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FACTS, TRENDS, FORECAST

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ECONOMIC AND SOCIAL CHANGES: FACTS, TRENDS, FORECAST

A peer-reviewed scientific journal that covers issues of analysis and forecast of changes in the economy and social spheres in various countries, regions, and local territories.

The main purpose of the journal is to provide the scientific community and practitioners with an opportunity to publish socio-economic research findings, review different viewpoints on the topical issues of economic and social development, and participate in the discussion of these issues. The remit of the journal comprises development strategies of the territories, regional and sectoral economy, social development, budget revenues, streamlining expenditures, innovative economy, and economic theory.

Founder: Vologda Research Center of the Russian Academy of Sciences

Federal State Budgetary Institution of Science Vologda Research Center of the Russian Academy of Sciences (VolRC RAS), which existed as Vologda Scientific Coordinating Center of Central Economic and Mathematical Institute of RAS until March 2009, is situated on the territory of the Vologda Oblast. V.A. Ilyin, Doctor of Economics, Professor, Honored Scientist of Russia, is the permanent director of the Institute. A lot of great scientists have played an important role in the formation and the development of ISEDT RAS as a scientific institution such as: academicians D.S. Lvov, V.L. Makarov, V.I. Mayevsky, A.D. Nekipelov, Y.S. Osipov. Everything that has been done before and is being done nowadays by the personnel of the Institute, it would be impossible without the constant support of the Vologda Oblast's Government and city leaders.

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 ISEDT 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.

MAIN RESEARCH DIRECTIONS

Due to the Resolution № 96 by the Presidium of Russian Academy of Sciences dated from March 31, 2009 VolRC RAS carries out investigations in the following fields:

- problems of economic growth, scientific basis of regional policy, sustainable development of territories and municipalities, and transformations of socio-economic space;
- regional integration into global economic and political processes, problems of economic security and competitiveness of territorial socio-economic systems;
- territorial characteristics of living standards and lifestyle, behavioral strategies and world view of different groups of the Russian society;
- development of regional socio-economic systems, implementation of new forms and methods concerning territorial organization of society and economy, development of territories' recreational area;
- socio-economic problems regarding scientific and innovative transformation activities of territories;
- elaboration of society's informatization problems, development of intellectual technologies in information territorial systems, science and education.

INTERNATIONAL TIES AND PROJECTS

In order to integrate scientific activities of the Institute's scholars into global research area, international scientific conferences are held on a regular basis; they result in cooperation agreements with different scientific establishments:

2007 – Cooperation agreement is signed with Institute of Sociology, of the National Academy of Sciences of Belarus , Center for Sociological and Marketing Investigations at the "International Institute of Humanities and Economics" (Belarus, 2008).

2008 – Memorandum of agreement is signed with Alexander's Institute at the Helsinki University (Finland, 2008).

2009 – Cooperation agreement is signed with Center for System Analysis of Strategic Investigations of NAS (Belarus, 2009).

2010 – Cooperation agreement is signed with Institute of Economics of the National Academy of Sciences of Belarus (Minsk, 2010).

2011 – Cooperation agreements are signed with National Institute of Oriental Languages and Civilizations (Paris, 2011), Institute of Business Economy at Eszterhazy Karoly College (Hungary, 2011), Republican research and production unitary enterprise "Energy Institute of NAS" (Belarus, 2011). Protocol of intentions are signed with Jiangxi Academy of Social Sciences (China, 2011), Research and Development Center for Evaluation and Socio-Economic Development and the Science Foundation of Abruzzo region (Italy, 2011).

2012 – Cooperation agreement is signed with Center for Social Research at the Dortmund Technical University (Germany, 2012).

2013 – Cooperation agreement is signed with Jiangxi Academy of Social Sciences (China, 2013).

July 2013 – The application for research performance by international consortium involving ISEDT RAS within the 7th Framework Programme of European Community.

2014 – Cooperation agreements are signed with Jiangxi Academy of Social Sciences (China, 2014), National Academy of Sciences SM TsSaiSI (Belarus, 2014). Protocols of intent are signed with the Academy of Social Sciences Jiangxi Mao Zhiyong (China, 2014), National Institute of Languages and Civilizations (France, Jean Verkey, 2014).

2015 – Protocol of intent is signed with the Academy of Social Sciences, Jiangxi Province (China, 2015). Cooperation agreement is signed with the Institute of Sociology of the National Academy of Sciences of Belarus (Belarus, 2015).

2016 – Cooperation agreements are signed with EHESS Ecole des Hautes Etudes en Sciences Sociales (Paris, France, 2016), Institute of Philosophy, Sociology and Law of NAS RA (Yerevan, Armenia, 2016), Yerevan Northern University (Armenia, 2016), Yerevan State University (Armenia, 2016). Protocols of intentions are signed with Academy of Social Sciences in province Jiangxi (China, 2016).

CONTENT

EDITORIAL

PUBLIC ADMINISTRATION EFFICIENCY

DEVELOPMENT OF MUNICIPAL FORMATIONS

MODELING AND FORECAST OF SOCIO-ECONOMIC PROCESSES

ADMINISTRATION IN TERRITORIAL SYSTEMS

ECONOMICS OF THE AGRO-INDUSTRIAL COMPLEX

ENVIRONMENTAL ECONOMICS

PUBLIC FINANCE

THEORETICAL ISSUES

SOCIAL DEVELOPMENT

FOREIGN EXPERIENCE

SCIENTIFIC LIFE

PUBLIC OPINION MONITORING

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Nationally Oriented Rotation of the Elites – the Most Important Condition for the Implementation of National Projects

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Abstract. In the previous issues of our journal[1] we have repeatedly addressed the problem of ineffectiveness of the Government's implementation of the President's instructions, which Vladimir Putin voiced in his Addresses to the Federal Assembly, in "May Decrees", etc. In the 2018–2024 political cycle, the main directions of state policy are implemented through 12 national projects. The comprehensive analysis of expert opinions urges us to talk about the threat of disruption of their implementation once again. The following materials analyze the essence of national projects, the dynamics of their implementation, since their adoption (2005), during V. Putin's third presidential term (2012–2018), as well as the specifics of the current socio-political situation in Russia in 2018–2019, which urgently requires a qualitative increase in the responsibility of the elites for the comprehensive achievement of the targets specified in the national projects for 2018–2024.

Key words: national projects, public administration efficiency, national interests, President.

[1] See, for example, editorials in the following issues of *Economic and Social Changes: Facts, Trends, Forecast:* vol. 11, no. 2 (2018); vol. 10, no. 3 (2017); no. 2 (26) (2013); no. 6 (30) (2013); no. 3(21) (2012).

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The history of priority national projects in Russia dates back almost 15 years: on September 5, 2005, at a meeting with members of the Government, the leadership of the Federal Assembly and members of the Presidium of the State Council, Russian President Vladimir Putin raised the question of "creating new mechanisms to improve the quality of life of Russian citizens significantly" and stressed his personal participation in the implementation of priority areas such as health, education, and housing: "During subsequent work, I ask that we focus on the said priorities. To this avail, a council for the implementation of priority national projects will be created, and I will personally supervise its work"[2].

Since then, **the continuity**[3] of goals, objectives, key directions, policy implementation, etc. can be called one of the main features of national projects. It characterizes the state policy on the implementation of national projects as a system designed for long-term work with the appropriate formulation of specific criteria, indicators, terms, and persons responsible for their achievement.

However, this continuity also has its "weak" points such as the consistent reproduction of the practice of non-achieving the planned result. Many experts – scientists and representatives of the civil society have already spoken a lot about this[4]. Many of them note that the main obstacle to the development of the Russian economy is "opportunistic behavior of the state bureaucracy and major entrepreneurs".

> The **opportunistic behavior of the Russian bureaucracy** has a wide-scale and deep its impact on the life of Russian society. Some of its representatives ignore the objectives of the reforms or conduct them with a focus on their group interests. This manifests itself in embezzlement of the state budget, corruption, etc... Some of the Russians who have enriched themselves over the years of reforms perceive structural and technological innovations, as well as the necessary social changes, as a potential threat to their privileged position and tacitly counteract them. I**n fact, Russian business, especially large business, is refraining from solving the problems of technological modernization of the economy and its diversification. Some representatives of the Russian bureaucracy hold a similar position...**
>
> **The large scale of opportunistic behavior of large groups of the population indicate the growing inconsistency between current institutional reforms and the needs of society; under the circumstances, it is necessary to replace them... The main conclusion is that the difficulties encountered on the way to the recovery of the Russian economy arise from the opportunistic behavior of the state bureaucracy and major entrepreneurs[5].**

[2] Vladimir Putin's speech at a meeting with members of the Government, the leadership of the Federal Assembly and members of the Presidium of the State Council, September 5, 2005. *Official website of the President of the Russian Federation*. Available at: http://www.kremlin.ru/events/president/transcripts/23157

[3] The priority national project "Health" (2006–2018), as well as the national project "Healthcare" (2019–2024), are aimed at reducing mortality, increasing the availability and quality of medical care and development of preventive healthcare.

The priority national project "Housing" (2006–2018) and the national project "Housing and the urban environment" (2019–2024) are aimed at increasing the affordability of housing for middle-income families (in particular, they plan to increase the volume of housing construction and mortgage lending, etc.).

The priority national project "Education" (2006–2018), as well as the national project "Education" (2019–2024), provided for the support of innovative universities, updating the facilities and equipment of educational institutions, etc.

[4] See, for example:

Glazyev S.Yu. National projects – illusion or reality? *Zolotoi lev,* 2007, no. 101–102. Available at: http://www.zlev.ru/101/101_52.htm;

Bashkatova A. Forgotten national projects. *Nezavisimaya Gazeta*, 2009, December 29. Available at: http://www.ng.ru/economics/2009-12-29/1_nazprojects.html; Proceedings of the final plenary session of the 17th April international conference on economic and social development, April 19–22, 2016. *Official website of the HSE*. Available at: https://www.hse.ru/news/science/181135658.html

[5] Vlasov F. Costs of opportunistic behavior of social groups. *Obshchestvo i ekonomika*, 2019, no. 6, p. 42.

This means that these entities "seek their own interests, ignoring the law, abusing market power and official position... in fact, they weasel out of their responsibilities to address the issues of technological modernization of the economy and its diversification"[6].

The major power of the Russian elite is the liberal clan that serves global financial speculators against their own people and strives to return to its "blessed" 1990s... The victories of the liberal clan include the reappointment of the Medvedev Government in 2018, **the pension reform,** the VAT increase, an insane tax maneuver (that inflated gasoline prices and made its production unprofitable), and the growing discontent of society...[7]

Under these conditions, the criticism and pessimistic forecasts of experts regarding the realism of the implementation of national projects in 2019 become quite understandable *(Insert 1)*[8].

In 2019, researchers from Vologda Research Center of the Russian Academy of Sciences (VolRC RAS) analyzed the datasheets and expert opinions on the national projects "Demography", "Healthcare", "Housing and Urban Environment", and the Comprehensive plan for the modernization and expansion of the main infrastructure for the period up to 2024. According to the results of this review, it was concluded that the measures aimed at the implementation of the goals lack financial support, that the national projects neglect a number of objective demographic and socio-economic trends, and that the quality of the used criteria for evaluating the effectiveness of the activities is insufficient.

In a concise form, expert assessments are summarized[9] in *Insert 2*. The data clearly show that before their implementation the national projects were not subject to broad, large-scale discussion either in the expert community or among the public; although this would have eliminated many of the shortcomings that arise today during the implementation of the national projects.

The expert assessments presented in Inserts 1 and 2 suggest with a high degree of probability that the practice of non-fulfillment of national project targets will be repeated, and, therefore, their essence is not so much economic and not so much political (since they are developed and implemented after the beginning of a new political cycle), but rather psychological, due to the fact that they are used as a tool of political rhetoric in the classical version of the management of crowd psychology.

The founders of crowd psychology (G. Le Bon[10], G. Tard[11], S. Sighele[12]) at first considered the crowd only in a negative context, as a gathering of people "mostly with criminal inclinations, obsessed with harmful passions and desire for destruction; who are not engaged in any useful work and do not have their place in society"[13]. However, with the

[6] Ibidem. P. 43.

[7] Delyagin M.G. Sobyanin's Prospects. *Gazeta "Zavtra"*, 2019, no. 32. Available at: http://zavtra.ru/blogs/perspektivi_sobyanina

[8] Insert 1 presents only a small part of the analyzed expert opinions, their quintessence. Nevertheless, it fully reflects the general skepticism of experts about the prospects for the implementation of national projects.

[9] More detailed information on the full list of expert assessments of these national projects and on the Comprehensive plan can be found in the following materials:

National projects 2019–2024: analysis and key risks to their implementation. Economic unit: scientific-analytical edition. Team of authors under scientific supervision of V.A. Ilyin, T.V. Uskova. Vologda: VolRC RAS, 2019. 93 p.;

National projects 2019–2024: analysis and key risks to their implementation. Social sphere: scientific-analytical edition. Team of authors under scientific supervision of A.A. Shabunova. Vologda: VolRC RAS, 2019. 68 p.

[10] Le Bon G. *Les Lois Psychologiques de l'Évolution des Peuples* (1894); *La Psychologie des Foules* (1895).

[11] Tarde G. *La foule criminelle* (1892); Études de psychologie sociale (1898).

[12] Sighele S. *La coppia criminale* (1892); *La delinquenza settaria* (1897).

[13] Golubeva M.V. Social masses – what it is, crowd psychology, specifics, features. Gray mass of people. *Information resource "Psychologist's advice"*. Available at: https://psychologist.tips/2814-sotsialnye-massy-eto-chto-psihologiya-mass-osobennosti-harakteristiki-seraya-massa-lyudej.html

Crowd psychology is a field of psychology, which studies the nature, essence, laws of occurrence, formation, functioning and development of crowds and masses as specific forms of human communities. It was created in the late 19th century by French sociologist and psychologist G. Le Bon, Italian psychologist and lawyer S. Sighele (1868–1913), etc... Traditional research subjects of crowd psychology include various gatherings of people, demonstrations, rallies, phenomena of mass euphoria, aggression, panic, etc.

To a certain extent, crowd psychology is focused on Le Bon's "psychological law of the spiritual unity of the crowd", according to which in the later phase of the formation of an organized crowd, there is a **leveling, depersonalization and deindividualization of people** in it; which is why on the basis of shared qualities managed bythe unconscious a temporary "collective soul" of the crowd is formed[14].

The origins of the idea of crowd psychology were laid in the theory of imitation by G. Tard, who argued that social behavior has no other explanation than through the idea of imitation[15].

development of psychological science itself and, in particular, with the increased interest in group psychology, the idea of the crowd has lost its negative connotation and started to be interpreted to a greater extent more neutrally – as a "relatively stable gathering of people with its own purpose and common intentions"[16] (this happened in the mid 20th century). It should be noted that this was largely facilitated by the emergence of the term "the masses", which became widespread in the second half of the 19th century within the framework of Marxist philosophy: the term "masses" meant "workers, that is, the people who are engaged in material production and play a decisive role in the development of society; the masses became the main force in the era of revolutions they were opposed to the ruling and intellectual elite"[17].

Non-critical thinking, hyperbolicity of thinking; ignoring the facts; simplicity and emotionality of perception; respect for power and the need for a leader – all these and many other regularities of crowd psychology allocated by the classics of this research area are fully present in our country today.

"The images that strike the imagination of the crowd are always simple and clear. Not the facts themselves amaze the crowd, but the way they are presented to it... The crowd does not think or consider. It is capable of perceiving only those ideas that are simplified to the limit. The judgments of the crowd are always imposed upon it, and are never the result of a comprehensive discussion. The crowd never seeks the truth. It turns away from any evidence it does not like, and prefers to worship delusions and illusions, provided that it likes them[18]. "The masses are easily manipulated and gullible. The person who would wish to take advantage of the masses would do best not to employ reasonable arguments but propose, rather, fascinating visual images which they should repeat again and again. The masses fall under the truly magical power of words"...[19]

Isn't it true that all these long-studied characteristics are extremely suitable for describing the modern relationship between society and power? They fully explain, for example, why at peak moments (no doubt,

[14] *The Newest Dictionary of Philosophy*. Minsk: Book House. A.A. Gritsanov. 1999. Available at: https://dic.academic.ru/dic.nsf/dic_new_philosophy/993/%D0%9F%D0%A1%D0%98%D0%A5%D0%9E%D0%9B%D0%9E%D0%93%D0%98%D0%AF

[15] Gadaev A.V. Crowd psychology. *Information resource "Proza.ru"*. Available at: https://www.proza.ru/2011/12/21/502

[16] Golubeva M.V. Social masses – what it is, crowd psychology, specifics, features. Gray mass of people. *Information resource "Psychologist's advice"*. Available at: https://psychologist.tips/2814-sotsialnye-massy-eto-chto-psihologiya-mass-osobennosti-harakteristiki-seraya-massa-lyudej.html

[17] Ibidem.

[18] Starikov N. Nine quotes by Gustave Le Bon. *Official blog of N. Starikov,* 2016, January 7. Available at: https://nstarikov.ru/blog/61667

[19] Freud S. *Group Psychology and the Analysis of the Ego*. Moscow: Sovremennye problemy, N.A. Stollyar, 1926. Available at: https://www.magister.msk.ru/library/philos/freud001.htm

Insert 1

Evaluation of national projects by Russian experts

Expert	Assessment / opinion	Source
National project "Healthcare"		
E.S. Gontmakher (Doctor of Sciences (Economics), Professor, Lomonosov Moscow State University)	"Even 3.6% of GDP is an extremely low level of public spending on health according to world standards. **In the member states of the Organization for Economic Cooperation and Development, in which we recently wanted to enter, this share is 6.5%, and in countries such as Germany, France, the United States – even more...** Under the circumstances, it is not very believable that ambitious goals to reduce morbidity and mortality of the population, to increase (almost four-fold, compared to 2017) the export of medical services will be achieved".	Why trillions of spending on national projects do not improve the situation. *Ekho Moskvy.* 2019, April 9. Available at: https://echo.msk.ru/blog/openmedia/2404337-echo/
National project "Education"		
V.M. Simchera (Doctor of Sciences (Economics), Professor, Honored Scientist of the Russian Federation, member of the Izborsk Club) P.V. Kalitin (Doctor of Sciences (Philosophy), Professor) V.V. Averyanov (Doctor of Sciences (Philosophy), Director of the Institute for Dynamic Conservatism, member of the Izborsk Club)	**"The very preamble to the passport of the national project "Education" contains the contradiction, the conflict between upbringing and education:** "the upbringing of a harmoniously developed and socially responsible personality" is proposed to carry out "on the basis of moral and spiritual values of the peoples of the Russian Federation, and historical and cultural traditions"; education, in contrast, will be based on the principles of "global competitiveness" and "entry of the Russian Federation in the list of 10 leading countries according to the quality of general education"... **Here we can see the fallaciousness of the very philosophy of this project; and the officials are guided by this very philosophy. Whether by inertia, whether intentionally, they continue to use a false quantitative and rating approach to the good things previously laid in the whole system of public administration".**	Simchera V., Kalitin P., Averyanov V. At the break of generations. Human "capital" or human "ballast"? Available at: http://zavtra.ru/blogs/na_izlome_pokolenij
National project "Demography"		
A. Ulyanov (economist, social activist, expert on antimonopoly and demographic policy)	**"Many of the measures proposed in the national project "Demography" resemble attempts to wipe the floor under a leaking roof, instead of repairing the roof...** The national project does not say a word about the mortality of working-age population... Besides, the national program does not say anything about abortion: in Russia, one hundred thousand signatures were collected in favor of removal of abortion from the compulsory medical insurance, and only three thousand – against it. It is nonsense that taxpayers' money continues to be spent on this operation, especially when the country is facing a demographic crisis".	Will the national project "Demography" solve the problem of fertility? *Online magazine "Yelitsy media"*. Available at: https://media.elitsy.ru/novosti/nacionalnyj-proekt-demografiya-reshit-problemy-rozhdaemosti
National project "Culture"		
D. Kiris (Deputy Chairman of the Commission of the Civic Chamber for the Development of Culture and Preservation of Spiritual Heritage, head of the Board of the Interregional Independent Trade Union of Theater and Film Actors)	**"...The project provides for regional co-financing, which often does not exist at all.** And in general, the primary issue concerns the effectiveness of spending in the regions... **for such a huge country as Russia, 113.5 billion is not the amount that can fully solve all pressing issues** and conduct a serious reconstruction with repairs and re-equipment".	The main problem for the Natinal project "Culture" is the regions. *Kulturomaniya website.* Available at: http://kulturomania.ru/column/item/denis-kiris-glavnaya-problema-dlya-proekta-kultura-regiony/
National project "Housing and the urban environment"		
N. Kosareva (president of the Fund "Institute of Urban Economics" and head of the Commission for Housing Policy of the Public Council under the Ministry of Construction of the Russian Federation)	"...Four federal subprojects within the national project "Housing and the urban environment" are not balanced among themselves... So far, the quality of the urban environment has been reduced to the improvement of yard areas, parks and squares. This is not a comfortable urban environment, but some minor improvements".	Experts propose to clarify the parameters of the national project "Housing and the urban environment". *Pravda o SRO*. Available at: https://pravdaosro.ru/news/yekspertypredlagayut-utochnit-parame/
National project "Environment"		
A. Avdonina (Senior Researcher, Center for Economic Modeling of Energy and Ecology, RANEPA)	"...The transfer of the timing of the MSW treatment reform in 15 regions on January 1, 2020; flaws in the mechanism for collection, storage and transportation of valuable secondary resources; lack of mandatory separate storage and collection of wastes in the territorial schemes of most regions of the Russian Federation. Of particular concern is the export of MSW and construction waste from Moscow and the Moscow Oblast to regions where there is no infrastructure for waste management... **Such facts cause social tension, protests, distrust in the authorities... Ths can result in the opposition to the actions of the authorities in the field of waste management...** which, in turn, will create obstacles to the implementation of NP "Environment"...".	National project "Environment" – tentative steps. Available at: https://www.finam.ru

End of Insert 1

Expert	Assessment / opinion	Source
	National project "Safe and quality roads"	
D. Tsopov (expert at the ONF thematic area "Safe and quality roads")	ONF experts studied the passport of the national project "Safe and quality roads", which was prepared by the Government of the Russian Federation. It became clear that the final edition of the document completely considered only two out of 31 suggestions – in that form and with that message that the social activists put in these suggestions... "To us at least it seems strange that the Cabinet of Ministers did not include a lot of issues in the passport of the national project; those issues were reflected in the expert proposals and are of great importance to the population. **In this situation, it is not possible to solve the tasks set by the head of state".**	The ONF will seek to include its proposals in the national project "Safe and quality roads" . *Project of the All-Russian Popular Front "Road inspection of the ONF. The map of damaged roads.* November 13, 2018. Available at: https://dorogi-onf.ru/news/5730/
	National project "Science"	
D. Zavarukhin (Director of the Institute for the Study of Science of RAS)	"...It is practically impossible to fulfill the tasks of the national project with the budget financing of fundamental science in volumes below 0.3% of GDP, and the financing of science in general from budgetary and extra-budgetary sources in volumes below 2% (RF suggests Russia should reach this volume in 2035)…»	Press conference of the trade union of RAS employees. RAS trade union: "We fail the national project". Available at: https://indicator.ru/
	National project "Small and medium entrepreneurship and the provision of support to individual entrepreneurial initiative"	
V. Korochkin (first Vice-President of OPORA RUSSIA)	"...Participants of the discussion noted that in general, the business environment in Russia has not improved yet – the number of enterprises is decreasing, unemployment is growing..." "...In 2018, the number of workers employed in small business decreased by 200–300 thousand people or 1.5%, while we set a goal to increase their number by 1.5 million people every year. The number of small companies decreased in 78 regions…"	An extended meeting of the regional Council of OPORA Russia, March 22, 2019. *Official website of OPORA Russia.* Available at: http://opora.ru
	National project "Digital economy"	
Assessment of the working group of the Expert Council under the government of the Russian Federation	"Legislative activity within the framework of the "Digital economy" **does not provide for public discussion, regulatory impact assessment and anti-corruption expertise...** Since most sectors of the economy will have their own plans for digitalization, **the procedure for passing legislative initiatives without public discussion will be applied to healthcare, education, industry, agriculture and other sectors.** The new rules also exclude the possibility of independent examination of initiatives and make the control on the part of business, society, and often the authorities impossible. Only big business and politicians will be involved in the implementation of the "Digital economy", while small and medium-sized businesses, associations and the expert community will be excluded from the process; **this will expand the possibilities of manipulation for interested structures".**	Tishina Yu. "Digital economy" gets more helmsmen. Kommersant, 2018, October 3. Available at: https://www.kommersant.ru/doc/3759007 (according to the evaluation of the national project by the Expert Council under the Government of the Russian Federation)
	National project "Labor productivity and employment support"	
A. Vetluzhskikh (member of the Central headquarters of the ONF, a State Duma Deputy)	"The project understates labor productivity indicators, which the country's industry should reach by 2024... According to the passport of the national project, in 2024, the ratio of labor productivity growth at medium and large enterprises of the basic sectors of the economy to the previous year without the implementation of the national project will be 103.2 and with the implementation of the national project –105%. Given the position of Russia in relation to the advanced economies of the world, these figures appear to be understated".	ONF parliamentary newspaper proposes to revise the national project "Labor productivity and employment support". Available at: https://www.pnp.ru/social/onf-predlagaet-podkorrektirovat-nacproekt-proizvoditelnost-truda-i-podderzhka-zanyatosti.html
	National project "International cooperation and export"	
V. Khaykov (Chairman of the Board of the National Association of Oil and Gas Services, member of the Public Council under the Ministry of Industry and Trade)	"The national project should be detailed. It contains quite long deadlines – they need to be reduced, because export tasks are critically important. It is very important that the national project provide for synchronization with regions... Financing: it is unclear how much money is allocated on a particular sphere, it is not clear how expedient such sum is; which means, we cannot estimate its effectiveness. The question concerning effectiveness: there should be key performance indicators (KPIs), the contribution of a specific task to the final result should be indicated".	Civic Chamber of the Russian Federation, Round Table "Discussion of the national project "International cooperation and export". Available at: https://nangs.org/

Insert 2

Expert evaluation by researchers from Vologda Research Center of RAS (summary)

National project "Demography":

✓ Financial incentives to promote the birth rate affect only the conditions of implementation of the need to have children, but do not affect the very need to have children (the value component of reproductive behavior).

✓ The proposed measures of financial support for families with children are insufficient to produce a stable positive effect, namely to increase the total fertility rate to 1.7 children per woman by 2024. A small amount of funds is allocated to support the birth of a third and subsequent children in families.

✓ Opening up additional places in institutions of additional education only partially solves the problem of employment of women who are on maternity leave to care for a child up to three years. In addition, the creation of flexible forms of employment for this category of women is of great importance, but this measure is not reflected in the directions of the national project.

✓ The national project does not stipulate infrastructure conditions for the implementation of the direction "Organization of activities for vocational training and additional vocational education of persons of pre-retirement age".

✓ The "Older generation" directions of the project only partly cover the provisions of the Strategy of Actions in the Interests of Senior Citizens in the Russian Federation up to 2025; namely professional training and additional professional education of persons close to retirement age, improvement of provision of social services and health care to senior citizens. Such directions as stimulation of employment of people of retirement age; anti-discrimination policy regarding labor activity of pensioners remain ignored or they are considered insufficiently; formation of conditions for the organization of leisure of citizens of the older generation; ensuring access of this category of the population to information and educational resources, etc.

✓ For the purposes of monitoring the health status of the older generation, it is more appropriate to use the indicator "healthy life expectancy at the age of 60".

✓ Motivation for healthy lifestyle is only partially reflected in the target indicator "Number of visits to medical organizations on the issues of healthy lifestyles". It depends not only on the medical activity of a person (their visits to medical institutions), but also directly on the practices of healthy lifestyle (Giving up smoking/alcohol consumption, balanced diet, physical activity, compliance with the work and rest regimen, etc.)

✓ The principle of selection of regions (priority areas/not included in the priority areas) for constructing sports centers and complexes is not clear. It is unclear whether sports facilities (indoor rinks, football arenas) listed in the action plan will be built in the same or in different regions of the Russian Federation. A similar situation arises with the supply of new equipment and inventory.

National project "Healthcare"

✓ Inadequate understanding of the development of primary health care is often perceived as a way to reduce the cost of healthcare and minimize costs, which is not true. Primary healthcare requires investment as well.

✓ There is a risk of fragmentation of efforts and programs, when some areas of medical care, including for individual nosological groups, are supported and others are ignored.

✓ Insufficient funds laid down in the framework of the national project for the development of a network of national medical research centers and implementation of innovative medical technologies.

✓ Risks to information security, as well as the fragmentation of the information field, formal approach to problem solving in the creation of a single digital framework in healthcare on the basis of the unified state healthcare information system.

✓ There is a risk that a formal solution to the problem of developing exports of medical services, for example, the growth of exports of services only within the CIS countries, will change the real growth of the competitiveness of Russian healthcare at the international level.

End of Insert 2

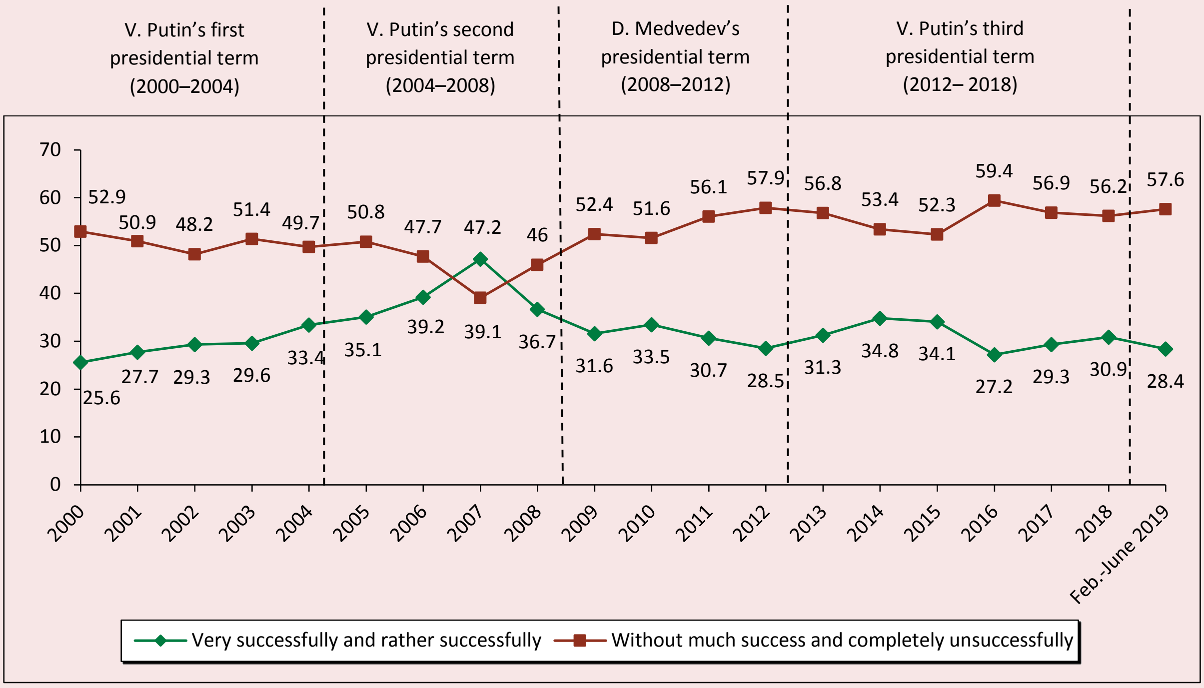
National project “Housing and the urban environment”:

- ✓ A drop in people’s real incomes for six consecutive years significantly limits the possibilities of development of mortgage market and housing demand in the coming years
- ✓ The project does not consider in detail the options for addressing the housing needs of the population with low income and inhabitants of small settlements.
- ✓ The planned rates of increasing the volumes of housing construction are difficult to achieve, since the volume of housing construction in Russia is decining for several years and in many regions it is below the level of 2014; and it is necessary to commission most of the objects (based on the cycle of their construction) in 2019–2021.
- ✓ The introduction of a new system of financing construction works using escrow accounts would increase the cost of housing with significant probability.
- ✓ It is unclear how the planned 30 rise in the price of square meter of housing in 2019–2024 will correlate with the increase in its availability to the population (even considering the reduction in mortgage rates).
- ✓ The national project does not propose any new mechanisms to improve the living conditions of the population (social, rental housing, etc.).
- ✓ The tools of state support for the utilities sector and the modernization of engineering networks have not been developed.
- ✓ The criteria used in the methodology do not allow us to give an objective assessment of the quality of living in the city: it does not consider important components of citizens’ life that determine the quality of life in a given settlement.
- ✓ Actual volumes of dilapidated and hazardous housing can be much higher due to the fact that a large number of houses are actually dilapidated, but they are currently not recognized as such.
- ✓ The planned indicators on improvement of living conditions of citizens lag behind the rate of increase in the number of dilapidated and hazardous housing; this fact does not help solve this problem completely.

Comprehensive plan for modernization and expansion of mainlinne infrastructure up to 2024:

- ✓ Insufficient coordination of the mechanism to develop a Comprehensive plan (the plan was approved in 2018, and the methodology for ranking individual projects contained in the transport part – in 2019); insufficient coordination of the projects for development of individual modes of transport with each other.
- ✓ Short planning horizon for the implementation of projects in the transport sphere (only 6 years); lack of pre-planning for the period after 2024
- ✓ Some target indicators are difficult to achieve (e.g. Russia’s raising up 24 positions in the ranking of countries according to the freight logistics performance index).
- ✓ The link between transport projects and the objectives for development of economy of regions of Russia is insufficiently substantiated and elaborated.
- ✓ The activities aimed at implementing the Comprehensive plan (e.g. development of airport infrastructure) are not detailed clearly.
- ✓ More attention is paid to megaprojects to the detriment of point investment projects that can have a significant impact on the socio-economic development of regions.
- ✓ Risks of uneven distribution of the load on the manufacturers of building materials and the risks of their failure to satisfy requirements under the Comprehensive plan.
- ✓ The risk of under-disbursement of budget funds or the emergence of the need for additional financing due to the lack of information on the energy part of the Comprehensive plan.
- ✓ The inadequate and unclear implementation mechanism can serve as a deterrent in attracting private investment in projects implememtation.
- ✓ The lack of detailed elaboration of the tools for the development of alternative energy, which is widespread abroad, with the prospect of its use throughout the country, not just in isolated areas.

Figure 1. In your opinion, how successfully does the Russian President cope with the problems related to economic recovery and the growth of citizens' welfare? (% of respondents)



an election is such a moment) the President and the party in power gain a record number of votes of support, while throughout the political season there remains a high level of dissatisfaction in society concerning the way in which these very authorities implement the same policy issues related to the dynamics of the standard of living and quality of life *(Fig. 1).*

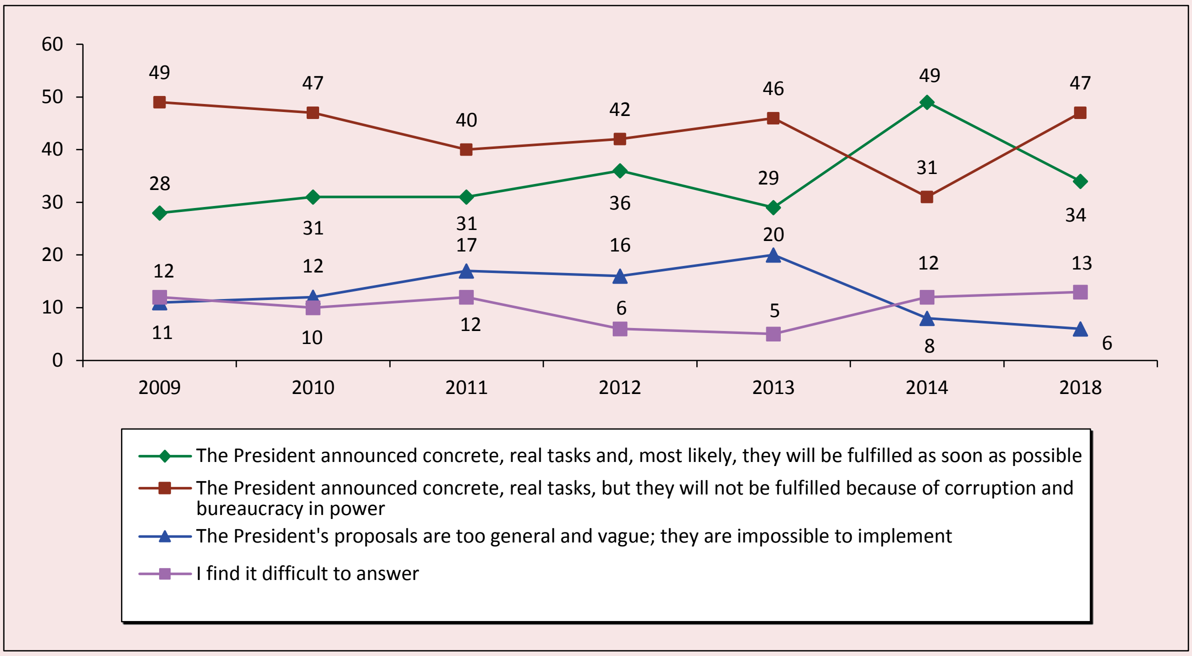
And just as precisely the formulation of the main goals set out in national projects (first announced in the President's annual Addresses to the Federal Assembly of the Russian Federation) sounds reassuring, although more than half of Russians, according to sociological surveys, do not believe that the designated development targets will actually be achieved.

Let us recall that after the President delivered his Address to the Federal Assembly of the Russian Federation in 2018, the majority of Russians (53%) noted that the tasks he had voiced would not be fulfilled. Moreover, according to 47% of Russians, they would not be implemented "because of corruption and bureaucracy in the government", and only 3% said it would be due to the fact that "the President's proposals are too general, non-specific"[20] *(Fig. 2).* According to RAS Federal Research Sociological Center, from 30 to 46% of Russians felt that the most important tasks of the Presidential Address of 2018 (increasing the average life expectancy of Russians to 80 years; increasing real incomes of working population and increasing pensions; improving the availability and quality of medical care and educational services, etc.) would not be implemented[21].

[20] President's Address to the Federal Assembly: first impressions: VTsIOM press release, 2018, no. 3602, March 13. Available at: https://wciom.ru/index.php?id=236&uid=116743

[21] Filina O. Birds in the hand turned into birds in the bush: what do Russians think about the feasibility of strategic tasks of the state. *Kommersant,* 2018, May 28. Available at: https://www.kommersant.ru/doc/3635558

Figure 2. In your opinion, to what extent are the tasks that the President announced in his Address to the Federal Assembly of the Russian Federation realistic, and will they be fulfilled or not? (all-Russian data by VTsIOM, closed-ended question, one answer; in % of those who lisneted to the Address or learned its content from the news)



Source: President's Address to the Federal Assembly: first impressions: VTsIOM press release, 2018, no. 3602, March 13. Available at: https://wciom.ru/index.php?id=236&uid=116743

The practice of public administration based on the laws of crowd psychology, apparently, continues to be implemented in the political season of 2018–2024. At least it is implemented by the same people who failed to achieve the goals set out in the previous orders of the President. Criticism of national projects of 2018–2024 points to the same "sore spots" as in priority national projects of 2006–2018 (insufficient funding, ill-considered evaluation criteria, etc.) and meanwhile the political system witnesses the same struggle for power on the part of various groups, which in 2012 was mentioned by experts from Minchenko Consulting Group: "The process of ruling aims primarily to sustain the existing inter-clan balance... Russian power is a conglomerate of clans and groups that compete with one another over resources"[22].

... Against the background of institutional proposals to modernize the system and arguments about the link between the government and the people, **Russian political history continues to degrade.** The autumn gubernatorial elections will be held in a purged competitive field – in order to guarantee the stability of the results... But another point is important. **An attempt to legitimize power in the conditions before, during and after the transit with the help of the changes in the system of public administration, but without reliance on the real interests of society, can only result in a greater gap between the elite and the people. It would be good if the changes began with the people rather than with the Constitution[23].**

Today, people may change, but the essence does not change: the political system is being "rebuilt" on the basis of the results of

[22] Vladimir Putin's Big Government and the "Politburo 2.0": a report by Minchenko Consulting. 2012. P. 2.

[23] Skorobogatyi P. Healthy evolution of the policy. *Ekspert*, 2019, no. 30, p. 49.

“undercover games” of elite groups rather than the interests of national development and the needs of the majority of the population, and this also indicates the “continuity” of the basic principles of building relationships between society and government.

However, the inability of the political system to transform itself dynamically is in conflict with the qualitative changes that have occurred over the past almost 20 years in Russian society. During this period, society has changed dramatically: in the demographic, economic, and psychological spheres... Not all of these changes are positive, but it is important to emphasize that **the social transformations have resulted in the growth of public awareness of its own subjectivity.** Today it is reflected in an increasing need for changes[24], in the increase in the number of Russians who do not count on the support of the state[25], and in the sensitivity and the severity of public reaction toward various episodes of social injustice on the part of the authorities with regard to the people – from the uncoordinated construction site for a church in Yekaterinburg to the non-admission of independent candidates to participating in the Moscow City Duma election.

> Everyone was horrified by the results of the research carried out at the Institute of Psychology of the Russian Academy of Sciences on the dynamics of the psychological state of our society, which were published in late 2013... **Over the past 30 years, all the negative traits** (permissiveness, violence, aggression, hatred, hostility, arrogance, greed, anger, cruelty, rudeness) **have aggravated in Russians, and the positive traits** (discipline, reliability, decency, humanity, kindness, compassion, selflessness, mutual respect, altruism), **on the contrary, deteriorated. So much for the difference between the two worlds – the socialist and the capitalist...**[26]**.**

We should note that according to the nationwide data by VTsIOM and regional data by Vologda Research Center, the likelihood of protests and most importantly the willingness of people to participate in them have not decreased to the values that preceded the public announcement of the draft pension reform (June 2018). Twenty seven percent of Russians and 20% of Vologda Oblast residents are ready to take part in protests – these figures are not only significant and create a situation in which “violent events can often unfold”[27]; they exceed those registered in the first years of V. Putin’s each presidential term *(Fig. 3 and 4)*.

As society becomes more “mature” in the political and civil aspects, the mechanisms of influence on public consciousness that are traditionally used by the government will increasingly lose their validity, but there is no alternative to them yet.

This is evidenced by the current and prospective situation in the country, which continues to degrade demographically, economically, morally and (as we can see from the increase in social tension) socio-psychologically:

✓ the demographic situation is such that only in four months of 2019 we reached natural population decline of 149 thousand people... In fact, we had such a decline in 2007. We faced similar situation twelve years ago”[28];

[24] Petukhov V.V. Dynamics of social mood of Russians and the formation of a request for change. *Sotsis*, 2018, no. 11, pp. 40–53.

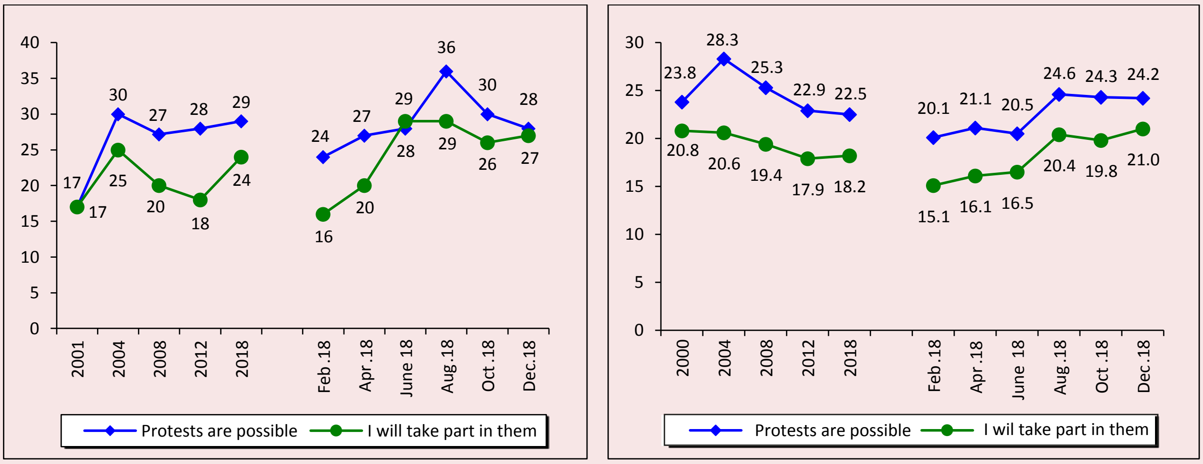
[25] Gorshkov M.K., Sedova N.N. Self-sufficient Russians and their life priorities. *Sotsis,* 2015, no. 12, pp. 4–16.

[26] Sapozhnikova G. In 30 years Russians have become bolder, meaner and greedier (an interview with Professor S. Enikolopov, head of the Department of Medical Psychology at the Center for Mental Health Research, Russian Academy of Medical Sciencesa). *Komsomolskaya Pravda,* 2014, September 1. Available at: https://www.vologda.kp.ru/daily/26179.4/3068438/

[27] Sheynis V.L. Historical transit: Russian drama. *Nezavisimaya Gazeta,* 2017, January 27. Available at: http://www.ng.ru/ideas/2017-01-27/5_6914_drama.html (accessed: 28.01.2017).

[28] Sysoev T. To stay alive. *Ekspert,* 2019, no. 28, p. 51.

Figures 3–4. Proportion of people who consider mass protests possible and who are ready to take part in them (% of respondents)



VTsIOM data (for Russia)

The wording of the question: "In your opinion, what is the likelihood of mass protests against falling living standards, injustice on the part of the authorities and in defense of your rights in your city/rural area? Will you personally take part in them or not?" Source: https://wciom.ru/news/ratings/protestnyj_potencial/

VolRC RAS data (for the Vologda Oblast)

The wording of the question: "In your opinion, can mass protests against rising prices and low living standards be held in your settlement? Will you personally take part in them?". Source: VolRC RAS database.

The most surprising thing is that now (unlike the mid-2000s), when you study poverty in Russia, you no longer feel any shock or surprise. And this indifference is dangerous, as it characterizes the usual social depression. It is not surprising, because not only the poor are poor in Russia, but virtually the entire Russia is poor. Median monthly income in many regions of the country is only 250–300 USD. According to this indicator, our once industrial regions are now equal to **the poorest republics of the CIS and the countries of Africa.** Air travel, vacation, education of children, quality medical care are hard-to-reach or even inaccessible benefits for the majority of the middle class[29].

✓ "one-third of Russian regions lives very close to the poverty line"[30];

✓ "given the current economic policy (tight fiscal policy and tight monetary policy) and the weak effect of national projects, technical recession in the economy can be recorded already in 2019, rather than in 2021"[31].

A rather pessimistic picture emerging in the expert opinion on the present and future of the Russian economy and on the demographic situation is directly related to the moral irresponsibility of the ruling elites, who allow the non-fulfillment of direct orders of the head of state and ignore public opinion trends. However, in his public speeches the President (who, in fact, agrees that not all the indicators set out in the national passports of the projects are being implemented to the fullest extent) regularly says that without setting ambitious goals we would not have had those results that we are now proud of *(Insert 3)*.

[29] Unpromising people (editorial). *Ekspert,* 2019, no. 29, July 15-21, p. 11.

[30] Obukhova E., Mavrina L. Survival, but not life. *Ekspert,* 2019, no. 29, July 15-21, p. 18.

[31] Titov experts predicted a recession in 2019. *RBK website*, 2019, August 5. Available at: https://www.rbc.ru/economics/05/08/2019/5d443a6d9a79470cb3c28cbc?utm_source=yxnews&utm_medium=desktop

Insert 3

Russian President Vladimir Putin on the implementation of national projects

Excerpt	Source
“This is the second time we are meeting in this format to discuss issues related to the implementation of the national projects. ***Some results have already been achieved over the four months since our last meeting****. It is important to see that the regions are playing an increasingly active part in this work, enriching the projects with their own programmes. The federal legal base that we need has been practically completed. The national projects have been discussed by the country’s legislators and by the State Council …* *Today we are to carry out a detailed analysis of the first results achieved so far.* ***We need to evaluate what we have managed to do, and also in which areas we regrettably still face problems. I will say from the outset that the problems we face are mostly systemic management issues,*** *along with the general barriers to effective market regulation that you are all aware of.* ***The measures implemented as part of the projects should be an incentive and catalyst for systemic transformation in the sectors concerned, but we have yet to see real structural change take place”.***	V. Putin’s Opening Remarks at Meeting of the Council for Implementation of Priority National Projects, **April 7, 2006**
“We had doubts about how the national projects would go. And the first steps were, indeed, difficult.... Some were afraid that we would be simply doling out money, and that it would go to an unprepared infrastructure and untrained staff, that the government would just waste its money and get no results. I am very glad that this didn’t happen and that the opposite is true. ***Of course, we know and have pointed out that there are problems in the country that are much bigger than those that are addressed by national projects. Moreover, national projects will not help us resolve every problem.*** *As we have said, these are only a catalyst. They are simply a nudge in the right direction, but one that has a number of effects….* *I have already talked about my impressions of the people I’ve met, people who are working on national projects in all areas, and by and large, of course, I was seeing the positive examples.* ***On the whole, these industries have many many problems. We must avoid looking at things through rose-coloured glasses. We need to face the truth. There are still so many problems!*** *And we all need to work hard on all these fronts”.*	V. Putin’s Opening Remarks at the Session of the Council for the Implementation of Priority National Projects and Demographic Policy, **September 13, 2007**
“I am sure that we can and must make effective use of the development targets the state has set and make use of the possibilities we have today to fulfil all of our commitments and promises. Together, we can take new strides forward in making Russia more prosperous and raising the living standards of our people. *I am not going to mention now what we have not yet managed to achieve. We are all well aware of the tasks still before us. Macroeconomic issues continue to be of great importance today”.*	State Council Meeting on Implementation of the President’s 2007 Address to the Russian Federation Federal Assembly, **December 19, 2007**
“Poor government efficiency and corruption are major problems that everyone can see. We will never be able to tackle the challenges facing our society and our nation without quality, modern public administration, and without a high level of personal responsibility of everyone involved in it”.	Presidential Address to the Federal Assembly, **December 12, 2012**
“We have done a lot to implement the 2012 May executive orders. I must say that ***there were several failures, but overall, despite the demanding targets of these orders, without them we would not have had the results we can see today”.***	Presidential Address to the Federal Assembly, **March 1, 2018**
“Unfortunately, and I have to say this openly today, ***we often, not always, but often, see an inert and bureaucratic approach, a desire to shift responsibility to someone else and to postpone meaningful work “for later”.*** *Deadlines for drafting regulations and national project goals are being put off for no reason, literally “at one’s own discretion”.* ***One delay triggers a series of others and the work stalls.***	Meeting of the Council for Strategic Development and National Projects, **May 8, 2019**

Insert 4

Russian President Vladimir Putin on public opinion as a criterion of effectiveness of national projects

Excerpt	Source
"Of course, the people of this country are watching this work very closely and with great interest and are waiting for concrete results – *better quality healthcare and education services, more intensive construction of affordable housing and greater rural development".*	V. Putin's Opening Remarks at Meeting of the Council for Implementation of Priority National Projects, **April 7, 2006**
"And the most important result is not even the amount of equipment that we have bought for the health system, for primary health care. It's not the number of ambulances, although we have fully refitted our ambulance fleet. And it's not grants, like the ones in the education system, or the new equipment ... ***Actually, it seems to me that the most important result is that people believe that the state cares about them"****.*	V. Putin's Opening Remarks at the Session of the Council for the Implementation of Priority National Projects and Demographic Policy, **September 13, 2007**
"… important systemic objectives have been set for the coming years, and our economy's continued growth and increasing competitiveness depend on our ability to reach these objectives, as does the development of a strong social policy ***centred on the population's interests.*** *This is all important for ensuring Russia's lasting status as a world leader…* *Responsibility towards our citizens is not the same thing as what happened some years back when we all made promises, tried to act when the budget was not in balance, ended up driving entire economic sectors into a dead end and then did not know how to extricate ourselves from this situation. Responsibility towards our citizens requires us to carry on* ***an honest dialogue with the public****".*	State Council Meeting on Implementation of the President's 2007 Address to the Russian Federation Federal Assembly, **December 19, 2007**
"The following principles should be the key to the new model of public administration. ***First. All parts of the state mechanism and all levels of government must be oriented towards a result that is measurable, transparent and understandable to the public"****.*	Presidential Address to the Federal Assembly, **December 12, 2012**
"Everything hinges on efforts to preserve the people of Russia and to guarantee the prosperity of our citizens We must achieve a decisive breakthrough in this area.… ***What should be our priority? Let me reiterate that I believe that the main, key development factor is the well-being of the people and the prosperity of Russian families".***	Presidential Address to the Federal Assembly, **March 1, 2018**
"Very soon, this year people should feel real changes for the better. It is on the basis of their opinion and assessments at the beginning of next year that we will evaluate the first results of our work on the national projects. *And we will draw the appropriate conclusions about the work quality and performance at all levels of executive power".*	Presidential Address to Federal Assembly, **February 20, 2019**
Source: official website of the President of the Russian Federation. Available at: http://www.kremlin.ru	

The initial message of the head of state, therefore, comes from the fact that it is important not so much to achieve the goals of national projects, but to ensure a **stable and, most importantly, really tangible dynamics of growth in the standard of living and quality of life for the general population.** V. Putin noted at one of the meetings on the implementation of national projects: "People are not interested in abstract promises... **The result is what matters for people, here and now, not in some distant future. In any case, people should see that the process is underway, that it is positive and leads to these results"**[32]. Moreover, to assess the effect of the implementation of national projects, in the end, mst be perceived by those for whom they are created – Russians themselves. In V. Putin's Address to the Federal Assembly of the Russian Federation in 2019, this idea sounded particularly clear, but it was also not the first time that he voiced it *(Insert 4)*.

This approach, which is based on the priority realization of national interests not only in foreign but also in domestic policy, cannot but be supported. However, real practice shows that the ruling elites do not share it.

"Around Putin in twenty years, a circle of devotees he personally trusted has been formed, but there are no signs of a circle of like-minded people who share a single ideology, whose thinking abilities are not reduced to the tasks of annual budget and short-term objectives, but who have a vision of what the future of Russia in ten or fifty years should be. There are no futurologists, no real ideologists, and no social designers among V. Putin's closest associates. Trying to look beyond the horizon of two or three years is considered bad manners. Therefore, so far, a global mobilization Development project has not been launched, and not a single one of the declared national projects has been properly executed"[33].

> The level of trust in Vladimir Putin according to VTsIOM is 70–73% in 2019. For comparison, the level of trust in Dmitry Medvedev and Vladimir Zhirinovsky is 34–37%, Gennady Zyuganov – 30–34%; Sergey Mironov – 27–29%[34].

As a result, national interests remain only at the level of goal setting and public speeches of V. Putin himself. And therefore, it is for a reason that Russian society "trusts only the President"[35] in the entire political system of our country. **But the objectively difficult economic and demographic situation in the country, the need to address key problems of people's concern (associated primarily with a high level of social inequality, poverty, inefficiency of "social elevators", etc.), a stable level of social tension in society – all this remains acutely relevant and represents a real threat to national security.**

Thus, we cannot but agree with experts who draw attention to the fact that in order to establish new and effective mechanisms in the system of public administration, the rotation of elites is necessary; and therefore, the main task for the President today (because only he really has the opportunity to implement it) is to make this process as manageable as possible and focused on the implementation of national interests. It is important not to allow the rotation of elites to be spontaneous (as it is now), because in this case it becomes a struggle for the political future of various groups and players. According to experts, "being in the grip of pre-transit

[32] Meeting of the Council for Strategic Development and National Projects, May 8, 2019. Available at: http://www.kremlin.ru/events/president/news/60485

[33] Shurygin V. Liberal ghouls and the crisis of the power. *Gazeta "Zavtra"*, 2019, no. 32. Available at: http://zavtra.ru/blogs/liberal-upiri_i_krizis_vlasti

[34] VTsIOM database. Available at: https://wciom.ru/news/ratings/doverie_politikam_1/

[35] Surkov V. Putin's long state. *Nezavisimaya Gazeta*, 2019, February 11. Available at: http://www.ng.ru/ideas/2019-02-11/5_7503_surkov.html

turbulence and the need to show economic growth, the Russian elite is doomed to generate new ideas and reforms. This does not mean that a significant part of them can be implemented, because **some authors do not have enough motivation, others – resources. But everyone has to be dynamic and visible to stay in the game and qualify for career lifts"[36].**

Thus, society does not really participate in the rotation of elites and therefore has no opportunity to ensure that national interests occupy a priority place in the motives and priorities of their activities. In these conditions society that has changed in the post-Soviet period can "react" in two ways: it can either "withdraw" and estrange itself from the issues of national development and focus on achieving individual success (what we are seeing now in the form of the increased layer of "self-sufficient" Russians who take responsibility for themselves, but at the same time, easily cross the line of moral standards and are unable "to succeed without abandoning moral landmarks"[37]); or it can radically change itself and increase the degree of its demands to the authorities. Both options pose serious threats to the Russian statehood, and it is unknown which one is better. Because in the first case we are talking about the loss of the national character of key development issues (in particular, such as the education of the individual, citizen, patriotism and national identity), and in the second case there is a high probability of sharp actualization of social upheavals, including irreversible ones, comparable to the events of 1991.

Indeed, the President has almost no "time for a sluggish start" in solving the problem of effective transition of the political system to a new political cycle. Not only because the period of 2018–2024 is his last (according to the current Constitution of the Russian Federation) presidential term. But also because the moral degradation of society emasculates the potential administration corps of the future, makes it simply unfit to govern the country.

> **For 50 years in general, the whole society has deteriorated markedly, and there is simply nowhere to choose smart leaders...** The degradation of society began in the late Soviet period and continues now. No efforts of the Communist Party and its successor elite could stop the process of global stupefaction of the population living in an atmosphere of global mass culture and consumer values. No reform of the education system can replace the environment in which modern man is formed both in the West and in Russia. And the fact that new education systems are worse than previous ones is also a consequence of the fact that they are created by already degraded products of society.
>
> It is also wrong to reduce the degradation of education only to a conspiracy of the world elite – **this elite itself has become significantly stupid over the past half century. It is no longer able to save itself from disaster, and it floats at the will of the waves, like a cork or some other substance. The problem of rotation of elites is not that the old ones do not let the new ones in, but that the new ones do not physically exist. And what exists is even worse than what is in power now...[38]**

In early 2018, Vladimir Putin announced his intentions for the next six years: "We need to take long overdue, difficult, but extremely necessary decisions"[39]. However, so far, the problems of the effectiveness of public administration and the dynamic growth of the standard of living and quality of life remain

[36] Skorobogatyi P. Healthy evolution of the policy. *Ekspert,* 2019, no. 30, p. 46.

[37] Gorshkov M.K., Sedova N.N. Self-sufficient Russians and their life priorities. *Sotsis,* 2015, no. 12, pp. 4–16.

[38] Khaldey A. The Era of Putin. *Gazeta "Zavtra",* 2019, August 3. Available at: http://zavtra.ru/blogs/epoha_putina

[39] Presidential Address to the Federal Assembly, March 1, 2018. *Official website of the President of the Russian Federation*. Available at: http://www.kremlin.ru/events/president/news/56957

relevant. The time factor works against the head of state, every month and year it tightens the knot of public impatience and discontent with the state of affairs in the country, with how the government communicates with the people (especially at the local level), what steps the Government is taking to implement the goals of national development.

The future of national projects (as well as the preservation of the Russian statehood in general, finding a solution to key internal and external tasks) will depend on how the President will be able to overcome the formal and "stencil" approach with which his instructions are executed by representatives of the bureaucracy at the federal and regional levels. Without a vigorous rotation of the elites, based on the principles of high professional competence and service to the national interests, the problems of effective public administration are unlikely to be solved. From this point of view, there is a high probability of continuation of the sluggish political and economic situation in the country, that is, the conditions that contradict the strategic goals of national development announced by V. Putin in his Address to the Federal Assembly in 2018, and the conditions that are not able to ensure the successful shift of society and power to the new political cycle of 2024.

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Regional Public Debt: Trends and Formation Specifics

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Abstract. The paper shows that current problems in the Russian economy are largely internal; external factors only multiply them. A significant reason for the emergence of regional public debt in modern Russia lies in the instability of the main types of budget revenues amid growing expenditure obligations. Their growth was significantly dominated by the directives of the federal center, including the first and second editions of the President's May Decrees, which are, as a rule, only partially supported with transfers from the federal budget or not supported with them at all. At the same time, the structure of regional budgets has been experiencing a continuous increase in the share of mandatory social expenditures and a continuous decrease in the share of capital investments. We show that in these conditions constituent entities of Russia borrow funds to address social issues rather than to stimulate regional investment development. The "residual" principle of financing the social sphere is replaced by the "residual" principle of financing the regional economic sphere of production development and regional infrastructure. It is empirically established that the investment activity of regional authorities involves intensification of debt

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activity. Having compared the volume and dynamics of debt obligations of Russia's constituent entities with the provision of expenditures with budget revenues we see that the rapid growth of debt obligations of the authorities of Russia's constituent entities and the increase in the debt burden on sub-federal budgets pose an actual threat to the stability of territorial budget systems and economic security of regions and the state. We show that territorial convergence of regional public debt in the context of federal districts hides the territorial divergence of regional debt that has increased under the load of obligations to implement the May Decrees and under the lingering and extremely high differentiation of regional budget revenues.

