Kharovsk – Vozhega”; the

Eastern corridor – “Totma – Nyuksenitsa – Veliky Ustyug”. Development corridors are located along major highways that provide access to the regional (local) market for all the members of business entities and maximum coverage of all the districts of the oblast. In addition, such a scheme of location of companies will give an impetus to the development of consumer cooperation as one of the key elements of the infrastructure of berry products market. Therefore, it is necessary to conduct systematic work in the corridors of development aimed to form engineering, transport, information, social and administrative infrastructures.

Taking into account the specifics of the economy of the territories, the structure of the regional fruit-and-berry territorial-production complex should contain private subsidiary plots, which are the main producers of cultivated berries and the main collectors of wild berries. Despite the fact that they cannot form the basis of the progress in the industry due to small-scale production and limited resources for modernization, they are distinguished by the maximum efficient use of available resources and a high level of personal interest in the results of the work. The support of private subsidiary plots is social, rather than economic, in nature, and it implies the gradual evolution of the more successful of them into small and medium enterprises.

Transport-and-distribution centers can promote the integration of the subjects of the fruit market most efficiently. These centers make it possible to carry out the analysis, accumulation and redistribution of the flows of goods and materials within the region, between separate business entities within the

Figure 7. Possible locations of small enterprises for processing berries within the existing development corridors of the Vologda Oblast



territorial-production complex. The creation of a network of transport-and-distribution centers through the implementation of public-private partnership will provide a synergistic effect due to cost savings of business structures with the joint use of infrastructure and special equipment, and will lead to the growth and transformation of potential network integration structures into strong and stable ones [5].

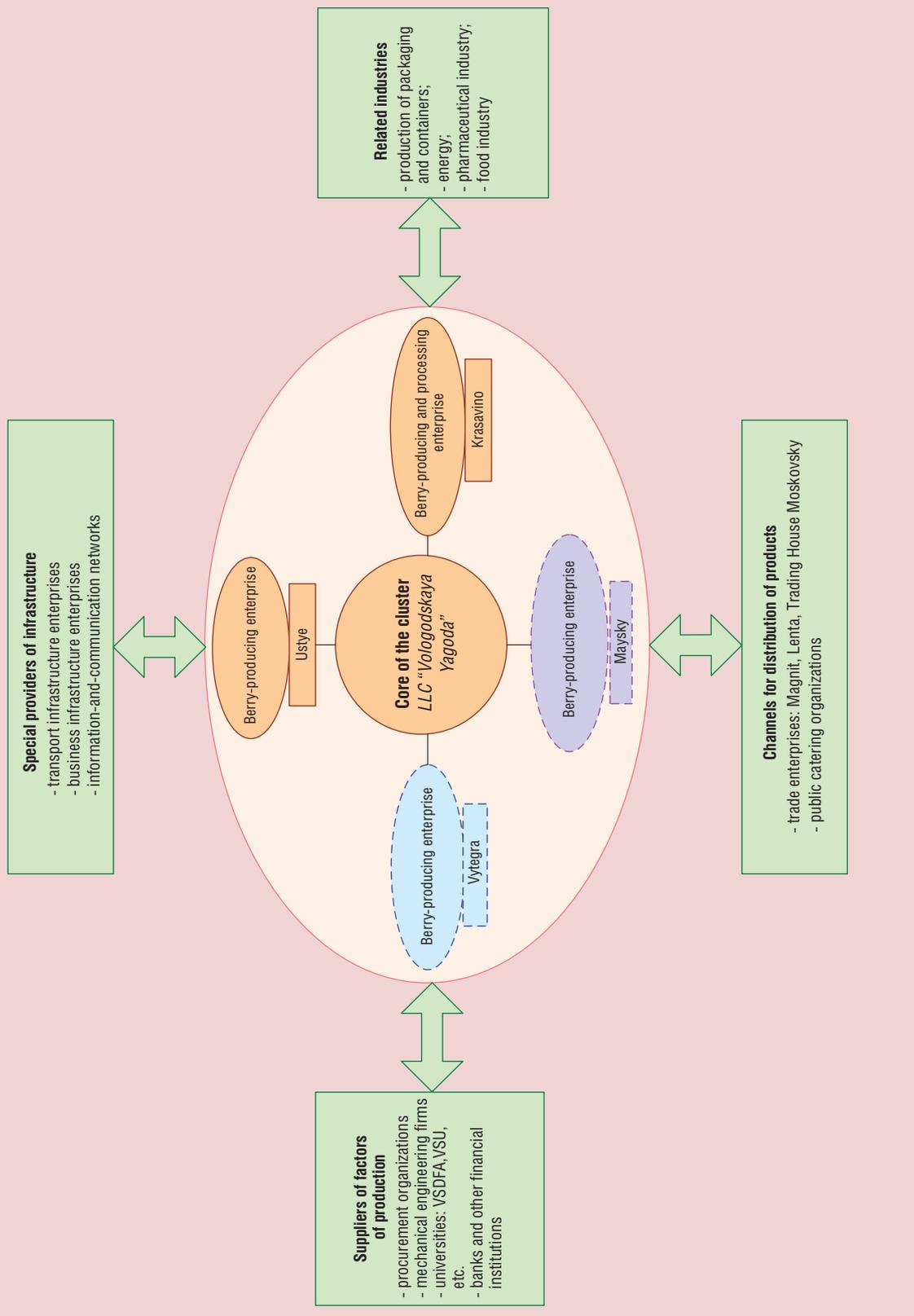
The Vologda State Dairy Farming Academy named after N.V. Vereshchagin, the Vologda State University and other educational institutions can supply the enterprise of the territorial-production complex with skilled employees. It can be said that these universities will contribute to scientific and technological support of the production and processing of fruit-and-berry products in the proposed complex. This interaction is particularly important

in the context of the necessity to create an innovation system and infrastructure for the production of competitive fruit-and-berry products.

The material and technological base and production technologies can be upgraded through the participation of engineering firms and research institutes in this complex.

Public authorities of different levels, innovation infrastructure, and the system of higher professional education are external partners of the fruit-and-berry territorial-production complex. Regional and municipal authorities, in particular, should establish a favorable external environment for its creation. At the regional level it is necessary to make appropriate adjustments to the Vologda Oblast socio-economic development strategy, to determine the place of the fruit-and-berry territorial-industrial complex as a landmark of priority development.

Figure 8. Composition of the Vologda Oblast fruit-and-berry territorial-production complex



At the same time it is necessary to develop an adequate system of state regulation and support of the industry. The organizing role of public authorities is very important at the initial stage of formation of the fruit-and-berry territorial-production complex.

In general terms, the structure of the fruit-and-berry territorial-production complex in the Vologda Oblast can be represented as follows (*fig. 8*).

The development of the fruit-and-berry territorial-production complex by 2020, according to our calculations, will be characterized by the following indicators (*tab. 4*). In addition, by 2020, the processing enterprises that will join the complex will contribute about 430–450 million rubles to the budget.

The increase in the economic turnover of wild berries in the Northern territories will be promoted by assistance from the authorities in the formation of the infrastructure of the local fruit-and-berry market by creating conditions to ensure the proper functioning of the market.

These conditions include:

- coordination of current and future directions in the development of regional and national economy;
- maintenance of the budget and commodity-money balance;
- development of legislation to provide a legal framework and protection of interests of all the participants in the local market of fruit and berries;
- creation of necessary conditions and control in order to ensure free and fair competition in the market;
- provision of rational and legitimate distribution of goods.

Due to the fact that the methods of state regulation in the formation of the fruit-and-berry market infrastructure are multi-dimensional in nature, their implementation should be effected by competent legislative, executive, supervisory and other public authorities.

In our opinion, this will contribute to the formation and sustainable development of the local fruit-and-berry market, turning it into a source of growth in the regional economy.

Table 4. Main indicators of the development of the Vologda Oblast fruit-and-berry territorial-production complex (calculations made by the author)

Share in the market	Type of market					
	Global		Russian		Regional (NWFD)	
	Fact 2012	Plan 2020	Fact 2012	Plan 2020	Fact 2012	Plan 2020
Fast-frozen berries, vegetables and mushrooms, %	1,5	2,2	9	14	73	91
Concentrated berry juices and puree, %	3	5	53	71	62	89
Concentrated vegetable juices and puree, %	0	1	0	11	0	24
Production output of frozen berries, tons	Fact 2012			Plan 2020		
	39 000			94 200		
Number of employees at the berry processing enterprises, including:						
– regular	210				580	
– temporary	1700				4000	

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## Conditions and factors promoting the movement of agricultural producers towards innovation-based development



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**Abstract.** The article considers the results of the questionnaire survey carried out in 2011–2013 by the Department of Production Management at the Vologda State Dairy Farming Academy named after N.V. Vereshchagin. The survey was supported by the Vologda Oblast Department of Agriculture, Food Stocks and Trade in the framework of ongoing research into the issues of transition of agricultural economy

to innovation development. The authors present and systematize the opinions of the heads of the region's agricultural enterprises concerning the challenges and opportunities of innovation-investment activity of agricultural organizations.

**Key words:** innovation, demand for innovations, innovation activity.

Russia's accession to the World Trade Organization (WTO) attaches greater importance to the enhancement of competitiveness of modern agriculture that operates under conditions of international division of labor and emergence of new markets. Agricultural producers realize that they need to improve the competitiveness of their products and production conditions in order to ensure the production of high-quality and safe products that meet and even anticipate the demands of consumers. The tactics to achieve economic growth commonly used in the 2000s was based on the existing range of products and launch of idle capacities, fixed assets and technology; this tactics cannot ensure the required competitiveness of enterprises at present and in the future.

Competitiveness, of course, depends on the level of resource usage efficiency and intensification of production, but if Russia wants to produce competitive products being the WTO member, it should enhance their quality, launch new, marketable production in accordance with the requirements of the globalizing market. This requires updating of basic production assets, their reconstruction and creation of new production facilities, the adoption of progressive technology. All this requires investment, which are the main factor promoting economic growth, its main driving force.

In the conditions, when the quality of economic growth is the most important and

it increases when production shifts to new goods manufactured using upgraded production facilities, investment in innovation becomes the most important direction for the use of investments. And today it seems that the Russian Federation does not lack suggestions to develop its economy based on innovation. The country's innovation development model is set out in the Concept for long-term socio-economic development of the Russian Federation [4]; it should result in the creation of innovation economy. State authorities are talking more and more about financial support to innovation activity.

However, official statistics do not show the growth of demand for innovation and the increase in the volumes of innovation products, including those from manufacturing industries that lay the foundation of economic competitiveness. There is no intensive technological re-equipment of domestic industry, and, moreover, unlike all other industrialized countries, Russia is not reducing the share of the low-tech sector in the structure of value added. Only about 10% of enterprises in the country, like a decade ago, implement technological innovation, whereas in Germany the figure is 60% [2]. Hence, some scientists, who study the model of innovation economic development, postulate that private owners of enterprises do not want to or cannot finance the innovation process [2].

This opinion is based on an extensive foundation of empirical evidence, but statistics show that some industries and enterprises that are in the same functioning conditions, are, nevertheless, able to find the funds for adoption and implementation of innovation development strategy. Here we do not focus our attention on the characteristics of produced innovation products that are new for the internal or external market or that do not have analogues on the world market. It is clear that it is not always possible to launch the production of innovative products with low costs.

However, there are a number of enterprises that imitate innovation, i.e. they do not spend money on research, but adopt R&D of others and develop their own production on the basis of that of industrialized countries. Enterprises that imitate innovation specialize mostly in food and raw materials. Agricultural production has been suffering from chronic investment hunger for the third decade in a row. It can be assumed that the imitation model of promoting innovation in this sector will spur the interest of agribusiness in innovations and in their development under the rules of the World Trade Organization that are in effect on the territory of the Russian Federation.

And now, as competition is getting tougher and Russia's economy is open to multinational corporations and WTO rules, agricultural producers will have to improve production processes and quality of their goods that remain competitive, and to increase productivity. We think that this approach is very important under the current conditions of production and circulation, because not all agricultural companies have the potential for

innovation development and opportunities to establish high-tech production in short term. The research and regular contacts with leaders and specialists of agro-industrial complex (AIC) show that they support the imitation approach to innovation, since it complies to the objectives of enhancing the basic conditions of reproduction and improvement of the overall climate for agribusiness.

Agricultural economics and AIC management practice is well acquainted with strengths and weaknesses of the current innovation system; they can be viewed from different angles, but its potential should be perceived, first of all, as an actual foundation of available competitive advantages based on scientific knowledge; one must use these advantages most efficiently to achieve sustainability and growth of expanded reproduction in agriculture.