Key words: regional public debt, debt burden, investments, social obligations, budget transfers, drift of economic and social obligations, economic security.

Introduction

The fundamental change in Russian economic and social trends, which occurred at the turn of the first and second decades of the 21st century, touched almost all components of national socio-economic dynamics. The displacement of positive trends by negative ones is manifested mostly in the decrease in investment activity [1], slowdown in people's income growth, negative growth of people's incomes, and changes in the nature of consumer behavior [2], general stagnation, reduction in aggregate demand and the subsequent decline in growth rates until the emergence of negative values in 2015–2016.

Attempts to link the reversal of trends with external economic and political shocks seem unconvincing. The decline in aggregate demand, the decline in investment activity, and the slowdown in income growth began at a time when world oil prices were still high, and not only the Russian but also the world economy started to recover (see, for example, [3]). Moreover, economic stagnation continued after the end of the period of falling oil prices, recovery of the federal budget surplus, resumption of growth of international reserves and overcoming the banking crisis. This indicates the presence of fundamental internal reasons for the changes in socio-economic trends in Russia.

One of the manifestations of the reversal of development trends and stabilization of negative expectations of both investors and households consists in the continuing growth of public debt, which reflects the increasing gap in the revenue potential of the federal budget on the one hand, and expenditure obligations in the social and investment spheres (including military spending, spending on internal security and the maintenance of an expanding administrative and bureaucratic apparatus) on the other hand. For the period from 2011 to 2019, total (external and internal) public debt of the Russian Federation increased from 5.2 to 13.2 trillion rubles, or in 2.5 times in current prices and taking into account the official exchange rate of the ruble. At the same time, internal debt increased from 4.1 to 10 trillion rugles (in 2.4 times), and external debt increased from 35.8 to 51.3 billion US dollars (in 1.4 times)[1]. The increase in federal internal debt in 2011–2019 amounted to 5.9 trillion rubles given the total deficit of the federal budget for this period amounting to 3.4 trillion rubles.

Since the mid-2000s, Russia has returned to the practice of the 1990s: it transfers the responsibility for maintaining economic growth

[1] Calculated with the use of [4]; Available at: https://www.minfin.ru/common/upload/library/2019/06/main/STR_WEB_2019.xlsx (accessed: 6.07.2019); https://www.minfin.ru/ru/perfomance/public_debt/internal/ (accessed: 6.07.2019).

to the regional level and finances the growing spending powers that are not backed with adequate revenue items [5]. This led to an increase in the federal public debt and debt obligations at the regional and municipal levels. It is due to the fact that a significant part of responsibility for the implementation of social standards was transfered to regional budgets; besides, the regions were forced to intensify their investment activities.

The state of affairs in regional finance is exacerbated by the fact that since the 1990s there is a lingering problem of scarcity of resources of regional authorities to finance economic and social development in their regions; and this problem has recently manifested itself in the form of proposals for the implementation of the "model budgets" system. Presented as a way to improve the system of intergovernmental transfers, this idea actually provokes the further "divergence" of the regions in terms of their own revenue security and in general in terms of socio-economic development [6].

The present paper considers issues related to regional public debt, which becomes not only one of the challenges of spatial economic equilibrium, but also an important factor in Russia's acieving its socio-economic development goals, given the more and more prominent shift of the center of gravity of the overall economic and social development of the Russian Federation toward the regional level; in particular, the evidence to this fact can be found in the Strategy for Spatial Development of the Russian Federation until 2025, which was adopted this year[2].

[2] Strategy for Spatial Development of the Russian Federation until 2025: approved by the Resolution of the Government of the Russian Federation of February 13, 2019 No. 207-R. Available at: http://static.government.ru/media/files/UVAlqUtT08o60RktoOXl22JjAe7irNxc.pdf (accessed: 6.03.2019).

Public debt: emergence of the theory and political implications

Naturally, the institution of public debt is present not only in Russia; it is considered an integral form of existence and development of the state fiscal system. The problem of formation and development of this institution is covered in extensive scientific and journalistic literature, which should also be taken into account, given the impact of public debt on all aspects of economic and social life (see for example, [7–11]). At the same time, assessments of the content and practical consequences of the formation of public debt have undergone significant changes in a relatively short period of time. From the initially negative attitude of economic science and society of different countries toward national debt and state loan, over time this attitude drifted more toward the "acceptable standard" in full accordance with the Overton Window – an approach, in which the attitude to any phenomenon, event, or theory is gradually changing from negative to extremely loyal, and is later perceived as the norm[3].

Public debts historically arose as a result of non-performance of monetary obligations on the part of the authorities, due to non-payment of salaries, specificed amounts of money to suppliers, etc.; so the very existence of debt was a sign of economic insolvency arising from extreme inability to conduct business affairs or from inappropriate wastefulness. Public debt was perceived as the government's desire to get "easy" money instead of working to save it.

The economic theory and practice have been critical of the very idea and implications of public debt formation from the very beginning of industrial capitalism until the 1930s.

[3] The Overton Window. Available at: https://www.mackinac.org/OvertonWindow#visual (accessed: 6.03.2019).

A. Smith stated: "The progress of the enormous debts which at present oppress, and will in the long-run probably ruin, all the great nations of Europe has been pretty uniform. Nations ... have generally begun to borrow upon what may be called personal credit, without assigning or mortgaging any particular fund for the payment of the debt; and when this resource has failed them, they have gone on to borrow upon assignments or mortgages of particular funds" [12, p. 651]. Sharply negative assessment of the national debt in connection with the peculiarities of its repayment and the impact on economic behavior gave and D. Ricardo pointed out that "no sinking fund can be efficient for the purpose of diminishing the debt, if it be not derived from the excess of the public revenue over the public expenditure" [13, p. 206], and the system of borrowing "tends to make us less thrifty – to blind us to our real situation" [13, p. 205].

S.Yu.Witte considered it unacceptable that a state debt be formed in the framework of a functioning economy: "When the state embarks on a path of taking loans, it immediately affects its further solvency and discredits the whole range of its previous debt obligations, for the credibility of payments rests upon a good financial situation in the country" [14]. According to Witte, state loan can be taken only in emergency circumstances as a temporary measure to cover the deficit.

The First World War led to a radical revision of the role of the state in the economy by shifting the vector of public perception of public debt to the point of it being "acceptable". But the Great Depression of the 1930s made the most significant adjustments to the estimates of government borrowing: the arguments of Bodin, Petty, Stewart, Pinto, and A. Hamilton in the perception of government borrowing became more popular (see [15]); in addition, public opinion on state loans shifted to the second stage of the Overton Window – from "unthinkable" to "radical".

The theory of J.M. Keynes made the final revolution, if not in the theoretical postulates regarding public debt, then certainly in the minds of a large part of politicians, because it explained the ability of public debt to stimulate economic growth. Keynes advocated the policy of deficit financing, as it helped invest additional funds in the development of new production and stimulate consumption growth. The idea of increasing public debt was made popular thanks to Keynes' arguments and explanations according to which unproductive spending financed by government loans could enrich society. Some theorists and the vast majority of politicians and financiers reacted positively to those of Keyness ideas that prove that the costs financed by loans and, accordingly the increase in the debt of state and local authorities are beneficial to the expansion of investment and increasing the propensity to consume [16, p. 195].

The new view on the nature of public debt proposed by Keynes became popular and for a long time it served as an excuse and even an incentive for active government borrowing. In the early 1970s, the International Monetary Fund officially recognized the normal 3% (of GDP) level of the deficit, which is directly related to the growth of public debt. After that the existence of public debt was perceived as the "norm" by the public consciousness. By the end of the 1970s, largely as a result of debt policy, problems with inflation and unemployment aggravated in many countries (especially in the United States); such a situation significantly undermined the dominance of the "Keynesian era" and accelerated a transition to neoclassical economic policies. Nevertheless, the position of public debt as one of the most important instruments of public economic policy remained unshakable.

Despite the fact that the end of the 20th and the first decade of the 21st century clearly showed that public debt in the context of globalization of financial markets turned into one of the most powerful drivers of financial and economic crises of national (USA, UK, Mexico, Russia, Greece, Republic of Korea, etc.), global and sub-global scale (1997–1998, 2007–2008), this instrument of economic policy has virtually no alternatives. Probably, this is why decision makers in practical financial and economic policy are reluctant to question the claims about the positive impact of public debt on economic growth, although debt-servicing costs have always been seen by economists as counterproductive and forming a "debt trap" into which all debt-burdened states, as well as most of their regions, are drawn.

In 2018, public debt exceeded 40% of GDP in more than 120 countries and 80% in 38 countries[4]. At present, Russia's public debt in accordance with short-term forecasts mostly falls within the intervals of relative security in terms of macroeconomic stability *(Tab. 1)*, but at the same time there is a tendency toward increasing the debt burden.

As can be seen, public debt in Russia is characterized as stable. This is largely due to the low share of external debt in its total volume. However, in this case we do not mean the entire external debt of the state, but only the part of it that is associated with the borrowing of the state itself (without regional borrowing) and the Central Bank *(Tab. 2)*. No doubt, the total amount of external debt is much larger due to the obligations of the private sector and public commercial structures.

The "chronically positive" balance of payments, even in the context of another economic downturn, which began in 2014 under the influence of external financial and political shocks that were superimposed on the negative investment and consumer trends in the domestic market, led to a gradual decrease in the level of total external debt (denominated in foreign currency). At the same time, federal budget, having the same "chronical deficit" until 2018 caused an increase in domestic debt denominated in rubles; moreover, there was an increase in foreign debt in ruble terms due to the devaluation of the national currency.

In general, Russia's public debt is steadily increasing; and in recent years, in order to cover budget deficits, there has been a transition in government borrowing from the external to internal market. In general, the increase in the

Table 1. Indicators of public debt stability in Russia, %

Indicator	2016	2018	2019 (estimate)	2021 (forecast)	Threshold value
Russia's public debt, % of GDP	12.9	13.6	14.9	16.5	<50
Proportion of internal debt in its total volume	72.0	71.4	73.8	77.1	>50
Proportion of public debt servicing expenses in total federal budget expenditures	3.8	4.7	4.7	5.8	<10
Ratio of the annual amount of payments for the repayment and servicing of public debt to federal budget revenues	9.2	8.0	9.9	10.1	<10
Ratio of annual amount of payments for the repayment and servicing of external public debt to the annual volume of exports of goods and services	1.4	1.4	2.1	0.7	<25
Source: Public debt in the world and in Russia – a problem or a necessity? Available at: https://www.finam.ru/analysis/forecasts/gosudarstvennyiy-dolg-v-stranax-mira-i-v-rossii-problema-ili-neobxodimost-20190319-14090/ (accessed: 11.07.2019).					

[4] Public debt in the world and in Russia – a problem or a necessity? Available at: https://www.finam.ru/analysis/forecasts/gosudarstvennyiy-dolg-v-stranax-mira-i-v-rossii-problema-ili-neobxodimost-20190319-14090/ (accessed: 11.07.2019).

Table 2. Size and dynamics of Russia's public debt

Year	Balance of payments, billion USD	Federal budget balance, billion RUB	External debt, billion USD/billion RUB		Internal debt, billion RUB (at the end of the year)	Total public debt, billion RUB
			total	Government and Central Bank		
2013	33.0	-323	636.4	77.0/2464	4998	7462
2014	15.5	-375	727.1	54.4/2611	5722	8333
2015	67.5	-1962	599.5	50.0/3350	7241	10591
2016	23.7	-2956	518.5	51.2/3328	7307	10635
2017	32.2	-1331	511.7	49.8/3237	8003	11240
2018	112.3	2741	518.9	48.6/3110	9137	12247
2019*	33.7	1885	453.7	50.7/3194	10029**	13223**

* Estimate.

** As of July 1, 2019.

Sources: calculated with the use of: Internal public debt of the Russian Federation. Available at: https://www.minfin.ru/ru/perfomance/public_debt/internal/ (accessed: 6.07.2019); Statistics: Russia's foreign debt. Available at: https://ruxpert.ru / Статистика:Внешний_долг_России (accessed: 6.07.2019); Public debt of the Russian Federation. Available at: http://budget.gov.ru/epbs/faces/p/Бюджет/Государственный%20долг?_adf.ctrl-state=9hjzhdzsv_4&regionId=45 (accessed: 6.07.2019); External debt of the Russian Federation (analytical presentation). Available at: https://cbr.ru/statistics/print.aspx?file=credit_statistics/debt_an_new.htm (accessed: 6.07.2019); The volume of internal public debt of the Russian Federation. Available at: /https://www.minfin.ru/ru/perfomance/public_debt/internal/structure/total/printable.php?id_38=20965&print_38=1&area_id=38&page_id=842&popup=Y (accessed – 6.07.2019); https://www.minfin.ru/common/upload/library/2019/06/main/STR_WEB_2019.xlsx (accessed: 6.07.2019).

amount of public debt, of course, is directly dependent on the ratio of the rate of growth of budget revenues to the rate of increase in budget spending. The former is determined by the growth rate of the economy and the "tax liquidity" of the economic structure; the latter depends on the level of social expectations and the degree of nationalization of the economy. Obviously, this is why internal public debt continued growing in 2018–2019, despite the change in the sign of the balance of revenues and expenditures from negative to positive.

Regional public debt

The main part of the regional public debt is formed at the level of Russia's constituent entities, whose debt accounts for more than 85% of the total consolidated debt of the regions, and is mainly associated with budget deficit, which have become chronic for a significant number of regions. Budget deficits were formed as a result of instability of the main types of budget revenues, the amount of which depends significantly on the general economic dynamics in a particular subject of the Russian Federation. Instability and slowing income growth amid the consequences of the 2009 crisis and the subsequent stagnation of the economy were superimposed on a stable increase in the expenditure part of regional budgets, including those generated by the directives of the federal center to implement the first and second editions of the "May Decrees" of the President. The conflict between the instability of income growth and the monotonous growth of spending has led to the "emissions" of regional public debts in certain periods of time, when spending at the regional level needs to be increased, and the adjustment at the federal level has not been made yet.

Therefore, in general, for the period of 2008–2018, the ratio of federal and regional public debt looks favorable for the latter. On average, the growth rate of regional debt is much lower than the growth rate of federal debt. During this period, the size of federal public debt increased sevenfold, and the value of consolidated regional public debt – 3.7-fold *(Tab. 3)*. At the same time, if in 2008 consolidated regional debt was 49.2% of the level of federal debt, then by the beginning of 2019 this share was 26.2%.

Table 3. Regional public debt (as of December 1 of the corresponding year, billion rubles)

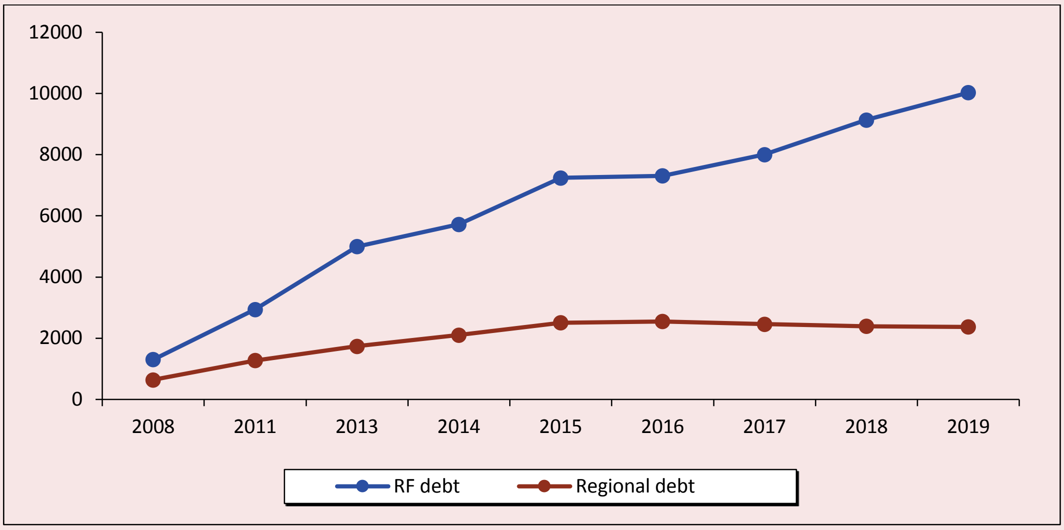
Indicator	2008	2011	2013	2014	2015	2016	2017	2018
Provision of expenses with own revenues of the consolidated budget of the subject of the Russian Federation, %	87.7	77.4	77.2	75.5	77.4	81.1	84.0	83.8
Russia's internal public debt	1301	2940	4998	5722	7241	7307	8003	9137
Consolidated regional debt	640	1272	1740	2104	2509	2548	2458	2394
Including:								
debt of RF subjects	535	1072	1491	1822	2191	2208	2142	2055
municipal debt	105	198	249	282	318	340	343	339
debt burden of the federal budget	14.0	25.9	38.2	39.5	53.0	54.3	53.0	46.9
Debt burden of the budgets of RF subjects	10.3	20.0	33.0	35.4	36.5	33.8	30.5	25.3

Calculated with the use of the following sources: Revenues of the Federal budget of the Russian Federation. Available at: https://www.minfin.ru/ru/statistics/fedbud/?id_65=80041&page_id=3847&popup=Y&area_id=65 (accessed: 13.07.2019); Regions of Russia. Socio-economic indicators, 2018; The volume of public debt of the subjects of the Russian Federation and the debt of municipalities. Available at: https://www.minfin.ru/ru/perfomance/public_debt/subdbt (accessed: 25.06.2019); Regions of Russia. Socio-economic indicators – 2008. Available at: http://www.gks.ru/bgd/regl/B09_14p/IssWWW.exe/Stg/d3/23-02-2.htm (accessed: 14.07.2019).
Note. Debt burden is the ratio of public debt to tax and non-tax revenues of the budget in the reporting year, excluding gratuitous receipts.

On average, debt burden at the regional level has decreased over the past decade, while it has grown at the federal level (see Tab. 3, *Fig. 1*). In general, this is contrary to a widespread thesis about the "exploitation" of RF subjects by the federal center, which transfers social obligations and a significant part of state investment costs to the regions. On the contrary, as evidenced by the comparative dynamics, the growth of regional debt and the debt burden on regional budgets after 2015 began to decline with a corresponding increase in these parameters for the federal debt.

However, the well-being of the average picture hides two substantive problems. First, it is the above-mentioned asynchrony in the time of growth of regional spending on the implementation of federal standards and

Figure 1. Dynamics of public debt in Russia, billion rubles



Built according to the data from Table 3.

regulations on the one hand, and federal compensation for this increase, including due to the increase in the size of federal public debt, on the other hand. This asynchrony generates "debt impulses" in the regions, which form the growth of regional debt.

Second, the degree of differentiation of the size and quality of public debt in the context of regions is extremely high. In general, the level of debt burden (ratio of public debt to tax and non-tax revenues of the budget) remains high, and in some regions the amount of debt is comparable to or even exceeds the amount of own revenues of regional budgets *(Tab. 4)*. In 2010–2018, only one or two subjects of the Russian Federation had no debt obligations[5]. In 2010, the level of debt burden in the range of 0.01–50% was observed in 58 RF subjects, 50.01–100% – in 22 regions, and it exceeded the limit rate of 100% only in two subjects (the Republic of North Ossetia–Alania and the Republic of Mordovia). In 2015, the situation worsened: the number of regions falling in the range of 0.01–50% decreased more than twice (to 26 subjects) while the number of regions in the range of 50.01–100% (43 subjects of the Russian Federation) almost doubled. The number of RF subjects that violated the budget legislation, i.e. those where the debt burden exceeded 100%, reached fourteen[6]. At the same time, during the period under review there was an increase in the average debt load for the subjects of the Russian Federation to 36.5% and the maximum regional debt load increased from 125.5% in 2010 to 182.5% in 2015 (in both cases we are talking about the Republic of Mordovia).

An impprtant event took place in 2016–2018: twelve RF subjects left the critical zone, in which the debt burden exceeds 100%; moreover, average debt burden in RF subjects decreased to 25.3%, which is almost comparable with the level of 2012. At that, debt burden remains 50–100% in nearly half of the regions

Table 4. Grouping of RF subjects according to the level of public debt burden in 2010–2018

Indicator	2010	2011	2012	2013	2014	2015	2016	2017	2018
Number of RF subjects	83	83	83	83	83	85	85	85	85
Percentage of RF subjects with debt burden among them:									
0.0 (no debt)	1	1	1	1	2	2	2	2	2
0.01–10.0	13	12	10	7	4	7	7	7	12
10.01–25.0	18	16	14	8	7	5	6	10	7
25.01–50.0	27	31	25	23	15	14	16	19	22
50.01–75.0	17	12	21	21	26	20	21	21	24
75.01–100.0	5	9	10	16	19	23	25	19	16
More than 100.01	2	2	2	7	10	14	8	7	2
Average debt burden, broken down by RF subjects, %	21.8	20.0	26.1	33.0	35.4	36.5	33.8	30.5	25.3
Maximum debt burden, broken down by RF subjects, %	125.5	175.2	179.7	172.1	144.4	182.5	176.0	225.7	236.9
Calculated with the use of: The volume of public debt of the subjects of the Russian Federation and the debt of municipalities. Available at: https://www.minfin.ru/ru/perfomance/public_debt/subdbt (accessed: 14.07.2019); Information on the execution of the consolidated budget of the subject of the Russian Federation and the budget of the territorial state extra-budgetary fund. Available at: https://roskazna.ru/ispolnenie-byudzhetov/konsolidirovannye-byudzhety-subektov/ (accessed: 14.07.2019).									

[5] Yamalo-Nenets Autonomous Okrug had no regional public debt in 2010, Nenets Autonomous Okrug in 2011–2013, Nenets Autonomous Okrug and the Sakhalin Oblast – in 2014, the Sakhalin Oblast and Sevastopol – in 2015–2018.

[6] It can be assumed that the actual number of such regions significantly exceeded the fixed number (14), since, according to the budget legislation, the debt burden should not be higher than 50% for highly subsidized regions.

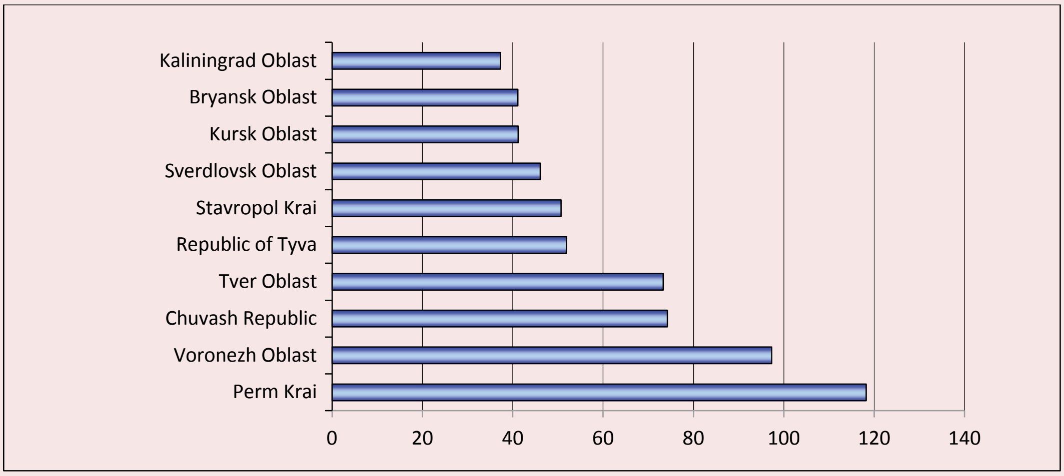
(40 of 85 RF subjects); as for the Republic of Mordovia, it remains a leader according to the dept indicator, and the amount of its debt burden is 236.9% (it is the lowest indicator by the end of 2018) despite the introduction of “direct external control”[7].

The low level of debt burden, when public debt is less than 10% of the tax and non-tax revenues of the budget, was observed in less than 13 RF subjects during 2010–2018. Although the mere fact of RF subject’s exceeding the threshold budget standard of debt burden at the beginning of the financial year does not indicate the verge of bankruptcy, because it is necessary to take into account the time structure of the debt, specifics of debt payments schedule and the possibilities of the regional budget, but regular borrowing to cover the costs and to finance the budget deficit before the new year makes the process of stabilizing the financial situation more difficult for many regions. For example, in December 2018, the total debt load of RF constituent entities grew by 7.4% due to the fact that the 36 regions have been active in raising new debt funds; moreover, 10 leading regions had the rate of growth of public debt in the range from 40 to 120% *(Fig. 2)*.

A slight decrease in the growth rate of both public and municipal debt in 2016–2018 is due to a number of economic and political reasons.

First, we can assume that in the context of financial instability, regional governments are beginning to save more and consider credit risks more carefully. Second, for the budgets of RF subjects, the year 2018 was the most prosperous in comparison with previous years, which was due to the increase in prices for export resources and the provision of federal financial support in connection with the presidential election. Revenues of consolidated budgets increased relative to 2017 by 15% due to an increase in

Figure 2. Growth rate of public debt in December 2018, %



Source: National Rating Agency (www.ra-national.ru).

[7] In 2018, the federal center conducted an experiment. Three regions with the highest debt burden (the Republic of Mordovia, Kostroma region and the Republic of Khakassia) were transferred to Treasury support, which actually meant strict external control over regional budget policy by the Ministry of Finance and the Federal Treasury. The Kostroma Oblast and Khakassia managed to reduce the total amount of public debt by 7 and 11.2%, respectively; as for the debt crisis in Mordovia, it still cannot be overcome. The national debt of the Republic increased by 12.5% during the year, while the share of commercial loans increased from 39.6 to 49.5% during the same period (see the website of the National Rating Agency www.ra-national.ru).

profit tax revenues (by 23%) and gratuitous revenues from the federal budget (by 22%)[8]. The increase in transfers in 2018 was the most significant over the last decade (even in the year of the previous presidential election, it was only 12%). The regions received the maximum transfer supplement in the fourth quarter, which is probably due to a decrease in the ratings of the authorities in the second half of 2018 and the governors' elections in a number of regions in September. Thanks to the increase in 2018 transfers by 22% and in own revenues by 14%, only 15 RF subjects ended the year with a budget deficit (there were 47 such regions in 2017). The most significant budget deficits were recorded in the Republic of Mordovia (17% of revenues), Khabarovsk Krai (8%), in the Moscow and Sakhalin[9] oblasts and in the Jewish Autonomous Oblast (5%).

Despite the overall growth of budget revenues in 2018 by 15%, consolidated regional debt decreased by only 3.9%. Debt burden was reduced in 57 RF subjects and most significantly – in the least problematic regions. There was a significant increase in debt burden in the regions with budget deficits: in the Moscow Oblast (by 32.4%), Khabarovsk Krai (by 19.4%), and in the Republic of Mordovia (by 13%).

At the same time, the share of mandatory social expenditures in the structure of regional budgets is constantly increasing and the share of capital investments is decreasing. The social orientation of regional budget expenditures is a global trend [17; 18], but the overall minimization of the investment component of budgets is a trend directly opposite to the formation of economic prerequisites for strategic planning practice. In other words, regions borrow not to stimulate investment development, but to address social issues, and they focus not on the development strategy, but on the survival strategy. The "residual" principle of financing the social sphere is replaced by the "residual" principle of financing the regional economic sphere, the development of production and regional infrastructure.

One of the consequences of the formation of debt dependence of regions is the transformation of the concept of "criterion of the effectiveness of debt policy'. Theoretically, the purpose of the regional debt policy is to establish and maintain the mechanism for emergency (debt) financing of socio-economic development; that is, the policy itself should be conservative and aimed at reducing debt obligations. It is provided by the establishment (existence) of an advanced socio-economic economic system in the region, ensuring the sustainability of territorial-budget system in the absence of gratuitous receipts from the federal budget. It means that the creation (development) of such a system is carried out on the basis of financial borrowing. In reality, the debt policy (which is usually conducted as a forced measure) carried out in the regions leads to an increase in debt obligations, an increase in the debt burden on the budget and in the cost of debt servicing and repayment, as it is aimed at fulfilling certain social obligations. As a result, the regions begin to consider such a policy effective.

Structure of the state debt in RF constituent entities

Let us consider the changes in the structure of public debt in the context of components of public debt and in the context of federal districts and subjects of the Russian Federation.

[8] Information on the execution of consolidated budgets of subjects of the Russian Federation as of January 1, 2019. Available at: http://www.minfin.ru/ru/perfomance/regions/monitoring_results/analysis/

[9] The budget of the Sakhalin Oblast suffered significant losses of revenues due to the fact that most part of tax revenues from the project "Sakhalin-2" was transferred to the federal budget and was not compensated by the increase in transfers by 17.9 billion rubles in 2018 (over 11% of total revenues of the oblast) (see [2, p. 55]).

The structure of components of the state debt of RF subjects has not changed significantly for the ten-year period *(Tab. 5)*. The most significant sources of financing the deficit of regional budgets are direct government borrowings of RF subjects in the form of bonds of domestic government loans and credit resources. However, in different periods there were changes in the ratio of these components, which can be arranged in the following sequence according to the degree of preference and the costs of their servicing: government guarantees, budget loans, securities (bonds), and bank loans.

Responding to the increasing complexity of the macroeconomic situation, in particular the increase in the key rate after 2014, the government increased its participation in the formation of "cheap" debt of regions by increasing the share of budgetary credits (from 19.7% in 2010 to 35–43% in 2016–2019). The share of commercial loans, having passed the peak of 41.6–42.5% in 2015–2016, stopped at 28.8%. The share of securities, which was steadily declining from 2010 (42.4%) to 2016 (18.7%), has grown from 19.4% (2017) to 25% (2019) in the last three years. Other debt instruments, including government guarantees, have become low in demand, and their share has steadily declined from 13.5% (2010) to 3.0% (2019).

The fact that the structure of public debt of constituent entities of the Russian Federation remains quite stable over the last three years, can indicate that in the current macroeconomic situation and the spatial distribution of parameters of financial stability and competitiveness of the subjects of the Russian Federation this structure is the most rational one (and possibly the only rational one), because the ability of regions to raise commercial loans and issue regional securities (bonds) is limited by high cost of these funding sources. Therefore, the program of the Ministry of Finance to substitute bank loans with budgetary loans was a necessary measure to reduce the cost of regional debt, and in essence, to shift regional debt to the federal level, which to some extent explains the fact that the growth rate of federal debt exceeds that of regional debt.

However, the question concerning the possibility of the federal center to adhere to this non-market instrument of borrowing remains open, although for a number of RF subjects the program of providing federal

Table 5. Structure of public debt of RF subjects by types of liabilities, % (at the beginning of the year)

Year	Public debt of RF subjects by types of liabilities				
	Government securities	Loans from credit institutions	Budget loans from other budgets of the budget system of the Russian Federation	State guarantees	Other debt obligations
2010	42.4	24.3	19.7	13.5	0.1
2011	37.2	21.2	31.0	10.6	0.0
2012	29.3	25.6	35.8	9.3	0.1
2013	27.8	32.4	31.5	8.2	0.0
2014	25.9	39.8	27.1	7.2	0.0
2015	21.2	42.5	31.0	5.3	0.0
2016	18.7	41.6	34.9	4.4	0.4
2017	19.4	34.4	42.1	3.8	0.3
2018	23.7	28.8	43.6	3.5	0.4
2019	25.0	28.8	42.6	3.0	0.6
Source: own calculations according to the Ministry of Finance.					

loans to regional budgets remains the only real model for maintaining the stability of their budget systems. For example, budget loans account for up to 100% of the total amount of their debt obligations[10] for the Vladimir Oblast, the republics of Ingushetia and Crimea, Altai Krai, the Kaluga Oblast, and part of Primorsky Krai.

Territorial structure of the debt

After 2010, the regions began sharply increasing their budget spending in connection with the requirements of the federal center to fulfill the "May Decrees" of the President. This led to a significant increase in the debt activity of the regions and, accordingly, an increase in the total amount of regional public debt by 2019 by almost 2.5 times *(Tab. 6)*. At the same time, the highest rates of debt growth were observed in those federal districts, which in 2010 were characterized by the lowest share of total regional debt.

Statistically this is reflected in the "alignment" of federal districts in terms of the share in the national debt by 2019. If in 2010 the maximum amount of debt (Central Federal District) exceeded the amount of minimum debt (North Caucasian Federal District) in 35 times, then by 2019, the gap has narrowed to 6.6 times, although the difference between the maximum and minimum values of the aggregate tax and non-tax revenues remained at two-digit value (24.6 times). And even if we exclude budget revenues for the city of Moscow (which does not actually form the public debt) from the amount of revenues for the Central District, the difference will still be 21.7 times.

Naturally, there is even more differentiation in tax and non-tax revenues of the budgets of RF subjects. Even if we exclude from the calculation the cities of Moscow and Saint Petersburg and the Moscow Oblast, whose income significantly exceeds the income of most of the "rich" regions because they use capital rent and its agglomeration effect, then budget revenues of the richest (Khanty-Mansi National Okrug) and the poorest (Altai Republic) of the Russian Federation subjects differ in 65.6 times. This was shown as a striking

Table 6. Public debt of RF subjects in the context of federal districts (at the beginning of the year)

Federal district	Total debt, billion RUB		Territorial structure of the debt, %		Growth rate of the debt, fold 2019/2010	Tax and non-tax revenues, billion RUB, 2019	Debt burden, %, 2019
	2010	2019	2010	2019			
Central	509.7	493.6	57.2	22.4	0.97	3441.0	14.3
Northwestern	57	213.8	6.4	9.7	3.75	1057.0	20.2
Southern	30.2	253.9	3.4	11.5	8.41	525.4	48.3
North Caucasian	14.6	74.3	1.6	3.4	5.09	139.7	53.2
Volga	149.6	531.6	16.8	24.1	3.55	1162.9	45.7
Ural	27.2	140.8	3.1	6.4	5.18	1026.2	13.8
Siberian	70.8	292.5	7.9	13.3	4.13	749.0	39.0
Far Eastern	31.7	205.9	3.6	9.3	6.50	573.6	35.9
Total	890.8	2206.4	100	100	2.48	8720.8	25.3

Calculated with the use of: The volume of public debt of the subjects of the Russian Federation and the debt of municipalities. Available at: https://www.minfin.ru/ru/perfomance/public_debt/subdbt (accessed: 14.07.2019); Information on the execution of the consolidated budget of the subject of the Russian Federation and the budget of the territorial state extra-budgetary fund. Available at: https://roskazna.ru/ispolnenie-byudzhetov/konsolidirovannye-byudzhety-subektov/ (accessed: 14.07.2019).

[10] For more detail, see: The volume of public debt of the subjects of the Russian Federation and the debt of municipalities. Available at: https://www.minfin.ru/ru/perfomance/public_debt/subdbt (accessed: 14.07.2019)

Table 7. TOP 10 RF constituent entities according to “debt criteria” as of January 1, 2019

RF subjects with the maximum amount of debt	Amount of public debt, billion RUB	Debt burden, %	RF subjects with the maximum debt burden of the budget	Amount of public debt, billion RUB	Debt burden, %
Krasnodar Krai	140.2	66.6	Republic of mordovia	56.2	236.9
Moscow Oblast	128.8	28.1	Kostroma Oblast	20.4	115.2
Krasnoyarsk Krai	103.9	52.3	Pskov Oblast	16.3	92.0
Republic of Tatarstan	95.0	40.4	Smolensk Oblast	29.3	90.4
Nizhny Novgorod Oblast	75.1	55.9	Republic of Khakassia	21.8	90.4
Sverdlovsk Oblast	72.8	32.6	Chukotka Autonomous Okrug	10.4	90.3
Republic of Mordovia	56.2	236.9	Jewish Autonomous Oblast	5.2	89.8
Samara Oblast	54.7	37.5	Kurgan Oblast	16.6	88.3
Volgograd Oblast	51.1	72.7	Udmurt Republic	47.0	85.7
Republic of Sakha-Yakutia	50.6	36.4	Republic of Karachay-Cherkessia	5.3	84.7
Total	828.4	45.0	Total	228.5	108.0

Calculated with the use of: The volume of public debt of the subjects of the Russian Federation and the debt of municipalities. Available at: https://www.minfin.ru/ru/perfomance/public_debt/subdbt (accessed: 14.07.2019); Information on the execution of the consolidated budget of the subject of the Russian Federation and the budget of the territorial state extra-budgetary fund. Available at: https://roskazna.ru/ispolnenie-byudzhetov/konsolidirovannye-byudzhety-subektov/ (accessed: 14.07.2019).

contrast between the concentration of regional debt, on the one hand, and the concentration of debt burden, on the other *(Tab. 7)*.

The main part of regional debt (38%) falls on ten RF subjects, in the budgets of which about 30% of tax and non-tax revenues of all regional budgets are consolidated, except for the budget of the city of Moscow, which allows them to keep the average debt burden at quite an acceptable level (45%). But ten RF constituent entities whose average debt burden is 108%, varying from 85 to 237%, accounted for only 10.5% of the total regional debt, but the total revenues of their budgets account for only 3.3% of tax and non-tax revenues of all regional budgets with the exception of the budget of the city of Moscow.

It is believed [19–21] that an increase in the share of investment spending in the regional budget leads in the long term to an increase in the region’s own revenues and its economic potential. This hypothetically means that debt activities of RF constituent entities are stimulated not only by an increase in spending on social and infrastructure obligations, but also by an increase in investment spending. To check this assumption let us compare official data of the Ministry of Finance of Russia on the largest public debt of RF constituent entities and the data of the National Investment Climate Rating, published annually by the Agency for Strategic Initiatives (hereinafter – the National Rating)[11], which reflects the state of the investment climate and the motivation of regional authorities to adopt policies to improve the investment climate in regions.

Let us compare the debt parameters of a group of eight regions that are consistently on the list of top 15 in terms of the integrated assessment of the investment climate, and seven regions with the lowest integrated assessments given by the National Investment Climate Rating *(Tab. 8)*.

The assumption that the active debt policy pursued by the authorities of RF subjects is closely related to investment policy should be confirmed by the fact that the regions leading in

[11] See: National Regional Investment Climate Ranking. Available at: https://asi.ru/investclimate/rating/ (accessed: 14.07.2019).

Table 8. Public debt of RF subjects (at the beginning of the year), billion rubles

Subject	2010	2012	2015	2018	2019
Regions that are constantly on the list of Top 15 regions according to the National Investment Climate Rating					
Republic of Tatarstan	36.7	80.3	93.2	93.3	95.0
Republic of Chuvashia	8.2	9.0	12.3	14.1	12.9
City of Moscow	243.1	234.1	161.7	34.3	30.0
Tyumen Oblast	0.7	1.4	0.3	1.6	3.6
Kaluga Oblast	11.1	16.3	24.4	30.2	28.7
Tula Oblast	5.5	6.2	15.9	18.7	17.9
Krasnodar Krai	7.0	39.9	136.3	149.1	140.2
Ulyanovsk Oblast	2.1	5.2	17.4	25.1	24.9
Total debt of eight RF subjects	314.4	392.4	461.5	366.4	353.2
Total debt of 83 RF subjects	890.9	1171.8	2089.5	2315.4	2206.3
Debt share of eight RF subjects,%	**35.3**	**33.5**	**22.1**	**15.8**	**16.0**
Regions with the lowest integral estimates of the National Investment Climate Rating					
Republic of North Ossetia-Alania	4.0	6.4	8.6	9.3	9.1
Ryazan Oblast	7.8	15.0	27.1	24.4	22.8
Altai Republic	1.3	1.7	2.0	1.5	1.5
Amur Oblast	3.0	11.6	28.2	27.7	27.4
Zabaikalsky Krai	3.6	5.3	20.0	28.3	27.6
Irkutsk Oblast	9.2	4.5	11.8	18.6	12.3
Republic of Tyva	0.1	0.4	2.0	2.3	2.0
Total debt of seven RF subjects	29.0	44.9	99.7	112.1	102.7
Debt share of seven RF subjects,%	**3.3**	**3.8**	**4.8**	**4.8**	**4.7**

Compiled with the use of the following sources: National Regional Investment Climate Ranking. Available at: https://asi.ru/investclimate/rating/ (accessed: 14.07.2019); The volume of public debt of the subjects of the Russian Federation and the debt of municipalities. Available at: https://www.minfin.ru/ru/perfomance/public_debt/subdbt (accessed: 14.07.2019).

terms of investment climate should have more significant indicators in terms of public debt.

According to Table 8, this assumption is confirmed on the way out of the crisis in 2010. According to the National Rating of Regions, total debt of eight leading regions which were producing 31.1% of GRP of the country, was 314.4 billion rubles, or 35.3% of the regional public debt of Russian regions, and almost 11 times the debt of seven regions with the worst conditions for investment.

However, at the stage of growing social pressures of regional budgets (2012–2015) and the subsequent period of savings, debt policy of regions with the developed investment climate has become more rational, which led to a reduction in the rate of growth of public debt in these groups of regions and to a reduction in the share of the “best” regions in the total value of public debt. By 2019, the share of regions with the best state of the investment climate according to the rating has decreased more than twice – up to 16%.

Consequently, debt policy of regions was closely related to the investment policy they pursued only at the stage of recovery from the crisis of 2008–2010. It was during this period that the investment activity of regional authorities implied the intensification of loan and debt activities with the focus on the growth of regional debt; this can be interpreted as an attempt to financing economic development with the help of borrowing. However, at the stage of growth of social burden of regional budgets (2012–2015) and the subsequent period of savings, the social orientation of regional public debt comes to the fore in the borrowing policy of the regions.

Conclusion

The problem of public debt is more acute for the subjects of the Russian Federation than for the country as a whole; and this is due to both economic and political reasons. In modern Russia there is a discrepancy in the interpretation of the concept of "criterion of the effectiveness of debt policy". If debt policy leads to an increase in debt obligations and debt burden on the budget and raises the costs of debt servicing and repayment, but at the same time is aimed at fulfilling certain social obligations, then in modern Russian conditions, regional authorities begin to interpret such a policy as effective.

The structure of expenditures of budgets of RF subjects in modern conditions meets interests of the current consumption connected with social development of regions. The predominance of unproductive spending hinders the development of the economic potential of the region and prevents its own tax base from increasing. The "residual" principle of financing the social sphere is replaced by the "residual" principle of financing the regional economic sphere, and development of production and regional infrastructure.

The stability of the structure of public debt in RF constituent entities for the last three years shows that the federal center sees the situation as quite acceptable, but it is hardly possible to interpret it as such from the point of view of ensuring debt sustainability of the regions. The question concerning the possibility of the federal center to support this situation in order to reduce the cost of regional debt obligations, even by artificial means (budget loans), remains open.

Territorial convergence of regional public debt in the context of federal districts hides the regional divergence of the debt load, which has increased under the obligations to fulfill the May Decrees and at the lingering unusually high differentiation of regional budget revenues.

It is shown that the active debt policy pursued by the governments of RF subjects consistently included in the Top 15 of the National Rating of Investment Climate is poorly related to their investment policy. More precisely, at the stage of recovery from the crisis of 2008–2010, the investment activity of regional authorities of RF subjects with the best indicators of investment climate actually assumed that the borrowing and debt activity would be boosted and regional debt would increase, which was interpreted as debt financing of economic development. However, the growing social burden on regional budgets (2012–2015) and the subsequent period of the policy of saving resulted in the fact that "advanced" regions have adopted more discreet and rational debt policy.

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Urbanization Processes in the Context of Spatial Development Patterns of Municipalities in the Zone of Influence of Megacities*

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Abstract. In the modern world, urbanization processes have become global and comprehensive. The federal law on regional policy "Fundamentals of the state policy of regional development in the Russian Federation for the period up to 2025" points out that the development of agglomerations is the most important condition for ensuring the competitiveness of the economy of the Russian regions and for providing economic growth and technological breakthrough. It can be stated that the significant role of the development of megacities as drivers of national economic growth is officially declared at the federal level of management of socio-economic development of territories. Due to the presence of various modifications of the organization of the economic space of the global economy in recent years, it becomes relevant to find new directions of scientific fundamental and applied research, the subject of which should be the socio-economic mechanisms of functioning of megacities and urban agglomerations formed on their basis, as well as the study of their impact on the municipal, regional, national and world economy in the context of globalization. In order to achieve a high degree of effectiveness in applying the experience of the United States, Western and Eastern Europe in our country, it is necessary to interpret the results of international activities in a certain context while maintaining the main target parameters. International processes of urbanization in the Russian practice are undergoing significant changes and are implemented in the form of suburbanization, a slightly different interpretation of the Western experience. Some of the results of the analysis of the activity of agglomeration movement in the Russian and international practice show that our country is lagging behind other countries, which is reflected in the presence of an insufficient number of municipalities that are larger and more populous then agglomerations: conurbations and others. We see the most important task of further research in studying the theory of urbanization and the processes of spatial and socio-economic development occurring in the territory of municipalities adjacent to the boundaries of megacities.

Key words: suburbanization, agglomeration, spatial development, municipality, foreign experience, megacity.

Introduction. The theory of urbanization and its practice have significant territorial differences. To a certain extent, there is no generally applicable theory and, moreover, no universal practice. There are several basic theoretical positions that have withstood the test of time. First of all, let us point out the classical, philosophical position that "world-city and province are the two basic ideas of every civilization... In place of a world, there is a city, a point, in which the whole life of broad regions is collecting while the rest dries up" [1]. Spengler's thesis should be recognized as important and very relevant; nevertheless, the forecast is a hundred years old, it is implemented, but in a fairly long historical perspective, in a complex stage. That is why the modern version of such a forecast looks less categorical: "the globalizing world is the world of cities and territories surrounding them" [2]. From our point of view, "surrounding territories" are an indication of the potential and problems of suburbanization. "In our time, during the industrialization and urbanization of economically developed countries, the city has ceased to be the highest and most complex form of organization of joint life of people and began more clearly and more often form an integral part of more complex socio-geographical formations – agglomerations of cities" [3]. We emphasize that it was written in the USSR almost sixty years ago, but it remains relevant today as well.

In order to achieve a high degree of effectiveness in applying the experience of Western countries in Russia, it is necessary to interpret the results of international activities in a certain context while maintaining the main target framework. It is not easy to do, as was noted by an outstanding Russian economic geographer, a specialist in the geography of the United States, and the meaning of his statement was that the international processes of urbanization known to specialists in the Russian practice are undergoing significant changes and are implemented in a slightly different interpretation of Western experience (an example is suburbanization).

In Russia, unlike the West, it is not about moving to the suburbs, but about the garden plots and dachas, which the majority of urban residents have; that is, the second house, not the first and the only one"[4]. The American experience of suburbanization is indeed most interesting, but it is most inapplicable for the post-Soviet space. American practices are ahead of post-Soviet and Baltic practices, at least by one stage. The completion of the stage of "classical" suburbanization (which has lost its relevance in the development of American practice) is considered as the beginning of a completely new period in the urbanization and suburbanization processes in the United States [5]. In fact, the formation of metropolitan areas – a key form of urbanization/suburbanization in the United States is not over, a new stage is coming, the characteristics of which and, moreover, the theoretical understanding of which have not yet taken shape. In these circumstances, one should be extremely careful in borrowing Western experience. This opinion has become sufficiently represented in the literature: enticing aspirations and experiments to correlate evolutionary processes in the suburbs of Russian regions with suburbs in Western countries seem untimely in the present economic and political conditions [6].

Methodology of research on territorial (spatial) development. Modern ideas about the territorial organization of society, as a rule, are reduced to considering it as a model that helps minimize economic costs with maximum social effect. Naturally, the agenda of settlement systems in this case becomes particularly important. This is especially evident in modern conditions, when the concept of "economy" in most cases is associated with urban economy or, in extreme cases, with the economy of suburbanized zones.

The specifics of spatial development theories lies in the fact that they tend to question the validity of a known statement – even with the permutation of the summands, the sum does not change. This question cannot be considered academically new, it has been covered extensively in the works of the Moscow, Leningrad (Saint Petersburg), and Novosibirsk economic schools [7].

In relation to territorial or spatial development (in this article, these concepts are used as synonyms), the rearrangement of economic "summands" in geographical space implies a change in their "sum". It can increase or decrease in comparison with initially set values [8]. In the first case it is necessary to speak about the effect or efficiency of placement, in the second case – about inefficiency [9]. "In countries with a polycentric system of large cities, GDP per capita is also higher, in contrast to countries where the population is concentrated in several megacities. This is probably due to the fact that with the increase in the number of metropolitan areas there is also an increase in the area of the surrounding territories, which benefit from the proximity to the urban economy" [10]. Blair Ruble, a well-known expert on American and Soviet urbanization, also wrote about this: in his opinion, the city (as an administrative unit), on an international scale, has a decisive influence in the process of reproduction of national wealth, social development, mobilization of investments, application of technical (technological), human resources in the framework of the implementation of goals in terms of productivity growth and the level of competitiveness of the subject [11].

The desire for efficiency inevitably leads to the concentration of population in large agglomeration zones. According to a study by McKinsey Global Institute, "1.5 billion people or 22% of the population live in 600 cities and produce more than 50% of world GDP or 30 trillion US dollars (2007), with the top 100 cities producing 21 trillion US dollars of GDP or 38% of the world economy ... By 2025, two billion people or 25% of the population will produce 60% of the world's GDP or 64 trillion US dollars" [12]. The seriousness of this process is recognized by the UN and its institutions. For example, the World Bank's annual World Development Report 2009: Reshaping Economic Geography (2009) highlights a number of significant factors (influencing the dynamic economic regional development):

1) agglomeration effect (active growth of population density of territorial settlements);

2) activity of migration flows of potential employees;

3) relocation of business entities in the framework of leveling the territorial gap with sales markets, which reaches maximum values at the regional and local levels (losing, at the same time, the degree of its entrepreneurial and production value) [13].

This affects not only the understanding of the practice, but also the theory of the question. For example, the well-known urbanist Blair A. Ruble notes that there is a real need to revise the definition of what constitutes the city – the growing cities reduce the percentage of landscape territory by spreading over many hundreds of square miles in different directions. In addition, the forecasted sea level rise also increases the number of urban dwellers living on or near the coast – including 2⁄5 of all million-plus cities in the world and fifteen of the two dozen megacities (with a population of over 10 million each) [11]. Of course, we can see in the agglomeration processes the attraction to the "coverage" of all free space, as does Professor S.S. Artobolevskii: "We can argue for a long time about whether unidirectional migrations of population and economy are related, but the fact remains that the economy first increased its attraction to suburbanized areas and later – to extra-agglomeration spaces. No wonder there was even the term "green-field location" [14]. Somewhat later, this issue was developed in the works of S.V. Kuznetsov and N.M. Mezhevich who pointed out that suburbanization is not so much the transformation of the "green field" into urban space, as the development of a quasi-city into normal European-type suburbia [15].

This approach considers several stages that are typical of these processes in Western Europe:

1. "Pre-war" stage: stimulating the growth – overload.

2. "Postwar" stage: unload – suburbanization (new and expanding cities) – reload.

3. "Current" stage – stimulation of growth of internal areas, gentrification [16].

Let us take a closer look at these processes. In the second half of the 20th century, France carefully studied the Soviet experience of regulating the development of super-large cities in the context of regulating the growth of Paris. After the Second World War, France formed a system of regional measures, including ekistical policy that provides for additional taxation of enterprises established in Paris or withdrawn to Paris. Similarly, tax rates decreased relatively in Rouen, Lyon, Brest, Grenoble, Marseille, and Toulouse. Only since the mid-1980s with the weakening of Paris' competitiveness, restrictive measures were relaxed, but public funding for the cost of moving businesses out of Paris was maintained.

Let us say a few more words about world experience. First of all, we shall look at American practice. It does not involve a distinct division into a highly effective center and periphery. The U.S. has adopted a different grouping cities and urban settlements in comparison with Russia. In the U.S., a small area (urban settlement) provides accommodation for about 2.5 thousand people. In addition to the generally accepted classification categories of "city", "urban settlement", in the United States of America included categories such as urban or metropolitan areas. The main thing, which is of interest to us, is that "two-thirds of American million-plus agglomerations are situated not in one, but in two or even three States. According to our concepts, such a mismatch of administrative division and public zoning should greatly complicate life in this country, especially since the States differ greatly from each other in legislation, business climate, etc." [17]. This problem is considered by Stein Rokkan, who introduces the categories of "center" and "periphery". He defines "Center" as a territorial locality within the country, which has preferential rights in all sectors of activity. Exclusive rights, bonuses and preferences in this area are due to both the level of investment attractiveness and the degree of influence of organizational and cultural factors.

The specifics of periphery are reflected in the number of economic parameters (realization of the subject activity) in the context of social and status-related building of the location: central part – periphery [18]. Here, the location at the central part or at the periphery is considered in the correlation between the positions of resource components and the degree of their territorial distance (but not from the viewpoint of the spatial-geographical ratio).

At the same time, the social and status proximity to the central part of the territories provides an opportunity to obtain resources, which implies a high degree of achievement of the goals of activity (social and economic development). This has the opposite effect in terms of the peripheral location of business entities (resource restriction, rigid life position).

This position is shared by Stein Rokkan, according to whom the periphery, being in a subordinate position and controlling (not always) only its own resources, feels the force of factor influence both in the near and far markets and is disconnected with other regions (except the dominant one) [19].

It should be emphasized that "centers" are located in the national-territorial borders and beyond. This concept, due to the complex mechanism of agreements among the political subjects of the center and the periphery, was built over time (years, centuries) under optimal conditions [20].

Thus, it can be stated that while the content of theoretical concepts of urban development, as a rule, is based on the dominant paradigm of economic thinking, the practice (and, accordingly, tools) of urban management largely depends on the level of socio-economic development of a particular country, the management system, as well as the mobility of the population.

In this regard, in our opinion, in Russia it would be advisable to pay serious attention to the study of practical experience in this area in more economically "advanced" countries in order to systematize and adapt it to the development of future policies in the field of management of the development of cities and agglomerations.

According to Professor S.S. Artobolevskii, the issues of practical application of issues related to the management of agglomerations in the West are subject to discuttions, but it is necessary to have information about different opinions in this field of research [21]. The results of studies of the international experience of developed countries demonstrate the following: the formation of joint activities in the framework of administrative units (where the agglomeration is implemented geographically) is a key tool for managing agglomerations.

At the same time, the outlined vector of administrative units in international practice leads to the creation of a competitive position such as the increase in real estate prices (within the territorial affiliation), which is a basic element in the formation of their budget; whereas in Russia the financing of administrative units comes from the regional budget.

It should be noted that the dispersal of the functions of state activity, as a result of the world process, determines the increase in the obligations of administrative units. The growing population in small towns makes it difficult for municipalities to carry out planning and management tasks. Such a situation makes it necessary to initiate the implementation of new approaches to the formation of planning and management algorithms, if we take into account the factor impact (in particular, population growth) [22].

World and domestic experience in spatial development and the results of agglomerations development analysis

Global trends of spatial development at the beginning of the 21st century include the concentration of population and economy in the largest forms of settlement, among which the leading positions are occupied by the largest urban agglomerations.

Currently, the Spatial Development Strategy of the Russian Federation for the period up to 2025 is being actively implemented, which involves the formation of a "spatial framework" of the country in order to develop promising centers of economic growth with an increase in their number and their maximum dispersion on the territory of the Russian Federation, acceleration of economic growth and technological development of agglomerations.

The analysis of the activity of agglomeration movement in the Russian and in the practice of international experience show Russia's lagging behind, which is reflected in the small quantity of forms and alternatives of population resettlement according to the type "urban agglomeration", the insufficient number of conurbations, etc. However, "if earlier the population of metropolitan agglomerations was concentrated in Moscow and Leningrad, then, since the 1990s it was for the first time distributed in their oblasts [23]. At the beginning of the second decade of this century, these processes were reflected in the works of the Institute for Regional Economic Studies of the Russian Academy of Sciences and Saint Petersburg State University [24, 25, 26].

The so-called monocentric model of agglomerations development with the concentration of jobs in the core of the megalopolis, created in the Soviet years and currently operating, has a number of objective drawbacks. The most obvious of them include a significant burden on the transport complex (primarily the road network) due to the transport flows directed only from center to periphery, as well as a decrease in the investment attractiveness of the metropolis due to the high cost of housing within the boundaries of the agglomeration center. Modern Russian and foreign experience has a lot of examples showing that in remote points of growth of agglomerations there are several central functions, including scientific, cultural, educational, research and innovation, administrative, business, shopping and entertainment; they create the necessary prerequisites for the development of attractive areas on the periphery of the metropolis.

For example, in our opinion, for large agglomerations, such as Moscow and Saint

Petersburg, it is most important to have two functional types of activity for the development of the territories of the Moscow and Leningrad oblasts adjacent to the boundaries of megacities:

• location of educational, research and innovation functions;

• location of business, shopping and entertainment functions.

Placement of educational, research and innovation functions began in 1899, when the Polytechnic Institute complex began to be formed in the north-east of Saint Petersburg. In the 1950s, the scientific and educational complex of Moscow State University was built on Vorobyovy Gory, which was at that time the southwestern outskirts of Moscow. In the same period in the major regional centers of the country (Novosibirsk, Irkutsk, Krasnoyarsk, etc.) on the outskirts large complexes of research institutes were being constructed, around which scientific research towns emerged. Near Moscow, a ring of science towns and high-tech production centers (Dubna, Korolev, Zelenograd, Troitsk, Fryazino, Chernogolovka, Protvino, etc.) were gradually forming. Classic examples of the development of scientific and educational functions in the 1950s and 1970s in the Leningrad agglomeration can be found in educational and scientific complex of Leningrad State University in Petrodvorets and the Institute for Nuclear Physics in Gatchina.

In the post-Soviet period, educational, scientific and innovative facilities were continued to be placed in the peripheral parts of the agglomeration, which can be illustrated by the famous examples of the development of the innovation center SKOLKOVO near Moscow, the satellite town Innopolis near Kazan, on the territory of Saint Petersburg agglomeration – the development of a nanopark in Gatchina, the project of placing the campus of the Higher School of Management in Petrodvorets, potential plans to move part of the campus of the ITMO University to the satellite town of Yuzhny.

The world's best practice demonstrates a large number of examples of significant and developed innovative, technical and innovation clusters and business centers in high-tech sectors of the economy in the peripheral zones of agglomerations. The most famous examples include:

– Silicon Valley in California (United States), formed around Stanford University in Paolo Alto on the periphery of the San Jose Metropolitan Area;

– Tsukuba Science City (Japan), developed around a number of universities and research and education centers on the periphery of the Tokyo Metropolitan Area;

– multifunctional district of Laoshan on the eastern outskirts of Qingdao (China) with large educational, scientific centers and research organizations, exhibition complexes, and an industrial zone for the development of high-tech industries;

– business district One Noth, formed around the metro station of the same name in the south-western outskirts of Singapore, where there are the National and Polytechnic universities and several high-tech clusters (biopolis, fusionopolis, mediapolis, etc.);

– multi-district Adlershof in the south-eastern outskirts of Berlin (Germany) that develops as the campus of Humboldt University and related research institutions, the business district, mediacluster, modern residential area, industrial area of high-tech companies.

The Soviet experience in the formation and integrated development of research activities in the territory of the agglomeration (for example, Novosibirsk Akademgorodok) was certainly an important administrative and breakthrough solutions in terms of spatial development, and it served as the basis for similar solutions in many countries. At the same time, the domestic centers of science were formed initially on the basis of the principle of a closed ecosystem, and their foreign counterparts, integrated into the transport system of the agglomeration, were designed for human resources of the entire metropolis. It can be concluded that transport accessibility in combination with significant public investment has played a key role in the formation of multifunctional clusters based on the already functioning research centers.

The creation of new jobs and the development of the peripheral part of the agglomeration are also possible on the basis of the formation and development of business and shopping and entertainment functions.

The Russian experience in forming and comprehensive placement of multifunctional public and business spaces on the periphery of the agglomeration is widely represented by large shopping and entertainment complexes near the ring roads of such major megacities as Moscow and Saint Petersburg (for example, "Mega" shopping malls in the Moscow and Leningrad oblasts adjacent to the borders of Moscow and Saint Petersburg, respectively). Within the boundaries of the peripheral zone of the Saint Petersburg agglomeration there are large multifunctional projects (business areas "Lakhta Center", "Aeropolis-Pulkovo", "Expoforum") with the development of congress-exhibition and business centers, and office space. In modern conditions, the main deterrent to the full-scale implementation of these projects is the weak level of transport infrastructure. The Moscow experience of complex placement of public and business spaces in the agglomeration zone allows us to highlight the following examples:

1. A multifunctional social and business area located at the exit from the Moscow ring road near the metro station Myakinino (Krasnogorsk, Moscow Oblast). Here are the largest shopping and entertainment complexes (Vegas, Crocus City Mall, etc.), the exhibition complex Crocus Expo, concert hall Crocus City Hall, a complex of buildings of the Government of the Moscow Oblast.