Actually, this was one of the pillars of a concept of research that we carried out in 2011–2013 to study the factors and conditions promoting innovation development of agricultural economics in the region in the case of the Vologda Oblast.

One of the stages of the research was to collect and generalize the opinions of the heads of agricultural enterprises in the region concerning the challenges, opportunities and prospects of innovation development. This was carried out through questionnaire surveys of the leaders of agricultural organizations; they were asked a specific set of questions to identify factors promoting or hindering innovation and investment activity of crops and livestock producers. The questionnaires were distributed to the heads of agricultural enterprises specializing in the production of dairy cattle and located virtually in all the administrative-territorial districts of the region.

The list of enterprises was approved by the leadership and economic service of the Vologda Oblast Department of Agriculture, Food Stocks and Trade. The total number of farms that had submitted filled-in questionnaires, was 52. This covers over 24% of the general totality of dairy farms, located on the territory of the region; this allows us to speak about high representativeness and credibility of the survey.

When we set the goal, we took into account the vulnerability of domestic agricultural economy [1] and the existing groups of current and long-term problems (economic, demographic, social), as well as the general conditions and specifics of functioning of agriculture. The first year of Russia's membership in the WTO, as it is quite obvious, dictates that enterprises should not only increase competitiveness of their products, but also create the conditions for its production, ensuring quality and safe products that satisfy and even anticipate the demands of consumers.

Now, due to large-scale and prolonged pressure of food imports in the context of globalization and economic openness, the issue of competitiveness of domestic agricultural products on the internal market is most acute (you can say, critical). And this cannot be solved by boosting agricultural production alone.

Negative demographic trends in rural areas, which are manifested in the decline in birth rate and growing death rate of rural population, high unemployment and low incomes dictate the necessity to move the whole rural economy to innovation development. Here, in the first phase of the study, we will consider only the key

link – agriculture – in the views of heads of agricultural organizations concerning the challenges and opportunities of implementing innovation development in agricultural economics.

Generalization and structuring of the questionnaire survey data clearly shows that heads of agricultural organizations do not deny the importance and significance of working out a strategy for innovation development of agro-economics; and they evaluate the market of innovations in agriculture as growing and developing, where scientific and technological innovations are very expensive and their supply on the part of national science could be more extensive, in their opinion. At that, the main obstacle to innovation breakthrough in the development of agricultural production, according to the respondents, is, quite reasonably, the restriction of demand for innovations resulting from a man-made “agrarian tragedy” that has struck agricultural economics (the expression of L.I. Abalkin, 2009).

Therefore it is not a coincidence that only 13% of surveyed executives say that they are ready to start the transition of agricultural production to the innovation stage of development, 42% admit the possibility of such a transition in the future, but 45% report they have no conditions for the implementation of this transition. Note in this connection that only 5% of respondents are focused on the intensification of agricultural production, as it is indicated clearly in their responses. Most of the executives (57.5%) assess the utilization of available production capacities at the level of 70–80%, and 32% characterize the level of utilization of production potential at no more than 40–60%.

Of course, the figures should not be interpreted as unwillingness of heads of agricultural enterprises to solve problems of innovation development of agricultural production. At present, most of the respondents are implementing innovation to a greater or lesser degree (*fig. 1*).

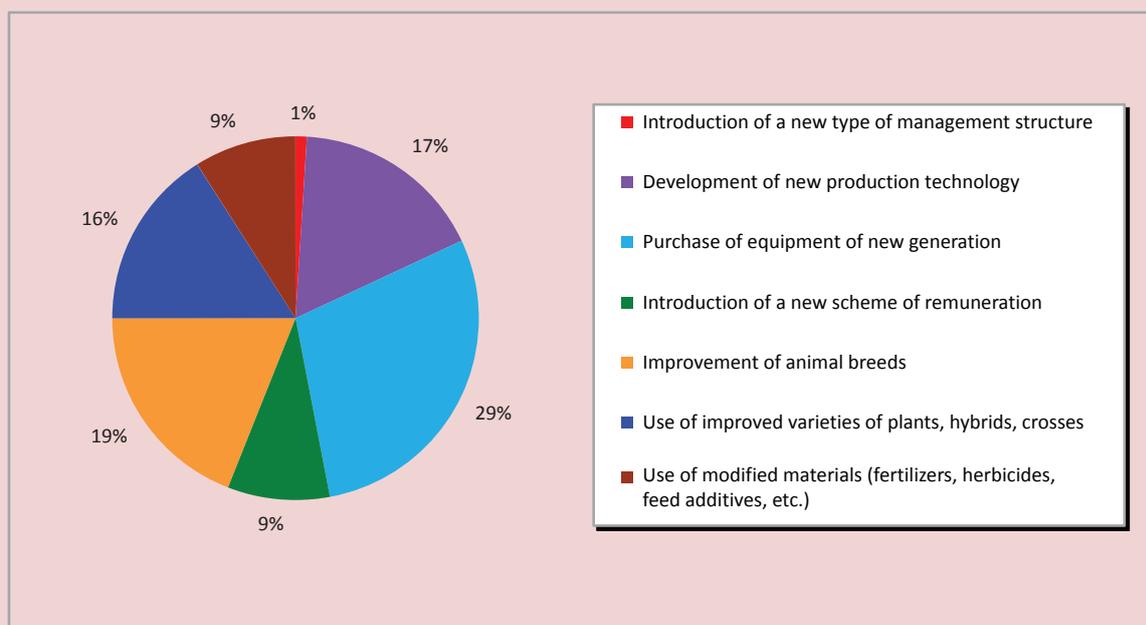
The highest level of demand for innovation projects, judging by the number of agricultural organizations that declared it and that are involved in implementing them, was found among those that are related to the purchase of equipment of new generation (29%), improvement of animal breeds (19%), somewhat less – among those related to the development of new production technology (17%), the use of improved varieties of plants, hybrids, crosses (16%) and very few among those related to the use of modified materials (fertilizers,

herbicides, feed additives, etc.) (9%). Mastering of production of the products of genetic engineering and new types of products is only expected in the foreseeable future.

It should be emphasized that leaders of agricultural enterprises are objective and very critical in assessments of their activity in the field of innovation. For instance, only 22% of the respondents evaluated the activities of their enterprises in introduction of innovation technology in animal husbandry by five points (on the scale of ten).

All respondents assess the level of implementation of innovation technology in plant cultivation below five points, including 12 and 5% – by four to five points, respectively. While 37.5% of the respondents point out a 10% level of satisfaction of the demand for elite seeds, not more than 4%

Figure 1. Innovation projects participated by agricultural enterprises of the Vologda Oblast in 2006–2010, %



of agricultural producers say the demand is satisfied by 80–90%, and none of them is supplied by 100%. Half of agricultural producers has a 12% level of satisfaction of the demand for elite seeds.

11% of agricultural producers have solved the problem of purchasing pedigree livestock; it is solved by 90% in 5.6% of agricultural enterprises. 22% of agricultural producers have an opportunity to satisfy only half of their demand for pedigree livestock, and 44% of respondents – only in the range of 10–15%.

Leaders of agricultural enterprises that participated in the survey are distinguished by pragmatism concerning the launch of innovative activity inextricably linked with the formation of basic conditions for expanded reproduction.

First of all, they include the upgrading of facilities and infrastructure of agricultural enterprises, so that they had the ability to manufacture competitive products. Secondly, they include measures aimed at organizing the production of new (unique) products.

In this context it is logical that heads of agricultural enterprises are concerned with the condition and replacement of fixed assets. For example, for five years (2006–2010) only 7.1% of respondents have fully upgraded their fixed assets, 33% were able to compensate for their retirement only by half, and 42% replaced only one-third of their retired assets.

Leaders of agricultural organizations are constantly arguing that capital investments allocated for the acquisition of long-term resource-saving equipment and technology,

investments in human capital and infrastructure development are a necessary and major source of economic growth. They determine the possibility of increasing the efficient use of land, labor and other production resources, and ultimately the competitiveness of agricultural products.

In 2005–2010 the volume of capital investments in the development of production capacities, according to 37.5% of the respondents, was sufficient only for simple reproduction (*fig. 2*); 25% of respondents consider it insufficient for simple reproduction. Only 20% of respondents admitted that the level of capital investments was sufficient for extended production.

It is significant that when asked about economic performance of their enterprises for 2011–2013, all the respondents indicate an increasing degree of unfulfilled requests for capital investments, lack of capital investment to provide simple and expanded reproduction.

Official statistics points out continuous and widespread decline in construction of production facilities in agriculture; it is confirmed by the corresponding estimates given by the heads of agricultural enterprises, who participated in the survey. Only 15% of respondents said they had implemented the plans of construction of production facilities in the livestock industry in the period under consideration. The list and the importance of factors that hamper investments in agriculture (in the interpretation of survey participants) are shown in *figure 3*.

The answers given by the surveyed heads of agricultural enterprises show interrelation between the tasks of growth of innovation

Figure 2. Assessment of the level of capital investments in the development of production capacities (as a percentage of the number of responses given by heads of the Vologda Oblast agricultural organizations, who participated in the survey)

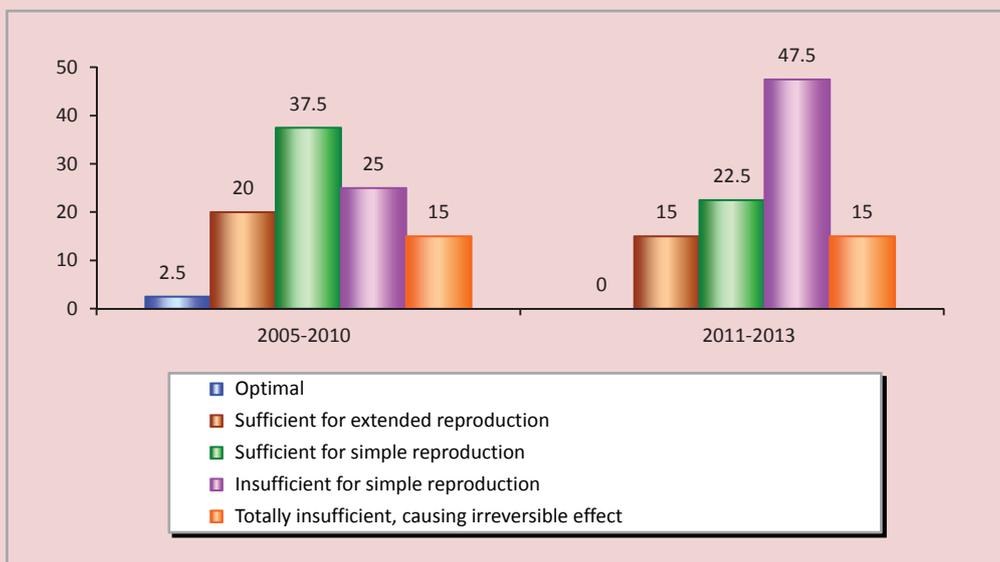
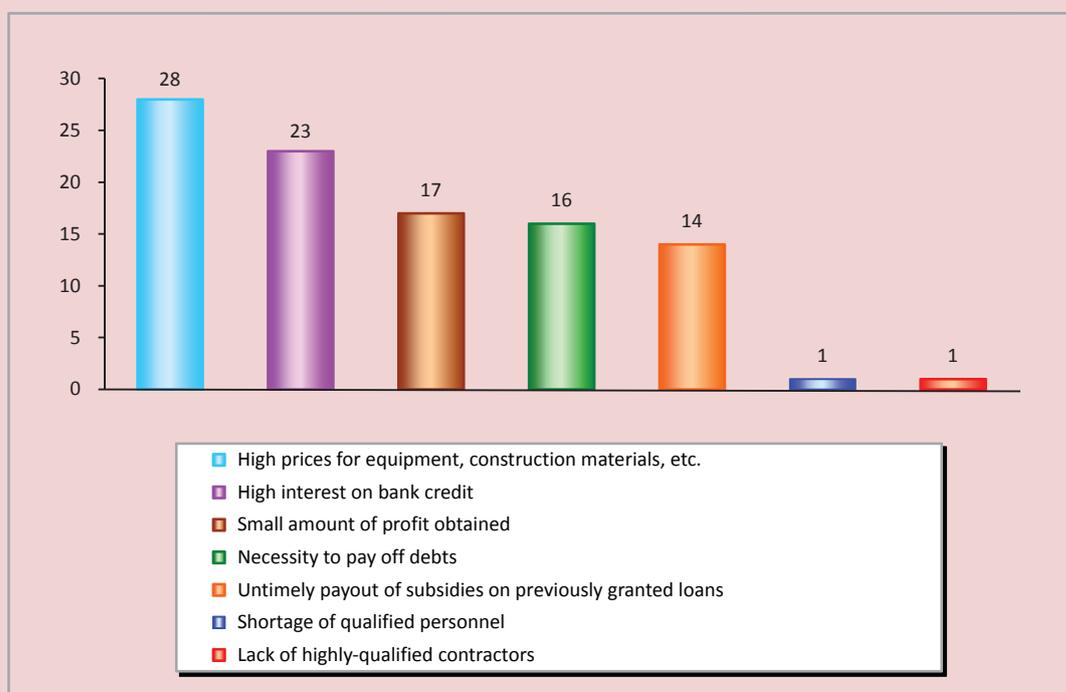


Figure 3. Factors hindering investments in agriculture (as a percentage of the number of responses given by the heads of the Vologda Oblast agricultural organizations, who participated in the survey)



activity and capital investment in agriculture, where investment is a condition and prerequisite for transition to innovation type of development of agricultural production. Also there is a correlation between the estimates of the possibilities of transition to innovation model of development and the level of investment support provided to agro-economics.