2. A business area near the junction of MKAD and Kiev highway. Rumyantsevo and Comcity business parks have been formed here.

3. A multifunctional public and business area, Putilkovo near the junction of MKAD and Novokurkinskoe highway. Within this area, the large business area of Greenwood and a complex of shopping and entertainment centers are developing.

Foreign experience in the spatial development of agglomerations demonstrates numerous examples of complex development of large social and business sub-centers on the periphery of the megacity, with excellent transport accessibility from the central business area. Successful examples of placement of public and business areas located in the peripheral zone of agglomerations and having good transport accessibility include:

– Westchase business district on the western outskirts of Houston (U.S.), which contains a variety of business centers;

– Montigala shopping town in the north-eastern outskirts of Barcelona (Spain) at the entrance to the city from the highway B20.

– the multi-functional district of Haabersti on the western outskirts of Tallinn (Estonia), where the largest shopping centers, sports complexes, business centers, and hotels are located.

Also, we can name the following successful examples of developed public and business areas located in the peripheral zone of agglomerations and focused on accessibility on the basis of high-speed rail transport:

– the multi-district Zličín-Stodulky on the western outskirts of Prague (Czech Republic), where the largest public business area with numerous shopping centers and office parks is developing on the basis of two metro stations;

– the multifunctional district Itäkeskus in the eastern part of Helsinki (Finland) around metro stations, where numerous shopping malls are located;

– the multifunctional district Dornach on the eastern outskirts of Munich (Germany), where numerous high-tech companies have their offices near the S-Bahn Munich-Rome stop;

– the multi-district Mats formed in the southern part of the Metropolitan Area of Haifa (Israel) near the transport hub Hof HaCarmel, where there are offices and manufacturing sites of high-tech companies, large shopping centers, and a sports complex.

The development of business, shopping and entertainment functions in the peripheral areas of urban agglomerations is a common practice not only in the United States and Western Europe, but also in Eastern Europe. In contrast to the location of large state research centers, this type of development of the territory is focused primarily on attracting private investors and is a consequence of the redistribution of flows in the structure of the megacity.

Conclusion. Summing up, we can say that the Russian processes of suburbanization have the same genesis as similar processes abroad. However, the stages in the first and in the second case are different. From our point of view, the processes of urbanization in Russia lag one or two stages behind the American ones. Russia is drawn into the processes of suburbanization, and in the United States of America suburbanization has reached its ultimate development and is transformed, including the phenomenon of "return to the updated city". It is possible and expedient to take into account the version and practices of suburbanization processes in Central Europe. Here suburbanization in some cases went much further than in Russia. Moreover, the socio-economic conditions and practices of transformation and modernization are close to those of Russia. Accordingly, verification of the results of suburbanization in CEE in relation to Russia is possible. Suburban spaces, which have a traditional fractional municipal division, do not meet urban management standards. That is why countries encourage the transformation of municipalities through their unification [27, 28]. This happens through the provision of additional subsidies, i.e. it is stimulated economically, and another option is also possible – through the reforms by administrative means, through coercion.

Thus, in the given perspective, new areas of fundamental and applied scientific research are coming to the fore, and their subject will be socio-economic mechanisms of functioning of agglomerations and their effect on the development of municipalities within their area, and also at the regional, national and world economy in conditions of globalization.

The most important task for further scientific research is to study the theory of urbanization and the processes of spatial and socio-economic development occurring in the territory of municipalities adjacent to the boundaries of megacities and developing the provisions and conclusions of this study.

The practical significance of the work consists in the fact that its results can be used to improve the management systems of agglomeration processes in the socio-economic space of the Russian Federation; they can also be used by the municipalities that are included in the zone of influence of megacities.

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Modeling the Investment Attractiveness of the Types of Economic Activities in the Region with the Use of the Matrix of Financial Flows*

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Abstract. The relevance of the work is due to the increased need to improve the efficiency of the state investment policy against the background of limited external sources for financing investment processes. The goal of the paper is to develop methodological tools for assessing the impact of changes in the volume of investments in fixed capital on the economic growth of the regions for the purpose of identifying the types of economic activities that have the greatest impact in terms of national economic development. The novelty of our approach consists in the fact that we integrate two tools for assessing investment effectiveness: the Cobb-Douglas production function, which is used to calculate the growth of gross output as a result of commissioning of fixed assets; and the balance model, which shows the movement of financial flows

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in the region (matrix of financial flows) and which is used to calculate direct and indirect economic effects arising from investment activities. We calculate and analyze sectoral production functions for four regions with different specialization and level of socio-economic development – the Sverdlovsk, Vologda, Chelyabinsk and Kurgan oblasts; we also calculate the marginal return on capital in 16 types of economic activity. We build matrices of financial flows for the regions under consideration for the year 2016, on the basis of which we calculate four groups of sectoral multipliers, reflecting the impact of the growth of gross output in individual industries on the aggregate growth of gross output (in the economy of the region as a whole), value added, household income and consolidated regional budget revenues. The paper shows that the cumulative effect manifested in growing GRP and tax revenues of the regional budget due to the growth of fixed capital, depending on the industry, may differ several times. Our study identifies statistical anomalies that indicate significant flaws in the data available; this fact prevents us from obtaining more accurate results. The approach we have developed and the results we have obtained can be used by the authorities to work out investment policy, taking into account the regional sectoral specifics of multiplicative economic effects.

Key words: investment attractiveness, region, investments, Cobb-Douglas production function, matrix of financial flows, multiplicative effect, investment policy.

Introduction

Investments are the basis of economic development of any state. That is why support and stimulation of investment activity is one of the priorities for all entities of the economy. However, nowadays, many Russian economists agree that investment sphere of the Russian Federation has many problems which interfere with achieving acceptable rates of economic development. First of all, it is lack of resources which are used for replenishment and expansion of the production base. From 2011 to 2016, a share of gross accumulation in gross output of the RF did not exceed 22% while there was a steady undulating outflow of capital. A.G. Aganbegyan notes that it is possible to provide average annual 2.5–3% economic growth rates with investment share into GDP at the level of 20–15%, just like it happens in the developed countries. For 5–6% economic growth rates, investment rates should remain at the level of 30–35%. If there is an objective to keep economic growth rates at the level of 7, 8% or above, it could be achieved with investment rates exceeding 40%. Currently, it happens in China and India just like in Japan, Southern Korea, and Taiwan in the periods of their accelerated development [1, p. 11-12].

The second important issue in the investment sphere is a structural imbalance. T.V. Uskova, after conducting analysis of investment processes in Russia, came to the conclusion that "the structure of investments in fixed capital is not optimal; the share of funds invested in agriculture, processing production, and construction is declining; the share of funds in machinery production, which determines the state of the country's production potential, is extremely low. Financing of the knowledge sector and industries aimed at the development of human capital is carried out as a residual" [2, p. 45]. It is possible to say that "the Russian economy is in the state of structural and technological disequilibrium which is characterized by inefficient distribution of production factors and financial resources which prevents formation of a steady economic dynamics" [3, p. 10]. In the same work it is noted that the key component of economic policy is structural and investment policy, which implies “a set of measures, aimed at smoothing the imbalances of sectoral, technological and spatial nature, which complicate the interaction between the sectors of the economy, they are not eliminated by traditional market mechanisms and include a system of targeted actions to develop mechanisms for financing investment in fixed capital [3, p. 10]. Thus, one of the primary shortcomings of the current economic policy is the lack of a systematic and scientific approach to formation of investment strategy of economic development of the state and regions and improvement of the investment relations organization and management [4, p. 29]. The implementation of a systematic and science-based investment policy requires appropriate tools for predicting the results of the measures taken.

Methodological approach to assessment of investment attractiveness of economic activities' types in the regional system

Peculiarities of state's activity as a representative of social interests cause a number of important methodological features of the process of decision-making in investment sphere. Specifically, it is the need to take into account the set of emerging economic effects. The basics of this approach were stated by R. Musgrave [5], Williams [6] and other scientists. An important part of this concept is the division of benefits and costs into internal and external, depending on whether they arise within or outside the jurisdiction of project implementation. Many state programs, implemented on one territory, can have a certain impact on neighboring regions. The same situation is typical for specific firms and investment projects, the implementation of which can lead to the benefit of contractors (consumers of products, suppliers of raw materials and equipment, employees, etc.) and to the competitors' losses. During the implementation of a project by a private company, it can, in many cases, neglect external effects. However, during the implementation of public policy, such effects must be included in the assessment. The most important manifestations of external economic effects are so-called multiplicative effects. They mean the set of external, in relation to the implemented project, effects manifested in the intensification of activities in related types of economic activities (TEA). Multiplicative effects include increase of gross output, added value in related industries, and increase of household income and tax revenues into budgets of all levels.

In practice, to assess the impact of different factors on state economy, a variety of economic and mathematical models of general equilibrium model (GEM) are used. These models offer a formal apparatus for the analysis of the source of economy's fluctuations and also for studying macroeconomic policy. Significant progress in CGE (computable general equilibrium) models development stimulated higher demand from central banks of developed and developing countries, as well as from the largest international economic and financial institutes. As an example we can name the model of Bank of Canada (Terms-of-Trade Economic Model – ToTEM), The Federal Reserve System (SIGMA), The European Central Bank (New area – Wide Model (NAWM), and models of International Monetary Fund global economy (GEM and Global integrated monetary and fiscal GIMF). In Russia, such models are developed and used by the authorities (the Ministry of Finances and The Central Bank of the Russian Federation) and scientific organizations. In this sphere, we can point out the work of the research team under the leadership of academician

V.L. Makarov [7], as well as the work of A.V. Polbin [8] and others. The development of such models for certain districts poses a difficult practical task because of the absence of reliable statistics on several key indicators of economic cycle. First of all, correct data on interregional moving of goods and services is absent. Secondly, available statistical data does not display complex corporative networks which lead to statistical concentration of gross added value in places of head offices registration of the biggest Russian corporations. Thus, the construction of detailed models of certain regions of the Russian Federation is currently impossible. However, this does not undo the need of federal and regional authorities for adequate economic and mathematical tools that allow modeling the impact of individual measures of state policy in the field of investment on the dynamics of socio-economic development of certain entities of the Russian Federation.

For the study of economic processes at the regional level, models based on the balance method are widely used. The first such models appeared in the 1920s–1930s. Scientific works of V. Leont'ev, L.V. Kontorovich, R. Stone and other great scholars became widely known in this sphere. In the future, the modified model of inter-sectoral balance became the most widespread in foreign practice – Social Accounting Matrix (SAM), or, in other words, the matrix of financial flows. Despite the standard model of inter-sectoral balance in the matrix of financial flows (MFF), along with intermediate and final consumption and gross added value, transfer payments between institutional sectors (households, firms, and the state) are reviewed additionally, as well as distribution of factor payments within each sector. Basics of MFF usage as an effective instrument for studying the structure of economic system, peculiarities of the reproduction process, and the formation and distribution of multiplicative effects were described in the works by G. Pyatt, J. Round [9], J. Defourny, E. Thorbecke [10] and others. The example of modern methodology of SAM development and analysis is the work by P.L. Scandizzo, C. Ferrarese [11]. The balance approach toward economy of certain regions study is widely used by Russian scholars too. Models of separate regions were built [12; 13; 14; 15]: the Sverdlovsk, Kurgan, Chelyabinsk oblasts, the Republic of Buryatia, and the Khabarovsk Krai and others. On the basis of these models scholars develop methodological recommendations for assessing social efficiency of certain investment projects implementation. In this sphere we can mention the works by T.S. Novikova [16], N.N. Miheeva and V.I. Suslova [17], A.B. Kogan [18]. Moreover, in our previous paper we suggested the methodology for assessing the implementation efficiency of investment projects on the basis of the matrix of financial flows [19]. MFF of the Sverdlovsk Oblast was formed and it was used as a basis for calculations of gross output multipliers, GRP, revenue, household's income, tax revenues in the regional budget. Account of MFF "industry" was divided into 16 types of economic activity in accordance with OKVED classification, which gives the opportunity to analyze the results of investment project implementation in the sectoral context. It was mentioned that this approach is applicable only for assessment of a certain investment project with known investment amount and future production output. However, the state investment policy primarily consists of measures, which affect total amount of investments on the territory. Changes in the tax regime, as one of the key instruments of the state investment policy, are analyzed in the works by E. Zwick, J. Mahon [20], C.L. House, M.D. Shapiro [21], R.E. Hall, D.W. Jorgenson [22]. Examples of such measures are changes of tax and monetary policy. The analysis of their impact on investment activity of enterprises is given in many works. The most widely used and accurate method of forecasting gross output is Cobb-Douglas production function. Theoretical, methodological and practical aspects of its construction and usage are thoroughly described in numerous scientific publications of Russian and foreign authors [23; 24; 25; 26; 27]. The construction of this function for a particular industry makes it possible to estimate how much the gross output of this area will change with an increase in the use of capital by one unit. In the future, the obtained information can be used to calculate the multiplicative effects using the matrix of financial flows and to set the total economic effect from investments in a particular TEA. Thus, the algorithm of assessing fixed capital increase impact on regions' economic growth rates consists of two stages:

1. Calculation of the amount of gross output growth caused by the increase of fixed capital volume. For this purpose, sectoral production functions, like Cobb-Douglas production function, are built, and also the marginal return of capital is calculated. The obtained value of the capital marginal return in the industry shows how much gross output will increase in this TEA with an increase of fixed capital by one ruble. Comparison of capital marginal returns across industries reveals sectors with relative capital excesses and deficits.

2. Calculation of direct and indirect economic effects of production output growth. The increase of gross output leads, first, to increase of added value and tax revenues in the analyzed industry. Secondly, it stimulates demand for products in related industries, which generates indirect economic effects (growth of added value and budget revenues with the growth of intermediate consumption).

The novelty of the author's approach is the integration of two tools of investment efficiency evaluation: Cobb-Douglas production function, which is used for calculation of the gross output growth as a result of fixed funds commissioning in certain types of economic activity and these investments' marginal returns, along with the balance model of the financial flows in the region (matrix of financial flows), used for the calculation of multiplicative effects emerging as the result of investment activities: direct – from the investments implementation, and indirect, which reflect increase of demand in related industries.

The suggested approach will allow assessing the efficiency of investments in a particular type of economic activity and determining the directions, attraction of investments in which will ensure higher rates of the whole regional system's economic growth.

Results of calculations

The selection of regions was based on conducted studies concerning the RF regional classification according to financial and economic sources of the development [28]. In accordance with previously obtained results, regions of the Russian Federation were divided into four groups: 1) financially sufficient regions; 2) financially stable regions, developing at the expense of their own internal financial and economic sources; 3) regions developing with attraction of significant external (budgetary and non-budgetary) investment sources; 4) regions developing primarily at the expense of external financial and economic sources. For more detailed analysis, one region from each group was chosen. Thus, objects of the research were the Sverdlovsk, Vologda, Chelyabinsk, and Kurgan oblasts, which have a number of structural and socio-economic development level differences. In particular, selected regions have differences in sectoral GRP structure and the structure of investment into fixed capital. Moreover, they have a different level of sectoral fiscal return per one output ruble and added value, the level of budgetary security and self-sufficiency, the level of diversification of the economy, as well as the degree of involvement in the processes of interregional and international trade. All named peculiarities directly affect the size of multiplicative economic effects, and suggested for their assessment balance model in the form of MFF allows conducting the analysis taking into account these features.

Stage no. 1: construction of production functions and calculation of marginal return of capital.

2005–2016 data was used for calculations. Cobb-Douglas production functions were built on the basis of these calculations, which meet the requirements of constant return of scale, positive and decreasing production factors' marginal returns:

$$Q = A \times K^{\alpha} \times L^{\beta} \tag{1}$$

Q – amount of production output;

K – amount of capital investments (fixed funds, or fixed capital);

L – amount of labor resources, or labor costs;

A – coefficient reflecting the technological level of production;

α – elasticity coefficient for labor;

β – elasticity coefficient for capital.

It was experimentally revealed that, to achieve high reliability while constructing production functions, source data must be converted to a linear type using the procedure of a linearization (extraction of the natural logarithm over all variables in the model). As a result, the formula (1) was reduced to the classic two-factor linear regression equation. As an argument for the function, data on the average annual number of employees from individual economic activities, as well as data on the value of fixed assets, were taken. The peculiarity of the applied method of production functions calculation was the usage of data on the amount of the annual gross output of goods and services. It should be noted that in most works [24; 25; 26], the authors used the amount of the gross regional product as the dependent variable. After obtaining sectoral production functions, the values of marginal return of capital, showing the interconnection between the change of gross output in rubles and the change of the amount of fixed capital by 1 ruble, were calculated. Based on the purpose of the study, the calculation of the marginal return of labor was not carried out. The results are given in *Table 1.* The analysis of the obtained coefficients showed that regions have a significant inter-sectoral differentiation of values. So, in the Sverdlovsk Oblast the highest value of marginal productivity of capital (MPC) was found in the "Construction" sector (0.867), the lowest – in the "Transport and communication" sector (0.051); the Chelyabinsk Oblast – "Wholesale and retail trade" (0.966), "Processing productions" (0.085), respectively; the Kurgan Oblast – "Construction" (5.312), "Transport and communication" (0.053); the Vologda Oblast – "Construction" (3.733), "Production and distribution of electricity, gas, and water" (0.038). Besides, there are significant interregional differences in separate industries. Thus, the highest value of marginal return on capital in the agricultural sector is observed in the Kurgan Oblast (1.098). In the Sverdlovsk Oblast this value is 0.35, in the Chelyabinsk and Vologda oblasts – 0.19 and 0.185 respectively. Different MPC values in the same industries of different regions show the lack or excess of capital regarding other production factors.

Table 1. Cobb-Douglas production function for different types of economic activities in the RF entities

TEA*	Sverdlovsk Oblast		Vologda Oblast		Chelyabinsk Oblast		Kurgan Oblast	
	Production function	MPC**	Production function	MPC	Production function	MPC	Production function	MPC
I	$Y = K^{0.35} \times L^{0.65}$	0.352	$Y = K^{0.12} \times L^{0.86}$	0.185	$Y = K^{0.2} \times L^{0.81}$	0.190	$Y = K^{0.55} \times L^{0.47}$	1.098
II	$Y = K^{0.34} \times L^{0.46}$	0.098	$Y = K^{0.10} \times L^{0.91}$	0.572	$Y = K^{0.2} \times L^{0.81}$	0.975	$Y = K^{0.09} \times L^{0.8}$	0.309
III	$Y = K^{0.13} \times L^{0.94}$	0.158	$Y = K^{0.4} \times L^{0.52}$	0.235	$Y = K^{0.53} \times L^{0.49}$	0.308	$Y = K^{0.42} \times L^{0.63}$	0.172
IV	$Y = K^{0.34} \times L^{0.74}$	0.748	$Y = K^{0.11} \times L^{0.99}$	0.257	$Y = K^{0.039} \times L^{1.05}$	0.085	$Y = K^{0.42} \times L^{0.64}$	0.926
V	$Y = K^{0.23} \times L^{0.85}$	0.147	$Y = K^{0.1} \times L^{0.97}$	0.038	$Y = K^{0.26} \times L^{0.8}$	0.119	$Y = K^{0.25} \times L^{0.78}$	0.051
VI	$Y = K^{0.3} \times L^{0.77}$	0.867	$Y = K^{0.42} \times L^{0.70}$	3.733	$Y = K^{0.43} \times L^{0.98}$	0.283	$Y = K^{0.72} \times L^{0.45}$	5.312
VII	$Y = K^{0.14} \times L^{0.91}$	0.725	$Y = K^{0.30} \times L^{0.71}$	0.867	$Y = K^{0.27} \times L^{0.75}$	0.966	$Y = K^{0.05} \times L^{0.91}$	0.133
VIII	$Y = K^{0.33} \times L^{0.71}$	0.516	$Y = K^{0.19} \times L^{0.76}$	0.244	$Y = K^{0.24} \times L^{0.76}$	0.330	$Y = K^{1.03} \times L^{0.067}$	2.319
IX	$Y = K^{0.33} \times L^{0.67}$	0.051	$Y = K^{0.21} \times L^{0.81}$	0.036	$Y = K^{0.51} \times L^{0.48}$	0.213	$Y = K^{0.28} \times L^{0.71}$	0.056
X	$Y = K^{0.65} \times L^{0.23}$	0.152	$Y = K^{0.71} \times L^{0.2}$	0.299	$Y = K^{0.22} \times L^{0.64}$	0.046	$Y = K^{0.62} \times L^{0.21}$	0.132
XI	$Y = K^{0.54} \times L^{0.45}$	0.244	$Y = K^{0.27} \times L^{0.7}$	0.060	$Y = K^{0.36} \times L^{0.61}$	0.096	$Y = K^{0.68} \times L^{0.22}$	0.182
XII	$Y = K^{0.54} \times L^{0.45}$	0.327	$Y = K^{0.29} \times L^{0.69}$	0.185	$Y = K^{0.13} \times L^{0.87}$	0.088	$Y = K^{0.53} \times L^{0.47}$	0.747
XIII	$Y = K^{0.29} \times L^{0.66}$	0.212	$Y = K^{0.04} \times L^{0.84}$	0.023	$Y = K^{0.2} \times L^{0.72}$	0.106	$Y = K^{0.59} \times L^{0.36}$	0.486
XIV	$Y = K^{0.32} \times L^{0.69}$	0.471	$Y = K^{0.15} \times L^{0.82}$	0.205	$Y = K^{0.16} \times L^{0.82}$	0.185	$Y = K^{0.48} \times L^{0.50}$	0.565
XV	$Y = K^{0.68} \times L^{0.29}$	0.467	$Y = K^{0.2} \times L^{0.67}$	0.082	$Y = K^{0.67} \times L^{0.28}$	0.473	$Y = K^{0.58} \times L^{0.33}$	0.307

* Types of economic activity: I – agriculture, hunting and forestry; II – fishing, fish farming; III – minerals' extraction; IV – processing productions; V – production and distribution of electricity, gas and water; VI – construction; VII – wholesale and retail trade, repair; VIII – hotels and restaurants; IX – transport and communication; X – financial activity; XI – operations with real estate, rent, and provision of services; XII – public administration and military security, social insurance; XIII – education; XIV – health and social services provision; XV – provision of other public, social and personal services.

** Marginal productivity of capital.

Sources: initial data of territorial agencies of the Federal statistics service of Sverdlovsk, Vologda, Chelyabinsk, and Kurgan oblasts; own model calculations.

Stage no. 2: construction of matrices of financial flows of the region and calculation of matrices of multipliers. In our previous works, the theoretical, methodological and methodical issues of a matrix of regional financial flows constructions are analyzed in sufficient details.

In addition, the possibilities of disaggregating the accounts of "Sectors" and "Households" are presented. Earlier, we have already calculated aggregated MFF of the Chelyabinsk and Kurgan oblasts for 2012, and disaggregated MFF of the Sverdlovsk Oblast for 2015. In this paper, disaggregated matrices of financial flows of four regions (the Sverdlovsk, Chelyabinsk, Kurgan oblasts) for 2016 are formed, and first developed MFF of the Vologda Oblast for 2016 is presented (*Tab. 2*).

Table 2. Aggregated matrix of financial flows of the Vologda Oblast, 2016

		1	2	3	4	5	6	7	8	9	10	11
		Goods and services	Sectors	Capital	Labor	House-holds	Regional budget	Federal budget	Off-bud-get funds	Invest-ments	Export	Total
1	Goods and services		613,456			214,350	38,671	25,107	13,425	114,115	301,004	1,320,128
2	Sectors	1,099,667										1,099,667
3	Sectors		290,841				3,351					294,192
4	Labor		183,602									183,602
5	Households			38,830	141,851		15,127	559	64,861			261,228
6	Regional budget		3,013	22,691		29,711		11,806				67,221
7	Federal budget		8,755	3,245							65,808	77,808
8	Off-budget funds				41,751			36,535				78,286
9	Investments			77,401		17,167	5,386	3,801			10,360	114,115
10	Import	220,461		152,025			4,686					377,172
11	TOTAL	1,320,128	1,099,667	294,192	183,602	261,228	67,221	77,808	78,286	114,115	377,172	

Source: own compilation on the data from the Territorial agency of the Vologda Oblast Federal Statistics Service, the Federal Tax Service, and the Federal Treasury.

Table 3. Ratio of regional key sectors multipliers*

		Multipliers of			
		gross output	added value	households' income	regional budget revenues
Sverdlovsk Oblast	Max. value	2.837 (5)	1.664 (13)	1.299 (13)	0.234 (10)
	Min. value	2.312 (13)	1.364 (4)	1.067 (4)	0.133 (12.14)
	Ratio	22.7%	22.1%	21.7%	75.9%
Chelyabinsk Oblast	Max. value	3.341 (5)	1.782 (13)	1.384 (13)	0.244 (10)
	Min. value	2.551 (14)	1.676 (5)	1.303 (5)	0.147 (12)
	Ratio	31.0%	6.6%	6.2%	66.0%
Vologda Oblast	Max. value	1.933 (5)	1.328 (13)	0.967 (13)	0.146 (10)
	Min. value	1.356 (9)	1.076 (4)	0.684 (4)	0.087 (12)
	Ratio	42.6%	22.7%	41.4%	71.3%
Kurgan Oblast	Max. value	2.413 (5)	1.557 (13)	1.22 (13.7)	0.172 (10)
	Min. value	1.779 (13)	1.367 (5)	1.097 (5)	0.107 (12)
	Ratio	36.2%	14.0%	11.2%	60.7%

* The number of the relevant economic activity is given in parentheses.
Source: own calculations.

The structure of the matrices of financial flows, its variables, and the analysis of revealed interconnections are described in details in [12, pp. 22-39]. Further, the "Industry" account was disaggregated according to the types of economic activities, and the matrix of MFF multipliers was calculated. The methodology of matrix of MFF multipliers calculations and interpretation of obtained values are presented in our work [29]. The multipliers of gross output, added value, household's income, and the consolidated regional budget are all given in *Table 3.*

It is possible to say that in a certain region values of various MFF multipliers in different sectors are not that different. For example, in the Sverdlovsk Oblast, the multiplier of gross output in the processing industry is the most important (2.837), and the least important – in the education sector (2.312). Consequently, the first coefficient is 22% higher, which, with all assumptions, does not seem critical. The situation is similar for the multipliers of gross added value and households' income. Maximum difference is 22 and 21% respectively. The analysis of sectoral multipliers of revenues of the consolidated regional budget showed more significant differences. Here, the difference between the values in the health sector (0.133) and the financial services sector (0.234) is 76%. The results of the comparison of other studied regions are given in *Table 3.* Since the multiplier is a numerical coefficient showing the dependence of one parameter on another, this study will focus on the impact of product output growth on a number of macroeconomic indicators of the region, such as: gross added value, households' income, regional budget revenues, and total output. Obviously, provision of per unit output growth in different industries requires different amounts of capital investment, because the increase of fixed capital per unit in different industries causes a different gross output increase. In order to take this factor into account, it is necessary to adjust the obtained industry multipliers of the current values of the capital marginal returns in relevant industries. The results of the calculations are presented in *Table 4.*

The analysis revealed the types of economic activities which have the greatest impact on increase of fixed capital. In the Sverdlovsk Oblast they are construction, wholesale and retail sector (values of adjusted added value multipliers are 1.27 and 1.13, respectively). In the Chelyabinsk Oblast the biggest return is in the sphere of wholesale and retail. Moreover, the mining sector, the hotel and restaurant sector have significant returns. It should be noted that the sector of fishing and fish farming has the largest multiplier of GAV in the Chelyabinsk region (2.7). Despite the fact that this sector can hardly be the basis of the economic development for the region, it is possible to note its prospects as one of the directions of small and medium-sized businesses development. In the Vologda Oblast, the wholesale and retail trade sector has the highest multiplier (1.34). In the Kurgan Oblast, the agricultural sector (1.635) and the processing industry sector (1.29) have the highest returns. Also, the construction sector in the Vologda and the Kurgan oblasts, as well as the sector "hotels and restaurants" in the Kurgan Oblast, should be pointed out. These sectors' values of GAV multipliers turned out to be significantly higher than average values. It can be assumed that the reason of such strong deviation is the peculiarities of the statistical accounting of fixed assets and labor costs in these TEAs. However, this aspect requires further research.

The analysis of sectoral multipliers, adjusted for the amount of marginal returns of capital, shows a significant change of capital return in

Table 4. Matrix of regional sectoral multipliers of 2016

	Sectors	Marginal capital return	MFF multiplies				MFF multiplies with the marginal capital return			
			gross output	GAV	households' income	regional budget revenues	gross output	GAV	households' income	regional budget revenues
Sverdlovsk Oblast	I	0.352	2.677	1.484	1.160	0.149	0.942	0.522	0.408	0.052
	II	0.098	2.516	1.562	1.231	0.200	0.247	0.153	0.121	0.020
	III	0.158	2.693	1.439	1.133	0.175	0.426	0.227	0.179	0.028
	IV	0.748	2.837	1.364	1.067	0.139	2.122	1.02	0.798	0.104
	V	0.147	2.796	1.383	1.083	0.144	0.411	0.204	0.159	0.021
	VI	0.867	2.682	1.472	1.151	0.146	2.325	1.276	0.998	0.127
	VII	0.725	2.534	1.568	1.228	0.161	1.837	1.137	0.890	0.117
	VIII	0.516	2.700	1.462	1.144	0.153	1.393	0.754	0.590	0.079
	IX	0.051	2.609	1.516	1.188	0.160	0.133	0.077	0.061	0.008
	X	0.152	2.683	1.424	1.134	0.234	0.408	0.217	0.172	0.036
	XI	0.244	2.509	1.589	1.246	0.175	0.612	0.388	0.304	0.043
	XII	0.327	2.478	1.556	1.214	0.133	0.810	0.508	0.397	0.043
	XIII	0.212	2.312	1.664	1.299	0.142	0.490	0.352	0.275	0.030
	XIV	0.471	2.453	1.579	1.232	0.133	1.155	0.744	0.580	0.063
	XV	0.467	2.530	1.543	1.207	0.147	1.181	0.72	0.564	0.069
Chelyabinsk Oblast	I	0.190	2.946	1.746	1.354	0.172	0.560	0.331	0.257	0.033
	II	0.975	2.770	1.763	1.368	0.175	2.701	1.719	1.334	0.170
	III	0.308	2.926	1.722	1.346	0.205	0.901	0.53	0.414	0.063
	IV	0.085	3.237	1.696	1.317	0.170	0.275	0.145	0.112	0.014
	V	0.119	3.341	1.676	1.303	0.171	0.398	0.2	0.155	0.020
	VI	0.283	3.029	1.728	1.341	0.170	0.857	0.489	0.379	0.048
	VII	0.966	2.828	1.753	1.362	0.178	2.732	1.693	1.315	0.172
	VIII	0.330	3.032	1.726	1.342	0.180	1.001	0.57	0.443	0.059
	IX	0.213	2.726	1.768	1.374	0.181	0.581	0.376	0.293	0.039
	X	0.046	3.005	1.699	1.337	0.244	0.138	0.079	0.062	0.011
	XI	0.096	2.770	1.764	1.372	0.187	0.266	0.17	0.132	0.018
	XII	0.088	2.698	1.744	1.353	0.147	0.237	0.154	0.119	0.013
	XIII	0.106	2.387	1.782	1.384	0.156	0.253	0.189	0.147	0.017
	XIV	0.185	2.551	1.766	1.369	0.149	0.472	0.327	0.253	0.028
	XV	0.473	2.749	1.745	1.357	0.171	1.300	0.825	0.642	0.081
Vologda Oblast	I	0.185	1.774	1.13	0.733	0.094	0.328	0.209	0.136	0.017
	II	0.572	1.391	1.218	0.754	0.096	0.796	0.697	0.431	0.055
	III	0.235	1.750	1.146	0.766	0.112	0.411	0.27	0.180	0.026
	IV	0.257	1.916	1.076	0.684	0.093	0.492	0.276	0.176	0.024
	V	0.038	1.933	1.082	0.704	0.099	0.073	0.041	0.027	0.004
	VI	3.733	1.884	1.105	0.726	0.092	7.032	4.124	2.709	0.345
	VII	0.867	1.553	1.186	0.781	0.138	1.346	1.028	0.677	0.120
	VIII	0.244	1.814	1.13	0.751	0.102	0.443	0.275	0.183	0.025
	IX	0.036	1.356	1.222	0.751	0.101	0.049	0.044	0.027	0.004
	X	0.299	1.773	1.116	0.738	0.146	0.530	0.334	0.221	0.044
	XI	0.060	1.574	1.191	0.791	0.127	0.094	0.072	0.047	0.008
	XII	0.185	1.725	1.205	0.850	0.087	0.319	0.223	0.157	0.016
	XIII	0.023	1.394	1.328	0.967	0.105	0.032	0.03	0.022	0.002
	XIV	0.205	1.614	1.239	0.876	0.095	0.331	0.254	0.180	0.019
	XV	0.082	1.608	1.217	0.839	0.106	0.132	0.1	0.069	0.009
Kurgan Oblast	I	1.098	2.199	1.489	1.206	0.124	1.414	1.635	1.324	0.136
	II	0.309	2.207	1.463	1.186	0.142	0.682	0.453	0.366	0.044
	III	0.172	2.195	1.45	1.179	0.169	0.378	0.249	0.203	0.029
	IV	0.926	2.363	1.398	1.123	0.115	2.188	1.294	1.040	0.106
	V	0.051	2.413	1.367	1.097	0.119	0.123	0.07	0.056	0.006
	VI	5.312	2.285	1.426	1.145	0.119	2.136	7.575	6.082	0.634
	VII	0.133	2.057	1.513	1.220	0.139	0.274	0.201	0.162	0.018
	VIII	2.319	2.231	1.448	1.164	0.123	5.173	3.358	2.700	0.286
	IX	0.056	2.189	1.488	1.206	0.133	0.123	0.083	0.068	0.007
	X	0.132	2.255	1.418	1.154	0.172	0.298	0.187	0.152	0.023
	XI	0.182	2.137	1.483	1.194	0.134	0.389	0.27	0.217	0.024
	XII	0.747	1.858	1.534	1.204	0.107	1.388	1.145	0.899	0.080
	XIII	0.486	1.779	1.557	1.220	0.110	0.865	0.756	0.593	0.054
	XIV	0.565	1.931	1.508	1.186	0.108	1.091	0.852	0.670	0.061
	XV	0.307	2.076	1.486	1.187	0.125	0.637	0.457	0.364	0.038

Source: own compilation.

different sectors. Thus, in the Sverdlovsk Oblast, the multiplier of gross output in the sector “Construction” (2.325) has the highest value. The “Processing production” sector has a close multiplier (2.122). “The transport and communication” sector has a lowest value of gross output multiplier (0.133). Consequently, the difference of the multiplier value was more than 17 times. The results of calculations for the rest of the studied regions are given in *Table 5.*

The analysis showed that economic effect from fixed capital increase in different sectors, expressed in GRP growth and consolidated regional budget revenues, may significantly differ (sometimes in several times). Therefore, the federal and regional investment policy should be carried out taking into account these features. In accordance with the proposed approach, the total economic effect from investments in a particular TEA, expressed in gross added value, is calculated by the following formula:

$$\mathrm{Eff}_{\mathrm{sec}} = \mathrm{I} \times M_{\mathrm{GAV}} + V \times MP_k \times M_{\mathrm{GAV}} \quad (2)$$

in which $\mathrm{Eff}_{\mathrm{sec}}$ – overall economic effect in the sector;

I – amount of investments in the sector;

V – value of fixed capital increase in the sector;

MP_k – marginal capital return in the sector;

M_{GAV} – gross added value multiplier of the matrix of financial flows in the sector.

Taking into account the methodology improvement, the algorithm for calculating the overall economic effect from investments in a specific TEA looks like this:

1. Calculation of the amount of fixed capital increase in sectors.
2. Calculation of the multiplicative effect from investment demand in the economy of the region.
3. Calculation of the direct effect in the form of gross output growth in the region connected to increase of the fixed capital amount.
4. Calculation of the multiplicative effect from increase of products’ gross output in the sector.
5. Calculation of the economic effect from investments in the sector conducted by summing the calculations’ results in paragraphs 2, 3, and 4.

Table 5. Ratio of key multipliers of regional sectors with marginal capital return

		Multipliers			
		Gross output (GO)	Added value (AV)	Households’ income (HI)	Regional budget revenues (RBR)
Sverdlovsk Oblast	Max. value	2.325 (6)	1.276 (6)	0.998 (6)	0.127 (9)
	Min. value	0.133 (9)	0.077 (9)	0.061 (9)	0.008 (9)
	Ratio	1648.1%	1557.1%	1536.1%	1487.5%
Chelyabinsk Oblast	Max. value	2.732 (7)	1.693 (7)	1.334 (2)	0.172 (7)
	Min. value	0.237 (12)	0.079 (10)	0.062 (10)	0.011 (10)
	Ratio	1052.7%	2043.0%	2051.6%	1463.6%
Vologda Oblast	Max. value	7.032 (6)	4.124 (6)	2.709 (6)	0.345 (6)
	Min. value	0.032 (13)	0.03(13)	0.022 (13)	0.004 (5)
	Ratio	21875.0%	13646.7%	12213.6%	8525.0%
Kurgan Oblast	Max. value	5.173 (8)	7.575 (6)	6.082 (6)	0.634 (6)
	Min. value	0.123 (5.9)	0.07 (5)	0.056 (5)	0.006 (5)
	Ratio	4105.7%	10721.4%	10760.7%	10466.7%
Source: own calculations.					

Discussion and conclusions

The integration of production function significantly affected the calculations of multiplicative effects and allowed, in our opinion, more precise definition of sectors which have the highest return of fixed capital increase, taking into account direct and indirect economic effects. Data from Table 5 show that regions have high inter-sectoral differentiation of capital marginal return. Thus, in the Sverdlovsk Oblast, the value of this indicator varies from 0.051 in the "Transport and communication" sector to 0.857 in the "Construction" sector. As a result, the analysis of primary sectoral multipliers showed that the greatest return, in terms of aggregate demand, might be brought by investments in processing production (multiplier 2.682) and, after their adjustment and calculation of the whole effect, investments in construction (total multiplier 5.007). The matrix of inter-sectoral regional multipliers lets federal authorities to compare the efficiency of investments into the same sphere in different regions and, by that, better redistribute budget funds for regional development better.

The author's methodological approach and tools might be used by the federal and regional authorities for rapid analysis of specific investment projects and state measures to stimulate investment. They give the opportunity to improve the efficiency of management decisions in determining industry trends and subsequent implementation of investment policy.

However, the obtained results can not be called definitive, because the calculations revealed significant anomalies caused by imperfections of the statistical accounting of several important regional indicators. The most striking example of this anomaly is the accounting of fixed assets in the sectors "Construction" and "Transport and communications" in the Kurgan and Vologda oblasts. As a result, we obtained extremely high values of marginal capital return in these industries, which, obviously, require additional research. The actions of the authorities can have a significant impact on the relative excess or shortage of production factors.

The analysis of the "Financial services and insurance" sector also needs to be clarified. This is caused by two factors. First of all, the specifics of the financial sector functioning, which do not require a high provision of physical capital which is the basis of the fixed funds growth rate, used to build the sectoral production function. Second, the high concentration of financial capital in Moscow. Additional examination of economic sectors which are related to the sphere of services, such as trade, medicine, education, etc., is required.

Improvement of the methodology of building regional MFFs, as well as gathering of additional statistical data about individual activities, will increase the accuracy and reliability of the effectiveness assessment of public investment policy measures, which ultimately will enhance the efficiency of social resources usage and significantly improve the quality of life and the level of national welfare.

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Development of Methodological Approaches to Assessing the Effectiveness of Import Substitution in Russia*

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Abstract. The relevance of the study is due to the fact that the process of import substitution, which is on the rise in the country, requires a reliable and accurate quantitative assessment of its effectiveness. The main idea of the study is to assess the effectiveness of import substitution as a complex multidimensional phenomenon characterized by multidirectional and contradictory dynamics of its processes in their unity, relationship and mutual influence. The goal of the study is to develop a method for integrated assessment of import substitution effectiveness on the basis of theoretical substantiation of its principles and provisions. To achieve the goal we use such methods as analysis and generalization of existing methodological approaches to its assessment. The hypothesis of the study is based on the fact that the method we have developed allows us not only to make a reliable assessment of the effectiveness of import substitution, but also to predict the directions of its increase. Our research develops the works of other authors in the field of integrated assessment of import substitution effectiveness: we elaborate a comprehensive system of target performance indicators (the system has not been used before) and assess the trends in the development of import substitution processes structured in the context of domestic production, export and import of goods subject to import substitution, according to the degree of achievement of these indicators. The study was carried out with the use of methods such as factor determinant and structural-dynamic analysis, and multi-criteria optimization method. The technique was tested on the example of food products – the flagship of domestic import substitution. We reveal the processes that hinder import substitution in the food industry and some positive trends in import substitution that confirm its effectiveness. We calculate an optimal structure of commodity resources, which ensures the achievement of import substitution effectiveness in the food industry to the fullest extent. It is advisable to apply our technique in the field of import substitution in individual commodity groups, each of which has its own features in the formation of imports, exports, domestic production and their specifics in the context of research tasks. We plan to continue our research in the development of methods for a comprehensive assessment of the impact of import substitution on economic growth in the country.

Key words: import substitution; efficiency, import substitution effectiveness; assessing import substitution effectiveness; sanctions; food products.

Introduction

The external restrictions and threats of recent years and the unfavorable world market situation for the domestic economy have once again demonstrated the irrationality of Russia's foreign trade balance and the failure of its raw materials exporting model. The policy of boosting import substitution in an extremely difficult period for the country, on the one hand, indicates the awareness of the extreme importance of this problem and the need for its accelerated solution; on the other hand, it gives the country another chance to reach the forefront of world economic progress. At the same time, a reliable quantitative assessment of the effectiveness of import substitution implemented in the country is of paramount importance, since it helps unambiguously interpret the state of import substitution at any time, identify its problems, priorities and targets, forecast further development in accordance with the real situation in the country's economy and the state of resource support for its economic growth.

The relevance and significance of quantitative assessment of import substitution effectiveness makes it necessary to find a solution to several problems. The most important of them are as follows: studying the information database of import substitution; critical analysis of existing methodological approaches of domestic and foreign scientists to assessing the impact of import substitution; rationale and development of our own technique for a comprehensive assessment of import substitution effectiveness and its testing on the example of commodity resources undergoing an active process of import substitution at the present stage; identification of ways to improve the effectiveness of import substitution in Russia.

The source of reliable information on the effectiveness of import substitution can be found in the official statistics, which widely cover the structure and content of foreign trade turnover of Russia, its domestic production and consumption as a whole in the country and in the context of individual product groups and commodity items.

The composition and nature of the use of these indicators in the scientific works of various authors is determined by the goals and objectives of their research. At the same time, we can clearly trace two types of work. The first type involves indicators that are not subject to economic-statistical processing and (or) are analyzed using the simplest of methods like measurement, comparison, grouping, etc. For example, O.A. Mironova [1] evaluates the effectiveness of import substitution in various economic sectors on the basis of studying the dynamics of absolute and relative indicators of imports and exports of the Russian Federation. R. Connolly and Ph. Hanson [2] assess the effectiveness of import substitution by analyzing energy prices, imports and exports, gross domestic product, investment activity in the country, etc. O.A. Chernova and V.V. Klimuk [3] build their assessment of the effectiveness of import substitution on the analysis of statistical data on the share of exports and imports in Russia's GDP in comparison with the leading countries of the world. K. Ullrich [4] assesses the effectiveness of import substitution in Russia by analyzing the dynamics of such indicators as gross domestic product, exports, imports, the ruble exchange rate, cost of import substitution programs, etc.

Despite the fact that these studies do not contain new solutions in assessing the effectiveness of import substitution, their conclusions are quite reliable and substantiated, since they are based on official statistics. However, given the complex multidimensional nature of import substitution and its contradictory and multidirectional dynamics expressed by different units of measurement, we can note that the use of individual indicators makes it difficult to assess the overall effectiveness of import substitution and obtain the answers to three basic questions: 1) is there a real process of import substitution in the country? 2) what impact do the sanctions imposed on the country's economy have on import substitution? 3) what trends hinder the process of import substitution? Clear answers to these questions are given in studies based on a comprehensive assessment of the effectiveness of import substitution. Such an assessment is based on a system-wide study of cause-effect relationships in the processes of import substitution, their maximum detail, and the development of various ways to systematize indicators expressing these processes.

Analysis of studies of various authors in the field of integrated assessment of the effectiveness of import substitution primarily demonstrates their diversity. Thus, the methodological tools for assessment are used in the context of import dependence of the national economy on its trading partners [3], the state industrial policy [5; 6], innovation activities carried out in high-tech industries [7], the regional strategy for import substitution [8], evaluation of the multiplicative effects of the implementation of the state program for import substitution [9], etc.

In the vast majority of studies, a comprehensive assessment of the effectiveness of import substitution is carried out by calculating a wide range of relative values based on the absolute indicators presented in the official statistics. As a rule, their authors calculate various coefficients [6; 7; 10; 11]. A number of studies use relative values in the form of indices. For example, O.A. Chernova and V.V. Klimuk [3] assess the performance of import substitution using the index of import dependence, the index of the country's economic integration in globalization process and the foreign trade balance index per 1 km of transportation from the exporting to importing country. K.A. Kolotov in his dissertation research [12, pp. 80-85] proposes a method for calculating the aggregate index of import substitution effectiveness as the ratio of the aggregate index of the quality of import substitution (measured by the ratio of the values of domestic production in the current period relative to the base one) to the time of the structural shift in the economy, measured from the beginning of the implementation of import substitution measures and up to the analyzed period.

In a number of studies, a comprehensive assessment of the effectiveness of import substitution is based not only on the calculation of private coefficients, but also on the definition of integrated performance indicators. Thus, I.G. Ershova and A.Yu. Ershov [5] have developed an integral indicator of import substitution effectiveness, which helps group regions of the country into the leading (high efficiency), median (average efficiency) and stagnant (low efficiency). V.A. Borovkova and M.O. Tikhanovich [8] calculate the integral effectiveness indicator as the sum of partial indicators of performance (coefficient of import dependence, the share of innovative products, coefficient of import coverage by export, etc.) and weighting factors characterizing the degree of influence of each criterion on the final indicator.

A separate group of studies consists of scientific works, the authors of which use a matrix model for assessing the effectiveness of import substitution. In particular, this model, which is based on the system of national accounts using the input-output method of analysis is implemented in the works of D.A. Tatarkin, E.N. Sidorov, A.V. Trynov [9] and L.A. Strizhkova [13]. In assessing the effectiveness of import substitution, the balance method was also used. For example, the technique used by A.A. Losev, V.I. Soloviev, A.M. Sunchalin [14] is based on the comparison of two sets of indicators – the volume of production and import of goods and the volume of consumption of goods on the domestic market and their export.

According to the analysis of the works of different authors we reveal of a number of problems related to assessing the effectiveness of import substitution.

First, in our view, ratio analysis does not correspond to the purpose of evaluating the effectiveness (efficiency) of import substitution, because such an analysis simplifies the assessment and does not ensure the reliability of the results due to lack of validity and, in some cases, the arbitrary nature of indicators calculated. Moreover, the combination of a set of coefficients into integral indicators observed in a number of works further reduces the reliability of assessment of import substitution effectiveness.

Second, most works substitute the term "effectiveness" with "efficiency". Given the complex and multifaceted nature of import substitution, the traditional approach to understanding its efficiency as a ratio of the result obtained to the cost of achieving it is hardly applicable. This coincides with the point of view of A.M. Vyzhitovich and P.A. Yershov [15, p. 57], who conclude that it is virtually impossible to calculate the efficiency of import substitution from such positions with mathematical precision in comparable units. The vast majority of studies estimated the effectiveness rather than the efficiency of import substitution, because the proposed techniques for its assessment consider the results of development of this process rather than its effects. The study of O.A. Chernova [10] is an example of a few works, the authors of which made an attempt to calculate the actual effects of import substitution.

In our opinion, the solution to the above-mentioned problems can be found in the development of such methodological approaches to the assessment of the effectiveness of import substitution, which are based primarily on identifying the trends in the development of its absolute and therefore reliable indicators in their unity and structural interaction; besides, the approaches should focus on determining the extent to which these indicators achieve their target values in accordance with the country's development priorities.

The development of methodological approaches to assessing the effectiveness (efficiency) of import substitution can be traced in the works of foreign scientists. In particular, Y. Kiliçaslan, I. Temurov [16] assess the effectiveness of import substitution in the context of identifying the correlation between import substitution, labor productivity and competitiveness on the example of manufacturing industries in South Korea and Turkey.

In the work of R.A. Aregbeshola [17], the effectiveness of import substitution is studied from the standpoint of its impact on economic growth in the BRICS countries with the use of econometric methods.

Ko M.L., Plasmans J. and Song-ken H. [18] propose to evaluate the effectiveness of import substitution using an aggregate coefficient of import substitution, which is a sum of weighted coefficients for the import of industries or groups of industries in which the relative sizes of the industry are the measure of weight.

H.G. Abhyankar, S. Dharmadhikari [19] assess the effectiveness of import substitution on the basis of indicators of balance of payments, the overall level of prices and price elasticity of the demand for goods on the example of India.

Foreign [20; 21] and Russian [22; 23] studies on the effectiveness of import substitution in conjunction with the sanctions imposed on the economy are also relevant. All research in this area is united by one common conclusion: sanctions have a significant impact on the economy and the processes of import substitution. That is why the assessment of the effectiveness of import substitution must be carried out taking into account the sanctions regime under which the economy is functioning.

Having reviewed the existing methodological approaches to the assessment of the effectiveness (efficiency) of import substitution presented in the studies of domestic and foreign authors, we point out their diversity and the corresponding wide coverage of evaluation methods. Their authors tested them the example of different countries, industries, enterprises, and commodity groups. The works of domestic scientists clearly show a positive vector of development of import substitution and its effectiveness. Foreign scientists give more cautious assessments of the effectiveness of import substitution in Russia; nevertheless, they recognize that the process of import substitution in the country is carried out and some progress has been achieved in its implementation. All of the above makes the problem of reliable assessment of the effectiveness of import substitution in Russia even more relevant.

Research methods

In the method we propose, the effectiveness of substitution is understood as the degree of compliance of the scale and dynamics of its processes (that are structured in terms of imports, domestic production, and exports of commodity resources subject to import substitution) with the target indicators that reflect the priorities of import substitution in Russia at the present stage.

Import substitution is recognized as effective provided that the values and dynamics of indicators characterizing the trends in the development of the structural components of the model correspond to the target indicators.

Our technique for estimating the effectiveness of import substitution is based on the following principles: 1) complexity that takes into account the complex multidimensional nature of import substitution and the contradictory dynamics of the processes described by a wide range of statistical indicators; 2) structural arrangement, which is manifested in grouping commodity resources subject to import substitution in the form of three structural blocks (import, domestic production, exports) that are monitored simultaneously in their interrelations and mutual influence; 3) reliability, which is provided by the use of official statistical information and the lack of integrated indicators that can distort the results of the assessment; 4) relevance, expressed in the focus on the priorities of import substitution, the observance of which meets the economic interests of the country.

We identify the composition of import substitution priorities, structure its processes and assess the degree of achievement of performance indicators with the use of the following provisions.

The priorities of import substitution at the present stage of development of the domestic economy are as follows:

1) to reduce the share of imports in the total volume of foreign trade turnover (or in the total volume of commodity resources of the domestic market) to the level at which economic security of the country is fully achieved;

3) to increase exports while reducing the share of raw materials exports in total exports;

2) to displace foreign goods from the domestic market, replacing them with highly competitive (safe, high-quality and innovative) analogues of domestic production;

4) to increase domestic production of high-tech goods (with a high share of value added) and their share in total exports.

In the economy of any country in which domestic production of goods is carried out and which has export-import operations, the total volume of commodity resources of this type is expressed by an additive factor model, which includes three main components: 1) the volume of imported goods; 2) the volume of goods produced domestically; 3) the volume of goods produced domestically and intended for export

$$V_{CR} = V_I + V_{DP} + V_E ,$$

where V_{CR} – the volume of commodity resources of this type;

V_I – the volume of import of the goods consumed in the domestic market;

V_{DC} – the volume of domestically produced goods consumed within the country (excluding goods exported);

V_E – the volume of domestically produced goods intended for export.

All variables in this model are single indicators, the absolute values of which (import, export – in US dollars, domestic production – in rubles) are widely represented in the official statistical information. At first glance, the effectiveness of import substitution can be easily monitored if we look at the dynamics of the total volume of commodity resources and their components produced in the country. However, many multidirectional options of behavior of the same variables and the outcome indicator of the model can be considered effective.

The application of a structural approach to the model of formation of commodity resources of this type allows us to assume that the total amount of these resources is equal to 100%, and to express its components in shares and, thus, to abandon the consideration of the changing trend of the final indicator in the model. The components of the resulting structural model, represented by the shares of imports, domestic production and exports in the total volume of commodity resources, are interconnected and affect each other. Simultaneous identification of trends in the development of each structural part of the total volume of goods subject to import substitution of this type in their interdependence and mutual influence provides a reliable assessment of the effectiveness of import substitution. In addition, only in the structural approach it is possible to decompose the variables of import, domestic production and export into their most important components and at the same time identify the features of their dynamics.

In this context, the model for assessing the effectiveness of import substitution takes the following form:

$$V_{CR} = D_I + D_{DP} + D_E \ ,$$

where V_{CR} – the volume of commodity resources of this type, taken as 100%;

D_I – the share of imports of goods in the total volume of resources of these goods;

D_{DP} – the share of domestic production of goods in the total volume of resources of these goods (excluding goods sent for export);

D_E – the share of the volume of domestic products intended for export, in the total amount of resources of these goods.

Under the influence of the sanctions in the foreign economic activity of the country caused by both external and internal effects, the indicators D_I and D_E should be formed taking into account the share of imports (exports) subject to the sanctions:

$$D_I = D_{NSI} + D_{SI} \ ,$$

where D_{NSI} – the share of imports that do not fall under the sanctions restrictions; D_{SI} – the share of imports that fall under the sanctions regime;

$$D_E = D_{NSE} + D_{SE} \ ,$$

where D_{NSE} – the share of exports that do not fall under the sanctions restrictions; D_{SE} – the share of exports that fall under the sanctions.

It should be noted that the sanctions regime of the country's foreign trade can have both positive and negative impact on its economy. An example of the positive impact of the sanctions is the embargo imposed by the Russian Government in August 2014 on the import of food products from a number of countries (EU, USA, Canada, etc.)[1], which created prerequisites for the growth of domestic food production.

[1] On the measures for the implementation of the decrees of the President of the Russian Federation: Resolution of the Government of the Russian Federation of August 7, 2014 No. 778.

Taking into account the fact that the main priority of exports of goods is the growth of volumes and share of high-tech (innovative) goods produced within the country, the indicator D_E is detailed as follows:

$$D_E = D_{NSE} + D_{SE} ,$$

where D_{LTE} – the share of low-technology goods in export composition; D_{HTE} – the share of high-tech products in export composition.

In addition, from the point of view of import substitution priorities at the present stage, the level of high-tech goods should also be taken into account in the composition of D_I to make comparisons with their value in the composition of exports:

$$D_E = D_{LTE} + D_{HTE} ,$$

where D_{LTI} is the share of low-tech goods in the composition of imports; D_{HTI} is the share of high-tech goods in the composition of imports.

The effectiveness of import substitution can be achieved if the following conditions are met.

1. The market niche that is released after the goods under sanctions have been excluded from the total volume of imports is filled with domestically produced goods, i.e. the increase in domestic production of goods is proportional to the reduction of sanctioned imports before and after the imposition of sanctions: $\Delta D_{CИ} \leq \Delta D_{BП}$.

$$\Delta D_{SI} = D_{SI\ BS} - D_{SI\ AS} ,$$

where $D_{SI\ BS}$ is the share of imports from the countries subject to sanctions restrictions before the sanctions are imposed;

$D_{SI\ AS}$ is the share of imports from the countries subject to sanctions restrictions after the imposition of the sanctions.

$$\Delta D_{DP} = D_{DP\ AS} - D_{DP\ BS} ,$$

where $D_{DP\ AS}$ is the share of domestic production in the total volume of commodity resources after the imposition of sanctions;

$D_{DP\ BS}$ is the share of domestic production in the total volume of commodity resources before the imposition of sanctions.

The similar situation should occur in the case of export sanctions.

2. The share of imports of goods in the total amount of resources of these products has a decreasing trend ($\downarrow D_I$) and is limited to the value of the target identifier for each type of goods (industry); at the same time the share of imports not affected by the sanctions and the proportion of imports under sanctions in total imports do not increase; moreover, they tend to decrease: $\downarrow D_{NSI}$, $\downarrow D_{SI}$; the share of high-tech goods in the composition of imports also decreases ($\downarrow D_{HTI}$).

3. The following items show a positive trend:

– the share of the volume of domestic goods in total resources of these goods ($\uparrow D_{DP}$);

– the share of the volume of domestic goods that are sent to export ($\uparrow D_E$);

– the share of high-tech products in export composition: $\uparrow D_{HTE}$; the rate of growth of the share of high-tech goods in the composition of export has outpaced that of the export itself: $G_R D_{HTE} > G_R D_E$.

The assigned criteria reflect the state of the economy of the country in which there is an active process of import substitution; the country has import operations in the framework of its foreign trade turnover, but the priority is given to the development of domestic production of competitive goods and their exports, mainly the exports of high-tech goods.

The condition for assessing the effectiveness of import substitution is the expression of exports, imports and domestic production of goods in the same units of measurement.

Domestic production is mainly expressed in the national currency of Russia – in rubles. Being expressed in US dollars (by analogy with exports and imports), the indicator of domestic production of goods becomes comparable with the indicators of export-import operations of the country and reflects the real impact of the ruble on the prices of domestic goods in terms of their import component, income and profits of Russian producers.

The model for assessing the effectiveness of import substitution was tested on the example of food products – the flagship of domestic import substitution in recent years. Most of the individual indicators characterizing import substitution in this area are presented in the official statistical information of Rosstat, but some related aspects of the implementation of the model require explanation.

In deciding on the range of values of the share of imports of goods in the total volume of these goods consumed in the domestic market of the country, we proceeded from the fact that the threshold values of indicators characterizing the state of food security of the country for certain types of goods can serve as target indicators of the share of food imports[2].

If we assess the effectiveness of import substitution of food products in the whole country without differentiating by separate types of goods, we can assume that the target indicator of the minimum percentage of replaceable import can be its value, above which there is a real threat to the food security of the state and which, according to various estimates, is more than 25% [24, p. 47], 30% [25, p. 77], and more than 40% [25, p. 12] [26, p. 12]. We conditionally accept that the share of imports of goods in the total volume of these goods consumed in the domestic market of the country is $D_I < 35\%$.

The value of the market niche that is released due to the sanctions restrictions in food imports, and the consequent condition on the proportional increase in domestic food production in relation to the import of these products affected by the embargo was calculated according to the total share of the following countries: first, those on the list of the countries, food imports from which were banned in 2014; second, those countries on which we have reliable statistical information; third, those countries, whose imports clearly prevailed in the import of food in the pre-crisis period. Therefore, the value of the released market niche in the domestic market of the country was estimated according to the total share of the EU, USA and Ukraine. At the end of 2014, the share of these countries in imports ($D_{CI\ SI}$) amounted to 47.8% and decreased in 2015 to 22.9%. Since 2016, there has been a growing trend in the share of EU, US and Ukraine in Russian imports (in 2016 it amounted to 23.1%, in 2017 – 24.0%, in 2018 – 25.1%).

Research results

The results of the study are presented by the data on the changes in the structure of food resources of the country for 2007–2017 in the context of three structural blocks (the volume of imports of goods; the volume of domestic production; the volume of exported domestic goods), detailed in accordance with the priorities of import substitution at the present stage.

Table 1 shows the values and dynamics of the absolute (volume of resources) and relative (proportion of the volumes in total resources) indicators used in the technique. First of all, attention is drawn to the trend of changes in the total volume of food resources. Until

[2] On the approval of the Food Security Doctrine of the Russian Federation: Decree of the President of the Russian Federation of 30.01.2010 No. 120

Table 1. Dynamics of the indicators used in the technique for assessing the effectiveness of import substitution of food products

Indicator	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Volume of commodity resources, V_{CR}, mln USD	103154	142070	118925	143807	165144	169387	177468	166032	126354	121464	137666
Volume of imports, V_I, mln USD	27626	35189	30015	36398	42544	40655	43255	39957	26650	25072	28924
Volumes of food products produced domestically, V_{DP}, mln USD	66438	97603	78943	98654	109276	111963	117951	107093	83489	79317	88043
Volume of domestic food products sent for export, V_E, mln USD	9090	9278	9967	8755	13324	16769	16262	18982	16215	17075	20699
Volume of imports of food products that do not fall under the sanctions restrictions, V_{NSI}, mln USD	10942	13583	13117	17216	19953	19392	20416	20858	20547	19280	21982
Volume of imports of food products from countries subjected to embargo, V_{SI}, mln USD	16684	21606	16898	19182	22591	21263	22839	19099	6103	5792	6942
Volume of imported high-tech food products, V_{HTI}, mln USD	5035.0	6532.4	4500.8	6013.1	6903.3	6924.1	7494.1	7022.2	4394.9	3760.2	5781.9
Volume of exported high-tech food products, V_{HTE}, mln USD	1163	1210	1037	1100	1239	1507	2343	2301	1821	2151	2782
Volume of exported low-tech food products, V_{LTE}, mln USD	7927	8068	8930	7655	12085	15262	13919	16681	14394	14924	17917
The share of imports of food products in the total volume of resources of these goods, D_I, %	26.8	24.8	25.2	25.3	25.8	24.0	24.4	24.1	21.1	20.6	21.0
The share of domestic production of food products in the total volume of resources of these goods, D_{DP}, %	64.4	68.7	66.4	68.6	66.2	66.1	66.5	64.5	66.1	65.3	64.0
The share of the volume of domestic products intended for export, in the total amount of resources of these goods, D_E, %	8.8	6.5	8.4	6.1	8.1	9.9	9.2	11.4	12.8	14.1	15.0
The share of imports of food products that do not fall under the sanctions restrictions, D_{NSI}, %	10.6	9.6	11.0	12.0	12.1	11.4	11.5	12.6	16.3	15.9	16.0
The share of imports of food products from embargoed countries in the total volume of resources of these goods, D_{SI}, %	16.2	15.2	14.2	13.3	13.7	12.6	12.9	11.5	4.8	4.8	5.0
The share of imported high-tech food products in the total volume of resources of these goods, D_{HTI}, %	4.9	4.6	3.8	4.2	4.2	4.1	4.2	4.2	3.5	3.1	4.2
The share of high-tech food products sent for export, in the total volume of resources of these goods, D_{HTE}, %	1.1	0.9	0.9	0.8	0.8	0.9	1.3	1.4	1.4	1.8	2.0
The share of low-tech food products sent for export, in the total volume of resources of these goods, D_{LTE}, %	7.7	5.7	7.5	5.3	7.3	9.0	7.8	10.0	11.4	12.3	13.0

Sources: own compilation with the use of: Russian Statistical Yearbook. 2008–2018: Statistics Collection. Rosstat. Available at: http://www.gks.ru/; Socio-Economic Situation in Russia. 2015–2018. Statistics Collection. Rosstat. Available at: http://www.gks.ru/; Statistical Bulletin of the Bank of Russia. 2008–2018. Available at: http://www.cbr.ru.

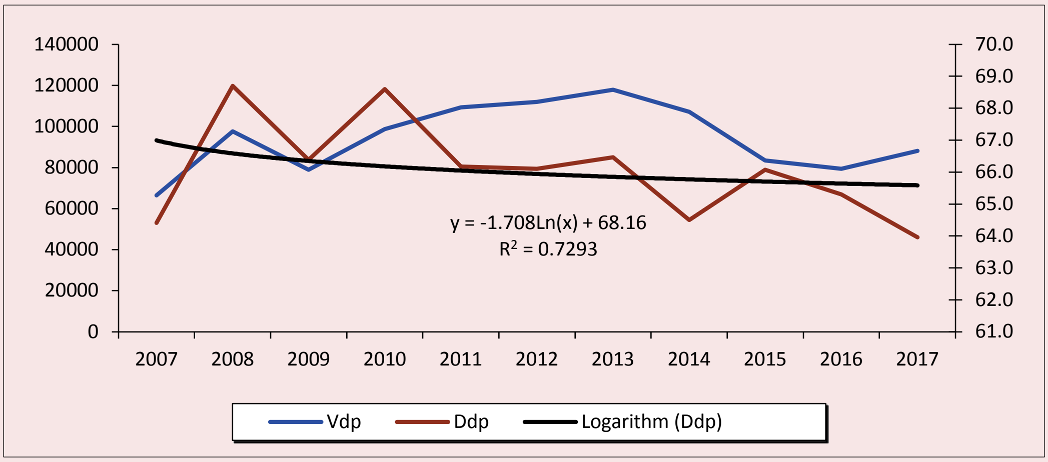
2012, there was a positive dynamics of their growth, which was subsequently replaced by a downward trend (an average of 10,466 million US dollars per year). Only in 2017 there was a tendency toward the growth of the values of this indicator.

The following trends are observed in the structure of commodity resources:

– the dynamics of the share of domestic goods in total resources of these products for 2007–2017 are unsteady, but since 2010 we observe negative dynamics in the share of domestic goods in total resources of these products against the backdrop of their decelerating decline *(Fig. 1)*;

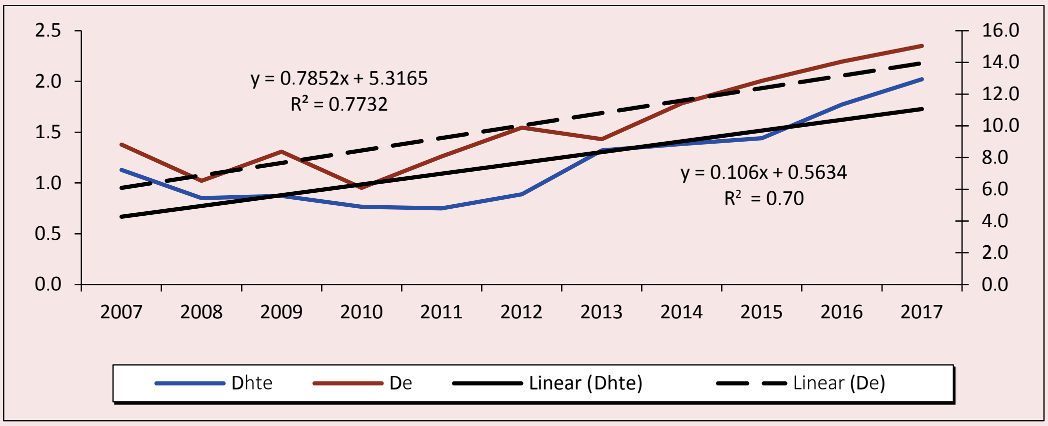
– there is an increase in the proportion of domestic goods intended for export (average for the year – by 0.79%) *(Fig. 2),* including the share of high-tech goods (on average for the year – by 0.11%); we note that the average annual decline in the share of imports in the composition of commodity resources is slower (0.56%) than the average annual growth of exports (0.79%) *(Fig. 3)*;

Figure 1. Dynamics of the volume of domestic goods and their share in the total volume of food resources for 2007–2017, million USD, %



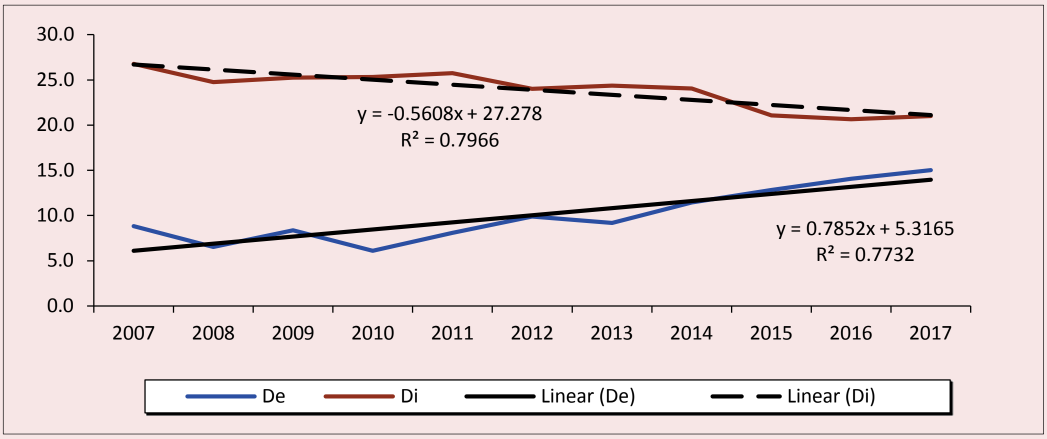
Source: own compilation.

Figure 2. Dynamics of the share of exports and the share of high-tech exports in the total volume of food resources for 2007–2017, %



Source: own compilation.

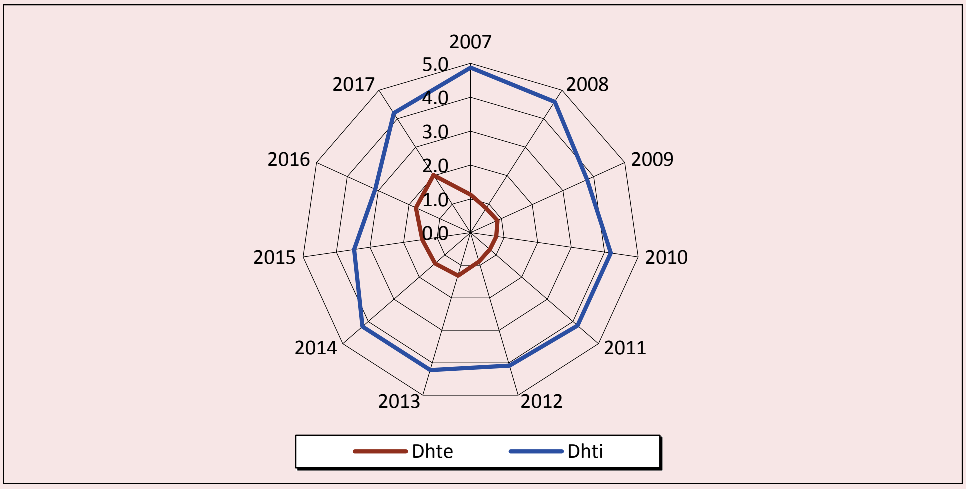
Figure 3. Dynamics of the share of exports and imports of food products for 2007–2017, %



Source: own compilation.

– we observe an increase in the volume and export share of goods (see Tab. 1), and the maximum values of indicators were achieved in 2017 – 2,782 million US dollars and 2% accordingly. The comparison of the volume and share of exports and imports of such goods in the structure of the total volume of commodity resources shows an accelerating decline in the ratio of imports and exports of high-tech food products, as well as a decreasing difference in their share values, the minimum value of which (1.3%) was achieved in 2016 *(Fig. 4);*

Figure 4. Dynamics of the share of exports and imports of high-tech food products in the structure of commodity resources for 2007–2017, %

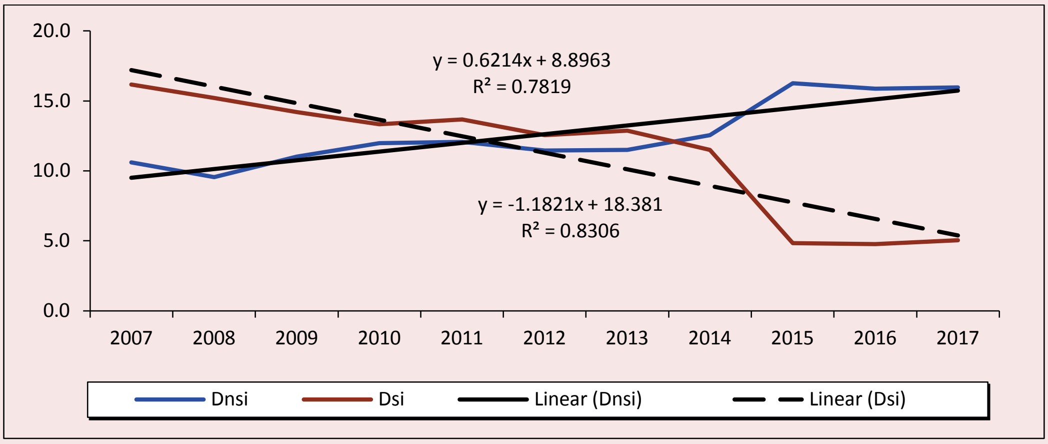


Source: own compilation.

– if we look at the dynamics of the structure of food imports in the context of those not falling under the sanctions restrictions and those subject to the sanctions regime, we see that there is a growth in the share of imports from the countries not subjected to sanctions (per year on average by 0.62%) *(Fig. 5)*.

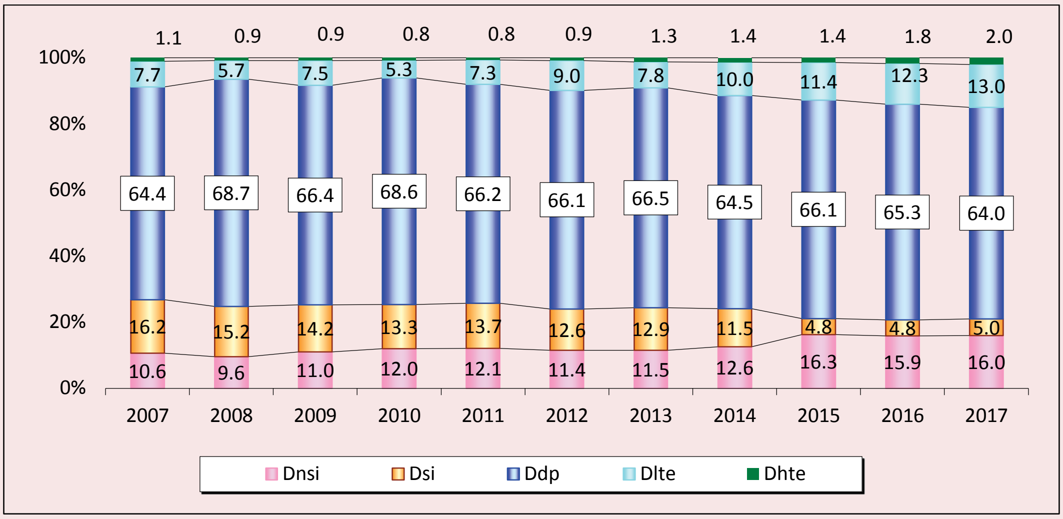
The general picture of the changes in the structure of commodity resources for 2007–2017, if we consider separately the import of food products not subject to sanctions restrictions and the import of food products under the sanctions regime, is shown in *Figure 6*. There is a decrease in the volume of domestic

Figure 5. Dynamics of the share of imports not subject to the sanctions restrictions and imports coming under the sanctions regime for 2007–2017, %



Source: own compilation.

Figure 6. Dynamics of the structure of commodity resources for 2007–2017 (the imports of food products not covered by sanctions restrictions and those under the sanctions regime are considered separately), %



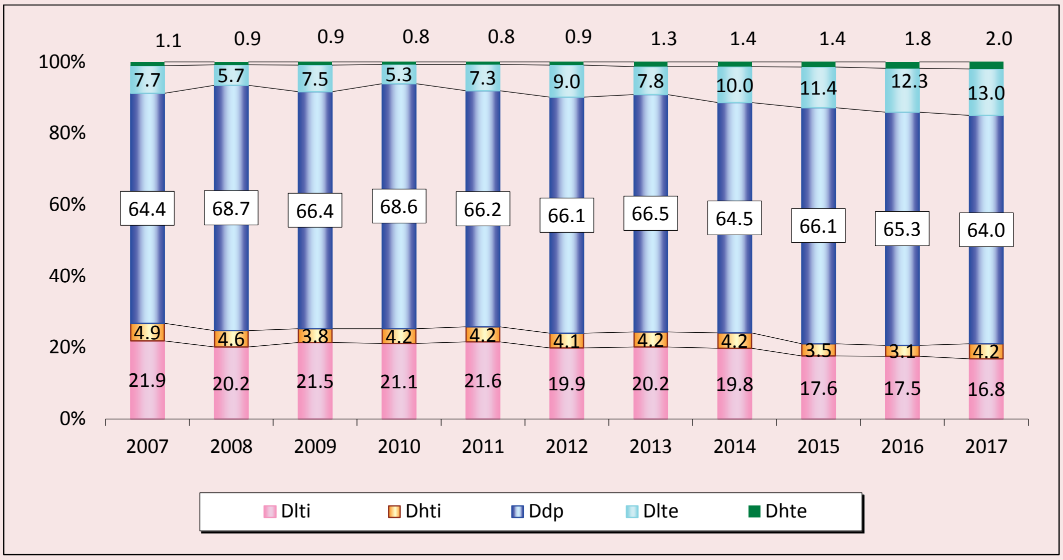
Source: own compilation.

goods while the share of these goods for export is increasing, and the share of imports is decreasing. At the same time, the share of exported high-tech goods is growing.

The final form of the structure of commodity resources, if we group food imports into high-tech and low-tech is shown in *Figure 7*. There is a declining trend in the dynamics of the shares of both high-tech and low-tech imports in the total volume of food resources.

The criterion $\Delta D_{SI} \leq \Delta D_{DP}$ (if $D_{SI} > 0$) is not fulfilled in the sanctions period, i.e. the niche released after the goods that enter the country under the sanctions regime have been excluded from the total volume of import has not been filled with domestic goods to the fullest extent. In 2015, a more than twofold decrease in the share of imports was accompanied by a decrease in the share of domestic goods by 1.6%. Even with a 1.4% increase in the share of food exports, the released part of the resources was not fully filled with domestically produced goods. A similar situation can be observed in 2016 – the share of domestic goods decreased by 0.8% compared to the level of 2015, and the share of exported food products increased by 1.3%. In 2017, the decrease in the share of domestic goods and the increase in the share of exported goods were supplemented by the positive dynamics of the share of imports in the structure of commodity resources. The increase in imports by 15.4% in 2017 was achieved largely by the growth of imports not covered by sanctions (19.9% vs. 14.0%, reflecting the increase in imports under sanctions). This increase is greater than the increase in domestic production, which amounted to 11% compared to the level of 2016. Such changes have led to a decrease in the share of domestic production volumes to a value below the level of 2014 and they indicate that in 2017 there was a reorientation of sanctions imports to the imports from countries that did not fall under the embargo.

Figure 7. Dynamics of the structure of commodity resources for 2007–2017
(if we group the imports of food products into high-tech and low-tech), %

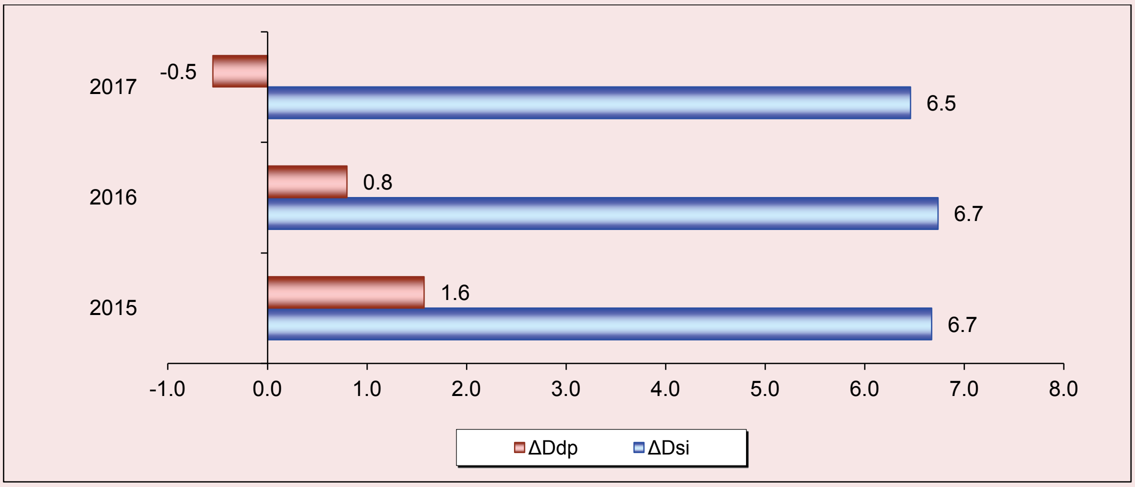


Source: own compilation.

According to the calculations, in 2015, the released niche in the amount of 6.7% of the volume of commodity resources was filled with domestic goods by 3% and with imported goods by 3.7%; in 2016 – by 3.4 and 3.3%, in 2017 – by 3.1 and 3.4%, respectively *(Fig. 8)*. If we assume that the size of the released niche is 100%, then in 2015 domestic goods accounted for 44.8%, imported goods – 55,2%; in 2016 – 50.7 and 49.3%, in 2017 – 47.7 and 52.3%, respectively; i.e., domestic food products fill only about half of the released market space.

Russia's food security criteria in the period from 2010 to 2017 are fulfilled for almost all food products, the discrepancy was observed only with regard to meat products and meat in 2010 and 2012 *(Tab. 2)*.

Figure 8. Comparison of changes in the share of sanctions imports before and after the introduction of sanctions with the changes in the share of domestic production of food products for 2015–2017, %



Source: own compilation.

Table 2. Dynamics of the share of imported food products in the total volume of their commodity resources in 2010–2017

Type of goods	Value of the share of imports ensuring food security of the country	2010	2011	2012	2013	2014	2015	2016	2017
Vegetable oil	< 20%	2.96	2.86	2.49	2.20	2.32	3.16	0.00	3.33
Meat and meat products	< 15%	16.04	14.80	16.10	13.91	13.16	10.95	8.87	8.69
Milk and dairy products	< 10%	3.17	2.59	2.20	3.44	3.50	2.88	3.63	3.67
Fish products	< 20%	5.20	5.03	5.37	5.79	5.58	4.56	4.19	4.74
Sugar	< 20%	3.77	4.51	0.85	0.70	1.15	1.32	1.01	0.44
Potato	< 5%	0.80	1.75	0.97	1.30	0.96	0.96	1.44	0.76
Grain	< 5%	0.64	0.55	0.57	0.54	0.58	0.87	0.93	0.80
Compiled with the use of the following sources: On the approval of the Food Security Doctrine of the Russian Federation: Decree of the President of the Russian Federation of 30.01.2010 No. 120; Russian Statistics Yearbook. 2005–2018. Statistics Collection Rosstat. Available at: http://www.gks.ru/; Indicators of import substitution in Russia. Share of imports of individual goods in their commodity resources. Available at: http://www.gks.ru/.									

The general picture of compliance with the target criteria in our technique for assessing the effectiveness of import substitution, tested on the example of food products, is presented in *Table 3*.

The results of the assessment show that of the ten targets criteria only six ($\downarrow D_{HTI}$, $\uparrow D_E$, $\uparrow D_{HTE}$, $\downarrow D_I$, $\downarrow D_{SI}$, $D_I < 35\%$) are fulfilled, one ($\downarrow D_{NSI}$) is not fulfilled, the criterion $\uparrow D_{DP}$ is also not fulfilled, but its decline is slowing down.

All of the above allows us to draw the following main conclusions. The positive dynamics of import substitution of food products is provided by a reduction in the share of imports in their total amount, including the share of imports under the sanctions restrictions and the share of imports of high-tech goods; moreover, the share of imports in the total resources of these products corresponded to the values of the country's food security throughout the period under consideration. There is an increase in the share of domestic food products intended for export, including high-tech goods. Negative structural changes are reflected in a decelerating reduction in the share of domestic food products and an increase in the share of food imports not subject to sanctions. Embargoed food imports have largely been reoriented toward imports from other countries. As a result, the niche that was released in 2015–2017 in the domestic market after the imported goods that enter the country under the sanctions regime were excluded from the total volume of imports, is filled with domestic food products only by half.

The fulfillment of all the criteria of import substitution effectiveness will be possible if there is a change in the structural components of the total volume of goods formed in the country – their import, domestic production, and export. The calculations performed in the process of solving the multi-criteria optimization problem, based on the composition of the criteria used in our technique (by the method of uniform search for the optimal alternative solutions), show *(Tab. 4)* that, based on the results of import substitution achieved in 2017, the increase in

Table 3. Compliance with the target indicators for assessing the effectiveness of import substitution of food products

No.	Indicator	Target value of the indicator	Fulfillment of the target indicator
1.	Ratio of the increase in domestic production of goods ΔD_{DP} to the reduction of sanctioned imports ΔD_{SI} before and after the imposition of sanctions	$\Delta D_{SI} \le \Delta D_{DP}$	Is not fulfilled in 2015–2017
2.	Proportion of imports, D_I	$\downarrow D_I$	Is fulfilled
3.	Compliance of the share of imports D_I with the target indicator of food security	$D_I < 35\%$	Is fulfilled
4.	Proportion of imports that fall under the sanctions regime, D_{SI}	$\downarrow D_{SI}$	Is fulfilled
5.	Proportion of imports that do not fall under the sanctions restrictions, D_{NSI}	$\downarrow D_{NSI}$	Is not fulfilled
6.	Proportion of high-tech goods in the composition of imports.D_{HTI}	$\downarrow D_{HTI}$	Is fulfilled
7.	Proportion of the goods of domestic production, D_{DP}	$\uparrow D_{DP}$	Is not fulfilled, but the decline is slowing down
8.	Proportion of domestic goods that are sent to export, D_E	$\uparrow D_E$	Is fulfilled
9.	Proportion of high-tech goods that are sent to export, D_{HTE}	$\uparrow D_{HTE}$	Is fulfilled
10.	Ratio of the growth rate of the share of high-tech exports D_{HTE} to the growth rate of the share of exported goods D_E	$G_R D_{HTE} > G_R D_E$	Is not fulfilled in 2009, 2011–2012, 2014–2015 Is fulfilled in 2007–2008, 2010, 2013, 2016–2017
Source: own compilation.			

Table 4. Forecasted structure of resources of food products, %

Indicators	Structure of commodity resources in the last year of observations	Forecast structure of commodity resources
The share of imports that fall under the sanctions regime, D_{SI}	5.0	4.6
The share of imports that do not fall under the sanctions restrictions, D_{NSI}	16.0	8.9
The share of domestic production in the total volume of commodity resources, D_{DP}	64.0	71.4
The share of high-tech imports, D_{HTI}	2.0	2.1
The share of low-tech exports, D_{LTE}	13.0	13.0
Source: own compilation.		

the share of domestic production by 7.4 p. p. will help fill the niche released as a result of counter-sanctions only with domestic goods. In addition, this will ensure a 7.1 p.p. decrease in the imports not subject to sanctions and, accordingly, will increase the share of exports in the total volume of commodity resources by 0.1 p.p.

Conclusion

The significance of the scientific research conducted and reflected in the work is due to the development of scientific ideas about the target priorities, directions of implementation and methods of assessing the effectiveness of import substitution at the present stage of development of the Russian economy, characterized by market instability, adverse influence of geopolitical factors and external constraints. The method we have developed to assess the effectiveness of import substitution allows us not only to simulate the real processes of import substitution, but also to forecast their development from the standpoint of the need to achieve the target indicators that ensure the effectiveness of import substitution.

Approbation of the method on the example of food products has shown that the process of import substitution in this group of commodity resources is actively developing, but not all the target criteria of import substitution are fulfilled. The obvious set of measures developed in numerous studies to intensify import substitution in the agro-industrial complex of the country must necessarily be based on scientifically substantiated quantitative guidelines of the processes taking place in it. On the basis of the results that we have obtained, the optimal structure of commodity resources was calculated, which helps ensure the full achievement of the effectiveness of import substitution of food products.

The results obtained in this work can be used in further research on the reasons that reduce the effectiveness of import substitution in Russia, and can also be used by public authorities in the development of economic policies, federal and regional programs in the field of import substitution. The proposed method is universal and suitable for any kind of commodity resources emerging in the country, which develops its domestic production and at the same time actively participates in global economic processes. However, the processes of import substitution as part of various commodity resources have their own specifics. In particular, while assessing the effectiveness of import substitution of food products their import was discussed from the positions of counter-sanctions introduced by Russia; they have divided foreign goods consumed in the country into those free from the restrictions and those the import of which from a number of countries is banned. Breaking down the import of food products, taking into account this circumstance, we have calculated the size of the released niche intended to be filled with domestic goods based on the target settings of import substitution. If restrictions (both external and internal) are applied to the export of any goods, then within the framework of our technique this export can be considered in appropriate detail. The most preferred area of research in this case is the import substitution processes in certain product groups, for which the adopted and implemented import substitution programs set limits on the share of imports in the total volume of these goods.

In addition, it is necessary to take into account the evidence that the process of import substitution is manifested not only in structural changes in the foreign trade balance of the country and its domestic production, but also in positive trends in the socio-economic sphere in terms of the increase in employment and income of the population and its standard of living as a whole. The increase in the number of indicators involved in the methodology makes it necessary to improve the approaches to assessing the effectiveness of import substitution. At the same time, it is extremely important to assess the impact of import substitution on economic growth in the country and the prospects for its further development. It is in this direction that we will continue further research in the field of assessing the effectiveness of import substitution.

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Public Administration Issues in the Development of the Non-Profit Sector at the Regional Level

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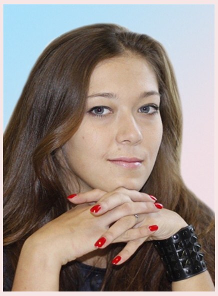

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Abstract. At the current stage of socio-economic development of the country the non-profit sector becomes a vital actor in the management system and the object of governance with its own unique features. The goal of this article is to present scientific propositions based on intersectoral social partnership for improving governance of non-profit organizations in the Russian regions. To achieve this goal, we used methods of systemic, comparative, statistical and sociological analysis. Works of domestic and foreign authors on the problems of engagement between authorities and the non-profit sector were analyzed. The conclusion that the term “intersectoral social partnership” is more appropriate for the conditions of the Russian regions was made. The Russian legal basis for governance of the non-profit sector at the federal and the regional levels was studied. It was identified that the conditions to attract new service providers to the social sphere were created – these providers are called “socially oriented non-profit organizations”

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(hereinafter – SONPOs). But it was identified that the legal basis, which opens new opportunities for SONPOs to be involved in social programs of the government, was not supported by proactive measures to strengthen the economy and human capacity of the considered organizations. This article proves that a region is the central element in the implementation of governmental policy in the sphere of regulation and support of the non-profit sector: discussed cooperation is implemented at the regional level. The concluding part of the article names structural organizational-economic and legal measures to improve the cooperation between regional, municipal authorities and the non-profit sector within intersectoral social partnership. The results of this research might be used to develop well-balanced state regional policy and programming documents as well as to plan strategic and operational events for the advancement of the non-profit sector in the entities of the Russian Federation.

Key words: the non-profit sector, non-profit organizations (NPO), socially oriented non-profit organizations (SONPO), governance, region, intersectoral social partnership (ISSP).

Introduction

After the collapse of the Soviet Union official authority set a course for liberalization of political processes, transition to the market economy and denationalization of the social sphere. Attention to the work of the non-government sector noticeably increased. The first steps to its formalization by legislative recognition and registration of non-profit organizations (hereinafter – NPOs) [1, p. 48] were taken. For the first time, the term "non-profit organization" was approved for the legal sources by the Supreme Council of the USSR in 1991. It was laid down in the Civil Code of the Russian Federation in 1994. The federal law on non-profit organizations, which regulates its activities on the Russian territory, was signed in 1996. An NPO is an organization which does not have profit-making as the main objective of its activity and does not distribute the earned profit among its participants[1]. In fact, the non-profit sector is a set of NPOs operating on the basis of non-market mechanisms.

Russian legislation singles out socially oriented non-profit organizations (hereinafter – SONPOs)[2], which address social issues and develop institutes of civil society[3], into a special group since 2010. Public and local authorities gain additional powers to support them. It implies that SONPOs become the entities of governance.

The selected object has its own specific features: relations between authorities of the Russian Federation, municipalities, and the Russian Federation entities are regulated by the civil law on an equal footing with non-profit organizations[4]. Equality causes some difficulties

[1] Federal Law 7-FZ "On non-profit organizations", dated 12.01.1996 (current version, 2016). *Law reference system "Consultant-Plus"*. Available at: http://www.consultant.ru

[2] A share of SONPOs is 66% of the total number of NPOs in Russia, in the Vologda Oblast – 88% (as at 2017).

[3] SONPO activities are determined by Federal Law "On non-profit organizations". According to Section 1 Article 31.1., they include: provision of social services, assistance and protection of citizens; prevention of risk behavior; training the public to response to consequences of disaster situations, catastrophes etc., and victim assistance; environmental and animal-welfare protection; provision of legal aid; philanthropy, actions to encourage volunteering; activity in the field of education, enlightenment, science, culture, art, healthcare, prevention and protection of people`s health, health promotion, improvement of people`s morale and psychology, physical education and sport; encouraging public attitudes of intolerance towards corruption.

[4] The Civil Code of the Russian Federation Article 124 "The Russian Federation, the Subjects of the Russian Federation and the Municipal Entities as the Subjects of Civil Law".

in implementing state social policy involving NPOs because these organizations, unlike state-run institutions, do not follow "direct orders" from the government. That is why there is a need for establishing special mechanisms of cooperation between authorities and the non-profit sector. Forms of state regulation must have sufficient flexibility in accordance not only with general aims of social policy but also with local features and needs of regions` population. Cooperation should be based on the cohesion of interests of governance and different social entities. Therefore, there is a need for creating such form of cooperation.

Significance of this cooperation at the regional level is supported by a number of issues NPOs help to solve – increase of human capital; enhanced contribution to economic growth (including production of goods and services); mobilization of financial funds and concentration of resources; security of people's employment and self-employment; fulfillment of public enquiries regarding cultural, educational and health services; assistance to adjust the financial imbalances inside social groups which leads to the normalization of public relations [2–3].

Therefore, the goal of this article is to present scientific proposals for improvement of governance of the non-profit sector in the Russian regions, which are based on the forms of intersectoral social partnership.

There are several tasks to carry out in order to achieve this goal:

1) to review main theoretical concepts of this research;

2) to study Russian legal sources concerning governance of the non-profit sector;

3) to analyze sectoral economic support of socially oriented non-profit organizations;

4) to define the place of state regional policy in the system of regulation and support of non-profit organization in Russia;

5) to formulate recommendations and proposals for improvement of state governance of the non-profit sector in the Russian regions.

Materials and methods

The knowledge base of the research includes the following: works of the Russian and foreign authors, legislative sources, documents of the federal and regional authorities, data from Federal State Statistics Service, part of which is published on the portal of Unified Interdepartmental Statistical Information System (UISIS).

Moreover, the results of monitoring of the economic status and social well-being of the Vologda Oblast population are used. Monitoring was conducted by using the method of interviewing. The model of multi-stage area sampling with quota sampling of observation units at the last stage was used. The first stage of sampling included selecting typical entities of the Vologda Oblast which include Vologda, Cherepovets as well as Babaevsky, Velikoustyugsky, Vozhegodsky, Gryazovetsky, Kirillovsky, Nikolsky, Tarnogsky, Sheksninsky districts. The second stage included territorial zoning inside the selected entities, and the third stage – selection of the respondents according to the gender and age quota. Sampling size was 1,500 people, sampling error – 3%.

Processing and interpretation of collected data were carried out by using systematic, comparative, statistical and sociological analysis.

Theoretical basis of the research

International scientific literature includes a number of theoretical approaches towards the problem of non-profit organizations' emergence and its cooperation with authorities.

The concept of "market/state failure". The point is that the emergence and the development of non-profit organizations are tied to the inability of the market and the state to provide an effective allocation of limited resources. The state compensates "market failures" by providing market goods, and the non-profit sector atones "state failures" by, in fact, covering a part of aggregate demand for public goods and services (M. Krashinski [4], I. Ilman [5], G. Khansmann [6–7]).

"Social origin" theory. According to the supporters of this concept, the non-profit sector is a derivative of the state social system. The latter is defined by its development features formed in a society by traditions and stereotypes towards the creators of public goods (G. Esprin-Andersen [8], L. Salamon, V. Sokolovski [9]).

The concept of "subsidy". Subsidies (tax relief, public spending, private donations etc.) give non-profit organizations a competitive edge against for-profit and public institutes. Subsidy is the main factor of a non-profit organization's emergence and growth (M. Jensen E. Fama [10]).

These theoretical approaches do not contradict each other and supplement the concept of New Governance Theory, which needs to be examined additionally.

Representatives of this school say that shortcomings of governance could be amended by implementing approaches and practices of the private sector. It includes strategic planning, management by objectives, etc. [11]. Ideologists of "indirect governance" suggest passing public services, including social ones, over to private and non-profit organizations by means of contracts and agreements [12]. Such outsourcing[5] practices at the public levels are implemented in developed countries (Germany, USA, France, The Netherlands, etc.) and some developing countries (Republic of Korea, India, etc.).

The benefits of cooperation with NPOs for the government are as follows: improvement of the quality of the services as a result of smaller-scale and greater responsiveness of NPOs; access to expert knowledge and experience in the process of addressing issues; an opportunity to mobilize extra-resources in the form of private fees and efforts of volunteers; a chance to shift some of the service price to clients; access to the innovative solutions for difficult problems which are usually created by NPOs; ability to address the issues flexibly, with a chance to avoid state bureaucracy; promotion of the social capital and harmony [14, p. 8].

But the implementation of "indirect governance" causes three problems: manageability, accountability and legitimacy. The first problem is that indirect forms of governance require a lot more planning than direct forms. Issues which are solved by direct governance on a case-by-case basis at the level of the country should be regulated through legally binding contracts under indirect governance. Coherence should be provided in many locations of the decision-making circuits, and dispersed organizations

[5] Outsourcing – is a way of organizing company's work by concentrating on the primary activity and giving out non-profile functions to outside expert firms on a contractual basis [13].

should be united in effective webs capable of comprehensive action. Everything mentioned requires new approaches and skills drastically different from those characterizing traditional governance.

The second problem is caused by a possible lose of control from public agencies, because implementing organizations, according to the "principal–agent problem", will always have more information about what happens in their area of activity.

The third problem explores de-legitimization of the state. Transition of public functions might weaken a perceived connection between taxes people pay and services they get. The services, which are provided by means of outsourcing, are given to citizens by NPOs and not by public institutions. As a result, people might get confused by the source of assistance [15].

Finding the balance between pros and cons in implementation of this theory in Russian realities requires further research, so now we will discuss a brief review.

Russian scholars see the solution of the governance problem in practice-oriented theories – "intersectoral social partnership", "social-public partnership" and "public-private partnership". Public-private partnership (hereinafter – PPP) primarily means cooperation between business and government. It includes different projects of co-financing new productions through private and budget funds [16, p. 271]. But A.A. Moskovskaya notices that social entrepreneurs and non-profit organizations should be included in PPP-system as important sources of social infrastructural development [17, p. 110]. Social-public partnership (hereinafter – SPP) involves citizens and their groups in implementation of the tasks of state policy. It also suggests the involvement of NPOs in the role of the institute which unites people in associated groups [18]. The nature of intersectoral social partnership (hereinafter – ISSP) means positive cooperation between public, business and the non-profit sectors in addressing social issues. This type of interaction is advantageous for the population of the territories and for each party – cooperation provides synergetic effect from combining the resources [19, p. 20–21].

The form of intersectoral social partnership is more effective for conditions of the Russian regions, because it helps get not only additional resources for social issues solution and quality of life improvement, but also to increase effectiveness of government decisions, to improve people's positive attitude towards authorities. The instruments of ISSP provide the opportunity for public institutes to understand people`s needs and to correct government decisions on time [20, p. 39].

Results and discussion

Governance process of the non-profit sector development is reviewed in four aspects: legal basis, sectoral specifics of economic management, problems at the regional level and effectiveness of informational support of the non-profit sector in the context of public opinion.

1. Legal basis

The formation of appropriate legal environment for non-profit organizations is an important premise for their willingness to work on common challenges with the government [21, p. 50]. Federal authorities acknowledge the use of cooperation with non-profit organizations and determine the priorities

Table 1. Documents and normative legal acts to support SONPOs in the Russian Federation

Document	Contents
Decree of the Government of the Russian Federation No.1144-r "On approval of the plan ("roadmap") "Improving access of non-government organizations to the provision of social services", dated 08.06.2016	It includes a range of measures designed to guarantee stage-access of SONPOs carrying out activities in the social sphere
Federal Law No.287-FZ "On non-profit organizations" regarding establishment of the status of a non-profit organization – performer of public utility services (PPUS)", dated 03.07.2016	SONPO gets a status of PPUS if it provides useful services of good quality for more than a year, it is not registered as a foreign agent, and doesn`t have back taxes and fees
Decree of the Government of the Russian Federation No.1096 "On the approval of the list of socially useful services, and criteria of quality assessment of their provision", dated 27.10.2016	It establishes the list of services NPO may provide and get subsidies for. Also, it states criteria of assessment: compliance with the standards, the availability of skilled employees and the adequacy of their quantity, satisfaction of beneficiaries, transparency and availability of information about NPO, the absence from the register of unfair suppliers
Federal Law No.449 "On amending FL "On non-profit organizations", dated 19.12.2016	It sets the minimum two-year period during which budget subsidies should be allocated to NPO-PPUS
Federal Law No.466 "On amending Articles 78.1 and 242.6 of the Budget Code of the Russian Federation", dated 28.12.2016	It determines the amount and procedure of subsidies provision from the federal, entity, and local budgets
Decree of the Government of the Russian Federation No.89 "On the register of non-profit organizations – performers of public utility services", dated 26.01.2017	It clarifies the rules of making a decision on the recognition of SONPO as a performer of socially useful services, as well as the rules of maintaining the register
Methodological materials on the development of regional programs of support for socially oriented NPOs	It establishes the powers of the regions; the procedure for the development of regional programs supporting SONPO, the requirements for the structure and content of such programs
Methodological materials on the formation and assistance of the SONPO support resource centers in the entities of the Russian Federation and municipalities	It defines the functions of the SONPO resource center and criteria to assess their activities. Besides, it contains recommendations on providing support to the resource center by public authorities of entities of the Russian Federation and local administrations

of state policy towards them. For example, according to Subparagraph 1 Section 1 of the Decree of the President of the Russian Federation No. 597 "On measures to implement state social policy", dated May 7, 2012, the government of the Russian Federation is assigned to "increase support of socially oriented non-profit organizations starting from 2013"[6].

In accordance with the May Decree of the President of the Russian Federation V.V. Putin a number of documents were prepared and adopted. Some of them, especially methodological materials for regions, are not mandatory *(Tab. 1)*.

Actions of the authorities and adopted official documents show that the involvement of non-profit organizations into public and municipal provision of social services is one of the priorities of the Russian social policy. The advantage is that legal basis, which helps involve such organizations in social sphere, is established. But some researchers point out the shortcomings of the existing system. G.M. Zabolotnaya and A.V. Larionov underline that "the real situation with bringing the non-profit sector into providing social services in the regions does not correspond to the request of the federal center" [22, p. 252].

[6] The Decree of the President of the Russian Federation No.597 "On measures to implement state social policy", dated 7.05.2012. Available at: http://base.garant.ru/70170950/

We should point out a number of reasons which restrain implementation of national policy at the regional and municipal levels. If we look at the register of non-profit organi-zations which perform socially useful services of the Russian Ministry of Justice, we will see 139 organizations across Russia (June 2018)[7]. The Central Federal District is the leader – 57 SONPOs are included in the register there (0.18% from the overall number of SONPOs registered in the regions of the district), in Siberian – 15 (0.07%), North Caucasian – 13 (0.16%), Ural – 12 (0.1%), Northwestern – 6 (0.04%), Southern – 4 (0.02%)[8]. Overall amount of SONPO financial assistance across all regions allocated from budget funds does not reach numbers stated in the "program of stage-access to budget funds" – 7% to 2018 and 10% to 2020 (planned)[9]. The real number is eight times below the target. For example, in the Northwestern Federal District the proportion of funds from consolidated regions' budgets for SONPO assistance is 1.2% (2,896,5 million rubles)[10].

While explaining the reasons of insufficient integration of non-profit organizations in the register and lack of their financial funding, regional authorities refer to the absence of unified methodic of budgetary allocations for non-profit organizations providing socially useful services[11].

After analyzing procedures of selecting social services suppliers in 15 regions, B.L. Rudnik, E.V. Kushtanina found numerous cases when adopted documents did not represent objectivity and transparency. In particular, authors point out the following problems: absence of requirements concerning provision of information about the selection and its results for the customer, usage of informal quality criteria, unresolved issues regarding activities of the commissions etc. [23].

S.V. Efremov examines subjective readiness of regional authorities to involve SONPO as the provider of social services, financed from budget funds, by interviewing deputies of governors and ministers of the regions (64 respondents in 44 regions). The author states that "overdepartmentalization of interests, along with conservative authorities, creates a vicious circle – regions do not seek gaining the experience of inviting SONPOs" [24, pp. 102–103]. This could be explained by the fact that transition of the part of the social demand to non-government organizations leads to budget cuts for public and municipal social institutions. Local authorities are not interested in this: they continue working as before and, at the same time, referring to "objective" reasons. On the other hand, non-profit organizations do not take the initiative and do not see the advantages of being in the register, because they cannot compete with public and municipal budget institutions. As the results of I.V. Mersyanova

[7] Data from the register of non-profit organizations-performers of socially useful services by the Ministry of Justice of the Russian Federation. Available at: http://unro.minjust.ru/NKOPerfServ.aspx

[8] There are no data for the Volga and Far Eastern federal districts.

[9] The 2016-2020 program of stage-access of socially oriented non-profit organizations operating in the social sphere to the budget funds allocated to the provision of social services for the people. Available at: http://economy.gov.ru/wps/wcm/connect/

[10] The report of the plenipotentiary of the President of the Russian Federation in Northwestern Federal District on the implementation of the assignment on organization and the results of monitoring of financial provision from the regional budgets of Northwestern Federal District given after Presidential Address to the Federal Assembly on 5 December 2016 No. Pr-2346. Available at: http://nko.economy.gov.ru

[11] Conducted monitoring of the activities support of SONPO-performers of socially useful services, Available at: http://nko.economy.gov.ru/PortalNews/Read/4437?_utl_t=fb

and V.B. Benevolensky researches, based on interviews of SONPO managers in 33 entities of the Russian Federation, show, the weaknesses of non-profit organizations include low financial-material base and the insufficient level of professionalism of SONPO personnel in providing social services [25, p. 94]. Interestingly, these conditions are mandatory according to the Decree of the Government of the Russian Federation No. 1096 "On the approval of the list of socially useful services and criteria of quality assessment of their provision".

Legal basis, which opens new opportunities to involve SONPOs in public social programs, turned out to be not supported by proactive measures to strengthen the economy and staff capacity of non-profit organizations which could implement necessary amounts of social services without the loss of quality.

In these conditions, regions choose alternative and easier ways to complete federal plan to involve SONPOs in order to resolve social issues. Thus, only their legal change into autonomous non-profit organizations (ANPOs) allows achieving numbers, recommended by the federal authorities, without losing specialists and material base of the abolished institutes – but in a different legal and economic reality (the model of institutional substitution is actively used in the Republic of Bashkortostan) [26]. But it is impossible for the government to hope for synergetic effect from attracting additional resources of non-profit organizations.

2. Sectoral specifics of economic governance of the non-profit sector

There is practice of a sectoral based management impact on SONPO economic behavior at the federal and regional levels in Russia. There are a number of ministries and departments, not including the Presidential Executive Office, providing financial support for SONPOs: the Ministry of Economic Development, the Ministry of Culture, the Ministry of Labor, the Ministry of Education and Science, the Federal Agency on Press, the Federal Youth Agency, the Ministry of Emergency Situations. The biggest part of subsidies is provided by the Ministry of Culture (3,310,327 thousand rubles). Almost the full amount of funds for SONPOs from this department is allocated on a competitive basis.

From 2014 to 2017, the amount of federal budget funds to support SONPOs in Russia tripled. But at the same time, the number of SONPOs which received financial assistance decreased from 6,037 to 3,688 units *(Tab. 2)*. Average amount of funds received by one SONPO was 3.5 million rubles in 2017 and 0.8 million rubles in 2014. There is a pattern of a decrease in the number of subsidized SONPOs and a simultaneous increase in the amount of overall funding. The cause of this situation lies in the stricter requirements in the competitive process of assessing the quality of projects.

On the one side, the growth of funding resolves, in part, the problem of the non-profit sector "crisis". In other words, it contributes to more stable and effective completion of projects, attraction of experienced stuff and multiplication of social impact. On the other hand, organizations become dependent on public funds, and the control over this sector of the economy increases. Besides, assistance is given discretely to one-time projects, and it does not allow hiring permanent staff and forming a material base.

Table 2. Information about SONPO funding in 2014-2017 from the federal budget (thousand rubles, at comparable prices of 2017)

Public authority of the RF financially assisting SONPO	Amount of public financial assistance given to SONPO (thousand rubles)		On the competitive basis (thousand rubles)		Number of SONPOs that received financial assistance		Financial assistance growth rate from 2014 to 2017, in %
	2014	2017	2014	2017	2014	2017	
Presidential Executive Office of the RF (including the Presidential Grants Fund)	3,241,396	6,653,841	3,241,396	6,653,841	1,276	3,213	105.3
Ministry of Economic Development	1,113	-	1,113	-	4,630	-	
Ministry of Culture	942,952	3,310,327	942,952	3,124,427	58	176	251.1
Ministry of Labor	896,692	1,319,184	-	-	16	25	47.1
Federal Agency on Press	101	107,2	-	-	33	138	6.4
Federal Youth Agency	21,625	113,500	21,625	113,500	24	96	424.8
Ministry of Education and Science	-	1,430,274	-	30,896	-	34	
Ministry of Emergency Situations	-	90,000	-	90,000	-	6	
TOTAL:	5,103,879	12,917,233	4,207,086	10,012,664	6,037	3,688	153.1
Calculations are based on: The report on the activities and development of SONPO in 2014 and 2017. Available at: http://nko.economy.gov.ru/Files/NewsDocuments/250a81ba-6074-4536-95b9-6f3d5cdc54c8.docx							

This analysis helped to find out one more disadvantage of this funding type. There is an overlap in financial flows from the Presidential Executive Office and sectoral ministries, departments. The same organizations can simultaneously submit the application for funding social projects to the Presidential Grants Fund and specialized executive power body. Also there is an opportunity for private (philanthropic foundations of V. Potanin, Elena and Gennady Timchenko, Lukoil and others), regional and municipal funds to finance these projects. Coordination of the targeted use of allocated resources is not provided in the existing methodologies – this is one of the tasks for the authorities to complete at the regional level.

To increase the efficiency of governance and to save sectoral approach towards the assistance to SONPOs, it is necessary to make structural changes aimed at addressing the issues of interdepartmental and intersectoral coordination.

3. Regional level of the non-profit sector governance

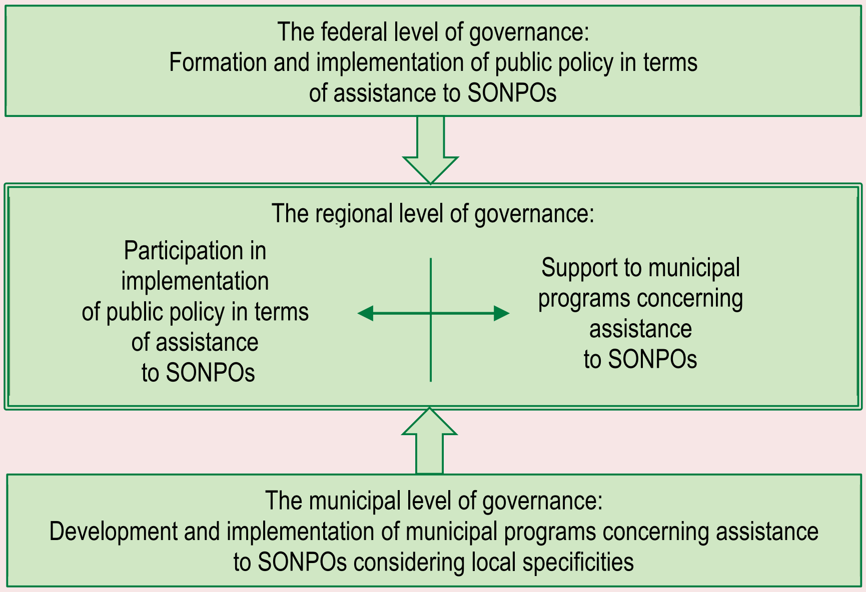
Success or failure of legislative solutions primarily depends on the position and economic opportunities of regional authorities which determine the efficiency of governance as a whole.

The regional level of governance is the central one. This is where all the requirements of the consolidated public policy[12], coming from the federal level, and specific needs, formed at the municipal level in accordance with local conditions, come together *(Figure)*. This is why the defined issue is primarily solved at the regional level.

According to the hierarchy of governance, the powers of the regional authorities concerning the regulation of SONPOs and

[12] According to Federal Law 7-FZ "On non-profit organizations" (Article 31.1.), dated 12.01.1996 (amended on 29.07.2018), public and local authorities provide the following types of assistance to SONPOs: financial; material; informational; consultative; training, retraining and further training of staff and volunteers.

The scheme of power-sharing between public and local authorities in Russia



Own compilation.

providing assistance to them include coordination and insurance of the implementation of government policy adopted at the regional level, the development of targeted programs of the Russian Federation entities, provision of support to the local authorities in issues concerning assistance to SONPOs (including realization of the municipal programs), monitoring of adopted programs, and control over their implementation.

According to the annual report of the Ministry of Economic Development, public programs of the Russian Federation entities (sub-programs of public programs) concerning assistance to SONPOs in 2017 are adopted and being implemented in 74 regions of the country[13].

However, resources of some regions to finance SONPO projects are limited. For example, regional budget of the Republic of Karelia for 2018 includes financing of SONPOs – 11.5 million rubles, in the Novgorod Oblast – 15 million rubles, and in the Pskov Oblast – 5 million rubles.

The Vologda Oblast implements a public program called “Creating conditions for the development of civil society and the potential of young people in the Vologda Oblast for 2014 – 2020” which established a sub-program called “State support for socially oriented non-profit organizations in the Vologda Oblast for 2014–2020”. The aim is to create favorable conditions for the development and effective functioning of SONPOs[14]. Dynamic of extents

[13] The report on the activities and the development of socially-oriented non-profit organizations in 2017. Available at: http://nko.economy.gov.ru/Files/NewsDocuments/250a81ba-6074-4536-95b9-6f3d5cdc54c8.docx

[14] On the public program “Creating conditions for the development of civil society and the potential of young people in the Vologda Oblast for 2014–2020” (amended on January 21, 2019). Available at: http://docs.cntd.ru/document/422454376

Table 3. Financial support of SONPO projects within the sub-program "State support of socially oriented non-profit organizations in the Vologda Oblast for 2014 – 2020" in 2014-2018 (thousand rubles, at comparable prices of 2018)

Indicator/year	2014	2015	2016	2017	2018	Growth rate of 2018 to, %			
						2017	2016	2015	2014
The amount of SONPO financial support, thousand rubles	29,530	27,565	15,769	12,554	15,000	19	-5	-46	-49
Co-financing from the federal budget, thousand rubles	16,788	11,072*	-	-	-	-	-	-	-
A number of supported SONPOs, units	71	93	70	53	48	-9	-31	-48	-32
A number of SONPO projects registered in the municipal institutions	27	21	16	8	10	25	-38	-52	-63
An average sum of subsidy given to SONPO, thousand rubles	416	296	225	237	313	32	39	5	-25

* At the end of 2015, the decision to stop co-financing of SONPO assistance programs was made by the Ministry of Economic Development.
Complied by the authors according to: The register of socially oriented non-profit organizations receiving support from the Government of the Vologda Oblast in 2012-2019. Available at: https://vologda-oblast.ru/vlast/pravitelstvo_oblasti/strukturnye_podrazdeleniya_pravitelstva/departament_vnutrenney_politiki_pravitelstva_vologodskoy_oblasti/reestry

of financial support could be analyzed starting from 2016: earlier it was implemented on the basis of federal co-financing. The amount of funds involved is something around 15 million rubles, with a slight decrease in 2017. If we share this number between all non-registered organizations in the region (1465 units), then each SONPO will get only 10 thousand rubles. Grants provide assistance for only 3% of SONPOs in the Vologda Oblast. There is an increase in an average sum of subsidy with a decrease in a number of supported projects (*Tab. 3)* – it matches the federal tendency of SONPO financial assistance. But competing projects do not gain full support: in 2018, 35% of applicants did not get subsidies in accordance with the presented estimates[15]. As a result, all the projects are implemented at the smaller scales, and it declines their efficiency.

In addition to low funding, non-profit organizations are encumbered with a difficult application system and necessity to provide reports on implementation of the projects in hard copy. As a result, there are additional administrative expenses on paperwork which lead to a decrease of their management efficiency.

An average length of regionally subsidized projects is about one year, because public sub-programs do not include long-term projects. It leads to instability of non-profit organizations' work and inability to keep qualified employees.

This way, only non-profit organizations involved in civil law contracts with public authorities are economically influenced by the government. Thus, 18% of SONPOs[16] have contacts for rent and royalty-free use of non-residential premises (buildings) which are government and municipal property. 7% of

[15] The annual report on the implementation and efficiency assessment of the public program "Creating conditions for the development of civil society and the potential of young people in the Vologda Oblast for 2014–2020". Available at: https://vologda-oblast.ru/vlast/pravitelstvo_oblasti/strukturnye_podrazdeleniya_pravitelstva/departament_vnutrenney_politiki_pravitelstva_vologodskoy_oblasti/otchety/

[16] Distribution of SONPOs in the Vologda Oblast according to the possession and the total floor area of premises in 2017. Basic characteristics of socially-oriented non-profit organizations in the Vologda Oblast in 2017. The Vologda Federal State Statistics Service. Available at: http://vologdastat.gks.ru/wps/wcm/connect/rosstat_ts/vologdastat/ru/statistics/finance/

Table 4. The structure of money funds formation of socially oriented non-profit organizations in 2014–2017 at the regional level in Russia (through the example of the Vologda Oblast) (thousand rubles, at comparable prices of 2017)

The sources of money funds	2014	Share, in %	2017	Share, in %	Increase rate, 2017 to 2014
Income from the sale of goods, works, services, property rights (except revenues from special-purpose capital)	3,109,215	46.7	2,423,863	54.1	-22.0
Special-purpose incomes (including charities), grants from the Russian NPOs	163,326	2.5	184,443	4.1	12.9
Special-purpose incomes (including charities), grants from the Russian individuals	595,230	8.9	490,560	10.9	-17.6
Special-purpose incomes (including charities) from the Russian for-profit organizations	1,877,270	28.2	1,080,844	24.1	-42.4
Budgets (federal, regional, municipal)	537,872	8.1	212,831	4.7	-60.4
Incomings from the foreign states, organizations, citizens and individuals without citizenship	7,833	0.1	8,305	0.2	6.0
Other incomes	**369,180**	**5.5**	**80,681**	**1.8**	**-78.1**
Overall revenues	**6,659,927**	**100.0**	**4,481,527**	**100.0**	**-32.7**
Own calculations based on: UISIS data. The activity of socially oriented non-profit organizations – the results of sample statistical observation. Available at: https://fedstat.ru					

organizations[17] have contracts for subsidies (grants). Besides, the Department of Domestic Policy of the Vologda Oblast provides non-contractual services on informational support for additional 14% of organizations[18]. Overall, there are more than a half of SONPOs registered in the region, which are not included in the cooperation with public institutions.

It needs to be reminded that regional SONPOs can gain subsidies from different sources. Information about SONPO funding in the Vologda Oblast is given in *Table 4.* The combined share of incomes from budget sources decreased from 8% in 2014 to 5% in 2017. At the same time non-repayable incomes from citizens and business institutions are seven times higher than the share of SONPO government support. The proportion of state support for non-profit organizations in western countries is about 40% [27] – it is much more than in Russia.

Local authorities develop and implement municipal programs of SONPO assistance and provide property support to them. According to the Ministry of Economic Development, municipal programs are adopted only in 23% of municipal institutions (in 540 out of 2,350). At the same time, overall proportion of subsidies given to local budgets by the Russian Federation entities budgets for implementation of SONPO support programs grew from 2.3 billion rubles in 2016 to 2.9 billion rubles in 2017[19]. The growth rate is 26%.