Thus, 15% of the surveyed heads of agricultural enterprises consider the volume of investment for expanded reproduction to be sufficient, and almost as many executives (13.6%) say that their agricultural enterprises have opportunities for the transition to innovation model of development.

Accordingly, lack of capital investment treated as “totally insufficient”, leads to negative judgments concerning the possi-

bilities of innovation development. The volume of investments, insufficient for simple reproduction, serves as a reason for a response such as “rather no than yes” concerning the estimates of opportunities for innovation development, whereas the parameters of investment that are considered sufficient for simple reproduction, form the answer “rather yes than no” (fig. 4).

According to respondents (fig. 5), the main driving force in the transition to innovation model of development of agricultural production is the need to enhance competitiveness (30% of the total number of respondents). 23% of the answers of managers point out increased competition in the market and express their concern about the fact of Russia’s accession to the World Trade Organization (17%), instability of external environment factors (15%).

Figure 4. Evaluation of existing opportunities for transition to the innovation model of development of agricultural production in the Vologda Oblast (according to the results of the questionnaire survey of enterprises’ heads), %

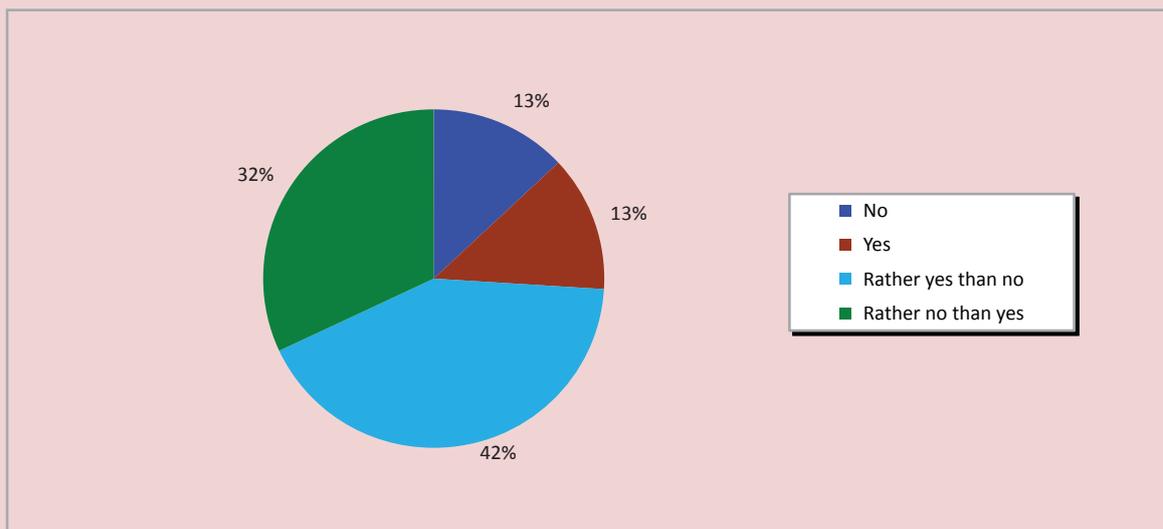
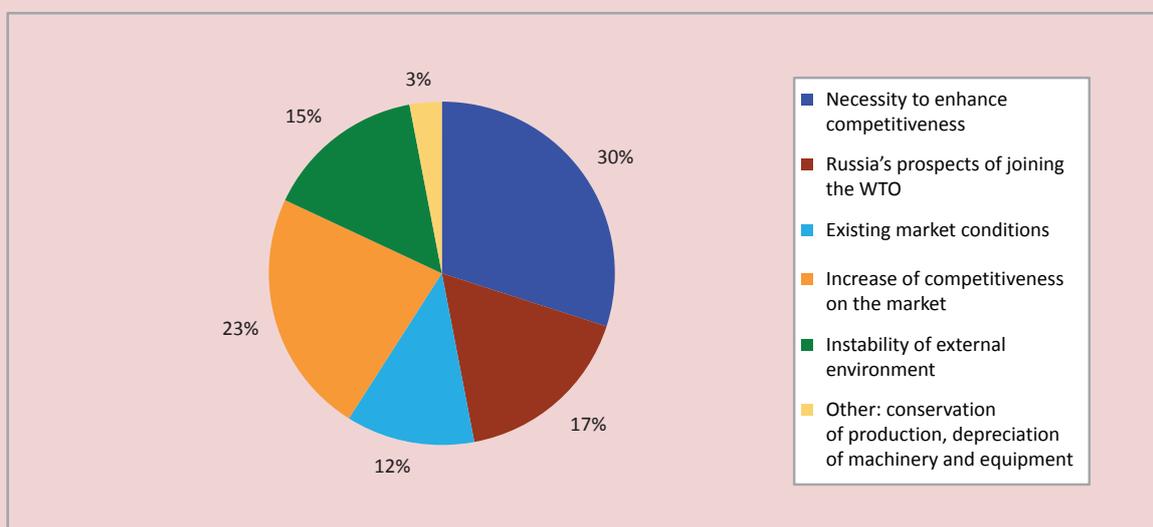


Figure 5. Factors promoting the transition to the innovation model of development of agricultural production in the Vologda Oblast (according to the questionnaire survey of managers), in %



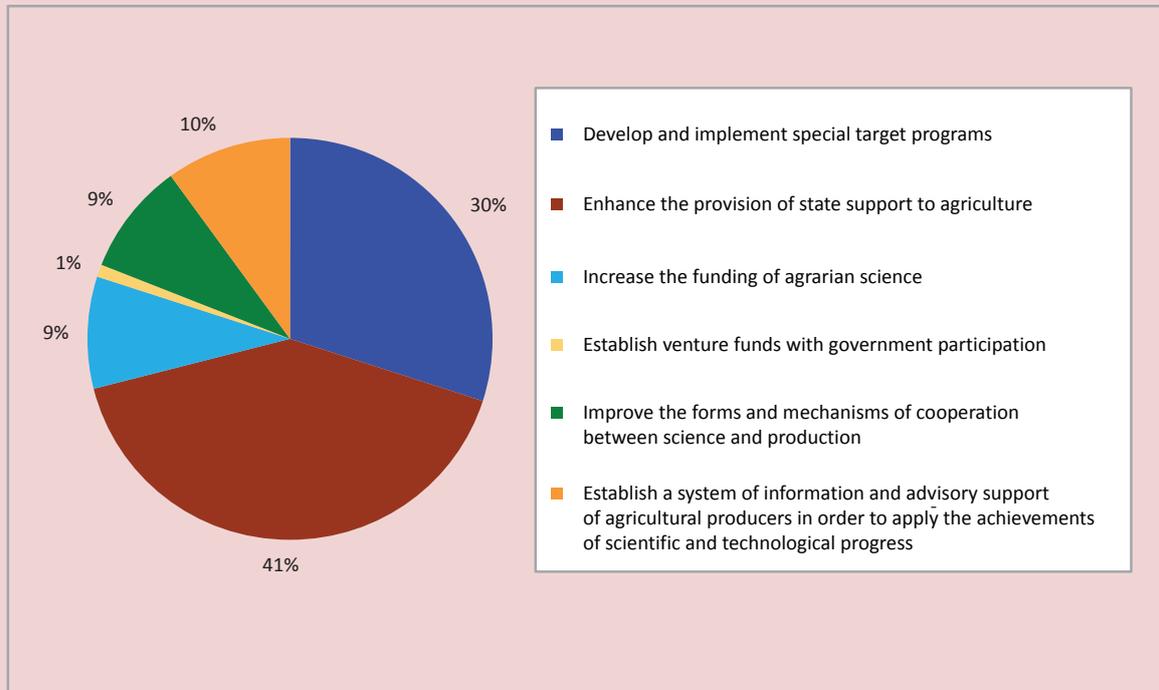
Leaders of agricultural organizations understand that transition to innovation model of development will be very difficult under the circumstances of socio-economic instability. It will be necessary to activate all the available resources and attract additional material, labor and intellectual resources; besides one will need a clear view of numerous risks and expected results, organization of target management of innovation, preparation and adaptation of personnel to innovation. It is clear that it can be achieved only with large-scale support and systematic participation of the state.

Therefore it is not a coincidence that heads of agricultural enterprises attach the greatest importance (41%) to the enhancement of state support of agriculture as a main condition for boosting innovation. The necessity of elaboration and realization of special target programs for innovation

development (30%) is on the second place (*fig. 6*) according to the degree of importance and significance. The tasks such as forming the system of information and advisory support of innovations, increase of financing of agrarian science, improvement of forms and mechanisms of interaction between science and production are estimated as being somewhat less important, but equally important with relation to one another. So far only 1% of respondents stressed the importance of establishment of venture funds with participation of the state.

An appeal of agricultural enterprises' leaders to the state for support should not be understood as a request for unlimited financing of expenditures on innovation at the expense of the state budget. We are talking about state protectionism of innovation development of agricultural production, similar to the one that emerged during the

Figure 6. Importance of tasks and conditions of transition to innovation model of development of agricultural production (according to the results of the questionnaire survey of managers), in %



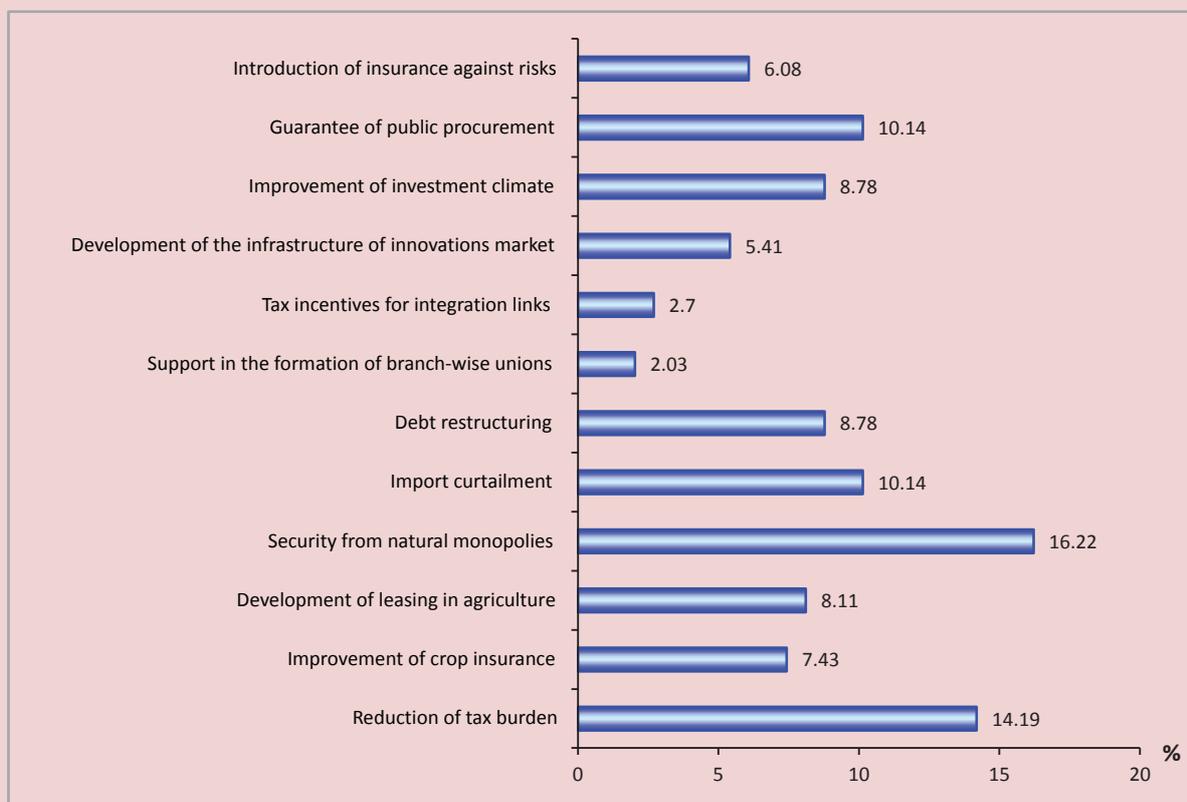
initial period of the “new economic policy” of the USSR and that was effectively applied in industrialized and other countries during the post-war period under the auspices of state paternalism in relation to agriculture. Today all that remains for domestic agricultural producers is nostalgia for large-scale public investment in agricultural production effected in 1976–1991, and dreams about “neo-NEP”.