[17] The register of socially oriented non-profit organizations receiving support from the Government of the Vologda Oblast in 2012-2019. Available at: https://vologda-oblast.ru/vlast/pravitelstvo_oblasti/strukturnye_podrazdeleniya_pravitelstva/departament_vnutrenney_politiki_pravitelstva_vologodskoy_oblasti/reestry

[18] The annual report on the implementation and efficiency assessment of the public program "Creating conditions for the development of civil society and the potential of young people in the Vologda Oblast for 2014 – 2020". Available at: https://vologda-oblast.ru/vlast/pravitelstvo_oblasti/strukturnye_podrazdeleniya_pravitelstva/departament_vnutrenney_politiki_pravitelstva_vologodskoy_oblasti/otchety/

[19] The report on the activities and the development of socially-oriented non-profit organizations in 2017. Available at: http://nko.economy.gov.ru/Files/NewsDocuments/250a81ba-6074-4536-95b9-6f3d5cdc54c8.docx

Table 5. Information about SONPO funding in 2014–2017 from municipal (local) budgets (thousand rubles, at comparable prices of 2017)

Region\year	2014	2015	2016	2017	Increase rate, 2017 to, %		
					2016	2015	2014
Saint Petersburg	182,195	112,544	115,944	136,345	18	21	-25
Leningrad Oblast	59,490	78,399	96,779	84,538	-13	8	42
Vologda Oblast	193,598	169,104	49,963	78,284	57	-54	-60
Arkhangelsk Oblast	86,439	56,648	66,090	42,264	-36	-25	-51
Murmansk Oblast	21,402	25,092	247,953	41,546	-83	66	94
Kaliningrad Oblast	53,392	37,598	40,284	32,371	-20	-14	-39
Komi Republic	22,501	75,559	20,855	16,959	-19	-78	-25
Pskov Oblast	13,764	9,594	9,446	15,221	61	59	11
Republic of Karelia	5,845	3,184	5,934	8,512	43	167	46
Novgorod Oblast	5,530	4,872	5,422	2,208	-59	-55	-60
Russia	**11,573,020**	**10,743,215**	**10,523,224**	**6,939,053**	**-34**	**-35**	**-40**
Northwestern Federal District	**649,424**	**575,702**	**660,171**	**458,248**	**-31**	**-20**	**-29**

Own calculations based on: UISIS data. The activity of socially oriented non-profit organizations – the results of sample statistical observation. Available at: https://fedstat.ru

The instability of SONPO financial support from budget funds is especially noticeable at the municipal level. It could be seen in some regions of the Northwestern Federal District *(Tab. 5)*. There is no positive dynamics of it from 2014 to 2017 in the Novgorod, Arkhangelsk Oblasts and in the Komi Republic. In the Vologda Oblast, an amount of SONPO subsidies from local budgets decreased significantly. It is noteworthy that overall amounts of subsidies to support SONPOs given to municipal budgets from budgets of the Russian Federation entities increase, but the local financing of SONPOs decreases.

The analysis of this data shows that, on the one hand, participation of the non-profit sector in development of new social goods as a partner of a state attracts significant additional financial resources in the social sphere. It is especially important if budgets of the regions are limited. On the other hand, SONPOs give people an opportunity for self-realization in the area of socially useful services, and a chance to become a socially responsible entity to business.

4. Public opinion as the criteria of the non-profit sector informational support

An important factor which, in part, determines the effectiveness of the non-profit sector at the regional and local level governance is the attitude and inclusion of people into activities of NPOs. Monitoring data of economical status and social welfare of the Vologda Oblast population show that people are not informed enough about NPOs. From 2009 to 2019 the number of respondents who know about NPOs or encountered them before is between 6% and 14%. It needs to be reminded that informational support of NPOs is one of the mandatory and legislated forms of state assistance[20]. It is impossible to ignore direct involvement of people into NPO work as its members or volunteers. In 10 years of observations, a number of NPO members decreased (from 7% to 3%). In general, the share of people not participating in NPO

[20] According to Federal Law 7-FZ "On non-profit organizations" (Article 31.1.), dated 12.01.1996 (last amended on 29.07.2018)

Table 6. Distribution of answers to questions: “Do you know about activities of non-profit (social) organizations?”; “Do you participate in NPO activities, or are you a member of any of them?”; “In your opinion, how do non-profit (social) organizations affect the life in the region?”, % of respondents

Answer option	2009	2013	2016	2019	Change in 2019 to (+\- p.p.)		
					2009	2013	2016
Do you know about activities of non-profit (social) organizations?							
Yes, I do. I encountered them before	12.3	12.7	6.3	10.1	- 2	-3	4
I heard something	40.3	34.7	33.1	42.3	2	8	9
I don’t know anything	24.5	33.6	43.1	36.5	12	3	-7
I hesitate to respond	22.9	19.0	17.6	11.2	- 12	-8	-6
Do you participate in NPO activities or are you a member of any of them?							
I am a member of the organization	7.0	4.5	3.0	2.7	-4	-2	0
I am involved as a volunteer	9.9	6.3	6.3	9.8	0	4	4
Neither of these answers	81.0	89.2	90.7	87.6	7	-2	-3
In your opinion, how do non-profit (social) organizations affect the life in the region?							
Affect greatly	5.8	4.7	4.9	7.0	1	2	2
Affect a little	25.0	22.4	18.1	19.3	-6	-3	1
Don’t affect at all	22.3	26.0	25.0	29.7	7	4	5
I hesitate to respond	46.7	51.9	46.9	44.0	-3	-8	-3
Source: Monitoring of the economic status and social well-being in the Vologda Oblast (VolRC RAS)							

activities remains at the same high level – 81–91%. Assessment of NPO impact on people’s lives is also an important factor which shows the public attitude toward these organizations and state efforts to support them. The survey results reveal that a number of people who think of NPO as powerful agencies is only 7% in 2019. Instead, 30% of respondents think that non-profit organizations do not provide any influence. Uncertain judgements in this period of time are quite stable and frequent (44–52%). These trends are directly connected to the low level of people’s awareness about NPOs (*Tab. 6*).

Therefore, the results of the Russian regions and municipalities’ resource base analysis show a significant accumulation of unresolved issues there. It gives us grounds for considering this level of governance as the most important in the process of increasing governance efficiency across the country.

Conclusions and recommendations

Coming back to the theoretical part of this research, it needs to be noticed that we determined intersectoral social partnership as the most advantageous form of constructive cooperation between state organizations, business and the non-profit sector for solving socially important issues at the regional level.

Now we can say that this type of constructive cooperation started to emerge. The non-profit serves as the coordinator, because NPOs are best designed for addressing social issues and understanding the needs of target audiences [28, p. 67]. The function of cooperation with non-profit organizations is assigned to the Ministry of Economic Development of the Russian Federation. The structural subdivisions of the local executive authorities do the same in the regions. In the Vologda Oblast, for example, this body is the Department of Domestic Policy of the Vologda Oblast Government. At the municipal level this function is performed by the special bodies of the administration or by individual specialists – it depends on the scale of a municipality. Non-profit organizations form an autonomous field as a horizontal network. A preferable cooperation is developed at its intersection point with vertical administration.

Almost all the regions actively develop a legal basis which regulates mechanisms of intersectoral cooperation. But the efficiency of its implementation is different in the Russian Federation entities. This is a result of several subjective factors: readiness of local authorities for ISSP, local specifics of the non-profit sector development, the level of social capital, formality and maturity of institutions etc. [20, p. 39]. V.N. Yakimets points out five types of ISSP mechanisms: competitive (subsidies, grants, contests, public procurement, social demand); socio-technological (creation and promotion of "social know-how"); organizational-structural (joint development of centers, legal entities for social tasks solutions); procedural and negotiating (civic chambers, councils, comities, round tables, working groups, tripartite agreements); complex or combined mechanisms (local communities` funds, resource centers, fairs of social services). The latter combines features of all the previous mechanisms [19, p. 21].

The sustainability of the partnership is provided by the mandatory usage of respective legal, economic and organizational instruments in developing coordination structures of the non-profit sector, business and authority on a parity basis. Thus, the regional resource centers (RRC), which are developed in organizational forms of a fund or an autonomous non-profit organization, start working in some regions. First of all, RRC should solve the issues stated in this research:

– analysis of the activities of non-government organizations in the spheres of social service, healthcare, education, culture, physical culture and sport, with the involvement of the resources from charity funds, business, science and other sources;

– strengthening of SONPO economic potential in order to increase their number at the market of social services in the conditions of the real competition with government and municipal institutes in the social sphere;

– creation of the centers for training and professional advancement for SONPO directors and staff;

– overcoming the inconsistencies, removal of interdepartmental barriers concerning financial and other support of SONPO by concentrating the resources from different budget and off-budget sources;

– organization of complex informational assistance of all the parties' activities;

– coordination of public and municipal assistance programs, attraction of the local business structures to the development, and implementation of these programs on the basis of shared financing;

– improvement of the work of expert and competition commissions in order to raise quality of financed projects and control of targeted funds use.

It should be noted that successful work requires legalization of resource centers' activities for non-profit organizations in the region. Mandatory state certification could be an option of legitimization of RRC activities.

In our opinion, new architecture of territorial cooperation within local communities lacks municipal centers for providing infrastructural support to SONPO (hereinafter – CIS). It could become network footholds for RRC which organize social-state framework formed on a parity basis by local social structures, business community and municipal administration. Specificities of many municipals, especially ones in rural areas, are that small non-profit organizations usually operate on their territories. Many of these institutes are initiative groups of citizens without a status of the legal entity. So CIS become a "maternal" multifunctional social structure for them which accumulates local civic initiatives, as well as human, administrative and material resources, for their successful implementation. Besides, CIS give municipal NPO and initiative groups of people access to gaining the services provided by RRC. Regional resource centers could become the organizer and the initiator of CIS development.

This form of social organization helps build own material and economic basis for a sustained development of the local initiative. CIS could be created as independent legal entities in the organizational-legal forms of a fund or an autonomous non-profit organization. CIS could operate as RRC affiliates in small municipalities.

Therefore, network horizontals become producing entities of intersectoral social partnership under conditions of equal participation: regional resource centers – at the regional level, centers of infrastructural assistance – at the municipal level. But in any case scenario RRC operates as a regional "umbrella organization" which provides consolidation of civic entities (SONPOs and business) on issues concerning economic cooperation with the state in the social sphere.

Suggested structural organizational-economic and legal measures improve intersectoral social partnership in order to meet the requirements of high efficiency of the non-profit sector governance in the regions.

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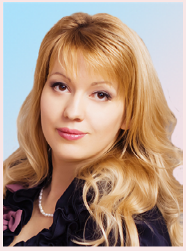
Assessing Export Potential of the Country in the Context of Global Demand in the World Food Market*



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Abstract. Nowadays Russia is actively expanding its presence on the world market by increasing food export. The goal of our research is to develop methodological approaches to the analysis of dynamics and structure of the world food export when assessing ways of increasing Russia's export potential. The main scientific problem reviewed in the article touches upon an issue of export policy in the food sphere. Our studies develop the theory of comparative analysis using indices of competitiveness and concept of food space by providing a new way to analyze potential capabilities of export potential. It is related to implementation of modern technologies and technological services on the food market. This approach matches assessment of global demand and capabilities to enhance export flows. Scientific novelty of the research consists in its theoretical statement and practical implementation of the research objective to examine aggregate figures of global import (as the indicator of global demand) and figures of trade items' export in the context of the country. We propose criteria and threshold values for conducting multi-criteria assessment of goods and detailed product groups. Data about global export-import trade flows were used as the informational basis, and programed filtering of big data was implemented. We used grain of wheat, a very important export product, to illustrate that the availability of scientific back-log (research and developments, technologies, patents) is a very important factor in growing export potential by implementing technological breakthrough in producing new types of products and raw materials.

Key words: food export, diversification, basket of export specialization, global import, data filtering, food space.

Introduction

Opportunities to grow and implement country's export potential are among key factors which ensure competitiveness of national economy. Analysis of export flows is an important component of country's export policy development. Indices of Balassa and Vollrath and their modifications [1–7] are classic tools for conducting these types of research. Methodological tools for identifying the most perspective external markets include classic methodological "shift-share" [8]. The work [9] examines issues of revealing export directions which can effectively develop with internal financial support. The metric of "complexity", or "manufacturability", of goods, which can be used as one of the factors of revealing and assessing growth points' prospects, is proposed for assessment of interconnections between export and "complexity" of goods in the work [10].

Foreign researchers in the works [11–13] present a concept of food space exported by a country. A number of domestic researchers support and develop these approaches [14; 15]. It is highlighted in the work [15] that it is necessary to assess export potential of goods which have higher share in country's export than in average global export. Also, a large part of export growth should go through deepening of export flows of top goods.

Nowadays almost all the countries of the world are involved into international food trade. Population's consumer preferences have significant differences in different countries, but changes of the global economy and economic growth in Asian countries develop new common trends which determine the nature of food demand. New geography of countries, which work toward creating innovative food for the future, emerges. There is an ongoing implementation of the Ministry of Science and Technology flagship project in Thailand, biggest global food exporter, in the form of control center for a new meal industry – Food Innopolis. Its activity is aimed at creation of agri-food products with high value added by using scientific research and developments. This center occupies 20,000 squire meters in Thailand Technology Park. There are three thousand scientists among participants, 9,000 food products plants, 150 R&D labs, 70 universities, 10 thousand students, 20 project institutes [16]. Also, there is a state corporation developing and implementing agricultural biotechnologies and other modern methods of conducting agriculture in Brazil, which has been operating for more than forty years within national and international projects [17].

In recent years, export of food and agricultural commodities has become an important direction of Russian agricultural policy. According to the Order of the Russian Federation President "On National Goals and Strategic Objectives of the Russian Federation through to 2024" No. 204, dated 07.05.2018, goals of achieving export numbers of agricultural sector products in the amounts of 45 billion American dollars per year until 2024 were set. The scale of this task determines the relevance of scientific researches on export topics, food export in particular. The aim of this study is to develop approaches to the methodology of analysis of the dynamics and structure of global food import in assessing the directions to strengthen Russia's export position on the global market of food products and raw materials.

Despite the success in food export, current undiversified commodity structure of Russian food export, in our opinion, may show strategic vulnerability in the environment of political and economic instability growth in global economy. According to data of customs statistics, in 2017, three major product groups – grains and its processed products; fish and crustaceans; fats and oils of animal or vegetable origin – represented 70% of total food export value[1] in in the structure of Russian food export. Unproportioned participation of regions in export shipments also takes place. As it is stated in the work [18], irregularity of distribution of export activity caused the situation when 10 primary entities provide 69.3% of country's total non-resource export.

It is necessary to note serious problems concerning the implementation of export potential on the food market in Russia. In practice, Russian exporters of agricultural products often face subjective difficulties in obtaining qualified information about the "rules of the game" on the markets of individual countries [19]. In our opinion, the fact of Russia's leadership on the global market in terms of wheat grain export creates an illusory idea for many manufacturers that it is enough to grow a crop in order to solve issues of selling it and getting high incomes. Thus, there was a record grain harvest in the Novosibirsk Oblast in 2017 – local farmers sowed all available areas with wheat. Consequently, amounts of harvest significantly exceeded capabilities of storage and selling. Rapid growth of grain reserves led to non-production costs (grain rotting in fields, warehouses and elevators), price drop, and agricultural manufacturers' bankruptcy.

[1] Calculated according to: Customs statistic of foreign trade of the Russian Federation: bulletin. Federal Customs Service of the Russian Federation. Available at: http://stat.customs.ru/apex/f?p=201:7:1040160463942812::NO (date of access: 10.12.2018).

Necessity to address the issues of export income improvement and growth sustainability of country's agricultural sector causes scientific and practical relevance of researches on developing approaches to assessing directions of increasing country's export potential.

Methods and information

Data from FAOSTAT informational basis – The Food and Agriculture Organization of the United Nations (FAO) [20] – are used in this research. It contains information about production, export, and import levels in more than 90 food and agricultural product categories of 245 countries from 1961 until present moment.

Within research, a comparative assessment of Russian export trade positions and summary measures of global food import in the context of trade groups, not including fishery products, was performed. It must be noted that fishery products are included into FishStat database in FAO. For providing data comparability for export analysis from the RF, FAO statistics was also used[2]. Authors in the work [21] did the analysis of existing global statistics databases and pointed out that usage of FAO informational base allows performing a complex analysis of dynamics and trade structure of global food export.

A basic stage of the research was usage of methods for filtering records of trade currents in FAOSTAT informational bases for estab-lishing samples suitable for the analysis' purpose. Pandas[3] library was used for program implementation of efficient computational filtering of named sets of big data.

According to the purpose of this research, we propose an assessment methodology of trade positions of export specialization, based on the criteria we allocate *(Tab. 1),* for defining competitive status of trade items, taking into account a degree of global food demand satisfaction.

The following threshold values and conditions for suggested criteria were adopted for assessing a value of commodity items of Russian food export:

- for criterion C0 – the share in the total value of the Russian Federation food exports, not less than 10%;
- for criterion C1 – the presence of the matching pairs "Top global import" – "Top export of the Russian Federation";

Table 1. Criteria for defining competitive status of trade items

Criteria	Interpretation
C0	The value of the export share of commodity items in the Russian Federation food export.
C1	Includes determination of matching/mismatching commodity items in the pair "Top global import" – "Top export of the Russian Federation".
C2	The average growth rate of global imports (in kind) in the context of commodity items.
C3	The value of the rate of dynamics variation of global goods import amounts. Shows the degree of variability of these products demand on global market.
C4	SPR coefficient, showing the share of commodity items of Russian exports in meeting global needs (import) of specific goods and commodity groups.
Source: own compilation.	

[2] Russia, as a member of the Food and Agriculture Organization of the United Nations (FAO), forms balances of food resources according to a unified international methodology.

[3] Available at: https://pandas.pydata.org.

- for criterion C2 – the average growth rate of world imports (in kind), not less than 6%;
- for criterion C3 – the value of the rate of dynamics variation of global import amounts, not more than 20%;
- for criterion C4 – the value of SPR coefficient showing the share of commodity items of Russian exports in meeting global needs (import), not less than 4%.

Within the research, formation of selective informational arrays, necessary for analysis and calculations of indicators, was conducted. In particular, we filtered the records about trade flows in the FAOSTAT databases, the total volume of world imports of which (based on data for 245 countries) is at least 200 million US dollars per year (2013) and has a positive trend growth in kind over the period from 1993 to 2013. Then the procedure of acquired samples ranking was performed and the list of leading commodity items "TOP-Global food import" was made. The ranking was organized according to the amount of share of overall import of commodity item in total amount of global export. The ranking is based on values' decline and the limiting value for inclusion in the ranking was value of estimate not less than one percent.

For the TOP-list products, the average growth rate of total imports (in kind) was calculated according to FAO data for the period of 1993–2013. Also, the coefficients of variation were calculated on the basis of pre-formed dynamic series for the period of 2000–2013 in order to assess the degree of their variability over time.

The ranking of commodity items of export specialization – the Russian Federation food (not including fishery products) – was compiled on the basis of the sample obtained from the FAO database. It was done by filtering goods, Russian export amounts of which were at least 10 million dollars per year (for 2013). The ranking, just like in the previous case, was organized in descending value order: the limiting value of estimated indicator, necessary for inclusion in the ranking, was at the level of at least one percent.

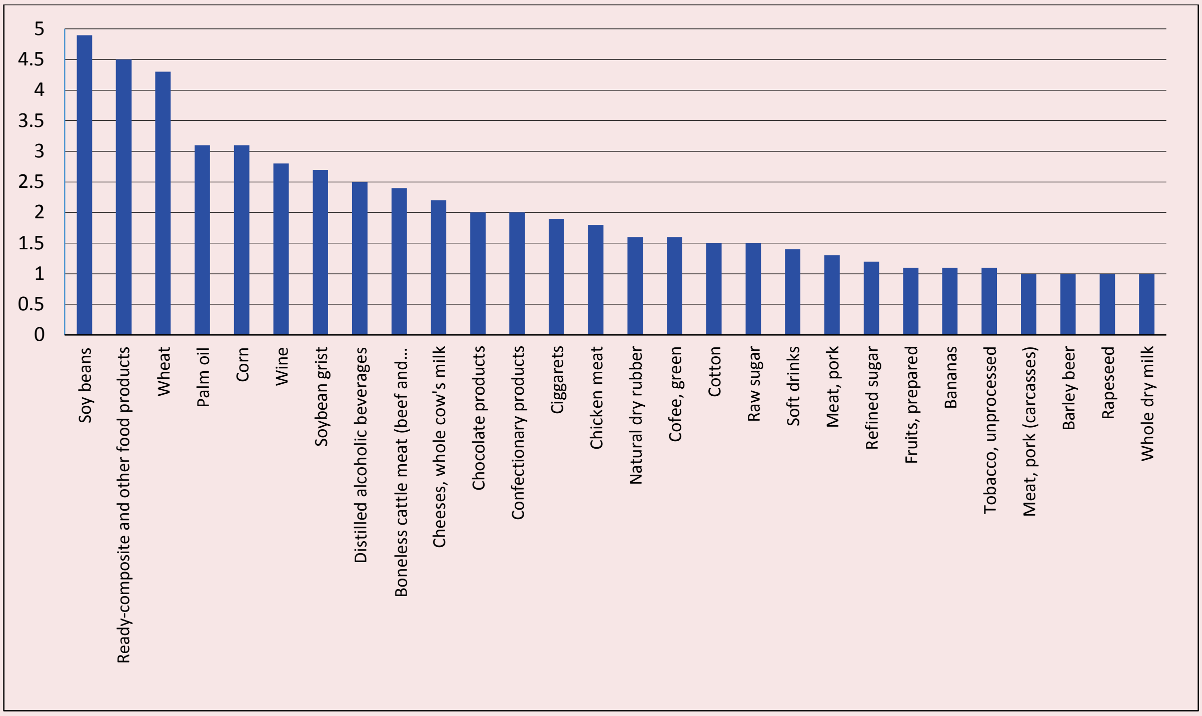
Then the analysis for defining competitive status of commodity items was conducted in accordance to suggested by authors criteria C0–C4, including calculation of SPR (Substantial PRoduct) relative indicator for matching commodity items in pair "Top global import" – "Top export of the Russian Federation".

Results and discussion

On the first stage of the research sample from the FAO database of food products was acquired in order to analyze dynamics and structure of global food import indicators. 258 products and product groups, with values of total import amount (on the basis of 245 countries) not less than 200 million dollars per year (for 2013), were included in the sample. After ranking acquired sample, the list of leading commodity items "TOP-Global food import" was complied. The list of commodity items of this ranking included 28 items. It should be noted that five top positions of the ranking accumulate 20% of overall amount of global import: 1) soybeans – 4.9%; 2) ready-composite and other food products – 4.5%; 3) wheat – 4.3; 4) palm oil – 4.3; 5) corn – 3.1%. The share of commodity items gradually decreases further in the list. From the position number 21 to 28 values of indicators become almost equal *(Fig. 1)*.

For items from the TOP-list, indicators of total import average growth rates (in kind) on the basis of FAO data for 1993–2013 were calculated. The analysis showed that, despite

Figure 1. Ranking of commodity goods of global food import, 2013, %



Source: own compilation according to FAOSTAT data.

different average growth rates of import, positive values of this indicator are present for all leading commodity items. The highest growth rates of global import were spotted in the following commodity items: pork meat (10.9%); confectionery (8.9%); soft drinks (8.8%); chicken meat (8.4%). The nature of the relationship between the average import rates of commodity items and their share in global import is very contradictory and divergent *(Fig. 2)*.

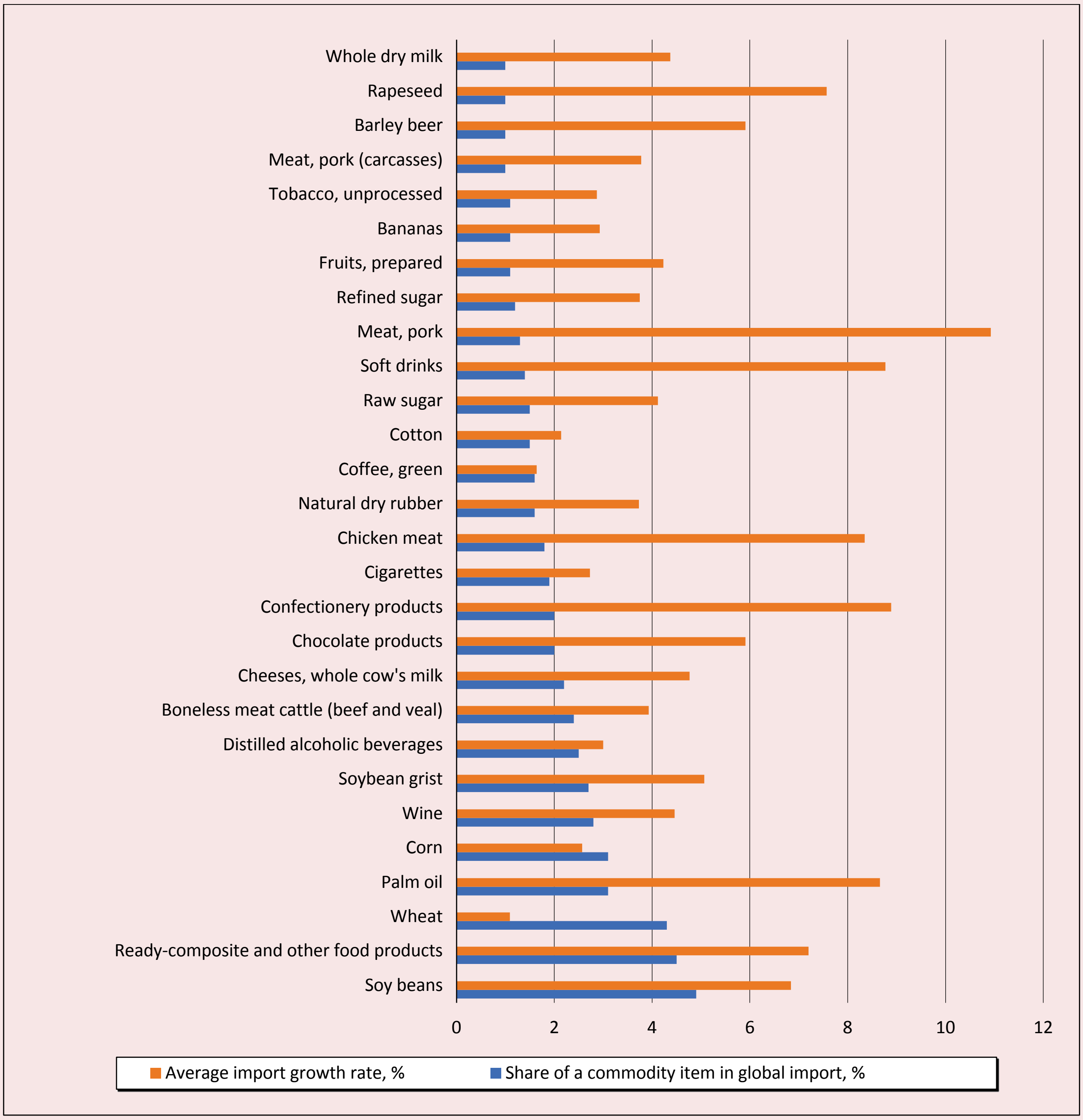
To assess the degree of global import indicators' variability (in kind) over the years for commodity items of ranking, variability coefficients were calculated on the basis of preformed dynamic arrays for 2000–2013. The analysis of these indicators shows the degree of variability of demand for these types of products on the global market. According to this, it is possible to draw conclusions concerning risk degree of export shipment of products or product groups[4].

The analysis results of distribution of calculated coefficients of commodity items variability, included in TOP-import rating, show that more than one third of commodity items are in the big risk zone *(Tab. 2)*.

More than a half of commodity items, included in TOP-Global food import, have values of variation coefficients indicating the average degree of dispersion, i.e. showing quite moderate variability of global demand for these types of products. Indicators analysis of commodity item share in global import and variation coefficients show the lack of dependence of demand variability indicators on the share of a given commodity item in global import (*Fig. 3*).

[4] In statistics, with variation coefficient below 10%, variability is assessed as weak, from 11 to 25% – average, from 25 to 33% – significant.

Figure 2. Average import speed (%) for 1993–2013 and a share of a total import amount of commodity items (on the basis of 245 countries) in global food import

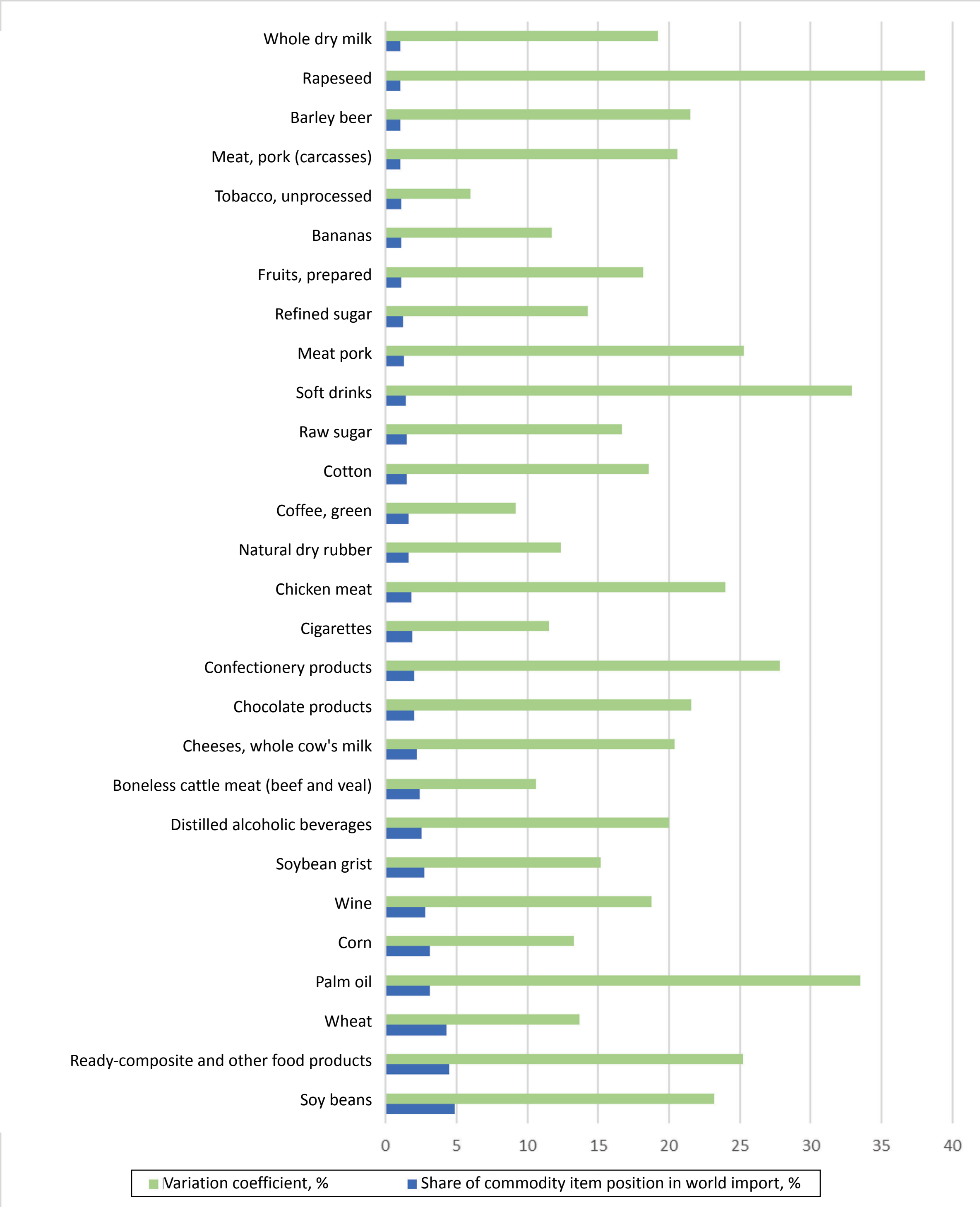


Source: own compilation according to FAOSTAT data.

Table 2. Distribution of variability coefficients' values over intervals

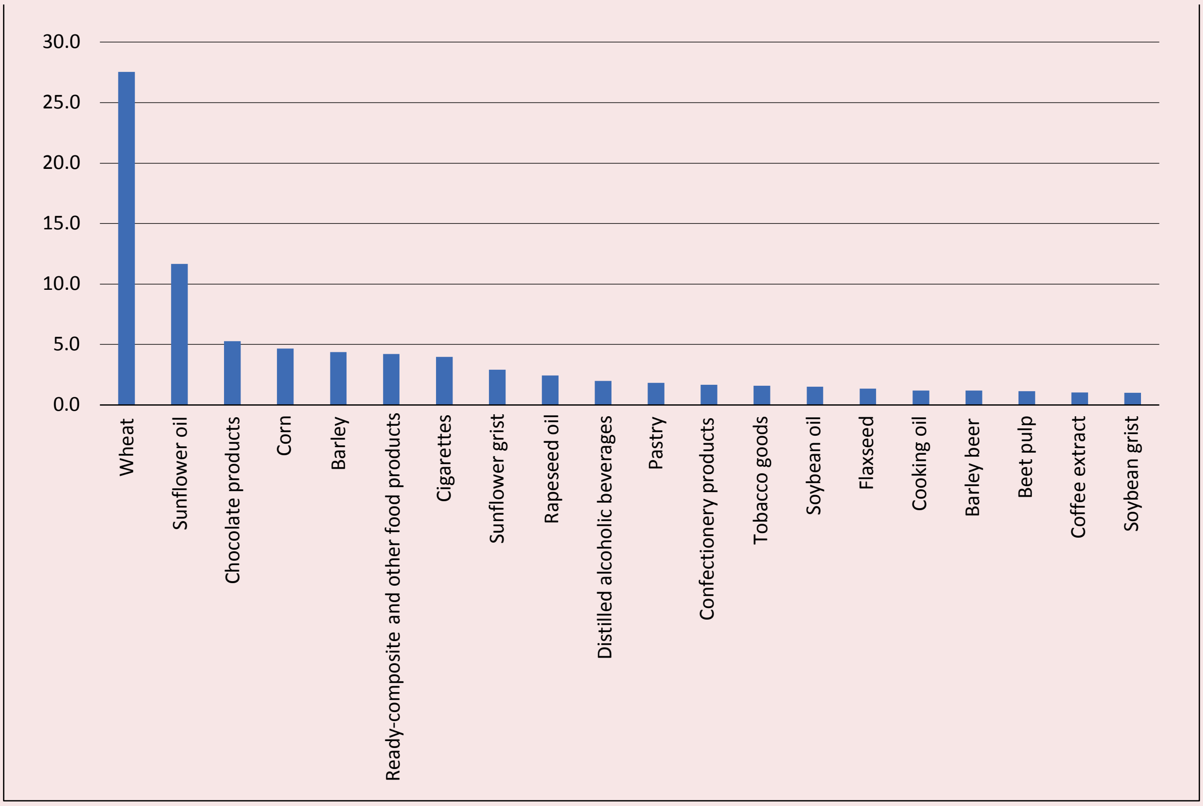
Indicator	Range of variation coefficient, %		
	Until 10	10–20	21–33
For TOP-import			
Number of commodity items in the interval	2	15	10
The share of the number of commodity items in the interval, in the total amount	7.5	55.5	37.0
Source: own compilation according to FAOSTAT data.			

Figure 3. Variation coefficients and share of a total amount of commodity items import (on the data of 245 countries) in global food export



Source: own compilation according to FAOSTAT data.

Figure 4. Ranking of commodity items if Russian food export (not including fishery products), 2013, %



Source: own compilation according to FAOSTAT data.

For the analysis of Russian food export, a sample from the FAO database was analyzed by filtering goods whose export amount from Russia was at least 10 million dollars per year (for 2013). This sample included 72 commodity items (*Fig. 4*).

Two leading commodity items (wheat and sunflower oil) account for 40% of a total amount of the sample (27.5% and 11.7% respectively). The next in the list – 5 commo-dity items (chocolate products, corn, barley, ready-composite and other food products, cigarettes) with a share between 4 and 5.3%, their total share is 22.5%. Thus, 7 commodity items account for 62.5% and the following 70 products and product groups – less than 38%.

Then, ranking of the most important products was complied. It was limited by inclusion of commodity items with share numbers of export value in its total amount not less than one. Twenty commodity items of export specialization were included in this list, which, in total, account for 78.22% of Russian food export.

To define the competitive status related to various commodity items of export specia-lization basket of Russian food exports, an assessment, in accordance with the criteria C0-C4 suggested by authors, was made. The research was conducted on the basis of initial data obtained from two samples: “TOP-Global food import” and “TOP-20. The Russian Federation food export (not including fishery products)". The results of the analysis of commodity positions for matches in leading groups of Russian export and global food import show (*Fig. 5)* that 9 items coincide: wheat, chocolate products, corn, ready-composite and other food products, cigarettes, distilled alcoholic beverages, confectionery, sugar confectionery, barley beer. It means that a significant part of items list (one third) in the basket of the Russian Federation export specialization corresponds to the list of goods-leaders of global demand

Figure 5. Definition of positions in the pair "Top-Global import" – "The Russian Federation top-exports"

Commodity items "Top global import"	
According to FAO classification	Translation
Soybeans	Соевые бобы
Food preparationsnes	Составные готовые и другие пищевые продукты
Wheat	Пшеница
Oil, palm	Пальмовое масло
Maize	Кукуруза
Wine	Вино
Cake, soybeans	Шрот соевый
Beverages, distilledalcoholic	Напитки дистиллированные алкогольные
Meat, cattle, boneless (beef & veal)	Мясо КРС без костей (говядина и телятина)
Cheese, whole cow milk	Сыры, цельное коровье молоко
Chocolate productsnes	Шоколадные изделия
Pastry	Кондитерские изделия
Cigarettes	Сигареты
Meat, chicken	Мясо курицы
Rubbernaturaldry	Натуральный каучук сухой
Coffee, green	Кофе зеленый
Cottonlint	Хлопчатник
SugarRawCentrifuga	Сахар сырец
Beverages, nonalcoholic	Напитки безалкогольные
Meat, pork	Мясо, свинина
Sugarrefined	Сахар рафинированный
Fruit, preparednes	Фрукты, подготовленные
Bananas	Бананы
Tobacco, unmanufactured	Табак, необработанный
Meat, pig	Мясо, свинина (в тушах)
Beerofbarley	Пиво из ячменя
Rapeseed	Семена рапса
Milk, wholedried	Молоко сухое цельное

Commodity items "Top global import"	
According to FAO classification	Translation
Wheat	Пшеница
Oil, sunflower	Подсолнечное масло
Chocolate products nes	Шоколадные изделия
Maize	Кукуруза
Barley	Ячмень
Foodprepnes	Составные готовые и другие пищевые продукты
Cigarettes	Сигареты
Cake, sunflower	Шрот подсолнечный
Oil, rapeseed	Рапсовое масло
Beverages, distilled alcoholic	Напитки, дистиллированные алкогольные
Pastry	Кондитерские изделия
Sugarconfectionery	Сахаристые кондитерские изделия
Tobaccoproductsnes	Табачные продукты
Oil, soybean	Соевое масло
Linseed	Семена льна
Fat, nes, prepared	Кулинарные жиры, приготовленные из растительных и животных масел и жиров
Beer of barley	Пиво из ячменя
Beetpulp	Свекольный жом
Coffee, extracts	Кофе экстракт
Cake, soybeans	Шрот соевый

Source: own compilation according to the results of conducted calculations.

for food. From the list of commodity items with the highest growth rates of world import, only confectionery products were included in the “TOP-20. The Russian Federation food export” list.

To assess competitiveness of products from Russian export basket specialization, SPR coefficient was suggested and calculated. It shows a share of Russian export in meeting global demand (import) for specific products and product groups (Fig. 2). This coefficient can be analyzed as an indicator showing the competitiveness of commodity groups on global market (the higher the coefficient, the higher the competitiveness). Then, the distribution of items, included in the rating “TOP-20. The Russian Federation food export”, over SPR interval with the selection of items matching and not matching names of product-leaders of global import was made (*Tab. 3*).

According to the results of calculations, item, corresponding with arterial directions of global import, with a maximums SPR indicator (6.46) is wheat. This indicator’s numbers of all the other items from this list are significantly lower. If we combine such groups as confectionary (0.93), chocolate products (2.63), sugar confectionery (2.03), allocated within FAO classification, the value of this group will be 5.59% – it shows growing global demand for these products.

The highest SPR coefficient values are found in commodity items not matching the list of “TOP-Global food import”. For example, an important item of Russian export is sunflower oil. Its share is 11.7% in a total

Table 3. SPR distribution of commodity items according to SPR indicator*

No	Interval, %	Matching commodity items**		Not matching commodity items	
		According to FAO classification	Translation	According to FAO classification	Translation
1.	<1	Ready-composite and other food products (0.95), distilled alcoholic beverages (0.81), confectionary (0.93)	Составные готовые и другие пищевые продукты (0.95) напитки дистиллированные алкогольные (0.81) кондитерские изделия (0.93)	Soybean grist (0.37)	Шрот соевый (0.37)
2.	1–3	Corn (1.51), chocolate products (2.63), barley beer (1.16), sugar confectionery products (2.03), cigarettes (2.11)	Кукуруза (1.51), шоколадные изделия (2.63), пиво из ячменя (1.16), сахаристые кондитерские изделия (2.03), сигареты (2.11)	Rapeseed oil (3.87), tobacco products (3.96), soybean oil (1.81), coffee, extract (1.88)	Рапсовое масло (3.87), табачные продукты (3.96), соевое масло (1.81), кофе экстракт (1.88)
3.	4–7	Wheat (6.46)	Пшеница (6.46)	Barley (5.89), cooking fats made from veg etable and animal oils and fats (4.45)	Ячмень (5.89) кулинарные жиры, приготовленные из растительных и животных масел и жиров (4.45)
4.	8–16	No		Sunflower oil (14.5);	Масло подсолнечное (14.5)
5.	17–20	No		Sunflower grist (17.8), flaxseeds (19.5)	Шрот подсолнечный (17.8) Семена льна (19.5)

* Product “Beetpulp” was not included in sample “Global food import” due to amount of overall import being below threshold value used for constructing sample. That is why SPR-indicator was not calculated for this item.
** Matching/not matching items in the pair “Top-Global import” – “The Russian Federation top-exports”.
Source: complied by the authors according to FAOSTAT and The Russian Federal State Statistics Service data.

amount of Russian food export (not including fishery products). High value of SPR indicator should be noted: it is equal to 14.5% and indicates a significant role of this item's export on global market. A share of its total import value on global market is 35.7%, so the reviewed sample is inhomogeneous and deviations from trend lines are significant. Consequently, organization of export shipments of this item is followed by great risks.

The accompanying product in the production of sunflower oil is sunflower grist (used for feeding animals, birds, fish, and also as food additive), which accounts for a significant share of exports from Russia (about 17.8%). However, the share of this item on global market is 0.2%, and in the ranked list of global commodity items import it occupies 119th position. The coefficient of variation is very high – 34.4%.

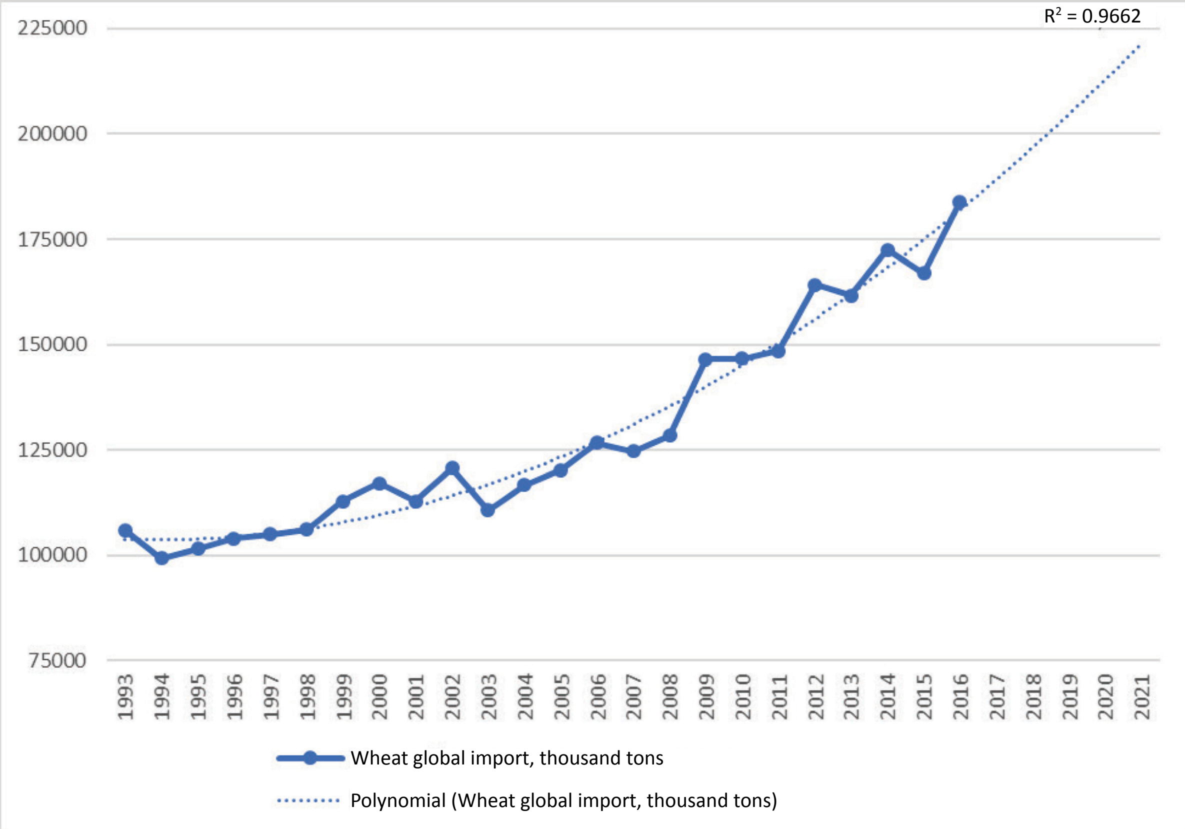
Product "Linseed" is in an interesting situation: it was not included in TOP-20 group, but this product's share in Russian export is quite large (19.5%) in global import of this item. Share of this item in global import is 0.1% and it occupies only 180th position in the list ranked according to descending value order of global commodity items import. Coefficient of variation – 13.8%, which indicates quite average fluctuations of demand for this product. Almost the entire Russian harvest of this agriculture is exported. Oil flax can compete with grain crops in regions with low yields, in particular in the Volga Federal District and Western Siberia. Flax is simply cultivated and well integrated into the crop rotation, but it accounts for less than 1% of all crops in the country. Export prospects of this crop are determined by comparative advantages of its production and the growing areas of processing of this raw material.

The commodity item with the highest competitive status, selected in accordance with suggested criteria and thresholds, is wheat. From the point of view of assessing the competitive characteristics of this product, wheat grain has an internal potential for growth and a high level of global demand. The analysis showed that the commodity item "Wheat" is in the trend of global needs and occupies a leading position in Russian export and on global market (highest value of share in Russian export, matching positions in the pair "Top-Global import" – "The Russian Federation top-exports", SPR coefficient is 6.46%).

Over the past 15 years, Russia has reached a fundamentally new level: it turned from importer into a largest exporter of wheat grain. Russia is the first in the world rank of wheat grain market share (in terms of amount in kind), and the fifth in the world in terms of value of sales, measured in million USD [22]. This is primarily determined by the fact that Russian grain is in a low price category. World market of wheat is traditionally one of the largest and important segments of global food market. Its distinguishing feature is progressive dynamics in long-term dynamics *(Fig. 6)*.

The results of growth prospects of global import amount were verified by objective factors with the help of regression models. These factors include the ratio between the dynamics of global production growth in FAOSTAT (linear trend) and dynamics of growth in UN Comtrade (illustrative trend), as well as dynamics of countries' population growth according to data of International Monetary Foundation. Acquired prognosis is preliminary and it will be updated by authors with the help of more complex models taking into account significant factors which can have an impact on global consumption and production of wheat (climatic data, macroeconomic, political, and etc.).

Figure 6. Dynamics and prospects of total global wheat import in 1993–2021



Source: own compilation according to FAOSTAT data.

The authors obtained the forecast data of global wheat imports until 2021, which indicate the strengthening of the increasing trend and the possible achievement of global demand for wheat by 2021 at the level of 220 million tons. The forecast was carried out using model of polynomial function, the trend line in the second degree, the approximation coefficient is 0.97, which allows us to talk about an adequate trend model that accurately reflects the patterns of world wheat imports.

It is important to note that growing interest to such traditional type of raw material as wheat happens because of wider use of modern biotechnologies. At the present moment, there is a whole array of high-tech areas on global market for developing food vegetable raw materials which nutritional value and composition may be pre-defined at the stage of creating a variety [23; 24]. In the last 20 years, selection and production of grain crops (rice, wheat, corn) enriched with anthocyanins have become widespread [25-28]. In Russia, the leader in the introduction of DNA markers in crop production (especially in wheat programs) is the Federal Research Center Institute of Cytology and Genetics SB RAS. Conducted experimental studies have shown the possibility of obtaining bakery and confectionery products from a new type of raw material with good organoleptic properties and increased levels of anthocyanins [29]. Thus, the development of new products and raw materials on the food market can ensure

Table 4. Areas of products of wheat grain procession usage

No.	Product of deep grain procession	Area of usage
1.	Gluten	Bakery and pasta industry, production of muesli, meat products, and feed
2.	Native and modified starch	Food, pulp and paper, pharmaceutical, textile, oil and gas industry
3.	Glucose-fructose syrups	Food, pulp and paper, pharmaceutical, textile, oil and gas industry
4.	Glucose	An important ingredient for the pharmaceutical and biotechnology industries
5.	Amino acids lysine and threonine	Valuable components for the creation of modern complete feed for livestock and poultry
6.	Organic acids, including lemon and dairy	Important ingredients in various industries, they are used in the production of most food products, as well as in the production of biopolymers and bioplastics
7.	Protein-mineral vitamin concentrates	They are used in livestock for feed production, in medicine and veterinary medicine
8.	Bioethanol	It is used in the production of fuel
Source: own compilation.		

the implementation of new increase points in order to expand the export potential of the country.

Nowadays, except using wheat grains as raw material for production of food products for population (bread and bakery, flour confectionery: waffles, crackers, pasta), wheat is widely used on global market for obtaining animal food. One of the modern global economy trends is growing demand for food raw material related to expansion of areas of using products of its deep procession for non-food purposes *(Tab. 4)*. Researchers note that circulation of such product as biofuel in current environment has a global nature [30].

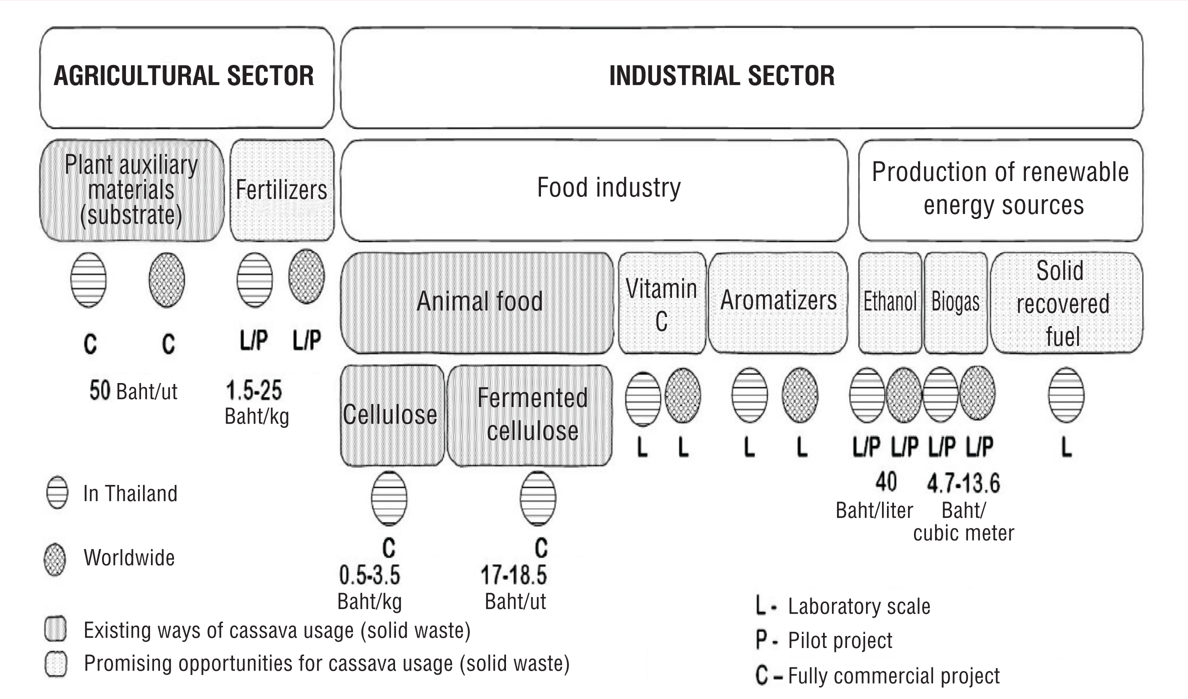
Many products from this list of processed products are used in B2B sphere as food additives, auxiliary ingredients, the purpose of which is associated with increase of the efficiency and manufacturability of industrial production of food products. A vivid example is wide usage of dry gluten, a product of wheat grain procession. A growing number of areas of wheat grain multipurpose usage definitely influences the demand for this important food raw material on global market.

While studying opportunities for increasing potential of Russian wheat export, it is impossible to ignore regional specifics of grain resources reproduction in the country. Russia, the biggest country in the world, has a significant differentiation of climate and economic environment for growing wheat. At the same time, 85% of its territory is in the zone of risky agriculture. At the current moment in Russia, the structure of grain quality has a noticeable tendency of increasing amount of poor quality grain [31].

The usage of wheat for processing, when it is possible to use low-quality grain, is currently very limited in Russia. For example, most distilleries, processing wheat grain, are closed or are closing. Grain procession into starch and molasses has small production amounts. Complex technology of nonconforming grain procession into raw material for cultivation of different microorganisms – producers of biologically active substances – just starts to develop. Until mid-2014, there were no companies for deep grain procession in Russia[3]. It needs to be mentioned that this is an expensive market segment, which primarily attractive for foreign investors. At the same time, production of items of deep grain procession has distinct ecological risks connected to technological peculiarities of production. There is largely imported equipment of high capacity offered on the current market: from

[3] The first factory was launched by “Cargill” company in June of 2014.

Figure 7. Generalized classification of existing and promising areas and technologies of cassava solid wastes usage in Thailand



Source: own compilation on the basis of primary information on the use of cassava processing products.

200 to 500 tons of raw materials per day. It costs several million US dollars. In such environment, domestic developments of deep grain processing technologies, which are oriented at using small form equipment with less capacity, are especially required. Mini-lines allow more flexible usage of resource potential – not "tied" to raw materials amounts in a limited area without additional logistics schemes of grain supplies. At the first stage of this segment development, mini-factories could provide smoother "entrance" into the market of manufactured products to guarantee selling and to minimize possibilities of financial risks.

From our point of view, the production chain of export products should be overviewed in a complex, including its final stage – management and utilization of production waste. Thailand best practices are interesting: there was a whole developed array of related industries and options for waste usage around "top" export item – cassava starch (manioc) [32]. Global demand for cassava starch increases every year and, therefore, new options of its usage also emerge. It also causes steady export growth of high quality cassava starch from Thailand over the last 20 years. In 2017, a share of Thailand export in the structure of global cassava starch export was 78%, the value of export – 1.13 billion US dollars.

The growth of starch export – a product of cassava procession – is accompanied by the growth of production waste. It leads to many negative moments and this problem is examined at the government level. Researches of environmental and economic prospects of starch wastes usage and searches for options of cassava starch production improvement are conducted by universities and research centers. Cassava solid waste might be used as raw materials in agricultural and industrial sector productions [32].

Options and technologies of utilization of starch production wastes from tropical cassava raw materials for food and non-food usage are presented in *Figure 7*. It also includes usage at the lab level, in pilot projects, and in fully commercially demanded productions [33].

Conclusions and suggestions

In this work, our methodology for assessing dynamics and structure of global import and Russian food export was suggested and tested. It was done for correcting directions of Russian export positions strengthening together with assessment of global demand on global market.

Our studies develop the theory of comparative analysis with using indices of competitiveness and the concept of food space by suggesting new direction in the analysis of the assessment of potential opportunities for expanding export potential related to the implementation of modern technologies and scientific solutions on food market. The novelty of the research includes theoretical statement and practical implementation of the research purpose of cooperative review of aggregated values of global import (as a reflection of global demand) and values of commodity items export in the country's context using methodic of processing large data. The conducted research showed that several leading commodity items with maximum values of Russian export costs are included in global food import ranking: wheat, corn, chocolate products, barley beer. The authors suggested criteria and threshold values for conducting multi-criteria assessment of products and detailed product groups, new SPR indicator was developed. Promising export commodity items were selected according to the results of calculations of SPR indicator, suggested by the authors: sunflower oil, barley, sunflower cake, flax seeds. These results show that it is necessary to increase the presence of products having high share in global import in Russian export. It could be done by deepening and expanding export flows at the cost of "related" products. At the same time, the article shows that it is necessary to consider the positive experience of other countries, paying attention to the manufacturing of products with high degree of recycling and waste management.

In the future, we intend to continue the research in terms of using our approach toward other informational bases, Comtrade for example, which will allow assessing structure of global food import on terms of another product classification. Our methodology can be used as one of the approaches to the analysis of the potential for expanding Russia's export potential on food products and raw materials market, as well as defining further technologies in terms of creating competitive products of the non-resource sector according to the new technological agenda. The suggested methods of evaluation may be of interest to employees of public administration and used in the activities of educational and scientific institutions.

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Procurement of Hunting Resources in the System of Fiscal Relations (Case Study of the Northern Regions of Russia)*

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Abstract. Scientific interest in the topic of hunting and game husbandry is due to the fact that the problems of rational nature management are coming to the fore – it concerns not only land relations, development of minerals and exploitation of forests, but also procurement of hunting resources combined with the protection of wildlife. The latter most clearly shows the problems of greening the modern economic activity and the traditional Northern economy associated with the use of the "gifts of nature". The paper highlights methodological principles of economic evaluation of wildlife and the analysis of Northern (domestic and foreign) experience of their taxation; we propose a scheme for transition from the disparate approaches to the taxation of this activity (resource, permission, compensation, etc.) to an integrated environmental-economic approach. In addition to the existing norms, this approach includes imposing excise duties on the production of weapons, ammunition and equipment; establishing a targeted environmental fee on the use of subsoil; imposing fines for unlimited or excessive withdrawal of wildlife objects; establishing funds for the protection of wild animals and birds in the system of local budgets. A new approach harmonizes the interests of the state (RF subjects and local government bodies), local population of the Northern territories, nature users (including hunters), subsoil users, and manufacturers of weapons and equipment. We determine the source of formation of tax revenues of local budgets; this measure makes it possible to finance environmental protection measures, reproduction of wild animals and birds, creation of infrastructure in remote Northern territories. The paper proves the necessity of introducing innovative methods for state monitoring of wildlife and correct distribution of functions of federal, regional and local authorities in its reproduction.

Key words: nature management, fauna, ecology, procurement of hunting resources, environmental protection, taxes, fees, excise taxes, experience of Northern countries.

Introduction

In our review of fiscal relations in the system of environmental management in the North [1] we note that the methodologically accurate account of resource taxes and payments can have a significant impact on the condition of the entire natural resource economy. We point out that renewable natural resources play a leading role in the organization of life in the Arctic and Northern regions; however, these resources are in the background of mineral and fuel resources in the system of financial and budgetary relations. We make a conclusion about a need for a partial flow of capital from the mining industries in agriculture, forestry and water management, and in the traditional activities of the northerners such as hunting and other trades. In this article, the financial and budgetary topic is considered in relation to the extraction of hunting resources, which is not very significant in the structure of the gross domestic product, but very indicative in identifying the features of the Northern life.

The goal of the study is to assess theoretical views on taxation of hunting resources in the system of fiscal relations, to analyse Northern (domestic and foreign) experience in this field of economic activity, to search for a new way to combine commodity-money relations in hunting and hunting farms and the problems of nature protection.

The objectives of the study are as follows: to determine the position of the taxation of hunting in the system of environmental management; to show the socio-economic value of wildlife and its use by an individual; to formulate methodological principles of economic evaluation of the objects of fauna; to undertake an analysis of hunting taxation; to reflect the international experience in this area and identify opportunities for its use; to draw conclusions on the comprehensive approach to the taxation.

Relevance of the research topic. More than 350 species of various animals and birds inhabit the Northern territories of Russia; 84 species of wildlife are classified as hunting resources, including 51 species of mammals and 33 species of birds. In the scientific literature and in the media, the issues of preservation of the unique Arctic and Northern fauna are considered with great concern, the search for harmonization of interests in various aspects of hunting and fishing is being conducted.

The key problem of the Northern regions of Russia, which have a huge natural and resource potential and a biologically diverse wildlife that differs significantly across territories, is the lack of financial resources to address these issues, to ensure sustainable development, and to finance public goods. Hunters not always understand and comply with a significant array of regulations on hunting and taxation of this type of activity (more than 10 at the federal level and more than 10 in each constituent entity of the Russian Federation). So, hunters in Russia pay llicence fees, fees for the use of wildlife objects, legal costs, membership fees in social organizations for hunting; the amounts of their (fees) are differentiated by type of production, territories, terms, etc.