Agricultural producers would like to actually see and constantly feel the real state support of innovation development of agricultural production. In their opinion, the most important direction of government policy in promoting innovation in agriculture is to ensure protection from the pressure of

natural monopolies, resellers or processors and to reduce tax burden on producers (fig. 7).

They emphasize the importance of restricting the import of agricultural machinery, raw materials and food, as well as the guarantees of state procurement of agricultural products manufactured with the use of new technology. The respondents point out certain very important activities of the state in implementing the following measures: development of innovation market infrastructure and leasing with the introduction of new equipment and highly productive breeds of animals, risk insurance in innovations, and tax incentives in integration links between agricultural

Figure 7. Choice by heads of agricultural organizations of the directions of the state policy in promoting innovation, in %



enterprises, processing and trade enterprises (agricultural holdings), on terms of mutual benefit, support in the formation of industrial unions of agricultural producers. Therefore, the opinion of the heads of agricultural organizations concerning state support of innovation development of agricultural production seems to be very informative and differentiated.

In this case, heads of agricultural organizations are not trying to shift responsibility to the state and get away from solving problems of innovation development of agricultural production. They do not

tend to deny their responsibilities for the implementation of innovations. Reasonably believing that the success of the transition of agricultural enterprises and agricultural economics in general to the innovative model of development will be determined primarily by knowledge assets and the level of professionalism, they critically review the qualifications and willingness of their employees to develop innovations; they forecast the innovation activity of their employees and begin to work on the formation and development of innovation potential of human resources.

The leaders of agricultural organizations that participated in the survey have noted a relatively low level of sensitivity of the existing management personnel to innovation. In the opinion of leaders, 25% of managerial staff have a positive opinion concerning innovations and are willing to implement them into life, but 50% show low and average readiness to implement them. Only 6% of managers believe that specialists are able to express the positive nature of the results of innovation for the entire enterprise and its employees, and also have sufficient authority, motivation and interest in implementation of innovation projects at their enterprise. So far, only one in ten managers believes that the company's specialists can sensibly explain the necessity and feasibility of innovations to production staff. None of the survey participants set the highest score to the management of their company for their ability to assess the factors in feasibility and success of innovation projects.

Consequently, it becomes obvious, undeniable and urgently necessary to raise the qualification of workers to the level required for independent development of innovation technology, and also to train managerial staff in the fundamentals of innovation management, and to train personnel in organizational behavior in the conditions of innovation development of economy.

The main part of the interviewed heads of agricultural enterprises (72.5%) consider it necessary at present to educate production personnel in the implementation of innovation projects, 17.5% do not deny this need. The rest (10%) do not consider this to be important and urgent.

The study of the opinions of heads of agricultural enterprises allows us to clarify issues related to innovation development at the enterprise level, i.e. at the level of the main component of economy, and see what the problem situation is, it also helps identify existing problems and assess the factors influencing innovative activity in agriculture.

Summarizing the results of our questionnaire survey, we emphasize the following:

1. Heads of agricultural organizations evaluate a market of innovation in the agricultural sector as a growing, developing one, where scientific and technological novelties are very expensive and their supply by the national science could be, in their opinion, much wider. Besides, attention should be also paid to innovation projects in the organization of production management, marketing and social technologies of formation of innovation-active management.

2. The promotion of innovation in agricultural production is, according to respondents, an objective necessity caused by the tasks to improve its effectiveness and ensure the country's food security, achieve a high level of competitiveness of products in the new institutional economic conditions resulting from the openness of the economy and the Russian Federation's membership in the WTO.

3. The demand for innovations in agriculture, according to the heads of agricultural enterprises, is limited due to current vulnerability of domestic agricultural economy and existing groups of present-day and long-term problems (economic, demographic, social), as well as general

conditions and specifics of functioning of agricultural production. This explains its relatively low susceptibility to innovation and, therefore, low priority of innovation activity in adopted strategies for development of agricultural enterprises.

4. However, leaders of agricultural organizations do not distance themselves from the decision of problems of innovation development of agricultural production; and at present the majority of respondents implement innovation. However, 45% of respondents point out that there is a lack of conditions for full-scale transition of agricultural production to the innovation stage of its development.

5. Innovation activity of agricultural producers, as the heads of agricultural organizations believe, should develop not by “rushing into innovation”, like “rushing into the market” in 1992; rather it should be based on the formation of basic conditions for expanded reproduction. Attention is focused on the relationship between objectives of innovation activity growth and capital

investment in agriculture, where investment is a prerequisite and precondition for transition to innovation development of agricultural production.

6. Heads of agricultural enterprises consider the process of transition of agricultural economy to innovation model of development, given the current socio-economic instability, very complex and demanding; it requires the efforts of all existing resources and attraction of additional material, human and intellectual resources; in this respect it is also necessary to have a clear and comprehensive view of many risks, to forecast expected results, to organize targeted innovation management, to train and adapt the employees to innovations.

This is followed by a reasonable statement that it is possible to make the transition to innovation model of development of agricultural production only with large-scale support and systematic participation of the state. The strategy for innovation development of agriculture should be developed and put in legal form.

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## Modelling of food security in the region



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**Abstract.** The article considers indicators that can be used for evaluating the condition of food security in the region. Taking into consideration the approaches existing in scientific literature, the authors have substantiated optimal and critical values of the ratios of sufficiency of consumption and affordability of food. Statistical data on the Vologda Oblast have been processed and on this basis the economic-mathematical models have been built, which reflect the influence of various factors on food security. The authors have determined that the main factors include the per capita volume of import and domestic production of food, the level of intensity of agriculture and economic activity of population, and the proportion of residents with incomes below the subsistence level. Trend models have been composed for each of the factor variables; these models, with the help of extrapolation method, have been used for calculating forecast values and determining the parameters of the coefficients of sufficiency of consumption and economic affordability of food. The revealed relationships have helped identify key areas of regional policy that contribute to improvement of food security in the Vologda Oblast.

**Key words:** food security in the region, economic-mathematical model, sufficiency of consumption and economic accessibility of food.

The issues concerning identification of threats to economic security and substantiation of mechanisms to neutralize them are becoming very acute in the context of increasing openness of the Russian economy. Food security acquires critical importance. This is caused primarily by the fact that, since food consumption is a vital necessity of population, the creation of conditions to provide food of appropriate quality in the required amount and for affordable prices is one of the priorities for authorities at all levels.

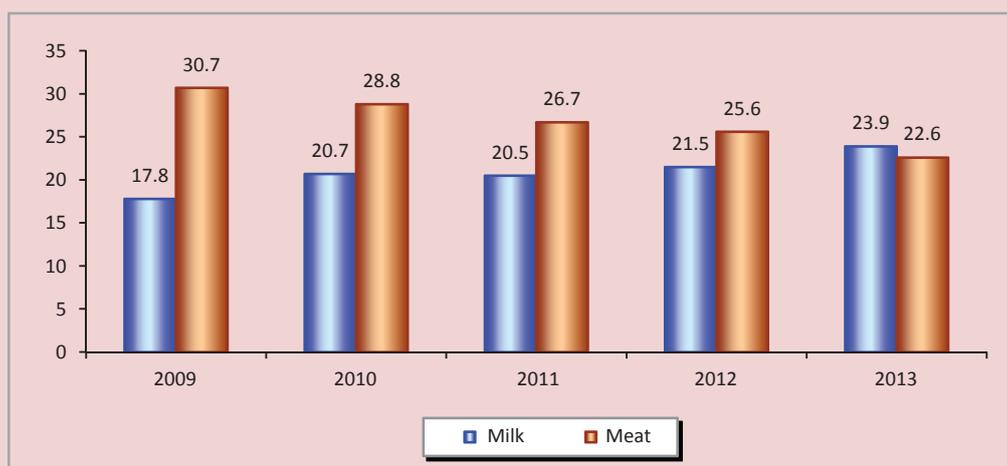
The analysis of statistics data allows us to say that the tools currently used in public and municipal administration do not ensure a fully acceptable level of food security in Russia. For example, although every resident of Russia has the opportunity to purchase food, it is largely supported by import. In 2013 the share of import accounted for nearly 24% in the total amount of consumed milk, as for meat, this figure was 23% (*fig. 1*). The demand for some foodstuffs is covered partly

by supplies from abroad. Therefore, measures to promote competition in the domestic market, the customs-tariff regulation, promotion of agricultural production do not reduce the risk of food shortages as a result of termination (reduction of volume) of import.

The issue of food security in Russia is aggravated by problems in the sectors such as storing, processing and distribution of food to the population. The Strategy for development of food and processing industry in Russia for the period up to 2020 [5] indicates that the production capacities of flour and grain mill, baking, sugar, dairy and meat industries are mostly physically and morally obsolete (depreciation of equipment is 70–80%), and they are used by less than half.

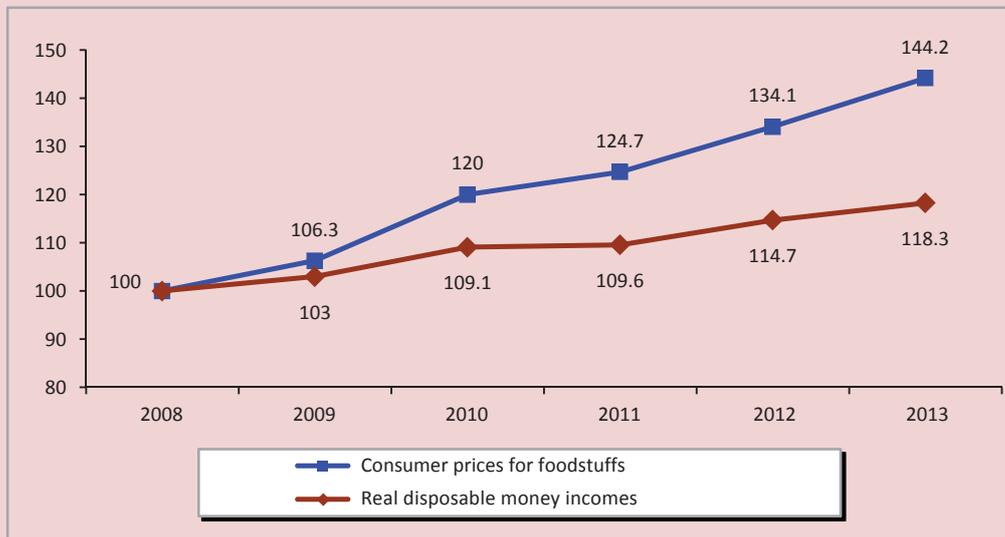
In general, economic affordability of food remains low. This is caused largely by the excess of food prices growth rate compared to the growth rate of real monetary incomes of population, which leads to a decrease in their purchasing power (*fig. 2*).

Figure 1. Share of food import in Russia in total consumption, %



Source: calculated according to the food balance sheets of Rosstat.

Figure 2. Growth rate of consumer food prices and real disposable money incomes of Russia's population, in % to 2008



Source: calculated according to Rosstat.

Therefore, in the near future, state and municipal authorities should solve the problem of expanding citizens' opportunities to purchase high-quality food.

There are other issues of food security in Russia that urge governments at all levels to take appropriate and timely measures. In particular, it is necessary to reduce the degree of monopolization of agricultural market by foreign companies<sup>1</sup>, to deprive them of an opportunity to control agricultural land<sup>2</sup>.

<sup>1</sup> In 2012, according to the Ministry of Agriculture of Russia [8], foreign companies accounted for almost 60% of milk processing market, 70% of juice market, more than 80% of the market of frozen vegetables, fruits and brewing and about 90% of the market of canned fruit and vegetables.

<sup>2</sup> According to the data of the Russian agricultural portal [2], the Swedish investment fund "Black Earth Farming" through its subsidiary Russian company "Agro-invest" controls about 300 thousand hectares in the Central Black Earth region; the Danish company "Trigon Agri" controls 100 thousand hectares in the Penza and Samara oblasts, the Kazakhstan company "Ivolga-holding" controls about 500 thousand hectares.

At the same time, another important issue for the management of food security at the regional level is connected with the absence of a mathematical model to assess and forecast its condition, taking into account the set of factors that influence supply and demand on the regional food market. This article is devoted to the solution of this problem.

The summary of a number of works of Russian scientists [1, 4] provided an opportunity to determine the set of conditions that ensures food security at the regional level. They consist in the ability of the system of production, storage, processing, wholesale and retail trade of food products to satisfy (consistently and evenly throughout a year) the needs of all social groups in the volume of consumption that meets evidence-based medical standards.

At the same time, and it is also important, economic entities involved in the production and sales of food, must function in the mode of extended reproduction.

Therefore, a crucial requirement to ensure food security in the region is the sufficiency of consumption of basic foodstuffs. In our opinion, its level can be estimated by using the coefficient ( $C_{sf}$ ), which represents the ratio of the actual amount of consumption of the  $i$ -th food ( $C_a$ ) to the amount corresponding to rational standards ( $C_s$ )<sup>3</sup>:

$$C_{sf} = \frac{C_a}{C_s}. \quad (1)$$

If the value of the coefficient is one unit, we can talk about the *optimal level* of sufficiency of food consumption. It will become *critical* when the value of the coefficient of sufficiency ( $C_{sf}$ ) will be less than the ratio of the amount of consumption of the  $i$ -th food product according to medical standards to the appropriate volume in the minimum consumer basket.

Our calculations show that the lower threshold of the coefficient of sufficiency in 2012 was as follows: for potato – 0.85, for milk – 0.87, for meat and meat products – 0.74, for vegetables – 0.80, for eggs – 0.79.

Another important requirement for ensuring food security in the region lies in economic affordability of food for the population. Its level can be measured using the index ( $C_{ab}$ ), which represents the ratio

of the value of consumer (food) basket ( $V_{cb}$ ) to average per capita income ( $I$ ):

$$C_{ab} = \frac{V_{cb}}{I} \times 100. \quad (2)$$

We shall consider the lower threshold of the share of expenditures on food in household budgets to be 10% (*optimal level*). This level is typical for the average resident of the United States and developed countries such as the UK, Switzerland [7]. If the cost of the minimum set of food products in the total expenditure ranges from 10 to 20%, the affordability of food can be considered *average*. This level is observed in France, Spain, Italy, Portugal. If the share of food expenditure is more than 20% but less than 30%, this indicates the low standard of living, and, consequently, *low* economic access to food (Latvia, Estonia).

When the ratio exceeds 30%, there are significant difficulties in the purchase of foodstuffs, i.e. we can say that the level of their economic affordability is *critical* (Belarus, Ukraine, Moldova).

Thus, modeling the values of the above coefficients, it is possible to forecast the level of food security in the region, and to identify the reserves for its improvement.

We have determined the degree of influence of various factors on the dynamics of food consumption sufficiency in the course of conducting the correlation-regression analysis of the data from the official statistical reporting on the Vologda Oblast for 2000–2011. The results of the calculations show that the greatest impact on achieving an optimal level of this coefficient is caused by factors such as the size of the cultivated area

<sup>3</sup> Rational norms of food products consumption have been approved by the Order of the Ministry of Health and Social Development of the Russian Federation of August 2, 2010, No. 593n.

(for potatoes), population of cows and birds (for milk and eggs). A general view of economic-mathematical models is presented in *table 1*.

They all describe a significant proportion of the explained variation, and they are significant according to the Fisher's *F*-test.

The obtained equations show that the level of per capita consumption of milk, meat and eggs can be optimized either by increa-

sing their import or enhancing domestic production, or accelerating the intensification of agribusiness in the region.

The economic availability of food, as it is evidenced by the results of the regression analysis, is influenced significantly by factors that characterize the standard of living. Thus, if the proportion of residents with incomes below the subsistence level increases by 1%, the coefficient of affordability will

Table 1. Results of simulation of the ratio of efficiency of consumption of foodstuffs

Equation of the model	Notation conventions	Coefficient of determination
$C_{potato} = -0.512 - 0.039 \times X_1 + 0.002 \times X_2 - 0.003 \times X_3 + 0.007 \times X_4 + 88.105 \times X_5 - 0.002 \times X_6$	$C_{potato}$ – coefficient of satisfaction of per capita demand for potato, % $X_1$ – import of potato, including from abroad, kg/person $X_2$ – production of potato, kg/person $X_3$ – industrial consumption of potato, kg/person $X_4$ – export of potato, including to other countries, kg/person $X_5$ – area for potato cultivation, ha/person $X_6$ – Potato yield, centners/hectare	0.995
$C_{milk} = 0.051 + 0.002 \times X_1 + 0.002 \times X_2 - 0.003 \times X_3 - 0.0014 \times X_4 + 2.320 \times X_5 + 0.00003 \times X_6$	$C_{milk}$ – coefficient of satisfaction of per capita demand for milk, % $X_1$ – import of milk, including from abroad, kg/person $X_2$ – production of milk, kg/person $X_3$ – industrial consumption of milk, kg/person $X_4$ – export of potato, including to other countries, kg/person $X_5$ – number of cows, head/person $X_6$ – yield of milk per cow, kg	0.735
$C_{meat} = -0.070 + 0.012 \times X_1 + 0.014 \times X_2 - 0.487 \times X_3 - 0.012 \times X_4 - 0.173 \times X_5 + 0.0002 \times X_6$	$C_{meat}$ – coefficient of satisfaction of per capita demand for meat, % $X_1$ – import of meat, including from abroad, kg/person $X_2$ – production of meat, kg/person $X_3$ – industrial consumption of meat, kg/person $X_4$ – export of meat, including to other countries, kg/person $X_5$ – cattle population, head/person $X_6$ – average daily gain of cattle, grams	0.994
$C_{eggs} = 0.013 + 0.004 \times X_1 + 0.004 \times X_2 - 0.007 \times X_3 - 0.004 \times X_4 + 0.025 \times X_5 + 0.0002 \times X_6$	$K_{яйц}$ – coefficient of satisfaction of per capita demand for eggs, % $X_1$ – import of eggs, including from abroad, kg/person $X_2$ – production of eggs, kg/person $X_3$ – industrial consumption of eggs, kg/person $X_4$ – export of eggs, including to other countries, kg/person $X_5$ – poultry population, head/person $X_6$ – average egg-laying capacity, units, centners/hectare	0.994

increase by 1.48%, and with the growth of consumer prices by 1% it will grow by 0.01%. The increase in economic activity of the population will have a positive impact on the level of their incomes and wealth; which in general, other conditions equal, will enhance the affordability of food. This, in particular, is shown by the obtained regression equation:

$$C_{ab} = 27.853 + 1.482 \times X_1 + 0.011 \times X_2 - 0.528 \times X_3, \quad (3)$$

where:

$C_{ab}$  – coefficient of economic affordability of food products, %;

$X_1$  – the proportion of the population with incomes below the subsistence level, %;

$X_2$  – consumer price index, %;

$X_3$  – the level of economic activity of population, %.

The factors that are taken into account in the model of calculating the coefficient of affordability cause 98% of the explained variation with 95% probability. The regression equation is significant by all the statistical parameters.

The forecast of the values of the coefficient of sufficiency and coefficient of economic affordability on the basis of obtained economic-mathematical models is possible with extrapolation of the trends of factorial variables within them. Equations of trends are described with linear, polynomial, exponential and logarithmic functions.

The results of forecast calculations indicate that, if we proceed from the current retrospective trends, then the per capita production of potato in the Vologda Oblast in 2014 can be reduced in comparison with 2011 by 28%, meat and meat products –

by 0.7% (*tab. 2*). At the same time it is possible to increase the production of milk and dairy products by 2.1%, eggs – by 2.7%. The level of economic activity of the population and the consumer price index over the forecast period will not change significantly. The share of the population with incomes below the subsistence level in 2014 can increase from 17.1% to 21.7%.

The forecast values of factor variables have been substituted into the obtained regression equations, after that the values of the coefficients of sufficiency of consumption and coefficient of economic affordability of food have been determined. The calculations allow us to conclude that in the future the average per capita consumption of potato will decrease and reach the critical level of 83% from the physiological norm (*tab. 3*). An average resident of Vologda will consume more milk and meat and their derivatives. Consumption of eggs in the forecast period will not change significantly and remain at the same level, which is 24% higher than the physiological norm. Economic affordability of food in the future will decrease due to the significant increase in the share of the population with incomes below the subsistence level.

Summarizing the results of these measurements, we can come to the conclusion that to ensure food security in the Vologda Oblast its government and municipal authorities should pay attention first of all to the enhancement of economic affordability of food. Much is already being done in these areas. For instance, all municipalities since 2012 have been implementing the action “Yellow price tag”, which sets the minimum price markup for socially important food products.

Table 2. Forecast of the values of factor variables used in the models for calculating the coefficient of sufficiency of consumption and the coefficient of economic affordability of food

Indicator (factor variable)	Trend equation	Fact	Forecast			2014 to 2011, %
		2011	2012	2013	2014	
Import of potato, kg/person	$y = -0.314\ln(x) + 1.935$	1.4	1.1	1.1	1.1	78.6
Production of potato, kg/person	$y = 384.5x^{-0.324}$	222.3	167.7	163.7	160.1	72.0
Industrial consumption of potato, kg/person	$y = 222.7x^{-0.476}$	64.4	65.6	63.3	61.3	95.2
Import of potato, kg/person	$y = 0.368x^2 - 6.981x + 40.241$	12.2	11.7	14.7	18.3	150.0
Area for potato cultivation, ha/person	$y = 0.024x^{-0.167}$	0.016	0.016	0.015	0.015	93.8
Potato yield, centners/hectare	$y = 1.103x^2 - 17.92x + 184.47$	140.3	137.8	149.7	163.7	116.7
Import of milk, including from abroad, kg/person	$y = -2.185x^2 + 33.82x - 38.66$	41.4	38.6	36.0	33.6	81.2
Production of milk, kg/person	$y = 0.413x^2 - 8.963x + 421.43$	372.2	374.7	376.9	379.9	102.1
Industrial consumption of milk, kg/person	$y = -1.695x + 62.46$	40.8	40.4	38.7	37.0	90.7
Export of milk, kg/person	$y = -2.638x^2 + 37.99x + 64.09$	133.6	122.3	111.9	102.4	76.6
Number of cows, head/person	$y = -0.0038x + 0.115$	0.072	0.066	0.062	0.058	80.6
Yield of milk per cow, kg	$y = 3005x^{0.209}$	5127.0	5144.3	5224.8	5300.9	103.4
Import of meat, kg/person	$y = 2.0385x + 8.79$	35.8	35.3	37.3	39.4	110.1
Production of meat, kg/person	$y = -0.222x + 43.79$	40.8	40.9	40.7	40.5	99.3
Industrial consumption of meat, kg/person	$y = 0.0005x + 0.078$	0.08	0.08	0.08	0.08	100.0
Export of meat, kg/person	$y = -1.108\ln(x) + 7.131$	5.3	4.3	4.2	4.1	77.4
Cattle population, head/person	$y = -0.0078x + 0.244$	0.154	0.143	0.135	0.127	82.5
Average daily gain of cattle, grams	$y = 13.963x + 415.41$	583.7	596.9	610.9	624.9	107.1
Import of eggs, units/person	$y = 49.98\ln(x) - 8.998$	119.4	119.2	122.9	126.4	105.9
Production of eggs, units/person	$y = 6.648x + 415.25$	501.3	501.7	508.3	515.0	102.7
Industrial consumption of eggs, units/person	$y = -0.117x^2 + 2.137x + 19.37$	25.3	27.3	26.3	25.0	98.8
Export of eggs, units/person	$y = 9.924x + 148.71$	279.3	277.7	287.7	297.6	106.6
Poultry population, head/person	$y = 0.011x + 3.337$	3.6	3.48	3.49	3.50	97.2
Average egg-laying capacity, units	$y = 1.273x + 292.56$	322.0	309.1	310.4	311.7	96.8
Proportion of population with incomes below subsistence level, %	$y = 0.152x^2 - 2.723x + 28.36$	17.1	18.6	20.0	21.7	4.6
Consumer price index, %	$y = 118.8x^{-0.0407}$	106.4	107.0	106.7	106.4	0.0
Level of economic activity, %	$y = 66.30x^{0.017}$	69.5	69.3	69.4	69.5	0.0

Table 3. Forecast values of the coefficient of sufficiency of consumption and economic affordability of foodstuffs

Indicator	2011 (fact)	2012	2013	2014	Optimal level	2014 to 2011, %
Coefficient of sufficiency of potato consumption	1.00	0.86	0.84	0.83	0.85-1	83.0
Coefficient of sufficiency of milk consumption	0.69	0.70	0.71	0.72	0.87-1	104.3
Coefficient of sufficiency of meat consumption	0.95	0.96	0.99	1.02	0.74-1	107.4
Coefficient of sufficiency of eggs consumption	1.23	1.22	1.23	1.24	0.79-1	100.8
Coefficient of economic affordability of foodstuffs	19.2	20.1	22.1	24.5	10	127.6

According to the information provided by the local authorities, 1422 retail trade organizations (the largest number of participants in Vologda is 177, in Cherepovets – 145 and Vytegorsky District – 105) took part in this sales promotion action.