We agree with domestic and foreign authors who believe that, along with the organization of hunting, as a sector of national economy with its own special technology and economy, it is necessary to establish proper tax regulation, and also understand the benefits of public-private partnership in the sphere of nature management [2,3,4], to determine the set of measures on economic and ecological behavior of people [5].

The scientific novelty of our research lies in the formation of a new integrated ecological and economic approach to the taxation of hunting resources in the Northern regions of Russia, based on the relationship of the theory of taxation of natural resources with the practical tasks of organization of hunting and wildlife protection.

Theoretical and practical significance of the research lies in defining topical issues of harmonizing fiscal, social and environmental relations in the field of use of wildlife objects, in studying the best international practices of taxation, in the development of a new integrated ecological-economic approach to the taxation of hunting.

The research methodology is based on the theories of taxation, environmental economics, regional economics, and organization of hunting. We use such methods as dynamic and static analysis of budget revenues fro the fees for the use of wildlife in the Northern regions of Russia, and we conduct a comparative analysis of tax systems in the field of hunting resources.

The results of the study present an assessment of the socio-economic value of the animal world and address the problems of ecological taxation; we also present the results of the analysis of taxes and fees in the system of procurement of hunting resources.

Socio-economic value of wildlife

Game animals in our country are considered as an important part of natural capital, which provides the formation of consumer and environmental ecosystem services. Hunting grounds in the Russian Federation occupy an area of about 1.5 billion hectares; more than half are legally used by 4,450 legal entities and individual entrepreneurs that carry out activities in 6,050 hunting grounds; valuation of game animals on the territory of the Russian Federation exceeds 87 billion rubles, the total annual turnover in the field of hunting is estimated at 80–100 billion rubles; more than 80 thousand workers are permanently or temporarily employed in the field of hunting. There are about 2.7 million hunters in Russia, taking into account game and tourist hunting. The annual expenditures that the federal budget allocates to Russia's constituen entities for the implementation of powers in the field of protection and use of game animals related to the control, supervision, issuance of permissions for hunting game animals and the conclusion of hunting and economic agreements are estimated at 1.3–1.5 billion rubles; budgets of constituent entities of the Russian Federation annually allocate additional funding for these purposes (in 2012, for example, in the amount of 2.4 billion rubles); the damage caused by illegal hunting exceeds the volume of legal hunting and amounts to about 18 billion rubles annually[1].

One of the main tasks for the development of Russia's hunting sector is "to improve the system of payments for the use of game animals and the fees for different game animals, as well as to create a mechanism for targeted financing of the hunting sector, which provides for the coverage of expenses necessary for the development of hunting, through the creation of environmental funds, ensuring state and public control over the targeted use of financial resource" [6, p. 8].

In order to determine the scientifically substantiated amount of tax rates for the use of natural resources and the amount of fees for the use of wildlife, it is important to understand their value, as well as the cost of compensation for damage caused to nature and restoration of wild animals and birds. The assessment of natural resources and the fundamental understanding of their value make it necessary to determine the social significance and take into account the environmental factor.

Foreign literature shows certain controversy with regard to the term "value". Some authors note the presence of internal values of natural objects, independent of man and his worldview [7], others believe that the natural system itself does not create social value. Only human relationships with the environment generate social value [8]. Perhaps the second position is more correct. We will add to it the Northern aspect of the social value of wildlife objects, which is fixed in special regulations governing the economic activities of indigenous peoples.

The question arises: how can we determine the value of wildlife and other natural resources? As a rule, the following positions are taken into account: first, goods and services are subject to evaluation if a person values them; second, value is measured in the values of compromises, namely in the desire of individuals to pay or receive payment for the use of natural resources by other individuals, and therefore value is a relative assessment; third, as a rule, a monetary measurement is used for evaluation; fourth, the values of the individuals are summarized to determine the social values of natural resources [9, pp. 10-11]. We accept these and other positions of foreign authors when it comes to different types of value of wildlife as part of ecosystems and as part of natural hunting resources. We also take into account the possibility to give a comprehensive (economic, social and environmental) assessment of natural resources [10].

In our opinion, in order to rationalize taxation it is necessary to taking into account socio-ecological and economic values of wildlife: first, to determine the value of the use of wildlife as a basis of taxation; second,

[1] This information is given in the "Strategy..." [5].

to highlight the potential value of non-use of wildlife as alternative values or the values of inheritance, namely, to preserve unique animal species for future generations by including them in the List of endangered species; third, to calculate the cost of reproduction of wild animals and birds and the corresponding amounts of funding. Ignoring the valuation of wildlife objects in fact means denying their socio-economic value. This approach can lead to the uncontrolled use and loss of the potential of natural resource reproduction.

Ecologization of hunting economy and its taxation: a review of studies

Development of the theoretical foundations of the ecological net is considered in the monograph edited by I.A. Maiburov and Yu.B. Ivanov, which reflects the transformation of the economic outlook in the direction of consumption of a balanced and careful attitude toward natural resources [11]. V.V. Gromov and T.A. Malinina pay particular attention to the problem of combining economic and environmental policies through tax regulation [12]. Some authors base the greening of taxation on the theory of external costs that are not taken into account in the economic system by means of prices. Thus, according to A. Pigou, positive external effects are manifested in the spread of new environmentally friendly technologies, and negative – in environmental pollution [13]. We believe that positive and negative external effects, indeed, play an important role in the greening of natural resources, and therefore they should be taken into account in the formation of a new approach to the economy and organization of hunting.

V.V. Lisauskaite, a well-known expert of international law in the field of environmental policy, distinguishes the inertia of thinking as one of the determinants of the attitude toward the economic assessment of environmental damage. She believes that the perception of lost profits should be replaced by more rational ways of environmental management, namely, by increasing the level of environmental awareness of economic entities and citizens and their awareness of the value of natural resources, including wildlife [14].

Despite the ecological postulates in the theory of economic activity, its practice does not yet have sufficient material interests in nature conservation. We agree with E.V. Girusov and V.N. Lopatin, who note that this situation has developed as a result of the fact that neither the planned nor the market models of the economy have been able to establish an adequate social value of natural resources [15]. However, approaching this kind of adequacy would mean the formation of a special approach to determining the effectiveness of the use of natural resources, when the attitude of people toward each other and their joint attitude to environmental management will be the criterion of the value of economic activity. At present, only experimental models created at the Institute of Economics and Industrial Engineering, Siberian Branch of the Russian Academy of Sciences, reflect quantitatively the importance of both economic and social effects of innovative projects [16]. "Clean economy" with a focus on the financial return on investment in production projects should recede into the background [17], especially if it concerns bioresource activities.

Analysis of the Northern domestic and foreign experience of taxation of hunting

Fees for the use of wildlife objects, forming the revenues of the consolidated budgets of RF construent entities in 2018 amounted to 0.003%; these fees are not received by local budgets of the Northern regions. This allows us to conclude that we are dealing with a sphere of economic activity that does not solve the

Table 1. Dynamics of receipts of fees for the use of wildlife to the consolidated budgets of constituent entities of the Russian Federation in 2015–2018, thousand rubles (in current prices)

RF constituent entity	2015		2016		2017		2018		2018 in % to 2015
	Thousand rubles	Proportion, %	Thousand rubles	Proportion, %	Thousand rubles	Proportion, %	Thousand rubles	Proportion, %	
Russian Federation	247902	0.004	275722	0.004	297249	0.004	300936	0.003	121.4
Krasnoyarsk Krai	23576	0.014	26197	0.014	30104	0.015	35636	0.015	151.2
Republic of Sakha (Yakutia)	14520	0.014	15190	0.013	16458	0.016	15687	0.012	108.0
Arkhangelsk Oblast	6028	0.013	7767	0.017	7759	0.015	7632	0.013	126.6
Khanty-Mansi Autonomous Okrug-Yugra	6626	0.002	7120	0.003	7166	0.003	7045	0.002	106.3
Kamchatka Krai	6812	0.029	6594	0.025	7439	0.027	6948	0.022	102.0
Republic of karelia	4662	0.024	4549	0.021	4571	0.021	4752	0.017	101.9
Yamalo-Nenets Autonomous Okrug	2549	0.002	3075	0.002	3810	0.002	3997	0.002	156.8
Republic of Komi	3626	0.006	3637	0.006	4107	0.005	3748	0.004	103.4
Magadan Oblast	1650	0.009	1722	0.008	1658	0.008	1811	0.008	109.8
Chukotka Autonomous Okrug	1148	0.008	1437	0.009	1613	0.013	1610	0.013	140.2
Murmansk Oblast	1330	0.003	1518	0.003	1463	0.002	974	0.001	73.23
Nenets Autonomous Okrug	49	0.000	52	0.000	84	0.000	79	0.000	161.2
Source: own compilation with the use of the data of the Federal Tax Service. Statistical reports for 2015–2018. Available at: https://www.nalog.ru									

problem of replenishment of the budget, but can be an indicator of other kinds of problems, such as territorial differences in the volume of hunting, localization and typology of the hunting sector, practical significance of the hunting sector in the organization of life of specific ethnic groups and groups of economic entities, etc.

The dynamics of inflows of fees for the use of wildlife to the consolidated budgets of the Northern regions of the Russian Federation has a positive trend *(Tab. 1)*, but this is mainly due to rising prices. We also note that these fees are received by the regional budgets of Russia’s constituent entities, rather than by the municipal budgets, although the logic of territorial management should be the opposite. And the compensation of expenses of the national budget for the improvement of an ecological situation at the expense of charges from users of wildlife objects is insignificant – about 50 billion rubles annually.

The amount of fees is affected by the number of payers and the number of permits issued. The number is relatively stable; moreover, it is reducing following the reduction in the limit on the use of hunting resources. We note the differences in the level of benefits. In the Northern regions, it ranges from 0 in Chukotka and Yamalo-Nenets autonomous okrugs to 4.7 and 4.6%, respectively, in Krasnoyarsk Krai and in the Komi Republic. The most significant point is that the representatives of indigenous peoples of the North, Siberia and the Far East of the Russian Federation are exempt from fees for the use of hunting resources; persons not belonging to indigenous minorities but permanently residing in places where hunting and fishing are the basis for their living and economic activities do not pay fees either. These benefits apply only to the number (volume) of wildlife objects that is sufficient to meet the personal needs of these categories of payers.

For the purposes of studying foreign practice in the field of taxation of the use of wildlife, we have selected four countries whose climatic conditions are close to the Northern regions of Russia: namely Finland, Norway, Canada and the United States. These countries have reconsidered their tax policy in the field of use of wildlife objects and developed theh ways to stimulate environmentally oriented behavior of nature users.

These countries use a permissive approach to this type of environmental management, although the system of payments for the use of wildlife objects is different. The cost of a hunting permit (license) differs significantly depending on the territory, place of hunting, types of hunting objects, season, terms, ownership of hunting grounds and other factors.

In Finland, 69% of the territory of which is covered by forests, about 300 thousand hunters are registered, and six percent of its citizens have a hunting license. Here hunters pay an annual fee which grants them the right to hunt for a year. The size of hunting fee is set annually by the state; it amounted to 28 euros in 2017. Hunting large animals involves the need to obtain a separate license and the payment of a corresponding fee. The cost of the permit (license) is determined by the party that owns the forest plots on the right of ownership or on the terms of the lease agreement. In addition, insurance premiums are provided in Finland to compensate for possible damage caused by firearms during hunting [18; 19; 20].

In Norway, despite its severe climatic conditions and mountainous terrain, forestry and hunting are well developed. There are 483 thousand hunters per five million Norwegians, which is about 10% of the population [21]. Here, the fee for obtaining a hunting license, which is an annual fee, ranges from three to four euros. Hunting large animals, including elk, involves obtaining a separate license for a small fee and is permitted provided that the individual has passed the exams on the accuracy of shooting from a hunting weapon, the cost of the exam is seven euros per attempt. Elk population in Norway is about 35 thousand, and the number of hunting licensec per year is about seven thousand, i.e. in a ratio of 5:1.

In 1901, the U.S. Government adopted several laws to increase funding of programs for protection, reproduction of fauna, resettlement of animals, promotion of civilized hunting etc. American hunters believe that the Federal Aid in Wildlife Restoration Act of 1937, most often referred to as the Pittman–Robertson Act is the most important one; it has led to positive results in the use of wildlife objects. It established a federal assistance program for local environmental authorities. The basis of the financial assistance was an excise tax, the rate of which was 11% on all types of hunting weapons and equipment sold. The Federal Department of Natural Resources received part of the excise tax from each cartridge sold (smooth and rifled); the money was then sent to finance reproduction and wildlife protection. The essence of this method of taxation is as follows: manufacturers of weapons, ammunition, and equipment used for hunting earn income and profit from their sales and pay the excise duty to the budget, the revenues from which are directed to compensate for the damage caused with the help of these tools. In the United States, all potential hunters must get a hunting license, for which a license fee is charged; about 20 million hunting licenses are sold per year. At the same time, the cost of licenses is insignificant, in different states it varies significantly for residents and non-residents. For example, in Illinois the annual fee for an ordinary licence is 7.5 dollars, and for that combined with fishing – 19.5 dollars.

At the same time, for residents of other States, the amount of the license fee for the right to use wildlife objects in Illinois increases in 5–10 times. Acquisition of a hunting license is regulated by the States; if the amount of hunting resources is insufficient, then a draw (lottery) is held for the right to obtain it [22].

In Canada, there are no centralized mechanisms for the collection of contributions for the right to hunt and mechanisms for the allocation of quotas allowed for their distribution, and there is no annual payment in the form of a state fee. Each province of Canada has its own set of laws. For example, Nunavut, the Northern territory of Canada, inhabited mainly by Inuit (Eskimos), has an original system of distribution of hunting rights, some elements of which are applied in other Northwestern territories of the country. In Nunavut, residents are guaranteed direct administrative distribution of hunting resources. The Nunavut Wildlife Management Board annually determines the total volume of hunting, allocating it based on the need and the possible benefits of their use for the local economy. The remaining part, sent for commercial use, is necessarily distributed through the limited entry system according to special rules. In the distribution of commercial licences, which do not exceed three years, preference is given to local residents with primary residence in the territory and to applicants offering benefits to the local economy. In British Columbia (Canada), a hunting permit for the entire hunting season costs 100 dollars, it provides the opportunity to hunt widespread species of wildlife such as elk, deer, bear, wolf, wolverine [23; 24; 25; 26].

In these countries, the directions of use of budget revenues that come from the fees for the use of wildlife objects largely coincide. In Finland, budget revenues received from the collection of payments from hunters are spent on financing activities aimed at improving the habitat of wild animals, conducting accounting and statistical studies of the population of animals and birds, and maintenance of hunting grounds. In the United States, all budget revenues derived from hunting taxation are used to finance federal and state programs, as well as to maintain departments for the protection and reproduction of wildlife. They are mainly spent on improving the habitat of wild animals, accounting and statistical studies of animal populations, acquisition of new hunting grounds, training and instructing hunters, construction of new and maintenance of existing public shooting ranges, and maintenance of the federal service for monitoring the use of hunting resources.

The restriction of the hunting area with the establishment of hunting boundaries is applied in all countries. The boundaries of hunting are strictly defined and controlled. For example, British Columbia (Canada) issues a special map with strictly defined boundaries within which it is allowed to hunt. In Finland, compliance with hunting rules is monitored by the territorial police and border guard within the powers established by the state. Here an individual can be deprived of the right to hunt for a period of one year as one of the measures of responsibility. As a result, violations are extremely rare. In Norway, the control of private hunting rules is given to owners of hunting grounds or tenants. In the United States, hunting rules are inextricably linked to the wildlife conservation act. The system of administration of the use of wildlife objects is built in such a way that the rules of hunting are clear to everyone, compliance with them is easy and inconsistent, and violation is financially burdensome. Poaching is punished very harshly; as a result, it is extremely rare [27].

Table 2. Theoretical approaches to the taxation of hunting resources

No.		Essence
1.	Rent-based	It is based on the rental nature of all tax payments. Proposed By D. Ricardo, substantiated by Russian scientists S. Yu. Glazyev and others [28].
2.	Compensational	It is based on the compensation of governmental expenses on the protection and reproduction of renewable natural resources, prevention of illegal use of wildlife, and environmental protection. Briefly described by R.R. Yarullinin [29].
3.	Permissive	It is based on the fiscal sovereignty of the state on the right of ownership of natural resources with the use of the licensing system. Briefly described E.B. Shuvalova, M.S. Gordienko, N.V. Sibatulina [30]. It is used in Russia.
4.	Environmental and economic	It is based on the following: harmonization of interests of the state, local population, nature users, including hunters and subsoil users; strengthening the ecologization of taxation; formation of methodical tools to determine the possible charges for use of wildlife objects; introduction of innovative methods of the state monitoring and control; strengthening of the role of regional tax policy. The elements of the environmental approach are presented in the scientific works of A. Pigou [13]. The environmental and economic approach was proposed by S.I. Chuzhmarova and A.I. Chuzhmarov [31].
5.	Comprehensive environmental and economic	It is based on the interconnection between the ecological and economic approach and the excise taxation. We make an attempt to substantiate it in the present paper.
Source: own elaboration.		

Analysis of the Northern Russian and foreign experience allows us to determine what could be considered for use in Russia. First, we can consider the targeted taxation of weapons and equipment manufacturers, the funds from which are directed to the financing of programs for nature protection, reproduction of wild animals and birds. Second, we can consider the establishment of a small amount of the license fee; third, strict liability measures in case of a violation of legislation on taxes and fees in the field of hunting. The combination of the above leads, as a rule, to a positive result.

Theoretical approaches to the taxation of hunting resources

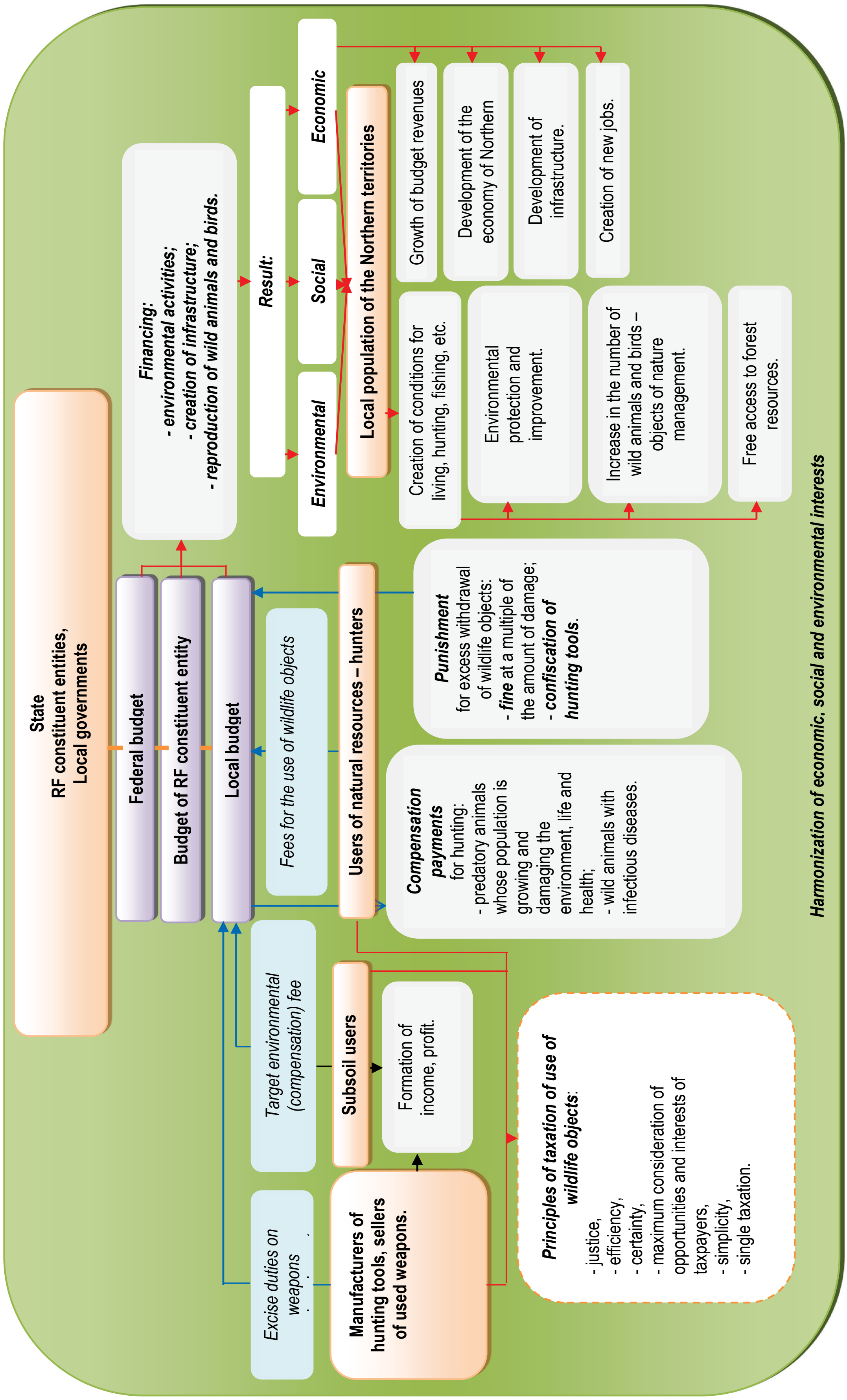
Analysis of the theory and practice of taxation for the use of wildlife in the Northern regions of Russia, as well as foreign experience of taxation of this type of natural resources allows us to identify the following alternative theoretical approaches to the taxation, the nature and content of which are different *(Tab. 2)*.

The problems of hunting and hunting economy, combined with the preservation of biological diversity relate to taxation, namely, the transition from its disparate schemes (resource, permission, compensation) to a new integrated ecological-economic approach that focuses on harmonizing social, economic and ecological relations *(Figure)*.

This approach requires compliance with certain conditions:

1. *Establishment of new excisable goods*: weapons, ammunition and equipment. The specified excise duty must be paid by producers of hunting weapons and equipment and also by the sellers of the resold weapon. Either the value of sold excisable weapons, ammunition and equipment, or their number may be recognized as the object of taxation. In our opinion, it is advisable to determine the number of weapons and equipment as the object of taxation, since the damage to nature does not depend on their value. The excise rate can be set at the rate of 1000 rubles per weapon and 1 ruble per cartridge. It should be noted that in Russia in 1994–1996 (Resolution of the Government of the Russian Federation of March 31, 1994 No. 273), excise taxation of weapons at a rate of 20% of its value did not allow to get a good result, due to the presence of the market of previously

Comprehensive environmental and economic approach to taxation of the use of wildlife objects



Source: own compilation.

used weapons that are not taxable. Excise tax should go to the local budget, which is the closest to the territory of hunting. It may be credited to specific trust funds specially created for this purpose, but the effect will be lower due to the organizational and management costsof the funds.

2. Excise tax can be considered from the perspective of compensation for damage caused to nature, as well as the possibility of expanded reproduction, further growth of production potential, income and profits of producers. In addition, this excise tax includes gunsmiths in the circle of persons involved in the performance of social functions for the reproduction of wildlife.

3. *Introduction of an additional targeted environmental compensation fee for subsoil users* whose activities have a negative impact on the environment. It is proposed to establish the amount of the fee at a multiple of the amount of damage. Its purpose is to increase the amount of funds for the maintenance of hunting grounds and strengthening the material and technical base of the hunting sector.

4. *Ensuring free access to forest resources for the local population of the Northern territories*. At present, unfortunately, a part of forest plots is leased to private persons for a long period of time. At the same time, local residents either do not have the opportunity to enter these sites, or must purchase a ticket, which gives the right to hunt in them. The cost of such a ticket exceeds manyfold the amount of the fee established by the Tax Code of the Russian Federation.

5. *Compliance with the principles of convenience, simplicity, single taxation* of hunters for the actual use of wildlife.

6. *Establishment of compensation for the elimination of predators* (wolves) (if there is a threat to reindeer husbandry and people's lives) and other types of animals in the event of mass infectious diseases to prevent further spread of the disease, for example, in the amount of 1,000 rubles per unit.

7. *Formation of modern methodological tools for the accounting of wildlife objects* on the basis of modern information technologies for determining the population of wildlife objects; *involvement of the local population to control the state of the environmental situation* in the territory of their residence.

8. *Granting the authorities of Russia's constituent entities the right to expand the list of objects of taxation and establish the rates* of charges for the use of wildlife objects taking into account territorial features. The Tax Code of the Russian Federation (Chapter 25.1) does not include many wild animals and birds that are objects of hunting, in particular arctic foxes, foxes, hares, partridges, etc.

9. *Establishment of benefits related to hunting fees*. The Ministry of Natural Resources of Russia proposed to establish an additional fee ("tax on hunters") since 2019 on hunting the objects of wildlife not included in the list (Article 333.3 of the Tax Code). Currently, this issue has not been resolved.

The practical importance of successful implementation of a new integrated ecological-economic approach to the taxation of the use of wildlife objects consists in the following: rise of tax revenues of local budgets; increase in budgetary funding to ensure the reproduction of biological resources – wildlife, environmental protection, improvement of ecological situation in the Northern regions of the country; involvement of local people in implementation of environmental protection measures and control of commercial hunting.

We note another important circumstance in the understanding of the "integrated approach" and its practical significance – a kind of dialectic of the organization of hunting and hunting economy. This economic sector once occupied the leading market positions in the system of initial capital, then it began to represent one of the forms of social (collective) organization of rural residents of the taiga and tundra territories of our country [32, 33]. At present, it could not, due to its specifics, "fit" into the classics of market relations and is forced to revive the old forms of existence or search for new ones. The revival of the old is implemented by establishing hunting and fishing cooperatives [34], the search for the new – by entering the infrastructure of tourism and sports hunting [35]. The fiscal aspect of such transformations consists in promoting hunting sectors (societies), especially in terms of their environmental functions and in establishing favorable conditions for recreation in nature. The revenue part of hunting is increasingly moving to the sphere of hunting tourism and is implemented in the costs of its organizing.

Conclusion

Taxation in the procurement of hunting resources should contribute to the formation of a system of social and environmental relations in terms of environmental management and environmental protection. The regulatory role of fees for the use of wildlife objects is most effectively manifested in the comprehensive coverage of the interests of all participants – the organizers of hunting and the hunting sector, in the development of their environmental thinking. It is appropriate to consider fiscal relations in this sphere of activity in the context of improving the delimitation of hunting grounds, efficient organization of complex hunting farms, provision of support to public associations of hunters, economic incentives for optimising the number of game animals, combining infrastructure of recreation and tourism with the needs of amateur and professional hunting.

The study proposes a new comprehensive environmental and economic approach to the taxation of procurement of hunting resources in the Northern regions of Russia, *based on* the results of the analysis of theoretical approaches, *assessment* of the socio-economic value of the animal world, *use of* Northern domestic and foreign experience, *taking into account* practical tasks of the organization of hunting and wildlife protection; the approach also includes:

– establishment of new excisable goods (weapons, ammunition and equipment);

– introduction of additional targeted environmental compensation fee;

– providing the local population of the Northern territories with free access to forest resources;

– compliance with the principles of taxation of hunters for the use of wildlife objects (convenience, simplicity, single-stage process);

– establishment of compensation payments for the elimination of predators;

– formation of modern methodological tools for the accounting of wildlife objects;

– involvement of the local population to control the state of the environmental situation;

– granting the right to the authorities of constituent entities of the Russian Federation to expand the list of objects of taxation and establish the rates of fees.

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Financial Behavior of the Population during the 2014–2015 Economic Crisis*

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Abstract. The article considers the changes in people's financial behavior that occurred under the influence of the "structural recession" of the Russian economy. Any changes in the economic behavior of the population in the context of its individual types are caused by transformations taking place in society, proceed from people's adaptation to new conditions and affect the duration and consequences of crisis processes. The goal of our study is to identify changes in people's financial behavior caused by the economic crisis of 2014–2015. The paper uses official statistical data and materials of national and regional sociological surveys. We analyze manifestations of the 2014–2015 crisis, such as the changes in the level and use of monetary incomes, bank deposits and loan debt of the population. On the basis of regional sociological studies we reveal the changes in people's financial behavior. We find out that during

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the crisis processes the growth rates of bank deposits and loan debt decreased, the structure of savings and credit purposes changed, and the violations in the regularity of loan payments became more frequent. In particular, at the regional level (in the Vologda Oblast), the share of inhabitants with savings has decreased significantly, the share of those who are saving money to use when they retire and the share of car loans have decreased; the share of savings for improving housing conditions, for recreation and travel, as well as the share of loans for urgent needs and unforeseen expenses have increased; the number of cases of overdue monthly payments on loans has increased. At the same time, some components of financial behavior turned out to be insensitive to the changing economic situation, among them – the reasons for refusal to form savings, the most common forms of accumulation, and the criteria for choosing a bank. We conclude that there are no mass deviant practices in the financial behavior of the population of the region in the crisis period; in general, people adapt to the changes that take place in the socio-economic situation. We recommend using the results of the monitoring studies of financial and other types of economic behavior in the activities of regional authorities in order to obtain timely information on current changes and make adequate management decisions.

Key words: financial behavior, sociological survey, economic crisis, rationality of behavior.

Economic crisis is an inevitable thing in the system of market economy. It is related to the abnormality in the current activity of economic system. It often leads to the disruptions of connected relations and financial agents' behavior models. But crisis could be analyzed as the transitional period which also gives opportunities for growth and development, not only causes risks of adverse effects emergence. "According to the theory of crisis, active crisis conditions might last four-six weeks. In this period, economy and the society (including individuals) adapt and achieve new level of sustainability, or decompensate (do not adapt) and reach lower level of functioning" [1].

Since 1990s, Russia has gone through the financial-economic crisis of 1997–1998, the economic crisis of 2007–2009, the "currency crisis" of 2014-2015, all of which affected the most sensitive and numerous participant of economic relations – country's population. It is possible to say that Russians always live in a "constant state of high alert" and adapt their economic behavior to new challenges of the world. Populations' financial behavior is not an exception. It is one of the types of economic behavior related to mobility and usage of financial income; it also includes different types of financial activity [2, p. 2222]. Post-soviet transformations, on the one hand, strongly deepened regions' differentiations and populations' material stratification, strengthened disconnection between elite and masses, inside social groups [3, p. 54-56]. On the other hand, they opened new financial market opportunities for Russians. As a result, people's affirmations and motives related to money and financial goals began to gradually change, differences in people's financial actions, according to their social-demographic group affiliation, became more noticeable.

In the last 10–15 years, impact of people's finances on country's economy, as well as characteristics and directions of financial behavior promotion, is more actively discussed by authorities and researchers. A vivid example of that is an extensive work on increasing populations' financial literacy (approval of the "Strategy to increase financial literacy in the Russian Federation for 2017–2023", annual events "Russian savings week", "Russian week of financial literacy"); propositions from the Central Bank of Russia, the Ministry of Finance, and the Ministry of Economic Development on including population's funds into financial sector (release of "people's bonds", proposals for the introduction of individual pension capital, regulation of private investors' activities); active promotion of the "insurance paradigm" in the relations between the government and people. Besides, significant investments are necessary for economic growth, sources of which are not only government, business, and foreign investors' funds, but also people's savings. The importance of the latter increases in the current environment of many domestic manufacturers' unprofitability, high pressure on the state budget, problems with involvement of foreign investments.

Favorable conditions for people's financial behavior are necessary for steady involvement of their funds in the country's financial system and maintenance of acceptable levels of quality of people's lives. Taking into account inevitability of crisis processes, we think that tracking and explanation of population's financial behavior in unstable and crisis socio-economic conditions are relevant. The way people use their money, allocate it between consumption and savings primary determines nature and duration of crisis processes in the economy. We think that 2014–2015 crisis is of particular interest for us for several reasons.

First of all, for the nature of it. The crisis of 1991–1995 was transformational, created by a transition from one political and economic regime to another, external and internal impact[1]. Financial crises of 1998 and 2008–2009 became a part of global economic crisis. The first one of them is a brought one, it came from Asian economy; it deepened in Russia because of debts and serious market crush[2]. Its main consequence was a quarter decrease of people's actual income and short-term production decline [4, p. 38]. The second crisis was global. It originated in USA, and at first it was a banking crisis. But it subsequently led to economic crisis, which worsened business climate, demand for services and supplies. It had an impact on Russian production sector[3].

Economic crisis decrease was significant (GDP lowered by 7%) and recovery from it took a long time (the economy overcame decrease only in 2012), but people's actual income grew [4, p. 38-39]. 2014–2015 crisis does not have any connections to global processes – it is completely internal. It is a crisis of old growth model collapse, which started because of the economy's stagnation – it stopped growing in 2013[4]. Later, it was additionally influenced by geopolitical factors (external sanctions, oil price drop, etc.). In this period of crisis, decrease of people's actual income is noted.

Second, for the end of the crisis. All the previous crisis processes are definitely over by now, but it is not that certain in case of the last one. We stand with experts' opinions, especially with Doctor of Geographic Sciences N.V. Zubarevich, and think that Russian economy is still in the "pit" of crisis' consequences. If key problems of current institutional economic model remain (inefficient institutes, low investment rates, and oil price), post-crisis recovery will take long [4, p. 41].

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[2] Zubarevich N.V. How do Russian regions survive the crisis. *Novaya gazeta*. Available at: https://www.novayagazeta.ru/articles/2016/11/18/70588-kak-vyzhivayut-rossiyskie-regiony-v-krizis-lektsiya-natali-zubarevich (date of access: 13.08.2019).

[3] Ibidem.

[4] Ibidem.

In this article, we make an attempt to identify changes which happened in substantive content of Russian people's financial behavior after 2014–2015 economic crisis. In doing so, apart from a short review of crisis manifestations in socio-economic life of the country, we present results of multi-year sociological studies of the Vologda Oblast population's financial behavior.

Extent of the problem's research

Certain aspects of population's financial behavior have been studied since the beginning of the 20th century; this problem received theoretical documentation and broad empirical confirmation in 1960–1970s. The theme of financial behavior researches is diverse, and works studying connection of behavior to crisis processes are very important. In particular, a representative study of 2008–2010 financial crisis' influence on the practices of managing finances in USA households was conducted by Taylor et al. (2010) [5]. This research examined changes of behavior models and affirmations which emerged during 2008–2009 recession. Authors used statistical data, accumulated by federal authorities, and data from special national survey conducted in May of 2010 in the form of phone surveys. 2967 people above 18 years old, who live in continental area of USA, participated. It was stated that crisis made more than half of Americans (60%) to cut general costs, one third of Americans (32%) could not put together the same amount of their pension savings, and almost half of Americans (48%) said that their financial situation was still below the pre-crises level.

The 2008–2009 crisis is studied in the works of Shim and Serido (2010) [6], who examined students' reaction toward the change of financial situation, Bricker et al. (2011) [7], who compared financial behavior before and after the crisis (in 2007 and in 2009–2010). 2098 people from two groups were interviewed in Shim and Serido's (2010) research: the first group – before crisis, in April of 2008, and the second one – after, in April of 2009. Their questions touched upon assessment of welfare, respondents' families' financial situation, financial education in high school, work experience, aspects of financial behavior. The work of Bricker et al. (2011) is based on data of national "Survey of Consumer Finances" (SCF) with samples from 2007 and 2009. It examines impact of changes of some assets' prices and debts size on households' standards of living. Earlier works (for example, Voydanoff, 1984 [8]; Varcoe, 1990 [9]) are also based on data received from sociological surveys of American households and examine practices of adaptation to stressful financial situations.

Many researches of domestic authors are devoted to the theme of financial behavior transformation under economic crises of 2000s as well. In the work by O.Yu. Dmitrieva and N.A. Dmitriev [10] conclusions about people's financial behavior change are drawn on the basis of the analysis of governmental statistics and data from Russian surveys conducted by the National Agency of Financial Investigation (NAFI) in March of 2016. The research by O.E. Kuzina (2009) [11], explaining manifestations and groups of population 2008–2009 crisis touched upon, is based on comparative analysis of the results of national surveys of leading sociological services (NAFI, VTsIOM, FOM). Changes in Russians' savings behavior from the point of view of used savings instruments and in relations between consumption and saving are examined in the works by M.A. Mosesyan (2010) [12], M.S. Shcherbal' (2013) [13]. In particular, the latter is based on the materials of socio-economic VCIOM monitoring, conducted in January–March of 2009, and it contains the typology of savings behavior, built by using the two step method of cluster analysis (in SPSS package). It pointed out the most popular behavior models in the conditions of socio-economic instability. While building this typology, authors took into account the following parameters of behavior: availability of savings, forms of its storage, strategies of savings management.

The work by L.I. Nivorozhkina [14] is an example of extensive assessment of economic crisis impact on the level of welfare and financial behavior. It is based on the methods of economic-mathematical modelling. The author used data about incomes, spending, property status and financial behavior of Russian households gathered during Russian Longitudinal Monitoring Survey of NRU HSE population (RLMS). Examination periods were pre-crisis 2013 and 2015 which had an on-going recession of economy. The analysis was conducted by using multidimensional models of relative change in the level of current available household resources with non-observant heterogeneity, shifting, caused by missed variables, and endogeneity [14, p. 86]. As a result, it was possible to identify factors which change financial behavior and level of population's welfare in the period of economic crisis in the most significant way.

While analyzing the problem of human behavior in crisis, the issue of rationality appears (the subject of economic behavior rationality has been a discussed topic for many years). A classical theoretical model of human financial behavior is based on rationality, independence and freedom of choice [15, p. 95]. After the 1980s, when many economically developed countries began transition to innovative trajectories of development, which widely extended people's material possibilities and possibilities of financial market, empirical researches started to show inconsistencies in observed and forecasted financial behavior of population. Many scholars see the source of this issue in the problem of behavior rationality

A precise definition of rationality is not adopted. In general, a choice of understanding rationality is "not an issue of truth but purpose" [16, p. 359]. In wide sense, rationality (lat. ratio – reason) means awareness and calculation of actions, definition of goals and borders. Rationality of economic behavior is manifested on two sides: firstly, in the intention to control resources and minimize their spending and, secondly, in fulfilment of individuals' interests, in the intention to achieve set goals [17, p.129].

Individual's economic activity is defined by the framework of productive and distributive relations established in the society. Consequently, there are more options of financial strategy within market conditions. Because of it, in the times of crises, there is a higher chance of using financial behavior models which lead to exclusion of significant sum of money, potentially suitable for investments, from economic circulation and the danger of bankruptcy for certain citizens and their families.

Except for existing in the society socio-economic relations and processes, individuals' financial behavior is heavily affected by the impact from person's psychological characteristics, his emotional state, because it is directly connected to the primary mean of survival – money. In other words, rationality of financial behavior is challenged by psychology.

For example, the founder of the behavioral finances theory – D. Kahneman and A. Tversky, who developed the idea of limited rationality, in the work "Prospect Theory: An Analysis of Decision under Risk" (1979) presented the results of experiments which proved that people cannot rationally assess amount of expected incomes and their probability. First, people have "asymmetrical reaction to welfare change. The man is mostly afraid to lose than to gain". The degree of frustration after losing 100 dollars will significantly overcome the felling of satisfaction after gaining the same amount of money. Therefore, "people are ready to take risks to avoid loses, but not ready to do the same to gain something". Second, "people make mistakes more frequently when they assess probability: they underestimate the probability of events which will, probably, happen, and overestimate much less possible events" [18, p. 184].

Socio-cultural impact on people's financial behavior is also very important. The current content of behavior was formed in the context of the market transformation of Russian society, which largely did not take into account the historical and socio-cultural features of the previous development. In the USSR social policy was paternalistic in nature, i.e. "state structures determined the paradigm of life of every citizen and every family, "ensuring" satisfactory, from the dominant ideology point of view, level and corresponding way of life" [19, p. 159].

In a market economy of modern Russia, the level of state "guardianship" on social issues has significantly lowered, high-quality social services, available at the required time, turned out to be paid for. It largely contradicts the stereotypes of behavior gained during the years of Soviet authorities. The accomplished revolution, not only in the sphere of social guarantees, but also in public relations, now forces Russians to solve problems of acquiring educational, medical, and other social services "at their own expense", naturally increasing the pressure on family budget and influencing other financial decisions. Taking into account mental characteristics and low level of trust of Russians in financial institutions[5], largely due to the negative experience in 90s, we can assume that in a situation of economic instability, there might be cases of destructive financial choice (for example, mass withdrawal of funds from the financial sector).

In this study we do not aim to come up with the "formula" of rational behavior in a crisis; we consider the aspect of rationality through the adaptation of behavior to changing conditions. If the population started to apply practices that can further lead to a decline in their standards of living, it is destructive behavior. But if the population began to apply practices that will preserve their standards of living, or lead to its increase in the future, it is constructive behavior.

Materials and methods

In this research the analysis of population's financial behavior was conducted. It includes, first of all, the analysis of dynamic distribution series of statistical indicators, which characterize socio-economic situation in the country along with people's actions on financial market and, secondly, assessment of the results of population's sociological survey, which reveals content of financial behavior.

Financial behavior is studied here from the perspective of saving and credit behavior. The reason of it, first of all, is that they are implemented in the most developed sphere of national financial system – banking sector. Second, they provide consumers' demand which impacts the level of people's welfare and

[5] According to the National Agency of Financial Investigation (NAFI), the level of Russians' trust in banks was 59% in 2015, 67% in 2016, 60% in 2017, the level of insurance companies trust was 34, 40 and 35%, the level of investment companies trust was 16, 18 and 17%, the level of non-state pension funds trust was 22, 24 и 15% respectively (the level of trust is measured in the number of respondents who chose answers "completely trust" and "rather trust"; source: https://nafi.ru/analytics/doverie-rossiyan-k-bankam-rastet/).

country's economic situation[6]. Third, there is a large source of statistical data about these types of behavior available for free. We chose amount of deposits of natural persons (characterizes saving behavior) and credit debts, given to natural persons (characterizes credit behavior), as statistical indicators. The structure of money income usage is analyzed additionally. Dynamics of statistical indicators is given for 2013–2017 which will allow understanding of crisis manifestations of 2014–2015.

Content of saving and credit behavior is revealed with the help of sociological surveys of the Vologda Oblast population, which can be observed as the typical entity of the Russian Federation according to the most demographic and socio-economic indicators [20, p. 175]. The following surveys were conducted: "The research of saving behavior" (RSB; 2001–2012), "Life quality" (LQ; 2014–2016), "Financial literacy" (FL, 2018), the Monitoring of Socio-Economic Situation and Perceptions of the Population (2013–2016). The RSB, LQ, FL surveys include several thematic blocks ("Socio-demographic information", "Saving behavior", "Credit Behavior", "Other financial services", "Financial literacy", "Overall characteristic of life quality"); inflation expectations and populations' consuming attitudes are tracked in the monitoring.

These sociological researches are conducted by the method of handout survey at the place of respondents' living on the territory of two large cities and six regions of the Vologda Oblast. Overall amount of samples in the RSB, LQ, FL surveys – 1,500 people a year, in the monitoring – 9,000 people a year (1,500 people once in two months); respondents' age – 18 and older.

[6] According to the Russian Federal State Statistics Service data, households' contribution to Russian final consumption in GDP was 50.6% in 2012, 52% in 2015, 52.8% in 2016, and 52.2% in 2017.

Sampling error – 3% and less. Comparison of two sociological surveys conducted in 2014 and 2016 with a data for 2012 and 2018 will let us identify substantive changes of population's financial behavior.

Overview of 2014–2015 crisis manifestations

National economy in 2014 was affected by serious problems which led to a slowdown of the development in real economy sector and worsening of significant part of households financial situation. Crisis negatively influenced the level of welfare and population's standards of life [21, p. 7].

The 2008–2009 crisis was a consequence of Russian economy integration into global economy and involved changes of external trade conditions, capital outflow, and strict policy in external borrowings. Negative impact from 2014–2016 was related mostly to several domestic events. We are talking about economic structural imbalances, which led to a general economic downturn and deepened further because of increase of budget expenditures due to the accession of a new region, introduction of sanctions against Russia and the rapid decline of global oil prices. All these factors led to a sharp weakening of the national currency, which resulted in deterioration of population's financial situation and transformation of its financial behavior. Because of the crisis, inflation rates grew – in 2014–2015 there was a major increase of the Consumer Price Index (CPI) across the country and in the Vologda Oblast (*Tab. 1*). CPI decrease happened in 2016. According to people, high level of inflation is the main destabilizing factor of financial situation. That is why, according to the National Agency of Financial Investigation (NAFI), solution of inflation problem is more important than assistance to banking system [11, p. 34]. It might be connected to the confidence in the system of deposit insurance,

Table 1. Dynamics of socio-economic indicators in 2013–2017

Indicator	Territory	2013	2014	2015	2016	2017
CPI	Russian Federation	106.5	111.4	112.9	105.4	102.5
	Vologda Oblast	107.2	112	112.0	105.0	102.2
Average per capita financial income*, rubles	Russian Federation	35,229,8	33,866,4	32,911,9	31,515,7	31,422,0
	Vologda Oblast	27,601,8	27,393,3	27,439,0	27,947,6	26,489,0
Deposits*, million rubles	Russian Federation	23,015,067,5	22,787,888,2	25,125,978,9	24,911,009,6	26,092,571,0
	Vologda Oblast	126,391,3	122,982,0	129,857,3	132,113,9	137,849,0
Credit debts*, million rubles	Russian Federation	61,188,8	66,092,3	56,852,3	54,498,2	57,867,0
	Vologda Oblast	111,238,7	111,538,6	94,361,0	91,733,7	98,068,0

* In comparable 2017 prices.
Source: author's calculations are based on: Regions of Russia. Socio-economic indicators. The Russian Federal State Statistics Service, 2014–2018.

which compensates for some funds at the "right" moment, and the hope for authorities' actions efficiency. According to S.K. Dubinin, CBR and Government's actions "countered a current thread and prevented cascaded banks' bankruptcy" [22, p. 219]. On the background of ruble's devaluation, stability of banking system was preserved without panic among Russians and exemption of funds from their accounts.

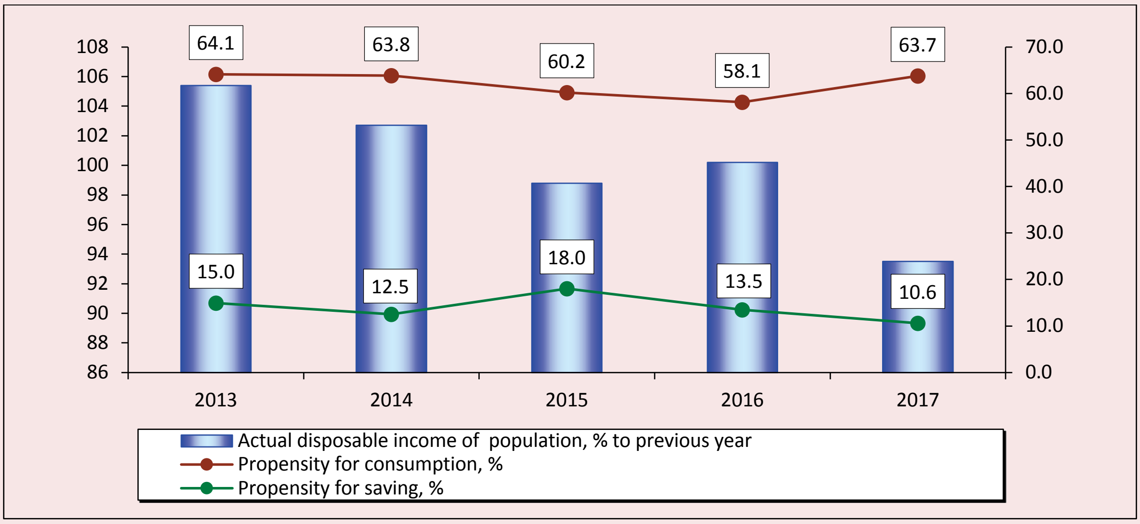
In pre-crisis 2013, actual average per capita income of Russian citizens increased by 5% in comparison to the previous period of time (the same happened in the Vologda Oblast). When economic crisis began, citizens' incomes decreased: 4% drop across Russia and 1% drop in the Vologda Oblast in 2014. Average per capita incomes continued to drop: by 3% in 2015, на 4% in 2016, by 0.3% in 2017. In the Vologda Oblast, after a slight increase in 2015 (by 0.2%) and in 2016 (by 2%), average per capita incomes decreased by 5%.

Increased attention to the state of banking sector in 2014–2015 from supervisory authorities, because of its important role as "a driving gear of positive and negative impulses in country's economy" [22, p. 221], prevented significant outflow of funds from deposits. Thus, extent of Russian population's bank deposits was 22,787 trillion rubles in 2014: it is just 1% lower that in 2013; in the Volodga Oblast the decrease was a little bit more noticeable (3%). In 2015, an increase of natural persons' deposits happened – by 10% across Russia and 5.5% in the Vologda Oblast (on a comparable basis). 2–4% growth of populations' bank deposits extent continued in 2016–2017, but it was still below pre-crisis rates. Such decrease of growth rate can be explained by the transformation of population's financial strategies in the environment of its material situation worsening.

Dynamics of the population's credit debt indicator also shows changes in financial behavior: the level of debt increased in 2014 across Russia and in the Vologda Oblast (by 8 and by 0.3% respectively). Then, there was a sharp decrease of population's credit debts – by 14% across Russia and by 15% in the Vologda Oblast. The rate of decrease slowed in 2016 (by 4% across Russia and by 3% in the Vologda Oblast), but increase of credit debts was again noticed in 2017 (by 6 and 7% respectively).

More detailed analysis of financial behavior of the Vologda Oblast population shows that in 2014–2015 there was, on the one hand,

Figure 1. Dynamics of Vologda Oblast population's financial activity in 2013–2017



* Propensity for consumption is calculated as the ratio of purchasing consumer goods and services to the population's financial income, %.
** Propensity for saving (saving rate) is calculated as the ratio of savings to financial income of the population. In this case, savings include increase (decrease) of deposits, purchase of capital bonds, change of funds in the accounts of individual entrepreneurs, loan debts, property purchase, purchase of cattle.
Source: Official statistics. Level of welfare / The Vologda Statistics Service. Available at: http://vologdastat.gks.ru/wps/wcm/connect/rosstat_ts/vologdastat/ru/statistics/standards_of_life/

decrease of incomes and propensity for consumption, but, on the other hand, growth of willingness to save money *(Fig. 1)*. But then, since 2016, despite the unstable dynamics of money incomes, propensity for saving started to decline and propensity for consumption, previously decreasing in 2016, started to increase.

It is possible to explain this situation from several points of view. Firstly, there is a certain degree of disbelief in financial institutions existing in some part of population[7]. This fact, coupled with problems in the area of financial literacy, lead to the situation when people cannot choose tools suitable for them (i.e. reliable and quite profitable) for investing free funds [24, p. 70]. Secondly, purchasing activity decline in 2016 is probably related to population's high inflation expectations[8] and general prices increase. Thirdly, propensity for consumption, which increased in 2017, along with real incomes decrease, can be the realization of postponed, due to 2014–2015 crisis, demand for purchasing expensive goods and services.

Decrease of citizens' real incomes caused the change in the structure of profits' usage *(Tab. 2)*. People primarily spend earned money on goods and services: in Russia this indicator was at the level of 70–75% in different years, in the Vologda Oblast – 60–64%.

[7] The Group "Fond "Obshchestvennoe mnenie" (FOM group) conducted a survey of Russian population in February of 2017 from the request of CB RF. It showed that 42% of respondents "do not trust in the present or did not trust in the past any financial contractors" [23, p. 98]. According to VolRC RAS sociological surveys, 21% of the Vologda Oblast population do not trust banks, 40% – insurance companies, 46% – investment companies, 50% – non-state pension funds, 60% – microfinancial organizations.

[8] According to the Vologda Oblast population surveys, in 2013, 61% of respondents expected that price growth would exceed income growth. In 2014, their proportion was 63%, in 2015 – 74%, in 2016 – 71%.

Table 2. Structure of population's financial income usage, % of total financial income

Indicator	Territory	Year				
		2013	2014	2015	2016	2017
Purchase of goods and services	RF	73.6	75.3	71	73.1	75.8
	VO	64.1	63.8	60.3	58.1	63.7
Payment of obligatory payments and various contributions	RF	11.7	11.8	10.9	11.2	11.1
	VO	13.3	13.1	11.6	11.3	11.6
Property purchase	RF	3.9	4.5	2.9	2.9	3.2
	VO	2.4	2.4	1.4	1.2	2.4
Growth of financial assets	RF	10.8	8.4	15.2	12.8	9.9
	VO	20.2	20.7	26.7	29.4	22.3
- from it, increase (decrease) of free people's money	RF	0.7	0.2	-0.4	0.7	1.3
	VO	5.8	8.2	8.9	16.3	13.5

Source: Regions of Russia. Socio-economic indicators. The Russian Federal State Statistics Service, 2014–2018.

There was a growth of consumer activity which activated investment processes in the times of 2008–2009 crisis. But during 2014–2015 crisis population started to spend less on goods and services – numbers decreased from 75.3 to 71% across Russia and from 63.8 до 60.3% in the Vologda Oblast. "Savings on goods and services became the most popular strategy of Russian families' adaptation to economic shocks in the times of crisis" [22, p. 32].

Qualitative changes of financial behavior

According to the results of sociological surveys of the Vologda Oblast population, one fourth of people had savings after 2014–2015 crisis (*Fig. 2*).

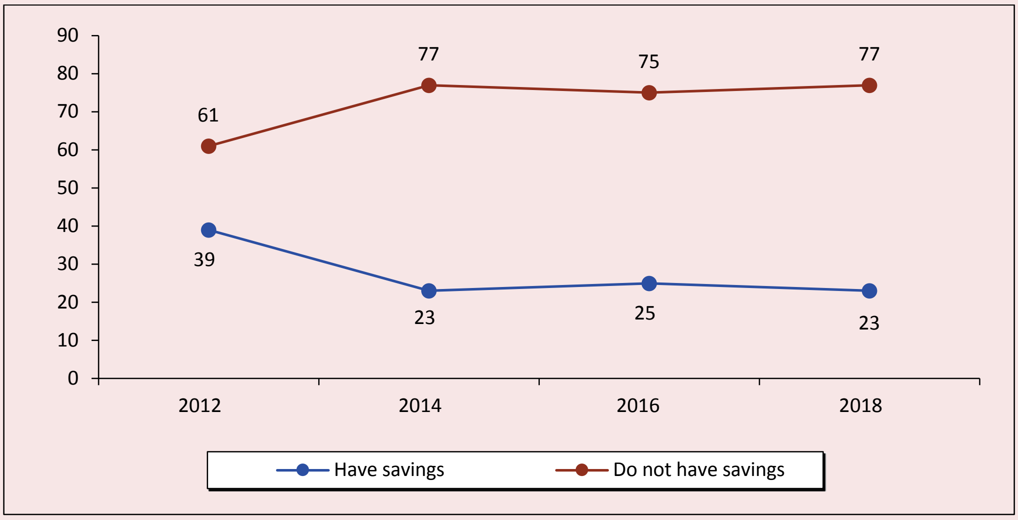
In 2008–2012, savers noted that they managed to put aside something about 90–120 thousand rubles (average number for one individual who saves money). These numbers increased in 2013 – to 265 thousand rubles, sums of money households save also grew up – from 5,200 rubles in 2007 to 5,934 rubles in 2013. In 2014, in the conditions of unfavorable external circumstances and unclear future prospective of economic situation, people of the Vologda Oblast cut amounts of savings – average number was 124 thousand rubles, which is equal to nine monthly incomes of one family member[9]. In 2016, as a result of economic stabilization and halt of real income decrease, people gained opportunities to put aside money – amount of savings raised to the average number of 167 thousand rubles for one family (it is equal to 12 average monthly incomes of one family member)[10].

"Money cannot buy happiness" – Russian proverb says. But economic realities argue: "Absence of money is the root of all evil". It is impossible to put aside money without additional funds – it is confirmed by the results of surveys. The major obstacle for savings is financial limits – absence of free money due to low incomes. This reason was stated by 70% of the Vologda Oblast population (72% in 2012, 71% in 2014, 68% in 2016, 65% in 2018). It is relevant for respondents despite their gender, age, education level and amount of income. "Unstable economic situation" itself is less important for absence of savings – about 10–

[9] Average monthly income is given by the respondent. In 2014, average sampling number of average actual monthly income for one family member was 14,084 rubles, in 2016 – 13,819 rubles.

[10] Increase of the amount of accumulated savings, expressed in terms of the average per capita income for one family member per month, is associated with a decrease of actual incomes in 2015-2016 and a decline of consumer activity.

Figure 2. Proportion of savers and non-savers of Vologda Oblast population, % from the number of respondents



15% of respondents name it (4% in 2012, 14% in 2014, 18% in 2016 and 2018). Circumstances related to populations' consumption attitude ("it is better to spend now, not save" – 7% in 2012 and 2014, 16% in 2016, 11% in 2018), instability of financial system, and offered products ("absence of reliable means of money keeping and high risk of its loss" – 6–7% in 2012–2014 and 11% in 2016–2018) are not primary factors as well.

Recent economic decline had a certain impact on the structure of the Vologda Oblast population' saving aims. In the previous post-crisis period (2012) reasons of buying apartment and motor transport *(Tab. 3)* significantly "decreased". The constant primary motive of saving money is housing improvement (35% in 2014, 41% in 2016). After a decline in 2012, this aim is the most important once again. It could be explained by a gradual "natural" recovery

Table 3. Distribution of answers to the question: "Why do you (your family) have savings (or would you do it if you had the opportunity)?"*, % from a total number of respondents

Answer option	2012	2014	2016	2018
To buy an apartment, improve living conditions	17.3	35.2	41.1	32.8
"For old age"	25.0	25.0	21.5	29.6
For vacation, entertainment, travel	17.8	16.5	23.8	19.6
For medical treatment	15.7	16.0	18.8	19.3
To leave it to children, help them in the future	20.5	19.6	19.7	18.9
To buy a car	10.2	14.8	19.2	16.9
To save just in case	28.1	13.6	16.7	16.9
To buy other expensive things	7.8	8.0	8.5	13.4
For education	8.8	13.3	13.4	11.3
To purchase shares and capital bonds	2.2	0.7	3.4	3.8
To open (expand) own business	4.1	3.5	5.4	3.1
* Ranked according to 2018 data.				

Table 4. Distribution of answers to the question: "How do you and your family keep savings nowadays?", % from the number of those who have savings

Answer option	2012	2014	2016	2018
Money in cash – rubles	22.0	41.0	46.5	57.3
Deposit in a commercial bank	52.6	59.0	50.3	55.1
Shares, other capital bonds of companies, funds, insurance policies	4.7	3.2	2.4	7.1
Foreign currency in cash	2.7	7.0	4.5	4.9
Gold bars, jewelry, antiques	3.2	3.5	2.7	4.9
Invested in real estate (apartment, house, cottage, etc.) for the purpose of renting or resale	10.3	5.5	7.0	3.8
Investments in pension funds (non-state), individual pension programs	0.5	5.2	1.6	1
* Ranked according to 2018 data.				

of savings, spent in crisis times, and objective demand to have an initial contribution for buying property for mortgage.

It is worth mentioning that "social" aims – savings for education, treatment, and children's financial security were not affected by worsened conditions. It is interesting that unfavorable conditions in 2014–2015 contributed to "investment" intentions of population: aims of business start-ups and acquisitions of capital bonds became more popular. Besides, interesting but explainable fact is that Oblast's population cut their savings for life after retirement (from 25% in 2012–2014 to 21,5% in 2016) and at the same time started to spend more money on "vacation, entertainment, travelling" (from 16.5 to 24% respectively). It seems that on-going changes of the pension system, long periods of pension funds "freezing" stop people from thinking that their old age will be prosperous and wealthy time. So people switch to satisfaction of their short-term and more pleasant needs.

While choosing the form of savings, region's population pay attention to the criteria of reliability and time-verification *(Tab. 4)*.That is why the most part of population puts their savings in a commercial bank (52% in 2012, 50% in 2016). Despite fluctuations of national currency, value of cash rubles increased after the crisis began – from 22% in 2012 to 41% in 2014[11]. A small consistent part of savers keep their money in potentially investment but risky forms (capital bonds, investment units, contributions to non-state pension funds). 5% of respondents noted usage of these ways to keep their savings in 2010. Their number decreased in 2016 (to 4%).

Considering popularity of bank deposits it is necessary to understand the reasons of people's selection of a commercial bank *(Tab. 5)*. There are mixed trends: on the one hand, people's reliance on bank's popularity grows up (43% in 2014–2016 in comparison to 27% in 2012) along with experience in cooperation with financial institution. On the other hand, depositors focus less on the conditions of financial service provision (interest rate, convenience of funds management, other services). A number of people who pay attention to the security and bank reliability, guarantee of funds savings (i.e. bank's participation in the system of deposit's insurance) also decreases (by 7% in 6 years).