The project “Discount card “Zabota” (“Care”) is also developing; it provides discounts on goods for certain categories of citizens. If at the beginning of 2012 four municipalities participated in the project, at the end of the year their number reached 10 municipal entities, in which such discounts were provided by 1037 trade and services organizations. Major retailers, network companies also offer various loyalty programs.

In order to stimulate consumer demand, to increase the sales of goods of agricultural products and processing enterprises, agricultural fairs are organized regularly, where residents can purchase the products they need at lower prices than in shops and retail chains. In 2011 approximately 326 thousand people visited these events in Vologda alone. At that the prices for dairy products were 5–15% lower than the average in the city, the prices for vegetables and fruits – by 30–50% lower.

At the same time, it is advisable to intensify efforts to increase economic activity of the population. According to some scholars [6], in this connection it is necessary to expand the scope of activities in such areas as:

- creation of new jobs and the promotion of self-employment;
- formation of conditions for attracting foreign labor force with regard to future demand of the economy for human resources;
- enhancement of territorial mobility of labor;
- implementation of programs to promote social adaptation and competitiveness of young people.

Along with the above, it is important to implement a complex of measures to reduce the share of the population with incomes below the subsistence level. According to L.V. Kostyleva [3] this problem can be handled if the authorities implement the following activities:

- introduction of the progressive scale of taxation;
- introduction of a system of inter-industry wage regulation.

Of course, a necessary condition for ensuring food security in the region consists

in promoting the development of agricultural production and its transfer to an intensive path of development (these issues are discussed in separate publications of the authors<sup>4</sup>).

Thus, it is possible to achieve an optimal level of sufficiency of consumption and affordability of foodstuffs only if all the authorities and business implement the set of activities.

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## Estimation of elaboration of strategic and program policy documents stipulating tourism development in the northern regions of Russia\*



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**Abstract.** The authors performed critical analysis of 26 strategic and program documents of federal and regional significance, governing the development of tourism, to allocate problems and targets of the development of tourism and risks of realization of the tourism development programs. The authors used scoring and expert evaluation methods to develop the technique, which estimates the elaboration of strategic and policy documents governing the development of tourism. The developed technique is used for evaluation of strategic and program documents of the northern regions of Russia. The guidelines for the establishment of regional tourism development programs are given.

**Key words:** strategic and program management, tourism, socio-economic development, the northern regions of Russia.

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Due to the country's transition to the innovation type of economy, the resource-oriented northern regions of Russia<sup>1</sup> have been challenged to abandon the raw-material economy model. One of the main and most promising directions of diversification is the creation and development of a competitive tourist complex.

Russia's northern regions have significant tourist potential. Their territories concentrate unique natural and recreational resources, objects of national and world cultural and historical heritage. People celebrate important economic, cultural and social events. All this, together with the factor of unexplored areas, promotes creation of new tourist products, satisfying the need to travel to more distant, less known and inaccessible places.

Tourism development in the regions under consideration can have a positive impact on the preservation and support of Indigenous Minorities of the North (IMN). The shutdown of many collective farms in the period of reforms, where Indigenous Peoples had worked, resulted in impossibility for many of them to meet the challenge and find job places, joining the ranks of the unemployed. Tourism provides abundant opportunities for their employment, while helping to preserve their original culture (organizing ethnic tours, producing souvenirs, etc.).

<sup>1</sup> The RF Northern regions comprise territories located in the Extreme North and areas equated to them: Arkhangelsk, Murmansk, Magadan and Sakhalin oblasts, republics of Karelia, Komi, Sakha (Yakutia) and Tyva, Nenets, Yamalo-Nenets, Khanty-Mansi, Chukotka Autonomous okrugs and Kamchatka Krai.

However, the significant contribution to entrepreneurship development, different types of self-employment and job creation can be recognized as a key social outcome from forming a competitive tourist complex in the Northern regions. This is especially relevant due to a difficult demographic situation in these regions: negative natural increase and significant out-migration.

Today strategic and program documents are one of the main mechanisms to control tourism development both in regions and in the country. However, in most regions of the North, the process of program-strategic management is of a formal character. Strategies and programs are not elaborated in detail; they often have unclear, vague objectives, not relevant to proposed actions.

There are certain problems.

The strategic plans and programs approved by the regional authorities are often just declarative [35]. When working on strategies and programs, Executive bodies of RF subjects have to rely on their neighbors' experience.

However, without detailed study and assessment of many options, it is difficult to determine what document is a good pattern and what needs serious improvements.

According to various estimates, although tourism is recognized as one of priority economy sectors and important tool to improve the level and quality of life, only 15–17% of rich tourism potential is used in Russia [1].

Low efficiency of used unique natural and cultural-historical resources, weak

development of tourist infrastructure and lack of competitive tourist products reveal insufficient management of tourism development on the federal and especially regional levels.

What is more, due to significant differentiation of socio-economic development and regions' tourist potential, the role of regional authorities in management of tourism development increases considerably.

All this has predetermined the need for critical analysis and elaboration of methods to assess strategic and program documents of the regional level, regulating the issues of tourism development.

The government has currently developed a number of recommendations to assess strategic and program documents. So, according to the Order of the Ministry of Regional Development of the Russian Federation [26], the evaluation criteria of the Strategy are:

- quality of elaboration of the main problems of Russia's socio-economic development, assessment of external and internal factors and scenario analysis;

- compliance of the priorities, objectives and tasks of RF subject's activity to implement the Strategy with the identified priority areas of development in general;

- quality of the assessment of main obstacles and relevancy of the resources, available to a RF subject, to the goals and objectives stated in the Strategy;

- degree of coordination of the Strategy with development strategies of the RF branches and strategic documents of the neighboring regions of Russia.

The main drawback of this approach is that it lacks measurable results of the assessment and thus the possibility of making comparisons.

The Order of Development and Implementation of Federal Target Programs stipulated by the Russian Government Decree (June 26, 1995, no. 594) [25], the projects of federal target programs are to be submitted for evaluation to the Ministry of Economic Development of the Russian Federation. Special attention is paid to:

- priority of the task proposed for program solution;

- validity, completeness and environmental safety of program activities, terms of their implementation;

- attraction of extra-budgetary funds, funds of RF subjects' budgets to realize a target program in conjunction with the possibilities of its state support at the expense of the federal budget;

- efficiency of the mechanism to implement a target program;

- socio-economic efficiency of a target program in general, expected outcomes of the program and its impact on structural reorganization of Russian economy.

The given criteria reveal that even less attention is paid to the issues of problems elaboration and targets justification when evaluating federal target programs than when assessing strategies. The criteria do not have quantification, like in the previous document, with it being a serious drawback.

The interests of the scientific community are focused mostly on solving the problems of assessing results of the implementation of strategic and program documents [2, 3], and

the contribution of these documents to the development of a socio-economic process or phenomenon [27]. Thus, today there are no methodological tools to quantify the drafting of strategic and program documents in the part of complexity of problems elaboration and targets justification.

In our opinion, the assessment of regional strategic and program documents is a key to their successful implementation. Ten basic criteria are selected for it. Points are used for their numerical estimate. These methods compare various indicators, disclosing elaboration of documents, and apply an integrated value, reducing all variety of studied criteria to a single value – points [4]. The advantage of the point evaluation method over others is explicitness of its results: in most cases, the better-written document has higher points.

The indicators that reveal the elaboration of strategic and program documents, regulating the issues of tourism development in the region, are the following:

1. Selection of tourism as a priority for socio-economic development in the strategy for socio-economic development of the region.

The strategy for socio-economic development of the region plays a key role while making strategic decisions, aimed at its development in the long term and achievement of competitive advantages with regard to possible changes in the external environment. With tourism being a priority, the region develops appropriate programs and coordinates the efforts of all executive bodies, responsible for the implementation of this direction.

The region that focuses on tourism gets 1 point, otherwise – 0 points (*tab. 1*).

2. Elaboration of the tourism development issues in the strategy for socio-economic development in the region.

3. Elaboration of the tourism development issues in the program for tourism development in the region.

The tourism development problems, outlined in strategic and program documents, should be identified on the basis of the complex analysis of tourism potential of the region and linked to the issues, highlighted in strategic and program documents of the federal level. It helps to set targets for tourism development properly, as well as to coordinate the actions of federal and regional authorities, facing the problems.

In the strategic and program documents of the federal level (the State program of the Russian Federation “Development of culture and tourism for 2013–2020” [18], the federal target program “Development of internal and inbound tourism in the Russian Federation (2011–2018)” [13], the Strategy of tourism development in the Russian Federation for the period up to 2015 [23]), we select the top five most acute problems that require urgent solutions.

They are characteristic for all RF subjects:

- insufficient development of tourism infrastructure;
- unprofitable economic conditions to attract investment in tourism infrastructure, lack of investment sites, presence of administrative barriers;
- lack of qualified personnel;

Table 1. Estimate of elaboration of strategic and program documents regulating the issues of tourism development in the Northern regions of Russia

Region	Selection of tourism as a priority for socio-economic development in the Strategy		Elaboration of the tourism development issues in the Strategy		Elaboration of the tourism development issues in the Program		Complexity when setting targets for tourism development in the Strategy		Complexity when setting targets for tourism development in the Program		Consistency of the tourism development problems, stated in the Program and Strategy		Consistency of the tourism development targets, disclosed in the Program and Strategy		Consistency of the tourism development targets, disclosed in the Program		Risk management in the program for tourism development	
	Without weighting coefficient	With weighting coefficient	Without weighting coefficient	With weighting coefficient	Without weighting coefficient	With weighting coefficient	Without weighting coefficient	With weighting coefficient	Without weighting coefficient	With weighting coefficient	Without weighting coefficient	With weighting coefficient	Without weighting coefficient	With weighting coefficient	Without weighting coefficient	With weighting coefficient	Without weighting coefficient	With weighting coefficient
Arkhangelsk Oblast	1	0.18	0.5	0.015	1	0.06	0	0	0.23	0.02	0	0	0	0	0	0.19	0	0
NAO	0	0	0.5	0.015	0	0	1	0	0	0	0	0	0	0.025	0	0	0	0
Republic of Karelia	1	0.18	1	0.03	0	0	1	0.05	0.23	0.04	1	0.09	0.5	0.025	0.5	0.095	1	0.08
Republic of Komi	1	0.18	0.5	0.015	1	0.06	1	0.05	0.23	0	0	0.09	0	0	1	0.19	0	0
Murmansk Oblast	1	0.18	0	0	0.5	0.03	0	0	0.23	0	0	0.045	0	0	1	0.19	1	0.08
KhMAO	0	0	0.5	0.015	0	0	1	0.05	0.23	0	0	0.045	0.5	0.025	0	0	0	0
YNAO	0	0	0	0	1	0.06	0	0	0	0	0	0	0	0	0.5	0.095	0	0
Tyva Republic	1	0.18	0.5	0.015	1	0.06	1	0.05	0.115	0.02	0.5	0.045	0.5	0.025	1	0.19	0	0
Yakutia Republic	1	0.18	1	0.03	1	0.06	1	0.05	0.23	0.04	1	0.09	1	0.05	1	0.19	1	0.08
Kamchatka Krai	1	0.18	1	0.03	1	0.06	0.5	0.025	0.115	0.02	1	0.09	0.5	0.025	1	0.19	0	0
Magadan Oblast	0	0	0	0	0	0	0	0	0	0	0	0.045	0	0	0	0	1	0.08
Sakhalin Oblast	1	0.18	0	0	1	0.06	0.5	0.025	0.115	0	1	0.09	0	0	1	0.19	0	0

- insufficient advertising of tourist possibilities both on foreign and domestic markets;

- imperfection of legislation in the sphere of tourism.

The assessment of strategic and program documents, regulating the issues of tourism development in the region, shows that if the strategy or program has one of the five issues selected at the federal level, the document gets the value of 0.2 (1/5); if – two of the five selected problems – 0.4 (2/5) and so on. Then all the obtained values are ranked into three groups by the method of equal intervals. As a result, the strategic documents that have a value from 0 to 0.13 receive 0 points; from 0.14 to 0.27 – 0.5 points; 0.28 to 0.4 – 1 point. The program documents that have a value in the range from 0 to 0.26 received 0 points; from 0.27 to 0.53 – 0.5 points; from 0.54 to 0.8 – 1 point (see table 1).

4. Complexity when setting targets for tourism development in the strategy for socio-economic development of the region.

5. Complexity when setting targets for tourism development in the program for tourism development of the region.

Target setting is a primary phase of the management process. Correct goal setting depends largely on the possibility of achieving the desired result. In the federal strategic and program documents, we select six of the most common targets of tourism development that are relevant and meaningful to all RF subjects:

- development and improvement of tourism infrastructure, including associated spheres (transport, public catering, entertainment and others);

- increase in investment attractiveness of the territory;

- development of the system to train personnel in the sphere of tourism (including higher and secondary professional education, professional development and staff training);

- information and image promotion of Russia as a country, favorable for tourism on world and internal tourist markets;

- enhancement of normative legal regulation in the sphere of tourism;

- creation of tourist-recreational and autotourists clusters.

The research in the elaboration of strategic and program documents, regulating the issues of tourism development in the region, discloses that if the strategy or program has one of the six selected targets, the document gets the value of 0.16 (1/6); if two of the six selected targets, then – 0.33 (2/6), etc. Then all the obtained values are ranked into three groups by the method of equal intervals. As a result, the strategic documents that have the value from 0.17 to 0.39 receive 0 points; from 0.4 to 0.61 – 0.5 points; from 0.62 to 0.83 – 1 point. The program documents that have a value in the range from 0 to 0.22 receive 0 points; from 0.23 to 0.44 – 0.5 points; from 0.45 up to 0.66 – 1 point (see table 1).

6. Consistency of the tourism development problems, stated in the strategy for socio-economic development and the program for tourism development in the region.

7. Consistency of the tourism development targets, disclosed in the strategy for socio-economic development and the program for tourism development in the region.

The strategy for socio-economic development of the region is a base document for the programs regulating development of one or another sphere of life in the region. It is presupposed by the fact that the highlighted problems and goals of tourism development in the strategy and the program should be consistent with each other for the effective and coordinated work of the executive authorities.

To assess the consistency of problems/targets for each legal instrument we calculate the ratio where the numerator is problems/targets in the strategy and program, and the denominator is a total number of problems/targets, singled out in the regional documents. Then all the obtained values are ranked into three groups by the method of equal intervals. As a result, the strategic documents that have a value from 0 to 0.17 receive 0 points; from 0.18 to 0.33 – 0.5 points; from 0.34 to 0.5 – 1 point. The program documents that have a value in the range from 0 to 0.26 receive 0 points; from 0.27 to 0.53 – 0.5 points; from 0.54 to 0.8 – 1 point.

8. Compliance of the targets with the tourism development problems, stated in the strategy for socio-economic development of the region (*tab. 2*).

9. Compliance of the targets with the tourism development problems, stated in the program for socio-economic development of the region.

The elaboration of tourism development targets should be based on a thorough and comprehensive analysis of the state of the regional tourist-recreation complex. The problem, singled out in the analysis, should be taken into account when setting goals

and objectives for tourism development in the region. When assessing the consistency of problems and targets for each normative document we calculate the ratio where the numerator is problems and targets, agreed in the strategy or program, and the denominator is a total number of problems/targets, singled out in the regional documents. Then all the obtained values are ranked into three groups by the method of equal intervals. As a result, the strategic and program documents that have a value from 0 to 0.266 receive 0 points; from 0.267 up of 0.533 – 0.5 points; from 0.534 to 0.8 – 1 point (see table 1).

10. Risk management in the program for tourism development in the region.

Risk management of program document implementation is one of mandatory sections while preparing it. Competent risk management enables you to develop the strategy to minimize risks and to allocate additional funds for its implementation. Since some risks jeopardize successful implementation of the program, risk management is fundamental to the entire program management. If the tourism development program takes into account risks of its implementation, this region receives 1 point. If risks are not taken into account, then – 0 points (see table 1).

The next stage to assess strategic and program documents, regulating the issues of tourism development in the Northern regions, after the selection of indicators is to identify their contribution to elaboration of the given documents by calculating weighting coefficients. Weighting coefficients show the contribution of the indicator to the final result and indicate the percentage of

Table 2. Compliance of the problems with the tourism development targets in strategy and program documents regulating the issues of tourism development in the Northern regions of Russia

Region	Document	Underdeveloped tourism infrastructure	Development and improvement of tourism infrastructure	Challenging economic conditions to attract investment in tourism infrastructure	Increase in investment attractiveness of the territory	Shortage of qualified personnel in the tourism sphere	Development of the system to train personnel in the tourism sphere	Insufficient advertising of tourist possibilities	Informational, image promotion of the territory	Improvement in the legislation in the sphere of tourism	Enhancement of normative legal regulation in the sphere of tourism	Creation of tourist-recreational and autotourists clusters
Arkhangelsk Oblast	Strategy [29]	•			•							
	Program [21]	•	•		•	•	•	•				•
MAO	Strategy [24]	•	•		•							
	Strategy [10]	•	•		•				•			•
Republic of Karelia	The program [7]	•	•		•				•			
	Strategy [34]	•	•		•				•			•
Komi Republic	Program [6]	•	•		•				•			•
	Strategy [31]		•		•				•			
Murmansk Oblast	Program [17]		•		•				•			
	Strategy [12]		•		•				•			•
KhMAO	Program [15]		•		•				•			•
	Strategy [33]		•		•				•		•	
YNAO	Program [16]		•		•				•			
	Strategy [32]		•		•				•			•
Tyva Republic	Program [22]		•		•				•			
	Prog. For socio-econ. development [8]		•		•				•			•
Yakutia Republic	Program [5]		•		•				•			•
	Strategy [30]		•		•				•			•
Kamchatka Krai	Program [19]		•		•				•			•
	Strategy [9]		•		•				•			•
Magadan Oblast	Program [14]		•		•				•			•
	Strategy [11]		•		•				•			•
Sakhalin Oblast	Program [20]		•		•				•			•

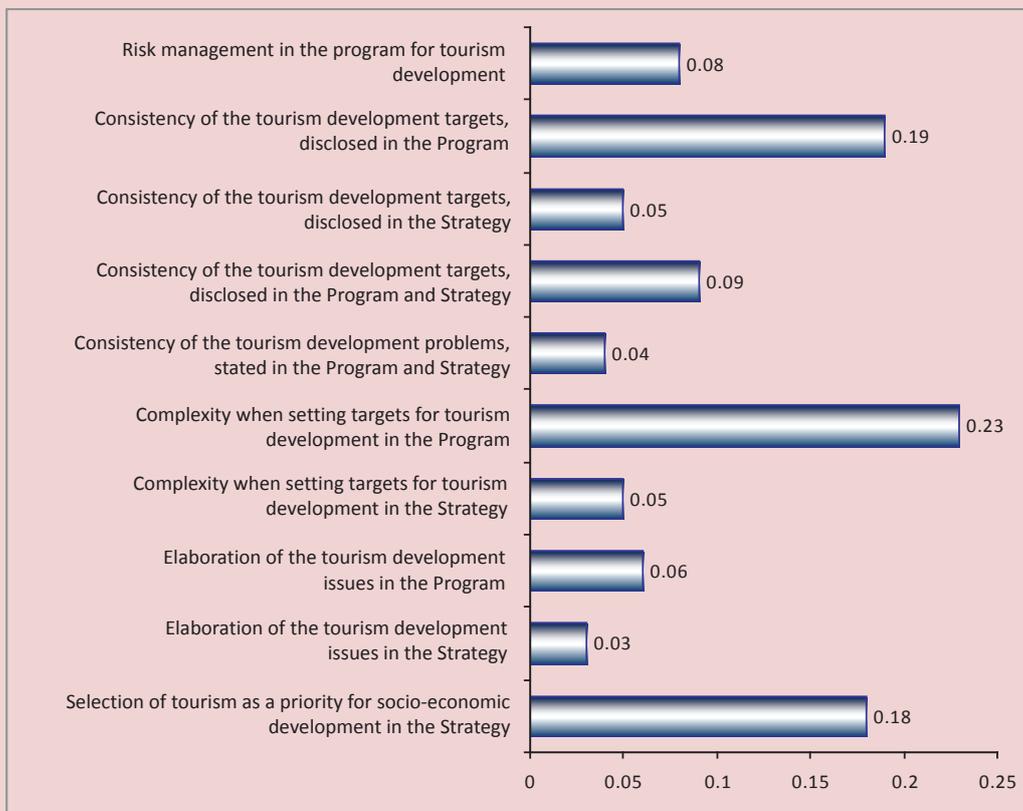
Legend: "•" – selection of problems and targets for tourism development in strategic and policy documents, regulating the issues of tourism development in the Northern regions of Russia.

its contribution in comparison with other indicators. They are calculated on the basis of expert opinions, which are defined as motivated expert judgments.

To conduct the expert evaluation 20 experts from the ministries and departments of the Arkhangelsk Oblast Government are selected. By means of the experts method of direct estimation the weighting coefficients are assigned in unit fractions for each indicator: the greater the contribution of indicator, the higher a weighting coefficient. Then the coefficients are averaged by finding the average.

The calculation results disclose that the greatest contribution to the elaboration of strategic and program documents, regulating the issues of tourism development in the region, is characteristic for the indicators “Complexity in setting targets for tourism development in the Program”, “Compliance of the targets with the tourism development problems, stated in the program” and “Selection of tourism as a priority for socio-economic development in the Strategy”, and the lowest contribution – for the indicator “Elaboration of the problems of tourism development in the Strategy” (fig. 1).

Figure 1. Weighting coefficients of indicators of the estimate revealing the elaboration of strategic and program documents that regulate the issues of tourism development in the region



As the result of the estimate, the Northern regions get points for each of 10 indicators. Then, to adjust their values in accordance with the indicator significance, the points of each region are multiplied by the revealed weighting coefficient of the corresponding indicator (see table 1).

Thus, the estimate ranks Northern regions according to the elaboration of the considered strategic and program documents (fig. 2).

The study indicates that the documents are better elaborated in the republics of Sakha (Yakutia), Karelia and Komi and the least – in Nenets, Yamalo-Nenets Autonomous okrugs and in the Magadan Oblast.

The analysis and assessment help to develop methodological recommendations to produce regional programs for tourism development in the Northern regions of the Russian Federation:

1. Due to the administrative reform and the introduction of management procedures in compliance with the results it is required to produce *state* programs for tourism development at the regional level. Today it is state programs that become the key mechanism of policy implementation in a particular area, gradually putting aside other types of programs (regional, federal, etc.).

Figure 2. Rating of the Northern regions of Russia according to the elaboration of the strategic and program documents, regulating the issues of tourism development in the region



2. It is necessary to ensure the continuity of strategic and program documents concerning tourism development in terms of adjustment of priority directions and targets of the federal and regional level. It will form common tourist space on the RF territory, involving all management levels in the tourism promotion process.

3. It is necessary to consider program documents of tourism development separately from other spheres, such as culture and sport.

4. It is necessary to provide a comprehensive analysis of tourism development problems at the regional level, taking into account the issues highlighted in federal strategic and program documents in the tourism sphere. This will contribute to form the system of goals and objectives relevant to the principle of uniformity. At the same time, the compliance of the set targets with the selected problems will be achieved.

5. It is necessary to identify, assess and manage the risks of program documents implementation at the regional level in the tourism sphere. For this purpose it is possible to use the list of risks identified in the State program of the Russian Federation “Development of culture and tourism for 2013–2020”.