[11] In 2014, the survey was conducted in March and April, so high demand for foreign currency, formed under the influence of changes in the currency policy of the Central Bank of Russia, lower energy prices, as well as the consequences of sanctions against Russia were not analyzed.

Table 5. Distribution of answers to the question: "What factor primarily influenced your selection of the bank to open a deposit"*, % from the number of those who have bank deposit

Criterion	2012	2014	2016	2018
Bank's popularity	27.2	42.4	42.9	65.7
Close location of bank's department	12.8	20.3	17.2	29.4
The interest rate	33.8	22.5	24.5	28.4
I already had a deposit in this bank	20.0	29.7	27.1	17.6
Profitability of offered conditions**	n.d.	13.8	21.2	10.8
Ease of assets' usage	11.0	10.1	10.6	10.8
Participation of the bank in the deposit insurance system	14.9	9.8	9.9	8.8
Decent quality of service **	n.d.	10.5	8.8	7.8
Recommendations of friends, relatives	11.3	7.2	8.1	6.9
Wide range of services provided	8.8	5.1	2.6	5.9
Other reasons	1	1.1	2.6	1

* Ranked according to 2018 data.
** These answer options have been included in the survey since 2014.

Together with savings, which provide "postponed" consumption, people use borrowed funds for current needs realization. Credit behavior[12] includes about one third of region's population: 28% of respondents had unsettled credit debts in 2016, 22%, in 2014, and 31% in 2013. As of 2016, average amount of borrower's credit debt was 226,362 thousand rubles (equivalent to 5-times average income of household having a debt). Large cities population's debt (Vologda and Cherepovets) is 1.5 times higher than debts of regional population (263,897 thousand rubles in comparison to 177,096 thousand rubles). An amount of approved loans does not exceed half of million rubles: less than 100 thousand rubles – 49%, from 100 to 500 thousand rubles – 41%[13].

More than a half of people who have loans (68% in 2014, 65% in 2016) spend up to 30% of per month income on monthly payments, i.e. they do not exceed limits recommended by financial experts. But monthly payments of 30% of borrowers constitute more than a half of per month family income. Consequently they enter a risk zone and may wind up in a situation when they will have to save money in order to make another payment. Higher payments (50% or more of monthly family budget) are more typical for young people and those who have primary or unfinished secondary education.

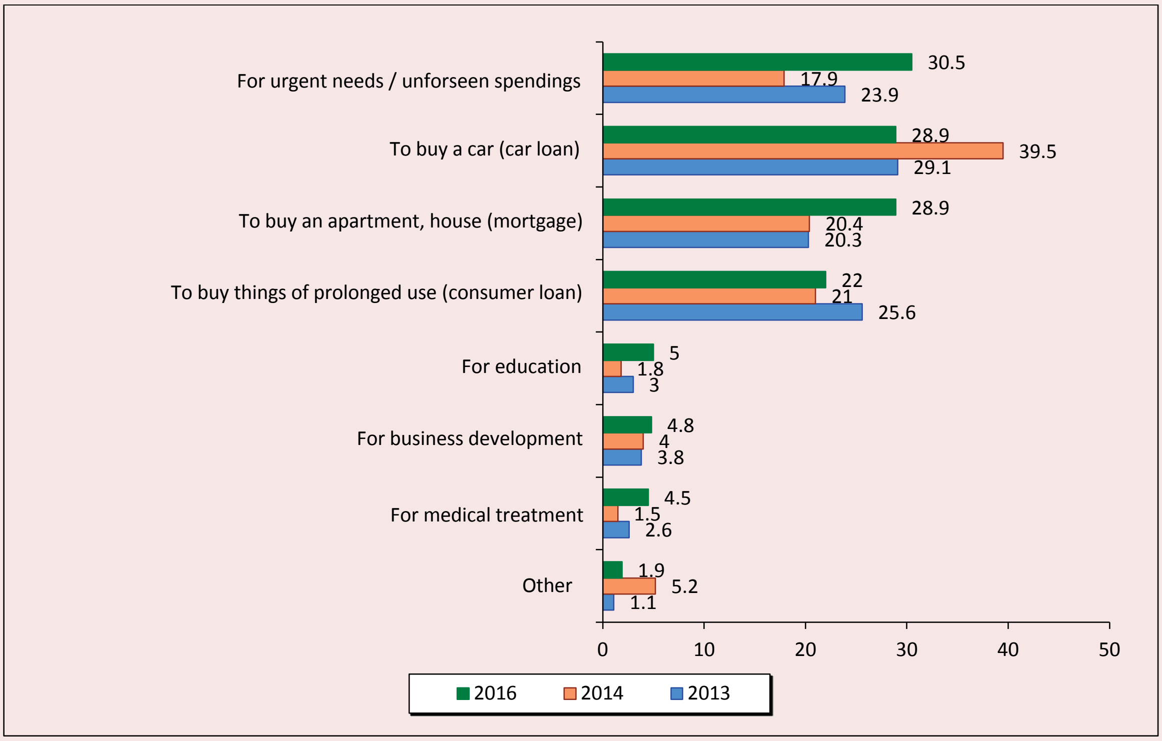
Bank loans are primarily taken by region's population in order to buy a car, property, expensive things of prolonged use, and provision of urgent needs and unforeseen spending *(Fig. 3)*. Loans are much less used for business development and solution of social problems (for education and treatment). 2014–2015 crisis led to a significant reduce of loans for buying a car (from 39.5% in 2014 to 29% in 2016) with simultaneous raise of loans for urgent needs (from 18 to 30.5% respectively) and property purchase (from 20 to 29% respectively).

[12] Populations' credit behavior was analyzed within sociological survey of the Vologda Oblast population using practices of loans' usage registered in commercial banks.

The study of credit behavior was conducted in 2013, 2014 and 2016 surveys.

[13] Data of the survey "Quality of life 2014" ("Kachestvo zhizni 2014"). These components were not assessed in 2016 survey.

Figure 3. Reasons of bank loans of Vologda Oblast population, % from the number of those who have an outstanding bank loan



General deterioration of the financial situation in the times of crisis naturally affected borrower's ability to fulfill loan commitments which led to increase of payment violation: only 21% of borrowers delayed their loan payments in 2014, but 2016 their number grew up to 30%. In this regard, women and people older than 30 are more disciplined. Also, a chance of non-payment decreases with an increase of disposable incomes and level of education.

Thus, the analysis of regional population's financial behavior helped to identify certain changes in its savings and credit practices related to, first of all, savings and loans, forms of savings and compliance with credit discipline.

Conclusion

Financial strategies and population's preferences are mostly determined by the nature of changes in country and region's financial situation. At the same time, the research of strategies of financial behavior is a necessary condition for getting real assessment of social processes in the economy. "Households' behavior ... could be seen as an indicator of society's transformation... it is a signal which shows well-being or ill-being of institutional environment" [24, p. 3].

Examination of strategies and population's preferences within saving, shopping, credit behavior during critical times of economic system development is a relevant issue from the point of view of money and credit and investment policy toward improving citizens' well-being and quality of life and growth of economy. Our analysis of population's financial behavior with a focus on changes caused by 2014–2015 crisis gives the opportunity to highlight the following major points.

1. Federal institutes' accumulated experience of overcoming crisis consequences and measures to support banking sector allowed avoiding serious complications in matters of population's deposits and credits in 2014–2015. In 2014, in comparison to 2013, amounts of Russians' bank deposits decreased only by 1%, in the Vologda Oblast – by 3%. Natural persons' deposits increased in 2015 and continued to grow in 2016–2017 but the rates of this process were below pre-crisis numbers. In case of population's credit debt indicator, there is an uneven dynamics: level of debt increased in 2014 (by 8% in Russia, by 0.3% in the Vologda Oblast on a comparable basis) and then it sharply decreased in 2015 (by 14% across Russia and by 15% in the Vologda Oblast), in 2016 grow rates slowed and credit debt indicators raised in 2017 (by 6 and 7% respectively).

2. The Vologda Oblast population in 2014–2015 crisis periods showed a trend of consumer activity decrease. People switched to the regime of a "forced" consumption primarily fulfilling their current needs in order to keep their capacity to pay by money on hand. This can be explained by worsened microeconomic indicators, decreased actual incomes, consideration of previous crisis periods experiences, and, possibly, expectation of a long period of instability. In particular, a number of those who have savings lowered by 15% (even in 2018 a share of savers still includes just one fourth of the Oblast population, and it is lower than pre-crisis numbers), a share of savings for "old age" and purchase of a car decreased. Proportion of loans for urgent needs and unforeseen spending has increased notably. Cases of late monthly credit payments happen more frequently.

But some characteristics of financial behavior remained insensitive to crisis processes of 2014–2015: especially, criteria of selecting a bank and the most popular forms of savings. In general, results of sociological surveys showed that mass destructive practices did not occur in financial behavior of region's population during the 2014–2015 crisis situation. The most people adapted to changes of socio-economic situation.

3. During the 2014–2015 crisis, the Vologda Oblast population followed non-investment strategies by accumulating the most part of saved money in cash and therefore creating a vicious circle. The withdrawal of a significant amount of money from circulation exacerbates the issue concerning deficit of reserve and investment potential in the region, which negatively affects the state of the economy, leading to a deterioration of citizens' standards of living in terms of reducing their actual income, which, in turn, largely determines the scale of their consumer and savings activity. Taking into account the prolonged decline of monetary incomes (cumulative income losses of Russians reached 11.4% in the period of 2014–2017 in relation to the level of 2013), it can be assumed that the absence of solutions to Russian economy systemic problems and private problems of regional economic systems can lead to a degradation of economic, including financial and consumer, behavior of population (for example, an increasing widespread of survival strategies and "tightened belts") [25, p. 151].

It should be remembered that a crisis is an integral stage of economic development, a "test of the strength" of the current system. Russian history has repeatedly proved that the country's population is able to cope with crisis processes, not excluding, of course, significant losses in the level and standards of their lives. In such periods, the work on the operational study of population's attitudes and behavior appears to be significant. It is sociological research methods (monitoring, surveys, etc.) that allow obtaining this kind of information. Consequently, they should be at the disposal of managers.

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Social Capital: Problem Field and Empirical Research*

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Abstract. The article analyzes the concept of social capital as a successful metaphor that covers a whole range of relations that can affect the success or failure of activities of an individual, small groups, organizations, enterprises, society, and finally, interstate associations and unions. We show that the study of social capital is accompanied by relentless disputes about the essence of the concept; there are supporters and opponents of its legitimacy and rationality of use in scientific analysis. Despite the controversy, both proponents and critics of social capital note the productivity of the use of this concept, which is a complex social phenomenon that requires in-depth study. Social capital is considered in relation to the scale of those objects whose part it is and in relation to which it operates at the micro-, meso-, macro- and meta-levels. Social capital gives benefits on any of these levels and is fixed in economic, political, and cultural advantage. A component of social capital, as shown by the Polish sociologist P. Sztompka, is a moral capital that helps build relationships based on trust, loyalty, reciprocity, solidarity, respect, and justice. Embedding moral capital in the culture of society creates a solid foundation for the relations that contribute to the development in one or another area and to the progress of the whole society. Acting according to moral rules can mitigate the existing injustice in the distribution of social capital. A good example of the use of the concept of social capital is provided by a study carried out at Vologda Research Center on the basis of an indicator model. The connection of social capital with the socio-cultural and economic development of the territories is shown, the actual problems of the spread of social capital beyond the small, near circles of interaction are revealed. Addressing these problems is an urgent political

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and social task; it will help increase solidarity in society, overcome the alienation of the population from power, and create and strengthen mutual trust between them.

Key words: social capital, its components, moral capital, indicator model, solidarity.

Introduction. Issue of the social capital is extremely popular among Russian sociologists in the last decades. There are more than 130 publications in the RSCI database issued from 2010 to 2018 which use the term "social capital" in titles. It is possible to state several reasons of such popularity. The first reason, as it is a shame for domestic civics, is that the development of a new concept and a new sphere starts with analyzing foreign publications on the topic, which also causes a lag from global trends. It is difficult to name concepts, the priority learning and teaching of which is an accomplishment of modern domestic social scientists. But after getting acquainted with foreign sources a massive research of a new sphere begins. The same happened with social capital. The term "social capital", as the part of intangible capital, was the most successfully defined by Pierre Bourdieu: social capital is the set of real and potential resources connected to durable networks of more or less institutionalized relations of mutual acquaintance and recognition – in other words, group membership. Social capital gives advantages, benefits to group members, it is a part of group solidarity [1, pp. 15–29]. T. Schultz, P. Bourdieu, G. Becker, R. Coleman, R. Putnam, F. Fukuyama, and other western scholars contributed to theoretical justification and empirical study of social capital. It is important that founders of the theory reached far beyond the analysis of its economic effects, they saw social content in this phenomenon. Thus, Bourdieu discusses the impact of three capital forms on human's existing environment, which is based on global volume of capital [volume global du capital]. It is understood as the set of resources and power which could be really used: economic capital, cultural capital, social capital. Russian social capital studies, in relation to different spheres of Russian society, started at the beginning of the 2000s: it predefined a large flow of publications on this topic.

Another reason is accumulation of the content, which could give a necessary amount of data for empirical research on the impact of social capital on different spheres of social life and social objects. This is how areas such as connection of social capital to entrepreneurship, organizations' activities, education, individual career etc. emerged. In this case, data from international surveys, quantitative and qualitative social capital changes in Russia were widely used. Methods of social capital measuring, including index measuring, started to develop, as well as comparative studies – domestic and international. The basis of these methods is usually a three-factor model of social capital, developed by R. Putnam: norms of mutuality, trust and social networks. It allows measuring of social capital with the help of individual indicators typed into generalizing indices. Due to some uncertainty in definition of the term "social capital", there is no unified method of its measuring. Authors use different methodologies but the acquired results prove that there is a significant connection between social capital and the results of different social spheres functioning.

The third reason is the problem of social capital which is not clearly articulated in domestic sociology or empirically studied, but it is intuitively felt – it is the connection of social and symbolic capital. As P. Bourdieu stated, social capital always functions as symbolic capital – it is a loan, prepayment, which is given to those who demonstrate it. Symbolic capital is one of the mechanisms which arranges movement of capital to capital [2, p. 235]. Scholars' attention is attracted by one specific type of symbolic capital – political capital which means trust to political actor – person or party, leader or institute. Their symbolic capital is important for conducting elections, implementing changes, even profound reforms, which affect all the society. Symbolic capital of organizations, firms, leaders is less studied but is equally important for economic relations, and the implementation of trust between economic entities in achieving their target results.

Despite active usage of "social capital" construct, the meaning of this term is not fully clarified. There are reasons to think that it is quite an elastic term, which has the umbrella effect, because it includes many research subjects – from relation between individuals to relations between states, interdisciplinary studies (economic, sociological, management, psychological, and other disciplines), monodisciplinary approaches, and often incomparable empirical methodologies of this phenomenon studies. This situation could be explained by "youth" of the term in modern studies and lack of uncertain reputable international experience of its study. Some pro-social capital concept arguments and its criticism will be discussed further.

Social capital: pros and cons

It is possible to find arguments to defend social capital as the research concept which fits modern definition of capital as the resource contributing to gaining advantages in economic sphere and life success at large. However, it is also possible to find arguments "against", which show obscurity of the term "social capital", its vulnerable interpretations, and polysemy. Let us examine two approaches on the example of two articles – P. Adler and S. Kwon from the U.S. and T. Claridge from New Zealand.

In Adler and Kwon's article, titled "Social capital: the Good, the Bad, and the Ugly" [3], argumentation in favor of social capital concept and the rationality of its usage for analysis, definition of sources, benefits and risks of social capital for organizations' activity is presented. The authors suggest their own, quite successful definition of social capital: it is the resource for separate and collective entities, created by configuration and network's content of their less stable social relations. Together with another forms of capital, social capital is the resource, which could be sustained by another resources – human, economic, cultural – while creating own network of external individual and collective connections. Unlike other forms of capital, social capital is "situated" not in the subjects, but in their relations with another subjects. This is the most general and fundamental difference.

Individuals can advance their social capital by gaining access to valuable contacts and information; collective actors can strengthen its collective identity and expand its opportunities for efficient management by investing into the development of its internal relations. Sources of social capital are limited to three components: networks, norms, and trust. It is noteworthy that the authors of the examined article insist on conceptual difference between trust and social capital (some scholars identify them, in empirical research too). Trust, according to the authors, is simultaneously a source and a result of social capital. Trust is a psychological state of individuals, while social capital is a peculiarity of social structure, a characteristic of existing social relations. Additional contribution to social capital, except three named components, is provided by human capital at the expense of common norms and beliefs formation, as well as created formal rules and institutions.

The authors point out advantages, which are provided by social capital in a market economy: enhanced access to information source; power, influence, and control which allow managing staff effectively; solidarity on the basis of unified social norms and beliefs (the most developed in closed social networks), decrease of the need for formal control.

Adler and Kwon's arguments are partially fended by T. Claridge from New Zealand – the social capital and organizational culture specialist. In the article "Criticisms of Social Capital Theory: and Lessons for Improving Practice" [4], he reviews arguments of scientists who do not agree with the social capital concept and point out its shortcomings. The author himself is not an opponent of this concept, but he tries to focus on its shortcomings in order to improve the practice of its usage in projects – research and practical. He also thinks that it is impossible to talk about social capital as a holistic concept. However, he underlines that there is some agreement among scholars and practitioners regarding the definition of social capital, its amounts, measures, and trends of formation. He considers the existing practice of social capital as a strictly theoretical approach to its examination, while the very existence of social capital is not denied. Some scholars, primarily economists, limit social capital by economic rationality. In this case, social capital loses its social features: social elements are belittled and boiled down to characteristics of something else. A good example of social capital sociality is trust which can be measured while choosing adequate indicators focused not just on the person, but on the impact of social surroundings on human behavior.

The next manifestation of social capital critique is focused on the assumption that social capital is not capital. The author agrees that usage of the term "social capital" is not always appropriate. Especially in the situations when it is necessary to neglect certain non-social aspects.

The authors' conclusions are addressed to the scholars who study social capital and to practitioners: do not lose "social"; do not treat social capital as capital, it is more like glue, lubricant or catalyst; do not use the term "social capital" if there is a more appropriate term; do not simplify and do not connect different elements of social capital; do not ignore the context social capital is used in; differ the levels social capital exists on. Finally, Claridge suggests using existing definitions of social capital, not creating new ones. The author's appeal to take into account the difficulty of the analyzed term, not to simplify interaction of different social capital aspects and its relations with social environment, can be fully supported.

Levels of social capital in non-material resources of the society

Social capital takes its place in non-material resources of the society together with human (including cultural), economic, symbolic capitals, and their internal structural varieties [5, pp. 36–44]. There is no strict anarchy between these types of capital without the context of qualitative features of the society, but there is the mutual connection and influence of all non-material capital types. Even in the middle of the 19th century, V.I. Dal, while underlying traditional capital forms in Explanatory Dictionary of the Living Great Russian Language, noticed that "capabilities, titles, and work can be called "capital", as well as health and strength of the worker [6, p.

216]. It is well-known that developed human and cultural capital is preserved in the modern Russian, but obstacles to its usage are created by underdevelopment and social capital features which do not fulfill the needs of democratic society in the process of modernization and transition to a new digital economy. In other, in terms of history and civilization, societies, in developed European countries first of all, social capital positively influences economic development by stimulating collective cooperation in achieving social goods.

If we analyze social capital in relation to scales of those objects, which it belongs to, it is possible to distinguish four levels. *Microlevel* – social capital of an individual, small group, which includes family, friends, its carrier – an individual, small group; *mesolevel* – capital of enterprises, organizations, its carrier could be an individual, director for example, or an institute as an organization; *macrolevel* – social capital of the society, which is characterized by the system of vertical and horizontal connections, availability of close value system and identification of society members, the level of trust and consolidation, the carrier could be an individual, who acts on the behalf of the society, individuals who are organized into communities, cooperating for common development; and, finally, *metalevel* – social capital of a country represented in the norms of international law and cooperation, membership in international organizations, international ecological, human-rights, and other associations, global importance of the country and local international unions. One of the phenomena of globalization is formation of “global social capital”. According to J.E. Diskin, it affects the efficiency of global economy by deepening trust in the system of global institutions, lowering the subjectively assessed transactional risks, and, respectively, reducing transactional costs. At the same time, global social capital is the battlefield for the usage of its advantages, benefits it provides. Shortening of country’s social capital negatively affects the efficiency of its economy. In these circumstances, it is necessary to reduce the dependence of the Russian economy on the speculative attacks of “global social capital” producers. The solution to this problem is the part of establishing new “rules of the game” in the global economy. Civilized competition is necessary for “global social capital” market [7, pp. 150-159]. The part of this competition is the battle for country’s available social capital – trust in international projects implemented in the country, honesty in relations with other countries, the ability to take into account interests of another party.

Social capital has its benefits, in different amounts and types for its owner, on each level. These benefits are fixed in economic, political, and cultural advantages. The effect of social capital could be measured by the scale of its impact on each level: does it affect the reception of local benefits only for its owner, or does it form opportunities for obtaining benefits for owner and his inner or far circle. In the latter case, a push toward creating new connections, norms of interaction, new cooperative institutes.

There is the transformation of social capital structure according to its types in post-soviet society. The amount of social capital on microlevel was preserved and partly increased. With a high degree of society atomization, the amount of social capital on higher levels has decreased: individualistic values have replaced collective values, identification with the social community, the level of trust and consolidation, especially regarding the authorities which are opposed to society in people's minds, has decreased. These processes are influenced by a gradual departure from the values of traditional society, which was essentially the Soviet society. Imitation practices of social interaction and participation in political life do not contribute to increase of social capital. Sprouts of social initiative: volunteer movements, public funds to support weak social groups, environmental movements, social networks, etc. – show the growth of trust between the members of these entities, contribute to the accumulation of social capital, which, in turn, contributes to the formation of civil society.

Moral capital as the component of social capital

An important feature of social capital was highlighted by Piotr Sztompka during his speech at the II Modernization Forum in Beijing. He showed that the important component of social capital is moral capital. It allows building relations based on *trust, loyalty, mutuality, solidarity, respect, and justice* [8]. In accordance with a topic of his speech, Sztompka said that society modernization requires understanding of the specific relations, widespread in the society, what values prevail there, are there any moral bonds which form moral capital. The author consistently reviews components of relations based on moral capital. Thus, *trust* provides a bridge across the sea of uncertainty, which causes existential safety, predictability of other people's reactions, readiness to initiate cooperation, to risk, and to accept changes in all transactions. On the contrary, distrust causes suspicion and anxiety, which paralyze action and cooperation. *Loyalty* initiates interaction, readiness to take risks and accept changes. On the contrary, disloyalty paralyzes actions and interactions, as partners turn out to be untrustworthy or unreliable. *Mutuality* strengthens previously formed ties by making them stable and loyal. It creates a dense network of relationships, which provides opportunities for cooperation. The opposite of mutuality is unilateral exploitation, which pushes people away from social interaction. *Solidarity* means recognition and commitment to the common good, followed by a willingness to sacrifice some personal interests for the sake of "we", the whole group, community or society. It is an expression of the typical human desire for social identity. And this is another fundamental prerequisite for cooperation. If this aspiration is suppressed by egocentrism, exploitation at the expense of others then, in this case, the atomized society is not ready for any risky innovative undertakings. *Respect* means mutual recognition of partners' achievements, rewarded with praise, fame, prestige, upward mobility, etc. Respect encourages innovative and creative actions, increases self-esteem, which is an important, very valuable advantage for everyone. If recognition and respect do not exist, then the amount of invested effort, energy, and time, necessary for innovations, simply does not pay off. *Justice* means that the received rewards are proportional, on the one hand, to the effort and, on the other hand, to the value of the result. This encourages the pursuit of novelty, because some reward, at least, is guaranteed, even if innovative results are not achieved, and, if there are any results, maximum reward exists. In this regard, the propensity for risky modernization undertakings increases. If, on the other hand, the distribution of rewards is arbitrary and based on specific criteria (such as nepotism), the motivation for innovation breaks up.

The formation of moral capital as the component of social capital and its incorporation into the society culture creates a steady foundation of relations, which "work" for the result of development in one area or another and for the progress of the whole society. This way, moral capital could be reviewed as the integral part, the component of social capital holding it together with invisible, virtual threads that make this "glue" of relations even stronger. Social capital and its moral component are affected of numerous circumstances which change its configuration and opportunity to use them actively. This remark is valid for all levels of social capital – micro-, meso-, macro-, and mega-. With a sudden change in society's development vectors or in the country's status on international arena, the content or amount of social capital changes on any of these levels. Social capital is something that could be lost, but also something that can be grown and increased. It interacts with the value system of a given society in its past, present, and future. It depends on the institutional structure of society and the vectors of its evolution. Under the influence of changing values, social capital also changes. When the Soviet society collapsed, change in the relations between people, organizations, regions, as well as change of Russia's relations with other countries, happened. Social capital went through deep transformations on all levels: some actors grew its resources, its social capital, while others shortened or lost it. If we speak about majority of the population, the "cultural trauma" caused sharp reduce of its social capital while relatively strengthened only family social capital. Even many friendly bonds did not survive people's relations change after the transformation of individuals' social status and differences in assessments of events happened.

The problem of social justice in social capital distribution

Social capital, just like all other types of capital (economic, cultural, human, symbolic) is unequally distributed in the society. But if three types of capital have some physical substance, institutionalized in different forms – economic – in the form of property rights, cultural and human – in the form of educational qualifications, titles, and recognitions – social capital has a virtual form, because it is formed in the process of relations between people and instrumentalities, it is formed by "social obligations (ties), and it is converted into economic capital under certain circumstances" [9, p. 60]. It cannot be alienated and transferred to another person, another organization, another region, another country. It is the belonging of the very subject of relations that inherited it or formed it, often over a very long period of time. The size of social capital determines the circles of influence – the near or far distance. Such characteristics of social capital might be used as means of measuring social distances and social inequality in a particular society – in relation to its social structure, in the relations of organizations and enterprises, regions and territories. Enterprises and organizations that have a large social capital – prestige, authority, strong ties with partners and higher organizations or personal friendships with leaders of higher authorities ("entry into executives' offices") – provide themselves with a more successful increase in economic capital.

Availability of social capital defines the sustainability of the society, its stability, and certain consolidation within relations which developed here and now. At the same time, stable social structures and stable social capital are obstacles to development, new, more efficient, alliances emergence, achievement of individual goals, and realization of individual interests in modern dynamic societies. Trends of individualization and social bonds weakening are fixed in current social capital studies, especially in dynamically developed countries with digital economy. As R. Florida notes, more diverse friendships, individualization of activities, and weakening of ties within the community are inherent for new type of society. “Weakened bonds are crucial for creative atmosphere... because they allow faster integration of new people and new ideas, which contributes to creative process” [10, p. 296]. Creative capital also plays a role: it can transform into economic capital with the bigger effect than social capital.

These observations are empirically fixed in relation to social capital on micro- and mesolevel. They contradict the results acquired by Putnam, Coleman, and other scholars. It seems that the reasons of it are the conditions of studies: different years and differently developed societies – industrial and post-industrial – for which social capital has qualitative originality and different role in development.

In Russia, empirical data from the beginning of the 21st century showed the dependence of the amount of social capital on individual’s affiliation to property strata and availability of power resource. The rich, directors in the public sector, and entrepreneurs have the largest amount of social capital in comparison with other groups. They convert one type of capital into another, and it contributes to the accumulation of resources that allow them to occupy a dominant position in society [11, pp. 24-35]. We think that this trend exists in modern Russia too. But are there any signs that creative capital is emerging in the country and it could contribute to a more equitable distribution of social capital? This problem requires further research.

Justice in the distribution of social capital affects the social space of the country, region, or particular territory, the tension of this space [12, pp. 51-64]. The concentration of social capital in the hands of one family, clan, oligarchic stratum contributes to their interests. In such situation, it does not depend on professional qualities, cultural and educational level, but on other factors – family, ethnic, parochial. It creates a tension of social space, the exit from which does not always occur as a result of negotiations by means of peaceful, legal protests. Sometimes, active non-peaceful events are organized which could lead even to country’s leadership change. But there are other, silent forms of protests in the form of population’s stratum marginalization, immigration to other regions and territories, where immigrants see more opportunities for the development and formation of their social capital, where their business activity is not blocked, and where are open opportunities for increasing social mobility. Unfortunately, in Russia, structures of civil society do not possess large amounts of social capital, but it grows gradually, drawing more people in the spheres of charity, volunteering, and activism.

Experience of the Vologda scientists in studying social capital

Amidst numerous domestic social capital studies, many of which are not mentioned in this article, works of scientists from the Vologda Oblast, which contribute to the development of theoretical, methodological, and empirical aspects of this problem, stand out. The first event, which attracted attention, was the conference in Cherepovets State University in 2012 [13]. Many speeches were devoted to conceptual basis of social capital theory, the history of this theory emergence. And orientation toward studying political aspect of social capital was noticeable. Thus, the role of social capital in political system functioning was pointed out, in particular, in processes of political mobilization and protest behavior, in civil society formation, peculiarities of functioning and the role of social capital in communities with authoritative and imperfect democratic regimes. The question of the state and political institutions' influence on social capital development was raised. The important conclusion was drawn: population's distrust in the authorities can be overcome by involving people in real, rather than imitative, discussion, and decision-making concerning political and social problems of the development of modern Russian society [14, pp. 11-22].

The conference showed the interest of the Vologda scientists in the social capital study in terms of socio-cultural development, the formation of civic initiatives, media activities, modernization, etc. Before this, only some aspects of empirical level of social capital were studied in the Vologda Oblast. For example, with the help of empirical data, reports on trust in the system of regional civil society, protest potential among region's population, region's population protest potential as the form of social capital manifestation, impact of social capital on old man's health, Internet usage in formation of young people's social capital, and other topics were made.

Activation of social capital studies occurred when the group of Vologda scientists received a grant from the Russian Humanitarian Science Foundation "Regional social capital in crisis", which allowed carrying out empirical research and preparation of a collective monograph on this topic [15]. The monograph presents the concept of social capital and its historic development, reveals opportunities of its usage for studying problems of socio-economic development of the region and localities, shows impact of the crisis on social capital and reverse impact of social capital on crisis development.

The review of the dynamics of the Vologda Oblast population's social mood in time periods of two crises (2008–2009 and 2014–2015), which showed socio-political context where region's social capital forms and functions, preceded the analysis of social capital. Social opinion's data monitoring, conducted by Vologda Research Center of RAS in the course of several years, showed quite low and stable level of protest potential during and between crises. It also showed the preference for peaceful forms of possible statements – meetings, demonstrations. Regular sociological researches of the Center allowed revealing the main factor of hidden protest activity – negative assessment of the work of various structures and institutions of power. The second factor, which showed a close connection to the level of protest potential, is related to the social well-being of the region's population. The third factor, influencing the protest mood, is formed by assessments of the economic situation in the country and in the region, as well as the population's financial situation.

The conclusion, drawn by the authors of the monograph, is important for the study of the Vologda Oblast population's social capital: "The important factor, which affects the development of population's civil participation, is low capability of the Russian system's political representatives to integrate interests of separate groups. Nowadays, such structures of civil society as political parties, trade unions, social groups, which should be the conductors of interests' realization of different social groups [15, p. 65], are not very popular. It is not surprising that in these conditions population's social capital is badly developed and localized, primarily, in the inner circle of relations – the conducted analysis showed that.

The authors set an ambitious task of measuring region's social capital and its separate territories, to show the connection of social capital to socio-cultural and economic development of territories. The model of measuring social capital was created for this purpose. Despite the great variety of methodologies and social capital's set of indicators in foreign and domestic literature (they are reviewed in the monograph), there is no generally accepted methodology which could "try" existing approaches. By suggesting their model, the authors analyze social capital as the social indicator of integral type which gives the opportunity to assess the state of social relations. "As an indicator, it is a generalizing concept that includes a set of operational concepts which allow connecting its theoretical and empirical components. The operational concepts in the measurement of social capital are trust, networks, values and norms, solidarity, the ability to influence the state of affairs" [15, p. 104]. The main method of acquiring information was population's survey, in which respondents' answers served as indicators of each social capital component. Respondents were divided into groups according to the amount of social capital (critically low, low, medium, above average, high), and interdependence of all groups of components (trust, networks, values, and norms) was shown. The analysis of the data showed the dependence of the amount of the Vologda Oblast population's social capital on the territory of residence. While comparing two biggest cities of the region – Vologda and Cherepovets, it turned out that bigger amount of social capital is concentrated in the capital of the Oblast. Also, the level of trust is higher here, but the population of the regions is more wary of the inner and far environment than people living in Vologda and Cherepovets. Population of the regions is more trustful than two town's population only toward their neighbors. In general, the study showed that, regardless of the localization, the peculiarity of social capital is the orientation toward a narrow circle of relatives and friends; social capital forms and operates primarily on the microlevel, in local networks, with a low level of institutional trust, and weak civil activity. Social capital positively correlates with the assessment of economic and political situation in the region, with estimates of own material welfare. The presence of a higher level of accumulated social capital positively affects the attitude of respondents to life, determines their active position and responsibility. On the contrary, respondents with lower levels of social capital trust people around them less, do not feel included in social networks, and do not count on someone's assistance. At the same time, they do not feel themselves responsible for the state of affairs in their life and society. All these factors form their generally oppressed life attitude.

The peculiarities of social capital in the Vologda Oblast are not special. The same situation is typical for other Russian regions and localities. If we compare social capital of population of Russia and other European countries, we can notice significant differences, especially with the most modernized countries like the North Europe. This comparison, based on data of European social research, showed that, according to the level of interpersonal trust, the closeness of friendly communication, trust in state institutions and public organizations, civil identity, Russia takes one of the last positions in the world [16, pp. 84-97]. The comparative study once again confirmed that societies with developed social capital, including a high level of trust, a strong civil identity, positive social ties and relationships, have more favorable opportunities for economic development, functioning of the country's post-industrial economy, and democratic regime. However, this is a counter movement – this type of economy and society stimulates the growth of social capital on all levels. Like other forms of capital, social capital requires support, and it increases in the process of active usage.

The last chapters of the monograph, which are devoted to social capital, pay special attention to young people's social capital and to a family as the first and primary structure which starts to form this resource of human and society development. It is quite disturbing that even young people have a very low level of trust in people outside their family circle and in institutions of the society. Individualism is quite popular, and there is no desire to participate in social life. Young people are like "fragments" of adult population, they copy adults' attitude toward important forms of cooperation.

Huge work conducted by the authors of the monograph and project participants, especially the creation of the indicator model for measuring social capital, opens up opportunities for a more detailed study of social capital of professional, social, gender, settlement, age, other groups and society strata, different types of families and other small groups, which, as the analysis showed, are the main carriers and producers of social capital in the modern Russian society. The problem of social capital spread beyond the small, inner circles of interaction is a current political and social problem of solidarity and social life participation increase, alienation of authorities from the population overcome, the emergence and strengthening of mutual trust between them.

Conclusion. This research was carried out with the purpose of finding new aspects of social capital analysis, which will let us reveal unused resources of this concept for deepening the analysis of relations on several levels – micro-, meso-, macro-, and meta-. The concept of social capital has the umbrella effect which covers a wide range of relations which may affect success or unsuccess of person's activity, small groups, organizations, enterprises, society, and, finally, interstate associations and unions. A new perspective of the social capital study should be the problem of inclusion of moral capital into it, which allows building relationships based on trust, loyalty, mutuality, solidarity, respect, and justice. Inclusion of moral capital into society's culture creates a steady foundation for relations "working" toward the result of one or another area development and the progress of the whole society. This aspect of the analysis requires empirical research in order to transform social capital into open, "overlapping" capital, which, for a country like Russia, is a valid and long-term task. Today, only microlevel social capital (relations with family and friends) approaches the level of European countries in Russia, while trust on other levels and in state, public institutions is poorly developed.

The measuring of social capital, primarily within comparative research, allows revealing unused development opportunities, especially in the moment of digital economy formation, when the subject of social trust becomes intellectually developed individual who values trust, shows solidarity, and has tight network of relations. The problems of developed social capital formation are valid for all Russian regions. That is why the study, conducted by the Vologda researchers within grant "Regional social capital in crisis" received from the Russian Foundation for Basic Research, attracts natural interest. The indicator model, created by the authors, let us assess and track the dependence of social capital on socio-economic development of localities, to define the structure of its levels. It is possible to support the conclusion made by the authors of the study: regardless of the localization, the peculiarity of social capital in the Vologda Oblast is the orientation to a narrow circle of relatives; social capital is formed and operated primarily on the microlevel, in local networks, with poorly developed institutional trust and low civil activity. Unfortunately, this conclusion is relevant not only for the Vologda Oblast, but also for other regions and the country itself.

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From the Demographic Dividend to Population Ageing: World Trends in the System-Wide Transition

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Abstract. In the 21st century, the increasing intensity of quantitative and qualitative demographic changes is becoming one of the most important factors that determine the direction of socio-economic development. Global downward trends in the birth and death rates have created conditions for the demographic system to shift to a new qualitative state. Humanity is at the crossroads of a transition between two phenomena it has not witnessed before: demographic "window" and population ageing. Under the circumstances, the research on the factors and implications of this system-wide transition is becoming increasingly important, because obtaining relevant information about the actual and forecast states of the demographic system is one of the key tasks of strategic planning for sustainable development. In this regard, the goal of the present research is to study the patterns, characteristics and driving forces of transition of the world population from the stage of realization of the demographic dividend to the stage of ageing. In our research we use fundamental works of foreign and domestic scientists and United Nations and World Bank statistics. In the first part of the article we consider approaches to the term "demographic dividend" and its conceptual substantiation, drivers of its formation and options to implement the demographic window. The second part of the paper presents the results of testing the methodology for determining the degree of implementation of the demographic dividend and the transformation of the age structure towards its ageing. We conclude that in the countries that are implementing the catching-up development model (from both the economic and demographic points of view; the "yellow group") the intensity and depth of the implementation of the demographic dividend is significantly higher than in the countries that

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have already completed it (mainly developed countries – the “red group”). At the same time we argue that the width of the demographic window of opportunity is directly proportional to the scale of potential impact of population ageing, which inevitably follows the stage of the dividend implementation.

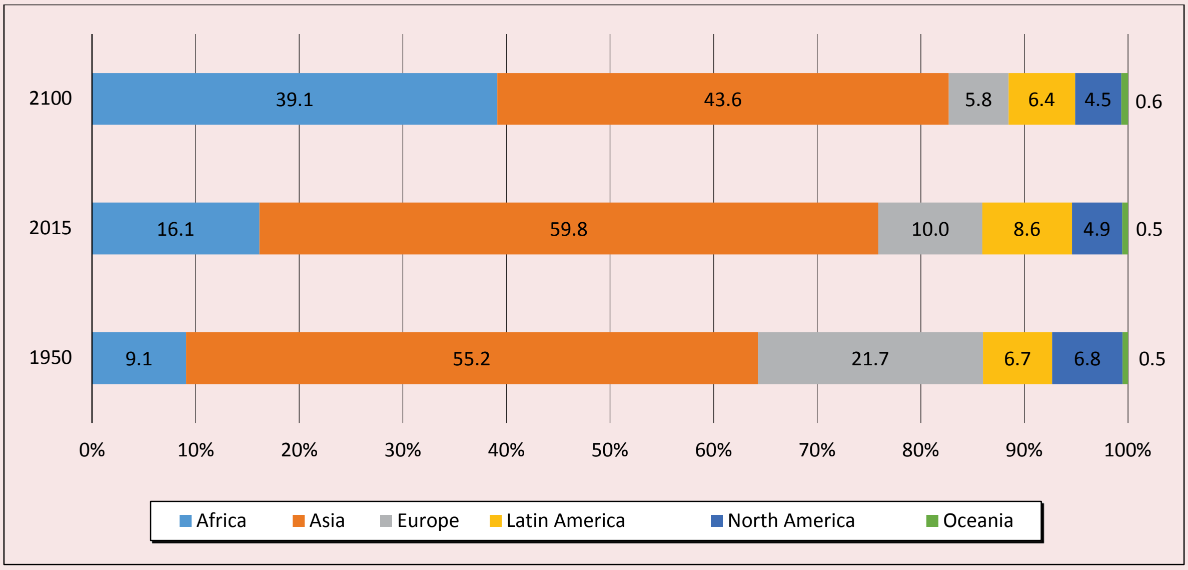
Key words: demographic dividend, population ageing, system-wide transition.

Introduction. In the last two thousand years planet’s population has grown up, according to different sources [1; 2], 25–50 times (from 150–300 million to 7.5 billion people). But the biggest increase happened in the second half of the 20th century, when world’s population grew by 4.5 billion people. It is important to understand that increase rates in different regions of the world were different *(Fig. 1)*.

It is possible to see in the figure that demographic map of the world significantly changed in the last 65 years: a share of the European population in general structure has decreased more than by 50%, while the African population increased by 7%. According to the average variant of UN forecast, by 2100 changes in the structure of world’s population will be even more significant: more than 80% of whole world’s population will be living in Asia and Africa. The latter, at the same time, will become the only region with the number of population constantly growing at an accelerated rate (by 2100, 40% of people on Earth will be living in Africa; now 16% of global population live there).

Moreover, in the 20th century quantitative changes of the demographic system were followed by its qualitative transformations [3; 4]. Global trends of declining birth rates and mortality created absolutely unique situation for planet’s population, when age structure, which remained almost completely unchanged in in the previous centuries, started to rapidly change which led to the reduction of proportion of younger population and parallel increase of able-bodied and elderly population. The

Figure 1. Structure of world’s population (1950–2100): fact and forecast, %



Source: according to World Population Prospects data: the 2015 revision. Available at: http://esa.un.org/unpd/wpp/

enormous growth of the population number and the change in its age structure has become one of the main factors and drivers of socio-economic development. It is difficult to overestimate the impact of demographic changes on economic processes. For example, as M. Yuselius' [5] research shows, the effect of population's age structure explains the main part of trend inflation and has the following pattern: increase of the share of able-bodied population causes its decrease, while increase of the share of children and elderly population causes its increase. From the point of view of economic theory it is difficult to explain a connection between demographic and monetary phenomena. However, history proves that post-war "baby boomers" era, or developed countries' ageing population in the 21st century, significantly impacted the average speed of prices' raise in the same period. But the effect of age structure can positively influence economic development if local territory enters the stage of the "demographic dividend" (DD) implementation.

The problem of interconnection between the age structure transformation and economic growth is represented in one of the most actively developing directions of economic theory – "economics of generations". The term "demographic dividend" is in the center of this concept, and it became one of the primary terms in socio-demographic studies [6]. New approaches toward its evaluation and the evaluation of support coefficients, taking into account age features of income and consumption, were developed within the system of national transfer accounts [7]. In fact, economics of generations receives: 1) social institutes and economic mechanisms through which generations or age groups produce, consume, rearrange and save resources; 2) economic flows between generations of age groups; 3) explicit and implicit contracts, which manage intergeneration's flows; 4) income and consumption of separate generations and age groups [8].

The emergence of "demographic window" becomes possible in certain conditions of the age structure when, as a result of a rapid birth rate decrease, the share of able-bodied population tends to some maximum, and the share of kids and elderly people – to minimum. The stage of implementation of demographic dividend is reviewed as the period of economic "favor", and the efficiency of "demographic bonus" usage largely determines further socio-economic development of the country.

The term "demographic dividend" can be interpreted from different points of view:

1. *Demographic*: DD is a state of population's age structure when, as a result of a birth rate decrease, the share of able-bodied population tends to some maximum and the share of dependency groups – to minimum.

2. Economic: period of DD implementation is reviewed as the time of economic favor: the share of able-bodied people and consumption rates increase, savings decrease, and the loading on state budget and pension funds reduces.

3. Social: implementation of DD is inevitably followed by the change of social space, characterized by changes in the structure of social values and norms.

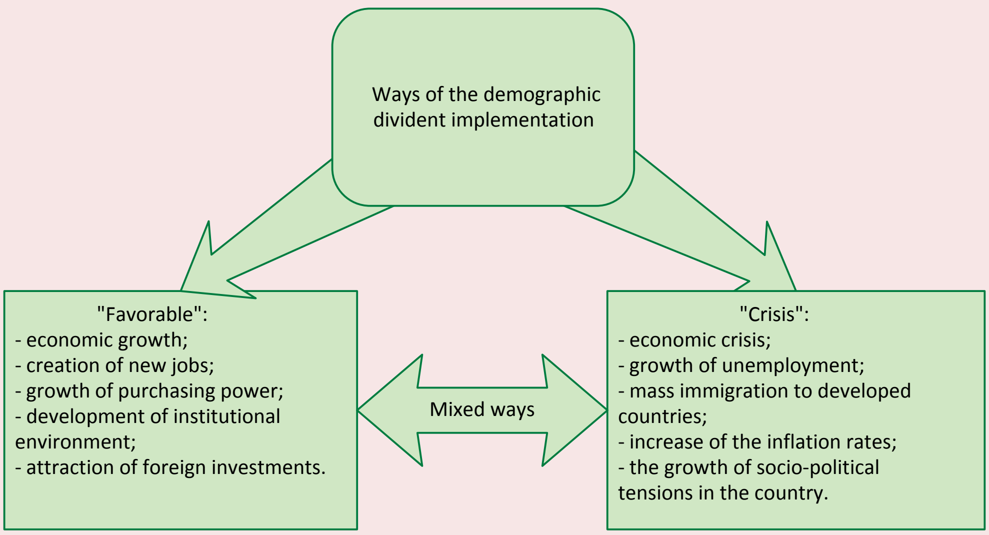
In general, as the experience of developed countries shows, the period of implementation of demographic dividend positively affects countries' economic development [9]. Today we can say that many Asian countries finish implementation of DD but, unlike the West, its economic effect is traced more clearly. Thus, for example, some researchers connect "economic miracle" of Japan and four Asian "tigers" (South Korea, Singapore, Hong-Kong, Taiwan) to growth of the share of their able-bodied population in the second half of XX century [9]. Still, in some cases this phenomenon can lead to negative consequences. In particular, A. Korotaev and Yu. Zin'kina, while reviewing the role of impact of so-called "youth bulge" (increasing amount of young people in a total number of population) on revolutionary events in Egypt in 2011 [10], come to the conclusion that the very transformation of population's age structure played a major part in country's political situation destabilization.

Thereby, the entry into the stage of DD implementation does not guarantee that the state automatically receives economic dividends, because there should be starting socio-economic conditions for effective usage of "demographic bonus". If the country is not ready for consequences of population's age structure transformation, there might be some crisis manifestations in the economy (for example, unemployment growth) leading to destabilizing effects in other spheres of social life *(Fig. 2)*.

Effective DD implementation primarily determines a degree of the state readiness for the transition to "old" age structure. If it is possible to provide productive employment for the most part of the population during this period, so increase rates of per capita incomes significantly accelerate which, in perspective, leads to sustainable increase of economic growth [11]. The period of demographic dividend implementation and, respectively, emerging "window" could differ: in particular, in developed countries, where ageing of population started noticeably earlier, timing opportunities for DD implementation and carrying out of reforms to neutralize consequences were wider than in modern developing countries, where the process of age structure transformation happened much more intensively. Thus, effective implementation of demographic dividend allows creating favorable conditions for transition to the stage of ageing population and neutralizing its consequences.

Under certain circumstances, the emergence of the second dividend is possible even

Figure 2. Variants of demographic dividend implementation



Source: own compliation.

after the implementation of "demographic bonus" [11]. Increase in the number of elderly people causes additional demand for certain types of resources, necessary for sustaining consumption at the same level. However, in the current moment, most countries have not yet completed the implementation of the first demographic dividend, which actualizes the studies of the features, patterns, and the possibilities, as well as consequences, of this process for the development of states.

The methodology of the research. Demographic dividend is a potential of economic growth which could be caused by the change of population's age structure. First of all, situation when the share of able-bodied population (from 15 to 64) exceeds the share of non-working age population (below 14 – above 65) [12]. In this study, the methodology of determining the entry, implementation and completion of the demographic dividend stage is based on the usage of the demographic load indicator by the non-working population under 14 and over 65 years on the able-bodied population aged between 15 and 64 years. The application of age limits allows, to some extent, neutralizing the imbalance in terms of differences of the retirement age borders, on the one hand, and, on the other hand, to consider earlier access to the labor market of the population from some developing and least developed countries.

Formally, situation of demographic "window" appears in the moment of birth rate decrease and increase of the share of able-bodied population. However, the difference between relation of unproductive and productive population, for example, in the proportion 1 to 1 or 1 to 2 is quite large in terms of defining degree of positive economic effect for the state. In a number of works [13–17] authors point out that the period of demographic dividend implementation in the economic meaning is much shorter than in demographic, i.e. it extents for short periods of time when the share of able-bodied population not just grows, but reaches its maximum historical values. Thus, in our study, the period of demographic dividend implementation is understood as the state of the age structure, when the proportion of unproductive groups to productive population is 1 to 2 or lower (i.e. the loading of unproductive population is less than 500 per mille, and the share of population between 15 and 64–66.6% or higher).

Based on the suggested methodology, the countries of the world could be divided in the following groups:

1. *Countries which finished demographic dividend implementation:* the coefficient of demographic loading exceeds 500 per mille and tends to grow; the proportion of population aged between 15 and 64 has already reached its maximum values, has fallen below 66.6%, and has a steady decrease trend (conditionally referred to as "the red group").

2. *Countries which are at the intermediate stage of demographic dividend implementation:* the coefficient of demographic loading is below 500 per mille; the proportion of population aged between 15 and 64 exceeds 66.6%, having, at the same time, a tendency to its decrease or growth (conditionally referred to as "the yellow group").

3. *Countries which did not enter the stage of demographic dividend implementation*: the coefficient of demographic loading is above 500 per mille, but tends to decrease; the proportion of population aged between 15 and 64 tends to grow but it has not yet reached 66.6% (conditionally referred to as "the green group").

It should be noted that the methodology, used to determine the degree of demographic dividend implementation, allows splitting of the

Table 1. Demographic dividend implementation in the regions of the world

Region	Countries which finished demographic dividend implementation, or countries of the early transition ("the red group")	Countries which are at the intermediate stage of dividend implementation ("the yellow group")	Countries which are in the late stage of demographic dividend ("the green group")
Africa	–	Mauritius, Seychelles, Algeria, Libya, Tunisia, Western Sahara (total – 6)	Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Mayotte, Mozambique, Reunion, Rwanda, Seychelles, Somalia, South Sudan, Uganda, Tanzania, Zambia, Zimbabwe, Angola, Cameroon, Central African Republic, Chad, Congo, Democratic Republic of the Congo, Equatorial Guinea, Gabon, São Tomé and Príncipe, Algeria, Egypt, Libya, Morocco, Sudan, Tunisia, Western Sahara, Botswana, Lesotho, Namibia, South Africa, Swaziland, Benin, Burkina Faso, Cape Verde, Côte d'ivoire, Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone, Togo (total – 57)
Asia	Japan, Sri Lanka, Georgia (total – 3)	China, Hong Kong, Macau, Taiwan, North Korea, Japan, Mongolia, South Korea, Uzbekistan, Bangladesh, Bhutan, India, Iran, Maldives, Brunei, Indonesia, Malaysia, Myanmar, Singapore, Thailand, Vietnam, Armenia, Azerbaijan, Bahrain, Cyprus, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Turkey, United Arab Emirates (total – 32)	Afghanistan, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Pakistan, Nepal, Cambodia, Laos, Philippines, East Timor, Iraq, Israel, Jordan, Palestine, Syria, Yemen (total – 17)
Europe	Bulgaria, Czech Republic, Hungary, Poland, Romania, Russia, Ukraine, channel Islands, Denmark, Estonia, Finland, Iceland, Ireland, Latvia, Lithuania, Norway, Sweden, UK, Croatia, Greece, Italy, Malta, Montenegro, Portugal, Serbia, Slovenia, Spain, Austria, Belgium, France, Germany, Netherlands, Switzerland (total – 33)	Belarus, Moldova, Slovakia, Albania, Bosnia and Herzegovina, Macedonia, Luxembourg (total – 7)	–
Latin America and the Caribbean	Barbados, Curacao, virgin Islands (total – 3)	Antigua and Barbuda, Aruba, Bahamas, Cuba, Jamaica, Puerto Rico, Santa Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago, Costa Rica, Mexico, Brazil, Chile, Colombia, Suriname (total – 15)	Dominican Republic, Grenada, Guadeloupe, Haiti, Martinique, Belize, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Argentina, Bolivia, Ecuador, French Guiana, Guyana, Paraguay, Peru, Uruguay, Venezuela (total – 20)
North America	Canada, USA (total – 2)	–	–
Oceania	Australia, New Zealand (total – 2)	New Caledonia, French Polynesia (total – 2)	Fiji, Papua New Guinea, Solomon Islands, Vanuatu, Guam, Kiribati, Federated States of Micronesia, Samoa, Tonga (total – 9)
Source: own calculations according to World Population Prospects data: the 2015 revision. Available at: http://esa.un.org/unpd/wpp/			

selected groups into more private ones. For example, in the red group it is possible to divide countries according to the axis of temporal distance from the moment when the share of able-bodied population reached numbers below 66.6%; in the yellow – according to the direction of the vector of able-bodied population share change regarding 66.6% milestone (i.e. removal from him or reverse approximation); in the green zone – according to the proximity of achieving 66.6% milestone. However, in our research we stick to three groups identified earlier, because the main task is to determine common patterns, not to conduct in-depth cross-country analysis.

Factors and peculiarities of demographic dividend implementation in the regions of the world. Data from *Table 1* shows that the red group includes primarily developed and developing countries: most European countries, USA, Canada, Australia, New Zealand, Japan, Georgia, Sri Lanka and several Caribbean island states. In numerical terms, the representation of countries in the yellow group (intermediate stage of transition) is significantly higher. It includes 7 European, 6 African, 32 Asian, 15 Latin American, and 2 island states of Oceania. The largest number of countries is in the green group.

Acquired data shows economic and geographic differentiation of the countries regarding stage of demographic dividend implementation: the red group primarily includes economically developed and developing (according to the methodology of World Bank) European, North American, and Oceanian countries, the yellow group – primarily developing countries of Asia and Latin America, the green group – a number of developing and less developed African, Asian, Latin American, and Oceanian countries. Classification of the groups according to territorial features gives an opportunity to obtain an approximate economic and geographical distribution. But in terms of defining features and patterns of the global transition, it is more important to assess the contribution of each group to global demographic processes *(Tab. 2)*.

We can draw several important conclusions based on obtained data. Change in the balance of global population's age structure from 1950 to 2015 was characterized by increase of share of population below 14 years old (by 8.1%) and a parallel increase of the share of able-bodied and elderly population (by 4.9 and 3.2% respectively). In general, this indicates the presence of a single global trend of the age structure transformation, but contributions of identified groups to its change are significantly different. In 1950, for example, 25% of the world's child population, one third part (33%) of the working-age population, and 50% of the elderly people lived in the red group countries. However, due to the relatively early entry and completion of the demographic dividend implementation, the red group showed the

Table 2. Matrix of the balance of global population's age structure change, 1950 and 2015

Year	Contribution to the share of global population aged from 0 to 14				Contribution to the share of global population aged from 15 to 64				Contribution to the share of global population aged above 65			
	Red group	Yellow group	Green group	Total	Red group	Yellow group	Green group	Total	Red group	Yellow group	Green group	Total
1950	8.7	19.4	6.1	34.2	20.6	31.7	8.4	60.7	2.5	2.1	0.5	5.1
2015	2.8	13.6	9.8	26.1	11.7	39.8	14.1	65.6	2.9	4.3	1.1	8.3
+/-	-5.9	-5.8	+3.7	-8.1	-8.9	+8.1	+5.7	+4.9	+0.4	+2.2	+0.6	+3.2

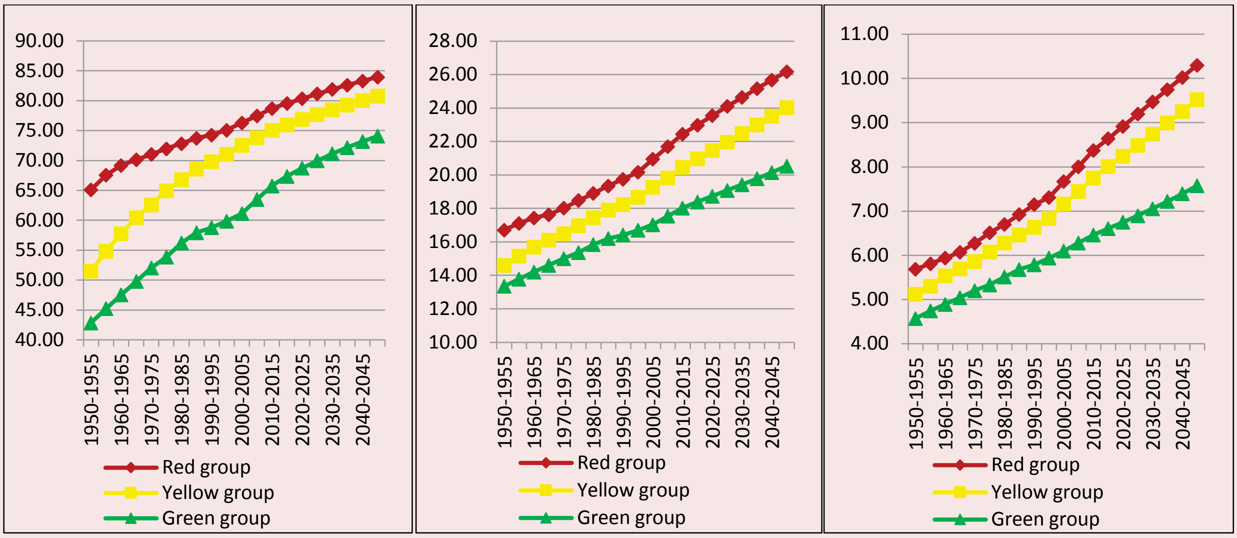
Source: own calculations based on World Population Prospects data: the 2015 revision. Available at: http://esa.un.org/unpd/wpp/

largest decline in the proportions of younger and working-age population, as well as the smallest increase of the share of elder people. Thus, by 2015, the contribution of the red group to the formation of the three main groups of the world population decreased to 11, 18 and 35%. Demographic processes in the countries of the yellow and red groups equally contributed to the reduction of the proportion of the child population in the global population structure. While the countries in the intermediate stage of DD implementation contributed to the largest increase in the proportion of the working-age (by 4.9%) and the elderly population (by 2.2%) by increasing their contribution to the formation of these age groups in the global population to 61 and 52%, respectively. The green group is the only group which showed a growth of child population share from 1950 to 2015. Also, the growth of working-age (by 5.7%) and elderly (0.6%, which is 0.2% higher than in the red group) population groups was recorded.

The reasons of differences in contributions of three country's groups to the transformation processes of global population's age structure should be sought for in the trends of mortality and fertility rates change. Control over many reasons of deaths, thoroughly described within the theory of epidemiological transition [18; 19], is the primary cause of changes which led to the beginning of global demographic transition. Let us look at the data of life expectancy changes in three groups of the countries *(Fig. 3)*.

Data, presented in the graphs, show that selected groups are characterized by factual and forecasted increase of life expectancy across all ages. Red group countries still surpass other regions in terms of population's life expectancy, but rates of LEB increase were almost two times higher in 1950–2015 with births in two other groups (13 years against 23.5 and 25 years respectively). The reason is in great reserves of decrease of infant mortality rates in yellow and green groups (maintained at the fairly high

Figure 3. Trends of life expectancy changes in three identified groups: fact and forecast
(A – life expectancy at birth; B – life expectancy at the age of 65; C – life expectancy at the age of 80)



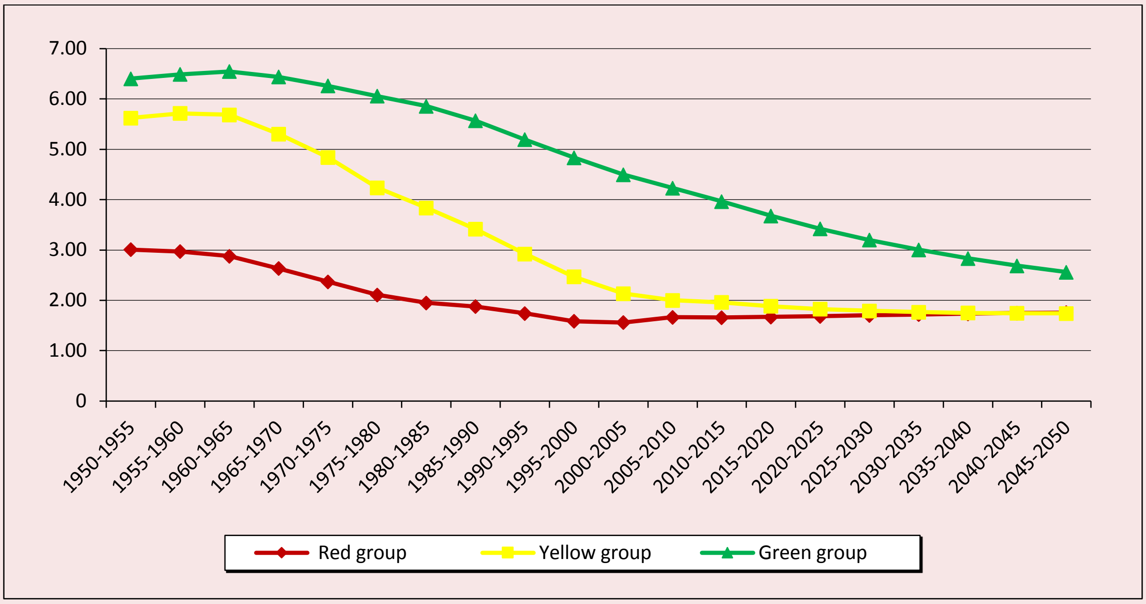
Source: own calculations according to World Population Prospects data: the 2015 revision. Available at: http://esa.un.org/unpd/wpp/

level), which became a primary factor of such significant life expectancy growth at birth. At the same time, LEB increase at the age of 65 and 80 during the analyzed period in all three groups was roughly equal: in the red group – by 5 and 3 years, in the yellow group – by 6 and 3 years, in the green – by 5 and 2 years.