6. When adopting strategic or policy documents at the federal level it is necessary to ensure the timely development of regional

strategies and programs with the validity period equal to the one stated in federal documents. This will ensure the continuity of the legal base and increase the financial capacity to implement program activities at the regional level.

7. To increase the efficiency of program management of tourism development it is necessary to scrutinize the following structural units of the program: competitive advantages, problems and targets of tourism development in the region, risks of program activities implementation.

The recommendations, based on the scientific analysis and assessment, help to boost the efficiency of tourism development in the Northern regions of Russia by improving the procedures for planning and management of development processes. The robust evaluation system promotes continuity of the policy in the tourism development sphere, makes the assessment an integral procedure of regional management. What is more, this assessment concludes whether the document can be used as a pattern and a target while considering the programs of tourism development in the neighboring regions. This, in turn, can stabilize the economic situation, mitigate social problems and act as a real factor in preservation and reproduction of natural and cultural-historical potential of the territories [28].

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## Modelling of economic systems with Petri nets



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**Abstract.** Modelling is one of the most important tools to study complex systems. Components of both continuous and discrete nature are present in the behavior of contemporary economic systems. The article uses formalism of nested hybrid Petri nets as a tool to study complex economic systems.

The author describes basic approaches of simulation modelling, concepts of classical Petri nets, modified means of nested hybrid Petri nets, benefits of their use for systems modelling. The article presents the concept of a universal system of simulation modelling.

On the basis of considered approaches the article proposes to develop a universal system of simulation modelling on the basis of the modified machine Petri nets.

**Key words:** Complex system, model, simulation modelling, Petri nets, universal system of simulation modelling.

Modern economic systems have both structural and behavioral complexity. The existing concept of a complexity level is determined by the number of points of a particular type, their relationships and interactions, and “relations order” between them [2]. Behavioral complexity can be associated with the system behavior in time and the existence of management

processes in economic systems. The system management is considered to be a process stimulating some system to achieve a certain goal [2]. In general, the system behavior is continuous in time, while the control processes are of a discrete nature. The complex system that combines components of continuous and discrete natures is referred to as hybrid.

One way to study the surrounding systems is modelling. Modelling is the process that reflects real (or planned) activities of the enterprise by means of a special methodology [8]. The model represents a real or abstract object, which replaces a research object in the study due to the existing analogy. The most natural and important field to use modelling is the analysis of complex systems, including social engineering (production, financing, etc.) [11].

Nowadays, the most effective method to study economic systems is simulation modelling [4].

There are three main approaches: discrete event simulation, system dynamics and agent based modelling [11].

System dynamics usually operates with continuous-time processes, discrete-event and agent based models are used for discrete-time processes.

System dynamics implies a maximum level of model abstraction; discrete-event simulation reflects abstraction of low and intermediate levels. Agent-based modelling can be applied at any level with a model of any size [11].

J. Gordon was the first to study discrete event simulation. In the early 1960's he designed the GPSS system and implemented it on the IBM mainframe. The main object in this system is a passive transact (service request), which can specifically represent workers, parts, raw materials, documents, signals, etc. Shifting down the model, transacts stand in line for single-channel and multi-channel devices, capture and release them, split and become destroyed, etc. [11].

In 1961 J. Forrester proposed a system dynamics methodology as a research tool to study information feedback loops in production and economic activity. The processes, taking place in the real world, are represented in terms of stocks and flows between them in system dynamics. The system-dynamic model describes system behavior and its structure as a set of positive and negative feedbacks and time delays. Mathematically, this model looks like a system of differential equations [11].

Agent-based simulation involves a decentralized model. In this model, there is no single point, which determines system behavior as a whole. The agent model consists of many individual objects (agents) and their environment. System behavior is described at the individual level; global behavior is seen as the result of the agents' total activity, each of them exists in a shared environment, interacts with it and other agents due to their own "charter" [11].

If you match an abstract submission system with certain graphics primitives and link them with lines that have certain logic, you get a net, a graphics image of the process. The net methods to describe and analyze the processes are preferential as their abstraction is close to the intuitive idea of the processes [5].

One of the popular graphical tools to study systems is Petri nets (P/T net). They help to describe and analyze the length of performance and interaction of the operations in the processes of various levels in order to identify the bottlenecks of production and economic systems, and to determine the magnitude and potential for cost reduction of human,

financial and other resources to perform these processes. The main advantages of using a P/T net in simulation are the following: 1) the process, defined in P/T net terms, has a clear and precise representation; 2) the visible graphics of net construction simplifies perception of its definitions and algorithms; 3) the possibility to use different methods of analysis [7].

At the same time, the P/T net popularity is caused by a good representation of different types of objects, present in many of the simulated systems, and by an “event-driven” approach to modelling. Petri nets describe linkages and interactions of parallel processes [5].

The P/T net is a powerful tool to study systems due to the possibility to describe many classes of discrete asynchronous, parallel, distributed, non-deterministic systems, visualized presentation of its work, developed mathematical and software tools of analysis. It was specifically designed to simulate the systems that contain parallel interacting components, such as hardware and software, flexible production systems, social and biological systems [5].

In general, the Petri net [3] is a directed bipartite graph:

$$N = (P_N, T_N, F_N), \tag{1}$$

where  $P_N$  is a final set of places,

$T_N$  is a final set of transitions, such as that  $P_N \cap T_N = \emptyset$ ,

$F_N$  is a function of incidence, specifying the multiplicity of arcs,

$$F_N : (P_N \times T_N) \cup (T_N \times P_N) \rightarrow \text{Nat}$$

(Nat is a set of natural numbers, supplemented by zero).

In Petri nets places comply with conditions and transitions – with events. The dynamics of simulated system behavior is reflected in the net functioning as a set of actions, called as transition firings. The transition rules reveal logical relationship between conditions and events in the system being simulated.

The change of the net status is associated with the mechanism of the change of a marking. The initial state of a P/T net is set by the initial marking of its place. The net marking is to assign places to numeric values (tokens). Tokens are a set of attributes (numbers, variables). The condition is represented by marking of the relevant place, namely transition of a number of n-tokens (markers) in this place. The transition can only actuate if all conditions to realize the given event are satisfied. There are special rules or transition procedures for it [3, 6].

The ordinary Petri net, despite the breadth of its use, does not help to study complex systems including both discrete and continuous components. The work [9] offers a tool of nested hybrid Petri nets (NHPN), uniting formalisms of hybrid and nested Petri nets.

The hybrid nested Petri net is defined by means of the following set [10]:

$$\text{NHPN} = \{\text{Atom}, \text{Lab}, \text{SN}(\text{HPN}), (EN_1, \dots, EN_k), \Lambda\}. \tag{2}$$

Atom = Var  $\cup$  Con is a multiset of atoms, consisting of variables names and constants names;

Lab = Lab<sub>v</sub>  $\cup$  Lab<sub>h</sub> is a variety of tokens for both vertical and horizontal transition synchronization;

$(EN_1, \dots, EN_k)$  ( $k \geq 1$ ) is a final set of ordinary P/T nets;

$\Lambda$  is a function of marketing transitions by means of elements from the set Lab.

SN(HPN) is a system net in the structure of the NHPN representing a hybrid Petri net (HPN):

$$\text{HPN} = (P, T, \text{Pre}, \text{Post}, D, C,). \quad (3)$$

$P = P_d \cup P_c$  is a multiset of discrete and continuous places;

$T = T_d \cup T_c \cup T_k \cup T_e$  is a multiset of discrete, continuous, transitions of quantization and extrapolation;

Pre, Post are incidence matrices describing the set of arcs;

$D: T_d \rightarrow \mathbb{R}^+$  is a function determining the delay period for the discrete time transitions;

$C: T_c \rightarrow \mathbb{R}_0^+ \times \mathbb{R}_\infty^+$  is a function revealing the bandwidth of continuous transitions.

The interesting question that arises when studying systems using P/T nets is to introduce the concept of time in the system. The concepts of global and local times can be used.

The first one is external time for the system, with which the latter is connected by means of the simulation step concept, thus estimating the temporary status of the system, relative to external systems.

The second one is used to identify the delay of discrete transitions and the bandwidth of continuous transitions of the NHPN. All discrete transitions are divided into instant capture, deterministic time and exponential deterministic. The division is connected with the identification of the delay interval for transition. Continuous transitions are defined

by the concept of bandwidth that reflects the speed of the token running through the transition.

Marking assigns the whole number of tokens, consistent with their potential, for each discrete place. For each continuous place it shows where it has a signal or not.

Nested hybrid Petri nets include the concepts of the arc weight and inhibitor arc, characteristic for high-level Petri nets.

The significant addition to the device is the possibility of using fractional and negative values for the weight of the arc running from the transition. When using the negative weight of the arc, we should take into account the potential of the tokens that are in this position. Regardless of the interpretation of marking, the equation for the net dynamics does not change.

The dynamics of the NHPN conduct describes the following types of steps:

1. The system-autonomous step is activation of the transition of the net system in accordance with the rules for hybrid Petri nets, with the elementary nets being considered as tokens that do not have their own structure.

2. The elementary-autonomous step only changes the internal state (marking) of the elementary net without changing its location in the system net.

3. The step of horizontal synchronization is used to synchronize transitions in two elementary nets that are in the same place of the system net.

4. The step of vertical synchronization is used to synchronize the transition in the system network with some transitions of elementary nets.

To describe the dynamics of the NHPN conduct we use the following equation:

$$M_k = M_{k-1} + C(p,t)U_k. \quad (4)$$

$M$  is a matrix of the net;

$U_k$  – the control vector determines the set of transitions, ready for operation at the moment;

$C(p,t)$  is a NHPN incidence matrix. The incidence matrix element, located at the intersection of the series indicated by the place  $p_i$  and the column indicated by the transition  $t_j$ , assigns the value NumM, NumM or 0 when the transition  $t_j$  has an incoming arc from the place  $p_i$ , an outgoing arc to the place  $p_i$  or has no connection with the place  $p_i$  (where the value NumM is a number of deleted/added tokens). The value NumM is determined on the basis of types of the place and transition, as well as the weight of the arc connecting them.

The modified tool of nested hybrid Petri nets extends the application of classical Petri nets and existing extensions and helps to explore hybrid systems with a complex structure as a whole.

The representation of individual parts of the system in the form of nested Petri nets helps to simplify the perception of the huge and lengthy P/T net, to make the model of the system more transparent and understandable and simulate multicomponent structures of varying complexity, including systems with the elements of service.

The introduction of new transitions of quantization and extrapolation, the concepts of arc weight, permitting and prohibiting arcs, modified rules of working with them makes the proposed formalism more powerful and expressive means of describing not only hybrid systems, but various mathematical functions and algorithms.

Economic-mathematical models have physical, financial and social factors requiring the use of various tools at the corresponding model level. So, the production-technological model (traditionally viewed as a system of mass service) is well simulated with discrete event tools like GPSS; the financial model fits well into the framework of system dynamics; the agent-based approach can be useful for simulation of labor resources [11].

Today simulation of systems that integrate all notes and high computer technologies is the most promising and rapidly developing sphere where business and corporations can apply simulation modelling [4].

The concept of a universal modelling system gives an opportunity to save time necessary for design and implementation of a simulation model, to make the model more simple and accessible. This reduces the probability of errors in the course of models development due to insufficient knowledge of the language means, negligence in the work with large volumes of information, etc. [1].

The concept of the universal system of simulation modelling is based on the principles of simplicity, modularity and adaptability [1].

The first principle involves the user's minimum knowledge of the modelling system and, as a result, low labor costs.

The second one involves the existence of model systems that are common for different classes – developed modules.

The third reflects the ability to cover complex unstructured multi-level objects, the elements of which are dynamic systems in a broad sense.

Existing simulation systems can be divided into two groups: systems using classical modelling languages (GPSS, iThink Analyst, Arena) and specialized systems, oriented to solve the tasks of simulation modelling of a particular narrow subject area. The advantages of one group of modelling systems are disadvantages of the other. Creation of the system covering the largest range of real objects, and, first of all, the systems, the product of which is management, is of considerable interest [1].

All the stated above shows that it is worthwhile constructing universal simulation systems on the basis of the modified tool of

nested hybrid Petri nets. There are certain advantages of the new system:

1. Its implementation on the basis of simulation modelling.
2. Integration of all positive features of Petri nets.
3. Possibility to develop models on the basis of various extensions of Petri nets.
4. Integration of all notes of simulation modelling.
5. Its implementation on the basis of the concept of the universal system of simulation modelling.
6. Possibility of application in various researches.

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*July 22, 2014*

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