We can confidently say that world population's life expectancy increase is the result of its age structure ageing. But it should be noted that the rate of population ageing in the red group countries and their increasing contribution to the formation of global population aged 65 years and above is lower than in the countries from the yellow and green groups, where the population can still be described as "young". Thus, group of countries having the largest share of elderly population, the highest survival and ageing "depth" rates have the least impact on global population ageing "from above". Meanwhile, countries of early transition showed the biggest decrease rates of young and able-bodied population. This paradoxical, at the first glance, situation, requires an appeal to the next factor which determines the size of the foundation of global population's age pyramid – fertility trends.

The graphs *(Fig. 4)* show the differences in changes of the total fertility rate (TFR) in three groups, which are more significant than in the case with LEB. TFR decrease in the countries of early transition started at the lower level and was much more moderate than in the intermediate and late transition groups. In the second half of the 20th century – at the beginning of the 21st century TFR coefficient in the countries of yellow group decreased rapidly (from 5.6 to 1.9). It created a situation when, on the one hand, fertility rates sharply dropped below the level of mere population's reproduction and, on the other hand, conditions for a fast transition to the demographic dividend implementation were created. In the countries of late transition decrease of TFR indicator was also significant,

Figure 4. Changes of the total fertility rate in the groups of the countries: fact and forecast



Source: own calculations according to World Population Prospects data: the 2015 revision. Available at: http://esa.un.org/unpd/wpp/

Table 3. Average values and variation coefficients for some demographic indicators in the world countries from 1950 to 2015

Year	Indicator					
	Share of population aged above 65 in world countries		LEB at the age 65+		Total fertility rate	
	Average value	Variation coefficient	Average value	Variation coefficient	Average value	Variation coefficient
1950	4.9	49.8	11.5	14.9	5.5	30.3
2015	8.4	70.2	16	16.5	2.9	49.6
Change 2015-1950	+3.5	+20.4	+4.5	+1.6	–3.6	+19.3
Source: own calculations according to World Population Prospects data: the 2015 revision. Available at: http://esa.un.org/unpd/wpp/						

but its value is still at the relatively high level (about 4 children per 1 woman of reproductive age).

Next, it is advisable to examine the change in the variation of the studied indicators for world population as a whole from 1950 to 2015 *(Tab. 3)*.

Conducted calculations allow suggesting that, despite the growth of average values of the share of population older than 65, the degree of heterogeneity of all reviewed countries' indicators in 1950–2015 also significantly increased: coefficient of variation share of 65+ population grew from 49.8 to 70.2%. It should be mentioned that analyzed sample was not homogeneous in the 1950s (variation coefficient exceeded 33%), while the degree of differentiation was a little bit lower which definitely affected distribution of countries. Thus, it is obvious that the population of the world as a whole is ageing, but the difference between two poles of countries ("young" and "old") is growing.

The data presented in the table confirm the fact that the reason of the observed changes is not the increase of population's life expectancy in old age. From 1950 to 2015 life continuity at the age of 65+ tended to grow, but variation coefficient of this indictor in world's countries has not changed and remained at the same low level (15 and 16.5% respectively). Therefore, despite the different intensity of demographic ageing in the regions of the world, the growth of LEB in older ages occurs in a similar scenario and does not significantly affects the increase of the territories differentiation by the level of old age. The main reason is the difference in birth rates decrease as the grounding factor of population's ageing [20]. The trend of fertility decline is global, which is confirmed by data on the change of the total fertility rate: from 1950 to 2015, in average, the indicator decreased from 5.5 to 2.9 (Tab. 3). However, variation coefficient significantly increased (from 30.3 to 49.6%) by almost the same number as the variation of the proportion of population aged over 65 years (about 19–20%). Thus, the general trend of declining fertility and, accordingly, the global ageing of the population is determined by a group of countries (about 40% of the total number of territories, primarily developed and developing), which entered the third phase of the demographic transition. A primary feature of this process is that other territories lag behind. In these countries fertility rates remain relatively high, and it predetermines the growth of the revealed differentiation.

To clarify, let's compare the distribution of the world's countries by the level of demographic old age in the classifications of the United Nations and Boege-Garnier-Rosset in 1950 and 2015 *(Tab. 4 and 5)*.

We can draw several conclusions based on these tables' data. Thus, it is clearly seen that

Table 4. Distribution of countries according to the level of demographic old age in 1950 and 2015 (UN classification), %

Level of old age	Share of world's countries, %	
	1950	2015
Young population (share of those older than 65 is less than 4%)	47.5	31.5
Mature population (share of those older than 65 is from 4 to 7%)	29	24.5
Mature population (share of those older than 65 exceeds 7%)	23,5	44
Source: own calculations according to World Population Prospects data: the 2015 revision. Available at: http://esa.un.org/unpd/wpp/		

Table 5. Distribution of countries according to the level of demographic old age in 1950 and 2015 (Boege-Garnier-Rosset classification), %

Stage	Share of people at the age of 60 and older, %	Distribution of countries, %	
		1950	2015
1	**Demographic youth (<8)**	**66**	**43.5**
2	**The first threshold of old age (8–10)**	**9.5**	**10**
3	**Threshold of old age itself (10–12)**	**12**	**7.5**
4	**Demographic old age (12 and higher)**	**12**	**39**
	Initial level of demographic old age (12–14)	6	4.5
	Intermediate level of demographic old age (14–16)	5.5	5
	High level of demographic old age (16–18)	1	2
	Very high level of demographic old age (18 and higher)	0	27.5
Source: own calculations according to World Population Prospects data: the 2015 revision. Available at: http://esa.un.org/unpd/wpp/			

the share of countries which can be described as demographically old, in the period from 1950 to 2015, noticeably increased: from 23.5 to 44% according to the UN methodology and from 12 to 39% on the scale of Boege-Garnier-Rosset. On the one hand, this trend once again confirms the conclusion that the process of demographic ageing of the world is quite intense. On the other hand, the presence of countries in the "buffer" zone between young and old territories significantly decreased. In fact, in the 1950s, three conventional levels of old age were distributed in descending order from "young" to "old". However, at the moment, both classifications suggest the existence of two poles, one of which primarily includes young territories, the other – old territories.

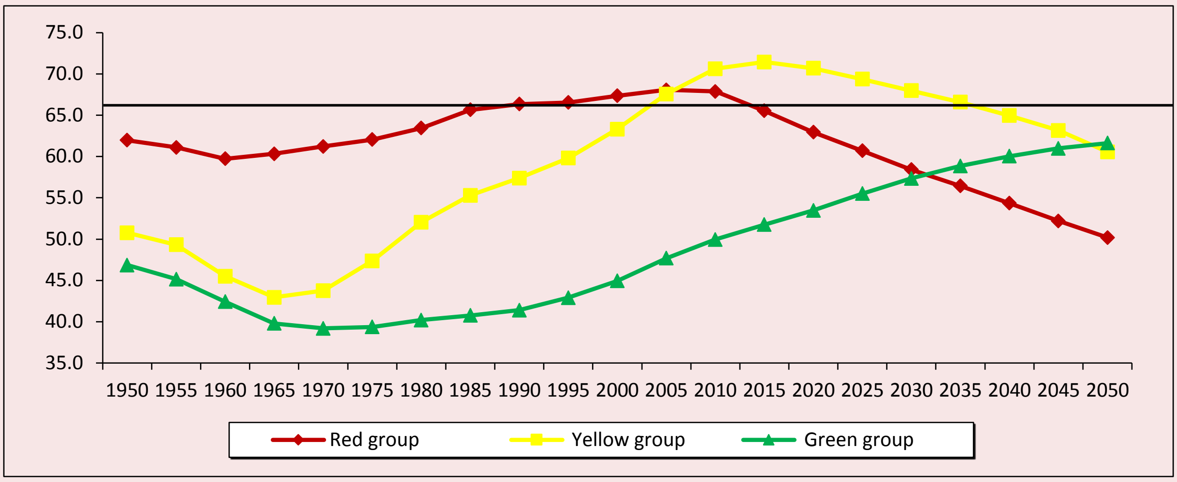
Back at the time, it took 120 years for France to double the number of population older than 60 years old, while the same took 20 years in China in the second half of the 20th century. At the same time, France has long been considered as one of the "oldest" countries in the world, and China is still at the maximum point of the demographic dividend implementation. Today, the rate of fertility decline in yellow and green groups is significantly higher than in the countries of the red group in earlier periods, and the population of these territories exceeds the levels of demographic old age. This fact suggests that, under conditions of intense global population ageing and in addition to measuring the levels of demographic ageing through the prism of the share of elderly population, the parameters of demographic dividend in a particular area should be assessed too.

The demographic dividend is some kind of a bonus which allows creating new economic basis for further development of a state in new demographic environment (further age structure ageing). The bigger this bonus is – the higher the chance that a manifestation of population's ageing consequences will be more vividly expressed. Thus, the very change of the demographic "window" parameters becomes one of the most important tasks in terms of defining the real scale of age structure transformations and accompanying socio-economic changes. *Figure 5* presents factual and forecasted change of the share of population aged between 15 and 64 in three groups in relation to 66.6% indicator.

According to this data, the growth of able-bodied population share in the red and yellow groups became noticeable after the end of post-war "baby boom" with time lag around 5–10 years. It happened significantly later in the green group. However, it is more important to define the parameters of achieving maximum values of the indicator within demographic dividend implementation (in our scenario – in relation to 66.6% indicator). As you can see in the figure, countries from the red group achieved the beginning of the maximum stage of demographic dividend implementation in the 1980s. This process went on until 2010–2015 (i.e. about 30–35 years). Herewith, the biggest value of the share of able-bodied population in this period was 68%. The yellow group countries entered this stage at the beginning of the 21st century, and they are currently at the peak of demographic dividend implementation. Despite approximate equality of duration of this period between these countries and the countries of the red group, the "depth" of DD implementation in the yellow group is significantly bigger: from the mid-2000s, the share of population aged between 15 and 64 years exceeds 71%. Countries of the green group approach maximum parameters of demographic dividend implementation very fast. However, according to the intermediate variant of the UN forecast, the most countries will achieve these values only in the second half of the 21st century.

The emergence of the wider demographic "window" for the countries of the yellow group was made possible because of the imposition of a number of conjuncture factors: relatively fast decrease of fertility and mortality rates in the second half of the 20th century. But relatively fast (by historic standards) obtaining of big demographic dividend can become a large-scale consequence of age structure ageing

Figure 5. Change of the share of population aged between 15 and 64 in three groups of countries: fact and forecast



Source: own calculations according to World Population Prospects data: the 2015 revision. Available at: http://esa.un.org/unpd/wpp/

for the countries of this group in the nearest future. The return to quantitative indicators of the overall demographic loading is followed by qualitative changes of its structure (*Tab. 6*)

From the data presented in the table, it can be concluded that the structure of the demographic loading in all three groups of countries tends to "ageing". In the red group, the share of elder population loading increased by 42.5%, in the yellow – by 45.2%. However, it should be noted that growth rates of demographic loading in the countries going through the intermediate stage of transition is much higher than in other groups of countries (more than 5.5 times growth in 65 years). For more clarity, let us review the support coefficient – the reverse indicator of population's demographic loading (*Fig. 6*).

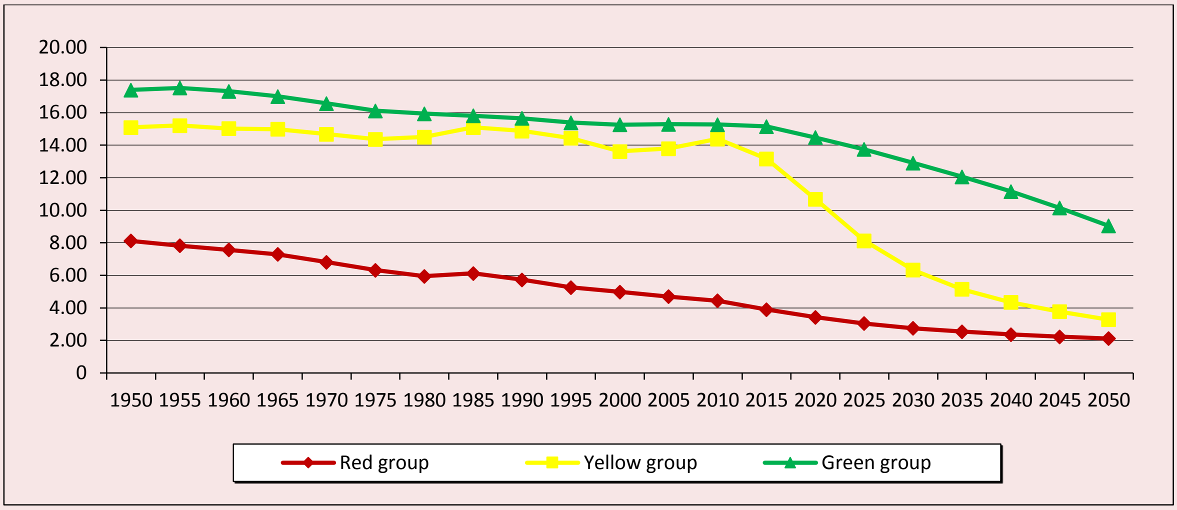
After the huge demographic dividend implementation, the support coefficient in the countries of the yellow group will go though unprecedented decline. Consequences of this process are already noticeable in many spheres. So, in recent years, there was growth rates decrease in three largest economies of the yellow group (China, India and Brazil) [21], which primarily determine steady development of the whole world. The rating of pension systems [22], in which 43 countries of the world underwent detailed analysis, is also very indicative. It is significant that China, India and Brazil were placed on 40th, 42nd and 43rd positions respectively, because of the largest negative dynamics by all parameters.

Table 6. Change of the structure of overall demographic loading in three groups of countries, 1950–2015

Indicator	The red group		The yellow group		The green group	
	1950	2015	1950	2015	1950	2015
Share of children's loading in the total demographic loading, %	77.3	34.8	89.8	42.3	91.7	73.8
Share of elderly people's loading in the total demographic loading, %	22.7	65.2	10.2	57.7	8.3	26.2

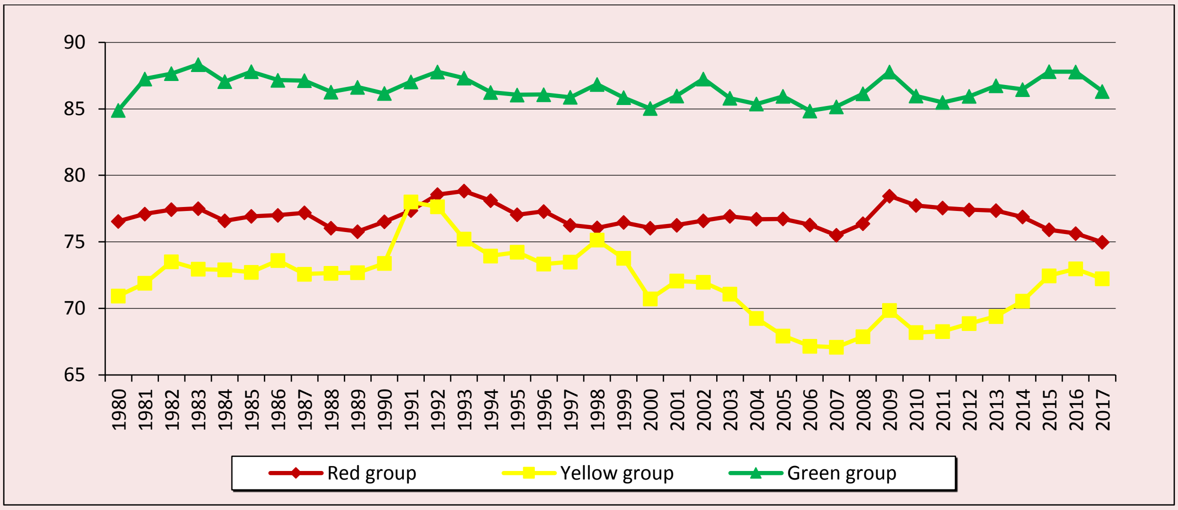
Source: own calculations according to World Population Prospects data: the 2015 revision. Available at: http://esa.un.org/unpd/wpp/

Figure 6. The support coefficient of the population older than 65 in three groups of countries: fact and forecast



Source: own calculations according to World Population Prospects data: the 2015 revision. Available at: http://esa.un.org/unpd/wpp/

Figure 7. Changes of final consumption level in three groups of countries, in % from GDP, 1980–2016



Source: own calculations according to World Population Prospects data: the 2015 revision. Available at: http://esa.un.org/unpd/wpp/

From the data, concerning final level of consumption in three reviewed groups of the countries *(Fig. 7)*, it follows that the level of final consumption in the green group, in relation to GDP, exceeded similar indicators in the red and yellow groups throughout the research period. The reason is in remaining high values of demographic loading by young population. At the same time, the level of per capita final consumption, in turn, is quite low, which could be explained by larger transfers toward children. The yellow group countries showed more noticeable rates of the final consumption level decrease in relation to demographic dividend implementation, i.e. situation when population produces significantly more than consumes, and the deficit of life cycle is noticeably smaller on the age axis. However, due to the rapid growth of the share and number of elderly citizens, reverse trends are gaining momentum now. It, consequently, leads to increase of the state budget expenditures related to "old age".

Experience of developed countries allows stating that ageing "from above", i.e. at the expense of life expectancy increase, in the future will become the primary factor of increase of elderly population share, which will affect growth of budget expenditures, but without the compensating effect of a higher level of capital-labor ratio. As a result, the most likely overall outcome for ageing societies is a decline of per capita consumption level with the same high GDP levels.

Conclusion. As the analysis showed, in terms of global population's age structure transformation world's countries are conditionally divided into three groups: the red group (countries which finished the demographic dividend implementation and entered the stage of irreversible population ageing); the yellow group (countries which are in the process of the demographic dividend implementation, including those which just started it or finishing it); the green group (countries which did not start the demographic dividend implementation).

One of the most important conclusions is the establishment of the following pattern: currently, the intensity and the depth of the demographic dividend implementation is significantly substantial in the developing countries (in terms of economy and demography; the yellow group) than in the countries which finished this process (primarily developed countries). The analyzed phenomenon fits the economic concept of beta-convergence [22]. Developing countries show not only the higher rates of economic growth, but also approach a number of developed countries' demographic indicators. However, the enormous demographic dividend, received by the yellow group countries, has a downside: the width of the demographic opportunity "window" is directly proportional to the scale of the potential consequences of population ageing, which inevitably follows the stage of the dividend implementation. At the moment, a number of the world's largest economies included in the yellow group (China, India, Brazil), significantly reduced the rates of economic growth with a parallel increase of negative manifestations in the social sphere (in particular, the problem of pensions). Depending on the context of the current state of population's age structure, countries form the red and yellow groups need to introduce a whole array of programs of their policy adaptation to new demographic conditions (increase of labor productivity, optimization of social institutions work, etc.).

To make competent management decisions it is necessary to acknowledge not just the fact of the demographic dividend phenomenon, but also track the mechanisms of its formation. The important element is the ability of the state to rethink its social policy in new demographic conditions and creating opportunities for saving steady rates of the development and fair redistribution of social goods. Moreover, as stated before, a country should be ready to implement the policy of economy adaptation to the consequences of age structure transformation in order to efficiently use the "demographic bonus". Perhaps, in the nearest century the countries of the green group will be the primary factor of demographic and economic development. Most countries of the African continent, as well as one third of the Asian and Latin American countries, still has not implemented its demographic dividend, which largely affects world's economic development in general. Nonetheless, the issue of their readiness to face consequences of age structure change remains. Economic development of the countries from the green group shows positive trends. It, however, might not be enough for effective implementation of the demographic dividend. In this regard, it is possible to point out several possible directions which will help to prepare the economy of these countries for the stage of DD implementation:

– creation of new jobs, taking into account the projected increase of labor market supplies;

– development of the education and health system;

– attraction of foreign investments for development of socio-economic infrastructure;

– elimination of informal employment and discrimination on labor market;

– reorientation of the economy to high-performance and labor-intensive production;

– private sector development and cuts of business taxes.

Decrease of mortality and fertility in combination with effective implementation of policy support measures can give the developing dividend to the developing countries and raise the quality of their citizens' lives. As a result, the green group might, and should, become one of the primary members of global economy and help partially alleviate the consequences of the world's population ageing. However, inability to take advantage of the opportunities, offered by this new demographic situation, can cause significant economic and social risks.

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Secondary Employment of Students as a Factor in the Professionalization and Social Integration of Young People*

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Abstract. The relevance of research on the secondary employment of students is emphasized by the necessity to study its mixed impact on the professionalization and social integration of young people in the Russian society. The goal of this article is to clarify the meaning of secondary employment for the professionalization and social integration of young people in modern Russia on the basis of empirical data analysis. Originality of the problem statement and its solution are due to the fact that we consider students' employment motivation in relation to the results achieved, realization of employment expectations, identification of possible outcome from combining studies and work, including the description of studies-work combination results for social and personal development of students and selection of several functions of young people's secondary employment. Empirical basis of the research is complied from the results of author's interviews with working students (2011 and 2017). The research showed the hierarchy of students' secondary employment motives: financial motives are on the top and professional ones are less important. We note relative permanency of this hierarchy and a decrease in importance of the early start of professional carrier for working students. Division of pragmatic and professionally oriented motives of students' secondary employment is explained. We point out that many working students have implemented their financial expectations, which reveals the leading role of the economic function in students' employment; devaluation of secondary employment experience as a competitive advantage in

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social and labor relations; non-productivity of performed work for professionalization of the majority of working students. At the same time, we reveal the significant impact of work on the formation of common labor culture in students. Necessity to strengthen professionalization function within students' secondary employment is revealed, and practical recommendations are given. The results of this research may help develop theoretical models and accumulate empirical data in the sphere of economic sociology, labor sociology, and youth sociology. It can be used by public authorities, employment services, and vocational education institutions.

Key words: employment, secondary employment, labor activity, professionalization, social integration, youth, student youth, Russian society.

Introduction

Structural changes of the Russian labor market, connected to its adaptation to economic state transformations by alteration of labor price and increasing informalization of employment [1, pp. 9–15], directly influence the integration of young Russian people into the system of social and labor relations in the society. It actualizes necessity to research the problem of employment and young people's working activities. In this plan, we should pay attention to the specifics of transitive state of the Russian society, which is caused by an on-going transformation of social institutes and practices. Leading Russian scientists point out its important features: antinomy of social consciousness which is expressed in existence of opposite values and behavior models in the society (Zh.T. Toshchenko [2, p. 65]); increased risks of young people's social integration related to its uncertainty, asymmetry, and alternative focus (Yu.A. Zubok, V.I. Chuprov [3, pp. 56–69]); extension of social distances between social strata and groups in the society, which leads to the tension of social space and difficulties in social mobility (L.A. Belyaeva [4, p. 9], etc. Transitivity of social conditions makes dysfunctional manifestations of employment possible: spread of informal and illegal employment, employees' rights discrimination, and etc., which may have an impact on young people's integration into social and labor sphere of the society. After analyzing empirical data of Russian Longitudinal Monitoring Survey by RLMS-HSE, P.M. Kozyreva and A.I. Smirnov found out the weakening of Russian young people's confidence concerning their labor market situation, reduction in secondary employment scale, increased number of those who ready to work without signing a written employment contract and on disadvantageous terms [5, pp. 55–67]. However, young people are the key resource of demographic [6], social, and economic development for the Russian society [7; 8]. It makes formation of young people's productive employment experience necessary. Also, it is important for them to use gained professional experience in labor activity.

In this context, it is necessary to refer to the analysis of the role secondary employment plays in students' lives, their life plans and its realization, in getting professional education, the inclusion in professional activities, etc. The interest that foreign and Russian economists and sociologists pay to the research on students' secondary education is due to progressive extension of this phenomenon and ambiguity of its consequences for studies, professional competences' development and initiation to the profession, social adaptation. The basis of the theoretical understanding of students' employment during their studies is described in the works of P. Ryan (concept of "school-to-work transition") [9], M. Trow (concept of higher education transformation from elitism to massiveness [10]), etc. In 2000s, students' secondary employment specifics and its impact on academic performance were studied (M.-P. Moreau, C.R. Leathwood [11]; R. Hall [12]; C.M. Kalenkoski, S.W. Pabilonia [13]; P. Robert, E. Saar [14]; M.A. Vorona [15]; Yu.M. Pasovets [16], etc., [17]). The results have something in common with major motives for combing studies and work, types of employment, social problems of this young people's category not depending on the country of residence. Among domestic researches of this period it is worth pointing out the work by D.L. Konstantinovskii, G.A. Cherednichenko and E.D. Voznesenskaya in which many of these aspects are discussed [18].

In modern foreign research this problem is further developed: interconnections between students' employment and performance under the new conditions, socio-economic status of secondary employed students and opportunities for their professional development, along with further training, are revealed. H. Simon, D. Casado and other scholars underline a quite common prevalence of long-term regular, paid jobs among students from Spanish universities: senior students and people having higher level of motivation usually work there. But authors also note that, unlike students' perceptions, regular work does not significantly impact their real academic performance [19]. Researching part-time employment of British students, its types, motivation and problems concerning combination of studies and work, R. Hordosy, T. Clark and D. Vickers find "double deficit" of students' secondary employment. Low incomes of students make them work to have some additional money and continue their studies. At the same time, part-time jobs deter results and their ability to improve skills necessary for employment [20].

In the last three-five years, foreign authors often refer to analyzing impact of students' secondary employment on their professional education, career, employment, and employment rate after graduating. While studying the readiness of students-managers from major Australian university to work, M. Chavan and L. Carter show that willingness to combine studies and a part-time job emerges at the end of the first year. Experience of work in the sphere corresponding to the student's education has a beneficial impact on understanding university subjects and performance [21]. After studying Australian young people, D. Jackson and D. Collings come to the conclusion that students' secondary employment is relatively useful: it eventually provides higher full-time employment rates of those who had paid jobs during their studies [22; 23]. They proved it by comparing impact from two forms of practical experience on full-time and part-time employment of graduates: "work-integrated learning" (WIL) and paid job during the last year of studies.

While analyzing current state of this topic, several national and regional Russian studies need to be mentioned. These works characterize social status of young people and touch upon some aspects of students' secondary employment like its structural parameters, which include spread of secondary education among students, model types of economic activities and its motivation [24; 25, pp. 97–98]; readiness to combine work and full-time education [26, pp. 84–88]. On the basis of "Monitoring of education economy" by NRS HSE, S.Yu. Roshchin and V.N. Rudakov identify widespread of university students combining work and studies in modern Russia (more than a half of higher education students have work experience). Also, scholars point out several factors which play a major role in students' inclusion into secondary employment sphere. They are lack of students' financial assistance from their families and willingness to get work experience, and etc. [24, pp. 159, 166 168]. However, data from regional interviews show that latter is more important in the secondary employment motive system for financially secured students [27, pp. 101 102; 28, pp. 77 78]. This topic is put in the spotlight only in several researches; detailed examination of certain aspects concerning combination of secondary employment and studies is more common. Impact of students' secondary employment on their professional formation [29], students' preferences in choosing type of employment during their studies, and etc. are among these aspects. Local interviews of students about this topic in certain universities are quite common.

While analyzing the level of knowledge of certain aspects of secondary employment, it is worth mentioning that the most part of researchers' attention is focused on identification of motivational aspects; a smaller part – on characteristics of structural parameters of students' employment. In many cases, this topic is examined on the example of students from higher education institutes. The term "higher education students" is usually used in the scientific community to describe this category of young people. At the same time, identification and analysis of functional aspects of students' combination of full-time studies and work are usually neglected. These functional aspects are connected to realization of students work expectations, achievement of objectives, and receiving of possible unintended consequences. Given this, this research represents an attempt to overcome lack of scientific works in this sphere and to analyze directly the role of students' secondary employment in their professionalization and social integration.

The purpose of this research is to explain the meaning of secondary employment for young people's professionalization and social integration in modern Russia on the basis of empirical data. The novelty of this problem's statement and solution is connected to the examination of students' employment motivation in relation to achieved results, realization of expectations from employment, definition of possible work-study combination results for students' social and personal development, and the selection of a number of young students' secondary employment functions: socio-economic, professionalization, increased competition, self-understanding, self-determination and self-realization; personal development and improvement of personal potential. We also divide pragmatic (getting experience from any job, search for the most suitable job) and professionally oriented (accumulation of professional experience, development of professional competences, and etc.) motives of students' secondary employment.

The relevance of this work is represented by the necessity to identify the impact of secondary employment for young people's professionalization and social integration, its consequences for young Russian generation livelihood. In a social transition environment, we expect mixed results from studying employment impact on social and professional adaptation of young people, their inclusion into the system of social and labor relations, and their professional development. In this context, scientific understanding of functional and dysfunctional manifestations of students' secondary employment becomes important. These manifestations are connected to the lower levels of student performance in their studies, acquiring negative experience from interactions with colleagues and administration, devaluation of professional values, and etc., and searches for effective ways of their levelling. We see the solution of these issues as important in theoretical and practical terms.

Methodology and technique of the research

First of all, it needs to be clarified that we think it is possible to use the term "secondary employment" to mark the group of students from institutions of secondary vocational and higher education having full-time studies as employed in the economics sphere. Our basis is the official position of the government that full-time students of educational institutions, including education in the sphere of state employment services, are considered employed[1]. In this case, their work is considered to be additional or secondary employment. Therefore, students' secondary employment is related to combining full-time studies and permanent or temporary work.

Examination of students' secondary education in the context of its social integration (into the spheres of labor and employment first of all) seems important because of mixed results from combining studies and work. On the one hand, employment during studies might be productive for students. Development and implementation of labor functions allows them to exercise their abilities without waiting for professional diploma, acquire experience and seniority, to earn their own money, to join the profession and professional activity provided that there is a relation between their ongoing education and work, and etc. On the other hand, it can lead to a series of problems which could be difficult for students to overcome. Getting a job while studying implies more physical and psychological pressure on students which frequently leads to problems with studies and university performance decline. If profiles of education and work do not coincide, a student might lose an interest in a profession he trains for during studies and devaluate its personal value.

Given this ambiguity, it is necessary to focus on the role of students' secondary employment for its professionalization. We prefer to interpret professionalization in a broad sense – as a process of including an individual into profession and professional work, formation of professional knowledge, skills and competencies, its probation and implementation in practice, development of values and norms of professional work, self-improvement in professional activity by refining qualification and professionalism. At the same time, this interpretation also means that professionalization is a part of social integration.

In our research, we use the following primary theoretical and methodological approaches toward students' secondary education: systemic, structural-functional, economic-sociological and resourceful. Systemic approach to the subject of the research allows building a common description of the studied phenomenon and characterizing its elements. Usage of structural-functional approach gives an opportunity to analyze interconnection between these elements, examine functionality of secondary employment, its effectiveness from the perspective of expectations implementation, in the context of its role in professionalization and social integration of students. Economic-sociological approach helps to address issues of revealing and explaining motives of students' secondary employment, students' evaluation of their "benefits", or peculiar results, from inclusion into the labor sphere, which have some

[1] On the employment of the population in the Russian Federation: Law of the Russian Federation of 19.04.1991 No. 1032-1. Available at: http://base.consultant.ru (accessed: 20.03.2017).

interconnections between economic status and social position. Resource income allows specifying opportunities combination of studies and work provides.

Also we suggest author's approach to defining possible results of combing studies and work for social, personal development of young students and pointing out relevant functions of students' secondary employment. Students' motivation for employment is examined in the context of their subjective assessment of the implementation of these expectations.

Empirical basis of this research – the results of two sociological surveys of secondary employed students (students from secondary vocational and higher education institutions having full-time studies combining full-time studies and work) from educational institutions of the Kursk Oblast conducted by us in 2011 (N=130 people) and in 2017 (N=150 people)[2]. The gathering of the empirical data was conducted by the method of handout questionnaire; the survey took place at respondents' educational institutions.

This methodology reflects the conceptual provisions of the research and includes identical indicators, which allow carrying out a correct comparison of data in repeated surveys. Among these measured indicators: motives of students secondary education, assessment of the work results as the implementation of the expectations from a job, assessment of the value of a current job for mastering a future profession, and etc..

The results of the research and their analysis

As the results from the 2017 results show, at the present moment a primary motive for students to combine studies and work (78.0%) – the willingness to earn their own money. A third part of respondents are motivated by an opportunity to financially assist their parents. A small part of students works because they need to pay for their professional education (*table 1)*.

Primary factor to get a job for 32.0% of working students is a willingness to gain experience for further employment. Every tenth student works because of the desire to find the most suitable job by trying different types of work (look at table 1). We think it is important to separate a wish to gain work experience possibly not related to the profession studied in the university and a wish to accumulate experience in the work related to professional program in the university. Motives for getting work experience and finding the most suitable job are not directly connected to professionalization (but it is not excluded). That is why these motives could be called mostly pragmatic and not professionally oriented.

22.7% of secondary employed students think that their job is the way of developing its common and professional culture, knowledge, competences. 19.3% of working students

2 While forming the sample of the research, we thought about lack of comprehensive data on volume and structure of aggregate combination of the examined empirical object as a result of quite common popularity of informal employment and necessity to present a pattern of secondary employment of students studying in professional educational institutions of the region. The research sample was formed as multistage: the selection of institutions with different programs of training (in 2017 – the same choice), the programs themselves, courses and groups of training with the following continuous survey in selected groups of students who combine full-time studies with permanent and temporary work. The surveys were taken by higher education students: students from the Kursk State University, the Kursk State Medical University, Regional Open Social Institute; students studying secondary vocational education programs: students from the Kursk Trade-Economic College (as a part of Commerce, Technology and Service College since 2015), Medical-Pharmaceutical College (as a part of KSMU since 2012), the Kursk College of Culture. The structure of the research sample according to the level of education: in 2011 76.9% – higher education students, 23.1% – secondary vocational education students; in 2017 76.7 and 23.3% respectively. The sample structure according to the sources of respondents' education financing: in 2011 74.7% studied through budget funds and 25.3% – non-budget; in 2017 – 70.0 and 30.0%, respectively. Respondents' age is from 17 to 23. The sample structure according to sex: in 2011 – 39.2% men and 60.8% women; in 2017 – 37.7 и 62.3%, respectively.

Table 1. Motives for students' secondary employment (in % from the number of respondents)*

Answer option	2011	2017
Willingness to be financially independent, to have own money	86.9	78.0
Necessity to gain work experience for further employment	34.6	32.0
Desire to financially assist parents	33.1	28.7
Willingness to use free time	31.5	27.3
Need for further development of skills	21.5	22.7
Desire to gain professional experience to shorten the period of adaptation to work	20.8	19.3
Desire to start a professional career as early as possible	20.0	10.0
Wish to expand their knowledge, acquire general cultural and professional skills	18.5	22.7
Wish to expand the circle of friends	11.5	8.0
Desire to create their own business, business	10.0	11.3
Necessity to pay for studies	8.5	5.3
Willingness to get acquainted with different types of work while studying at the University and choose the one that is more suitable for the role of permanent work	7.7	10.0
Spiritual need for work	6.9	9.3
Another reason ("*for the family budget with a husband*", "*necessity to provide for a daughter*", "*current life situation (birth of a child)*", "*necessity to pay for a second higher education*")	2.3	0.7
Overall	313.8	285.3
* *It was possible for respondent to mark several answers.*		
Sources: Data from author's survey of secondary employed students, the Kursk Oblast, 2011 and 2017.		

want to accumulate professional experience to shorten the period of adaptation to work after their graduation. Only every tenth student combines studies and work to start a professional career. These motives are connected to professional inclusion, therefore they could be named professionally oriented.

Significant groups of students think of employment as a way to use their three time (27.3%) and the way of developing their skills (22.7%). The lesser number of employed students connect their employment to willingness to try themselves in business sphere, to organize their own business, to spiritual need for work and aspiration to expand their social networks.

While analyzing motivation of students' secondary education from 2011 to 2017, we can mention two peculiarities. First of all, there is a relative stability in hierarchy of motives. Material or economic motives and several professional motives of lesser importance oriented toward professionalization are on the top. Secondly, there is a decrease in a number of students who begin working during their studies and seek for early start of a professional career.

It is important to correlate motives of students' secondary education and opportunities the work gave to students, because many employed students have material and professional expectations from work. Also, it is possible to examine the level of their implementation. Special interest in the research is the answer of secondary employed students to the question of the relevance of the gained experience for their further professionalization and professional adaptation.

There is a term "window of opportunity" in literature which is used to understand social phenomena and processes. It implies advantages which a social practice presents. Based on specifics of working activity and special social status of employed students, we presented so called window of opportunity, which is given to students by means of secondary employment. Within it, certain "advantages" are grouped into two broad categories: social, including economic and professional opportunities, and opportunities for developing personal potential.

Students' social acquisitions from inclusion into the sphere of labor and employment may include:

– getting to know the nature of the profession, inclusion in the professional community, the establishment of business relationship (familiarization with the profession and the professional community; the opportunity to communicate with colleagues, more experienced and qualified specialists);

– formation and improvement of professional competencies, knowledge and skills (the ability to competently, efficiently do the work, mastering of knowledge of the profession);

– obtaining competitive advantage for future employment, professional adaptation, and career advancement (advantage over other graduates without experience, advantage in further application for another job; a chance to start working earlier after graduation and advance a career faster that other graduates);

– the acquisition of financial independence and a source of livelihood (opportunity to have one's own money).

Supposed ways of the development of young people's personal potential in the process of work could be:

– individual's self-realization and realization of the potential (discovering one's new skills and abilities);

– social self-determination (acknowledging one's social position in the society);

– development of common cultural competences important for goal-setting and goal-achievement, setting of one's life path (ability to plan life, set life goals, ability to choose the right means to achieve goals);

– development of important personal qualities, including those necessary for professional activity (formation of personal qualities necessary for the employee: responsibility, discipline, etc.).);

– self-realization (ability to realize one's interests and propensities).

Professional growth of young people become interconnected with the following opportunities: getting to know the nature of the profession, inclusion in professional society, establishment of business connections; formation and development of professional competences, knowledge, and skills focused directly on professionalization and professional adaptation; and also development of personal qualities necessary for professional activities; acquisition of competitive advantages in further employment, professional adaptation and career advancement.

Assessing the impact of work on achieving aim of being financially independent and getting personal money, at the present moment, the most part of working students (69.3%) say that work is the source of their own money (*Tab. 2*).

Overall, we can say that the most part of students who have material motives for work say that it helps to realize them. Significant part of employed students think that their work helps them to understand the nature of the profession and join professional society (31.3%) and communicate to colleagues along with more experienced and qualified specialists (24.0%).

In terms of the development of professionally important skills many students notice the favorable impact of work on the development of their ability to competently, efficiently perform their work and on professional knowledge (24.7%). Speaking of social acquisitions from participating in a work related to getting competitive advantage in the labor sphere, more than a tenth part of students (13.3%) think that work experience gives them

Table 2. Students' opinion about impact of their work on the extension of social opportunities and development of personal potential (in % from the number of respondents)*

Answer option	2011	2017
Opportunity to have personal money	76.2	69.3
Self-discovering of new abilities and opportunities	39.2	45.3
Ability to plan life, set life goals	33.1	36.0
Opportunity to realize interests and propensities	30.8	30.0
Opportunity to begin work faster after graduation (in comparison to other graduates) or faster advance a career	28.5	13.3
Formation of personal qualities necessary for the employee (responsibility, discipline, etc.)	27.7	33.3
Acknowledging a social position in the society	24.6	18.0
Ability to competently, efficiently do the work, professional knowledge	24.6	24.7
Opportunity to communicate with colleagues, more experienced and qualified specialists	24.6	24.0
Inclusion into profession and professional society	23.8	31.3
Ability to choose appropriate means of achieving aims	23.1	16.0
Advantage over other graduates, who do not have working experience, in further employment for another job	19.2	10.0
Other ("*opportunity to live without parents*"); ("*communication with different people in different situations*", "*maintenance of practical experience*", "*fatigue, lack of sleep*")	0.8	2.0
Job did not give anything	–	0.7
Overall	376.2	354.0
* *It was possible for respondent to mark several answers.*		
Sources: Data from our survey of secondary employed students, the Kursk Oblast, 2011 and 2017.		

an opportunity to start work earlier or faster advance their career after graduation, unlike students who do not have this experience. The same amount of students (10.0%) think that they would have an advantage over graduates who do not have work-related experience in applying for another job (Tab. 2).

Thus, judging by the assessment from secondary employed students, possibility of having own money is the primary social opportunity the work gives them.

If we speak about opportunities for personal growth in the process of work, the main part of employed students think that work helped them to understand their potential (45.3%) and provided them with the means of realizing their interests and abilities (30.0%). Besides, one third part of students (36.0%) see their jobs as the place where their ability to plan life and set life goals improves. Also, in the process of work, many of these young people (16.0%) learn to choose the right means of achieving their goals. One third part of working students (33.3%) notices the formation of personal traits necessary for work: responsibility, discipline, and etc. Generally, every fourth student from the number of secondary employed students (18.0%) thinks that working experience has an impact on understanding their social position in the society.

If we speak about employed students' assessment of personal potential development job provides, for the most young people their work becomes a source of understanding of themselves and their potential, presents opportunities for developing general cultural competences, which are important for goal-setting and goal-achievement, life planning, forming demanded personal traits.

While looking at the dynamics of students' possible "benefits" from work from work in 2011–2017, it is possible to find several special aspects. First of all, we can speak about relative stability of so-called window of opportunity of secondary employed students, where the most valuable assets are material (financial income), personal (awareness of their capabilities and self-realization), and less valuable – professional (inclusion into professional activity and society). Secondly, according to the respondents' answers, revaluation of the role of secondary employment in the context of its competitive advantages happened in the minds of students. In comparison to 2011, in 2017 a number of those who chose these answers decreased: from 28.5 to 13.3% of those assessing secondary employment as a competitive advantage in professional adaptation and a career building; from 19.2 to 10.0% – in assessing it as a competitive advantage in further employment.

We think it is necessary to analyze assessment of the role of employment for professionalization and professional adaptation by working students. The results of our surveys allow us to specify the meaning of including students into profession. These results reflect assessments from students, who combine studies and work, concerning professional experience impact on the formation of their views toward profession and professional activities *(Tab. 3)*.

Now, the most part of working students (83.3%) think that gained experience has an impact on the formation of their views toward some aspects of working and professional activities. Thus, about a half of secondly employed students (48.7%) think that work helped them to understand specifics of relationships between colleagues, business communication. Many respondents (41.3%) talk about a significant impact of work experience on the extension of their ideas about principles of relations between managers and employees.

A significant number of employed students began to clearly understand employer's requirements for employee's personal abilities and professional competence (26.0%), and the contents of professional activity, professional duties (38.0%). Only some students, while working, managed to develop clearer understanding of opportunities and limitations for their possible promotion (7.3%) and professional growth (5.3%).

The fact that only 40.0% of working students point out the impact of their jobs on development of their ideas about profession and professional activity is noteworthy. One of the reasons for this – employment of students in

Table 3. Students' assessment of work experience impact on the formation of their views toward profession and professional activities (in % from the number of respondents)*

Answer option	2011	2017
The work allowed forming a clearer picture: On relationships between colleagues, business communication	55.0	48.7
On the principles of relations between managers and employees	42.0	41.3
On requirements of the employer for personal qualities and professional knowledge and abilities of the worker	41.0	26.0
On professional duties or the contents of professional activity	25.0	38.0
On opportunities and limitations for Your career advancement (promotion) in the organization	15.0	7.3
On opportunities and limitations of developing Your professional skills in the organization	11.0	5.3
No, this job has not played any part in shaping Your ideas about work	15.0	16.7
Overall	204.0	183.3
* *It was possible for respondent to mark several answers.*		
Sources: Data from our survey of secondary employed students, the Kursk Oblast, 2011 and 2017.		

the spheres not corresponding to the profession studied in the university and in the areas of low-quality work. Thus, only one third part of students (32.0%) have work connected to their program of professional education (in 2011 the number was 44.6%).

The most part of this category is represented by students from engineering (they work as system administrators, engineers of technical support, website developers, and etc.), economic and service (they become managers, accountants, credit specialists, administrators, and etc.), pedagogical (they are tutors, counselors, teachers-organizers, and etc.), and sports (work as coaches, instructors) training programs. To a lesser extent, work in the sphere of future profession is typical for humanitarian students (where strong competition is expected), medical and pharmaceutical professions (where a diploma-confirmed qualification is required).

But now the most part of secondly employed students (68.0%) work in economics sphere not connected to their professional education and their work does not require high qualification (sales consultant, sales manager, manicure/nail service master, promoter, driver, etc.) or is described as nonqualified (handyman, caretaker, cleaner, dispatcher, courier, etc.).

In this context, differences in opinions of students, who work in the economic sphere, concerning value of their job for mastering their profession studied in the educational institution become clear (*Tab. 4)*. It means that students split up in two significant categories according to the relevance of their job to mastering future profession: those who think that their job is useful for the studied profession and those who think differently.

Table 4. Students' opinions about relevance of their current job for the profession studied in the educational institution (in % from the number of respondents)*

Answer option	2011	2017
Yes	25.4	10.7
Rather yes, than no	18.5	22.0
Hard to say exactly	11.4	9.3
Rather no, than yes	15.4	16.7
No	28.5	41.3
Refuse to answer	0.8	–
Overall	100.0	100.0
Sources: Data from author's survey of secondary employed students, the Kursk Oblast, 2011 and 2017		

While generally assessing a value of their real work for mastering future profession, only one third of working students (32.7%) believe that it would be useful for these purposes (Tab. 4). This opinion is expressed by the most part of those who work in the sphere of their future profession (62.5% of the category) and by less than one fifth part of those whose profiles do not coincide (18.6% of the category). In comparison to 2011, this rate did not significantly changed (74.1 and 19.4% respectively).

Meanwhile, the most part of the respondents (58.0%) think that their experience from a current job will not be valuable in the process of mastering the profession they study in the educational institution. This category includes mainly those whose work is not connected to their education (73.6% of this category in 2017 and 68.1% in 2011); but some students who work in the sphere of their education think the same (25.0% of this category in 2017 and 13.8% in 2011). This is why there is a decrease in 2011–2017 dynamics in a number of those who are confident about relevance of their current job experience for future profession, and an increase in a number of those who think the opposite. These changes are caused by increased rates of students employed in the sphere of services and sales and bigger gaps between the profile of received education and available jobs.

In 2011 and in 2017, the most part of working students admit a favorable influence of occupation on the formation of their professional culture. Another, lesser part of student think that work positively impacts the development of their professional culture (Tab. 3). Mostly, this is valid for development of young people's ideas about business relations and communications as components of working culture. To a lesser degree, this is valid for the nature of the profession and professional activity as a component of professional culture. If we speak about the role of secondary employment in forming ideas of young students about opportunities for building career and professional trajectories in a certain organization, it is currently minimal and recently decreased.

Discussion of the results

Our attempt to find oud and analyze students' social and personal acquisitions from working activities allows characterizing functional aspects of their secondary employment while considering it as the factor of modern young people's professionalization and social integration. According to the surveys' analysis, many employed students point out that work gives them opportunities to form and master professional competitions, knowledge and skills; to develop necessary personal qualities; to understand nature of the profession and to be included into professional society, to establish business connections; to get competitive advantages in further employment, professional adaptation and career building. According to this part of students, these opportunities, connected to the substantive and formal aspects of professional and working activities, contribute to their professional adaptation and increase competitiveness on the labor market.

Considering our attitude to the question of defining possible results of combining studies and work for students' social and personal development, we suggest pointing out the following functions of students' secondary employment.

In social terms:

– socio-economic which means getting income and achieving material independence, the latter allows extending designation of this function and using its definition as socio-economic (not just economic);

– professionalization connected to the inclusion into the profession and professional activity, professional society, development of professional knowledge and competences, and the formation of professional competence;

– strengthening of competitiveness meaning acquisition of competitive advantages in employment, performance of professional functions, and career building in comparison to other students and graduates.

In personal terms:

– function of self-understanding, self-identification, and self-realization, which are manifested in discovering personal skills and potential, their realization, and understanding individual's social position and status;

– personal growth and improvement of personal potential which is connected to the development of important personal traits and common cultural qualities in goal-setting, goal-achieving, and life-planning.

We think that proposed functions of students' secondary employment influencing their livelihood do not exhaust all of its functional manifestations and can be supplemented in the following scientific developments. At the same time, this approach allows reviewing aspects, which are important for author's research, of combining studies and work connected to identification of the importance of students' secondary employment for professionalization and social integration.

In addition, unlike previous studies, we suggest analyzing motivation of students' employment during studies in relation to achieved results, its subjective assessment by working students themselves, and employment expectations along with its realization. This approach allows identifying social and personal effect of students' secondary employment. We pay special attention to the specifics of social acquisitions from combining studies and work as well as to their changes in the last years, identified in this research.

First of all, empirical data from surveys conducted by us show that the most part of working students have their material expectations from work realized. In comparison to other employment "advantages", it stands as the top priority for young students and their social integration. The results of our research, their comparison to other researches [19; 20; 24; 25; 28] indicate the leading role of socio-economic function of secondary employment for students from Russia and foreign countries.

Second, if we take into account objective state of processes in subjective assessments, we should say that in the last years the potential of competiveness of secondary employment experience for students decreased. It is displayed in respondents' opinions and the results of our surveys. We think that the primary factor of such process is a mass spread of studies and work combination among young students. As the data of all-Russian and regional surveys show, more than a half of students are involved in the economy on a permanent or temporary basis [24, p. 159; 25, p. 97–98; 28, p. 65]. In this situation, working experience might stop being a competitive advantage, but at the same time it might remain as a necessary resource for employment after graduation.

Third, despite increasing social need for enhancing level of graduates' professional competence and availability of their practical professional work experience, a share of working students who observe the productivity of their work for professionalization is one third. The main reason of this situation is the growing gap between the profile of received education and the work students do by combining it with studies. Solution to the issue of students' employment in the sphere of future profession heavily depends on an employer, his willingness to give a job, and qualified requirements of work itself. In this regard, students, who do not have necessary work experience and their qualification is limited to their primary employment at the place of studies, are offered vacancies in the sphere of non-qualified work with part-time schedule and absence of the official registration of work-relations, etc. Many students, who want to have their money right now, agree to this job and its conditions, but this employment does not attribute to professionalization and puts their precarization at risk. Precarious employment characterizes unstable position of a worker on a labor market and absence of employment guarantees [30, p. 6; 31, p. 101]. Young people under 23 have the highest risk of entering this group [32, p. 38], which is the age of the most students. Besides, threats of a mass spread in the young people's society of the idea to choose work with the lower requirements to accumulated potential or "overqualification" [33, p. 163] and non-realization of cognitive and creative potential [34, p. 92] emerge.

At the same time, the most part of secondary employed students see their work as an important factor of forming their work culture in general and their views on business relations and communication. Acquired results show the necessity to strengthen the function of students' secondary employment, connected to its professionalization, and creation of conditions for it by institutions of professional education and authorities.

After analyzing modern practical developments of foreign and domestic authors concerning solution of this problem [21; 22; 25; 28], we assume that implementation of the following recommendations will greatly contribute to completion of the defined objective:

– creation of a single specialized database of vacancies for students, who want to combine studies and work, at the level of regional employment services, possibly using electronic government resources;

– involvement of employers in cooperation with professional organizations for the joint development of strategies for the students and graduates' employment, the formation of labor supply in the areas of institutes' training programs, and the development of the institute of training and industrial internship, when students have the opportunity to work in the field of a studied profession;

– continuing organizing job fairs, presentations of professions, master classes, practical conferences and other professionally-oriented events with the participation of potential employers on the basis of specialized educational organizations.

In addition, it is possible to acknowledge the efficiency of the following measures to strengthen students' secondary education connection to their professionalization and integration into labor sphere:

– from the government: the development and the implementation of financial incentives and subsidies for organizations which provide jobs for students according to the profile of their future profession and cooperate with professional institutions (universities, colleges);

– from institutions of higher and secondary vocational education: increase of cooperation with potential employers, search for vacancies and their provision to students according to the profile of their education, creation of own services (departments, recruiting agencies, labor exchanges) for students' employment promotion, consultation support for students during employment process;

– also from professional educational organizations: implementation of the practice of material and moral encouragement of students working in the sphere of their education;

increased organization of educational clusters consisting of educational institutions and educational programs of secondary vocational (training of skilled workers, employees and mid-level specialists) and higher education, within which interaction with organizations and enterprises is carried out.

Conclusion

Thus, acquired results allow understanding of secondary education's mixed impact on the development of personal potential, social and professional adaptation of modern students. On the one hand, implementation of material expectations, which are a top priority, formation of views concerning relations between labor subjects, and etc. are major socio-economic and personal acquisitions for the most part of working students. On the other hand, opportunities for professionalization and accumulation of professionalism in the process of studies and work combination remain unimplemented by the most part of employed students.

In this regard, today we can talk about a significant impact of students' secondary employment on the formation of their common labor culture and the necessity to strengthen its professionalization functions, which will contribute to the growth of employed young people's professional culture.

The results of our research, related to the production of sociological concept of young people's integration into the sphere of labor and presented in this paper, contribute to the development of theoretical presentations and accumulation of empirical data in the sphere of economic sociology, labor sociology, and young people's sociology. We have made an attempt to relate expectations from students' employment to achieved results, define its potential for students' social and personal growth, and point out a number of its functions: socio-economic; professionalization; competitiveness increase; self-understanding, self-determination, and self-realization; personal growth and mastering personal potential. It is also important to give explanations for differences between pragmatic (acquisition of any work-experience, search for the most appropriate job) and professionally oriented (accumulation of professional experience, development of professional competences) motives of students' secondary employment.

The obtained results might be used in the practical work of authorities, employment services, and educational institutions of professional education as a necessary informational basis for the regulation of interaction between educational system and labor market. Its goal is the reduction of the gap between profiles of students' education and work, the formation of students' practical experience in the sphere of professional occupation, and activation of students' adaptive potential.

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The Increase in the Number of Disabled Population in European Countries as an Indicator of the Effectiveness of Their Health Policies

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Abstract. The paper presents an analysis of disability indicators in European countries, where the increase in the number of persons with disabilities is largely determined by the high primary disability in the elderly. The goal of our research is to identify distinctive characteristics of disability in groups of European countries that have different levels of economic development and conduct different policies in the field of healthcare. To achieve this goal, we solve the following research tasks: we arrange European countries into groups; we make a comparative evaluation of disability rate in the population in selected groups; we analyze of the quality and accessibility of healthcare as a factor that influences disability indicators; we propose recommendations aimed to reduce the disability rate in Russia's population. We group European countries into six clusters according to disability indicators, the proportion of elderly persons in the population and healthy life expectancy at age 60. The greatest similarity of these parameters is observed in the countries that have similarities in geographical position and historical experience of participation in political associations. The Russian situation is characterized by worse values of healthy life expectancy and a relatively low proportion of elderly population in comparison with the situation in most other European countries. The discussion part of our paper considers the quality and availability of healthcare. In Russia, a significant part of older citizens who have the greatest risk of developing disabling pathologies cannot afford to receive treatment in private medical organizations. The effectiveness of rehabilitation measures for people with disabilities remains low. In conclusion, we summarize the arguments in favor of the use of disability indicators in assessing the effectiveness of countries' health policies. We propose directions of

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work to reduce disability in Russia. The results of the study can be useful for social management workers and for scientists whose research interests affect the problems associated with disability of the population.

Key words: disability, increase in the number of the disabled, quality and availability of medical care, demographic ageing.

Introduction

Population ageing largely determines the trends associated with people being registered as disabled. An increase in the proportion of older cohorts in the population tends to lead to an increase in primary disability. The World Health Organization (WHO) links the increase in disability to this very cause[1]. In addition to medical and biological factors, the negative socio-economic conditions contribute to the growth of disability. Disability is inextricably linked to poverty and social exclusion: according to the WHO, it mostly affects vulnerable groups (women, the elderly, the poor) and is more prevalent in low-income countries[2]. The correlation between the impact of demographic ageing and socio-economic conditions forms the characteristics of disability in different countries. In turn, an analysis of the extent and structure of disability provides insight into the quality of social policy.

Invalidization of the population is the process of increasing the proportion of people with disabilities in the population, due to the spread of disabling pathologies and external influences that lead to disability. The leading causes of disability vary from country to country depending on the stage of epidemiological and demographic transition experienced by the country and on the quality of their social and demographic policies. Disability, in turn, has a certain impact on the social and economic development of society. The increase in the number of the disabled is accompanied by a decrease in the health potential of the population. The increase in government spending on social services and healthcare, under-production of GDP by unemployed persons with disabilities – these are the manifestations of the impact of disability on the economy. Social implications of disability include the years of healthy life lost, and an increased risk of social exclusion.

There are several thematic areas in the disability studies. The first area covers the study of the dynamics of disability [1; 2] and the structure of disability [3], and forecasting [4] their indicators. The second area is closely related to the previous one and includes works on the causes and factors that determine the structure and dynamics of disability [5]. The third area aims to assess socio-economic consequences of disability [6]. A more specific area includes the works that study the socio-economic situation of people with disabilities [7]. It can include articles dealing with education, employment of disabled people [8], and creating an accessible environment [9].

These areas differ in their main subject. Demographic studies consider the parameters of the process of population invalidization and its consequences for society and economy. Among the sociological and economic studies, we can more often find works aimed at the study of disability as a phenomenon at the macro level (countries and their regions), meso level (on the example of local communities – in professional teams, enterprises) and individual level. At the same time, the grouping we have made is conditional, because there are works that consider the general problem of disability

[1] Disability and health. World Health Organization. Available at: http://www.who.int/mediacentre/factsheets/fs352/ru/ (accessed: 24 April 2019).

[2] 10 facts on disability. World Health Organization. Available at: http://www.who.int/features/factfiles/disability/facts/ru/index1.html (accessed: 24 April 2019).

together with the issues concerning the quality of life [10] or other complex problems, such as the effectiveness of public policy in the field of healthcare and social services [11; 12].

In some cases, the term "disability" may not be mentioned in the study, but its conclusions refer the reader to this problem. Thus, the article by V.M. Shkolnikov (et al.; 2019) examines the relationship between the quality of governmental social policy and the state of public health. The authors show that at the current level of GDP per capita, Russia could expect a higher level of life expectancy at birth (LEB) compared to what it is now. They came to this conclusion by comparing the indicators for Russia and a number of countries with a similar level of economic development. By plotting the Preston curve (the ratio of GDP per capita to life expectancy at birth in different countries at one time) for each year for the period 2005–2015, they found that there was no direct relationship between the growth rate of national income and life expectancy. However, the authors of the study say that life expectancy at birth in the developed countries of Europe is growing, although slowly and against the background of the economic crisis, due to investing in the development of new methods of treatment. For Russia, they see the need for more intensive investment of national income in improving public health [13]. And here the question arises that it is important not only to increase average life expectancy, but also to "stretch" its healthy period – without chronic diseases and disability.

Domestic works on demography consider disability indicators among other indicators of public health [14; 15]. Case studies of disability often discuss how to measure the number of persons with disabilities [16; 17], the causes of primary disability [18; 19; 20], quality of life of people with disabilities [21], conditions for equal participation of persons with disabilities in society [22; 23], and their employment [24; 25; 26; 27]. There are very few works aimed at identifying the features of the Russian process of disability against the background of global demographic trends [28].

Reference to the topic of disability growth in foreign studies often serves as an illustration of more general problems: demographic aging, social inequality, loss of public health, improvement of social and health insurance systems. Disability growth in developed and developing countries is mainly due to the accumulation of diseases in older age groups. The speed and scale of this process depend on the quality of life, availability of advanced medical technologies, as well as on public health policy. Thus, in the work of A. Chang (et al.; 2019) it is shown that the population in different countries acquires a set of characteristic "senile" diseases at different ages. The list of such diseases, according to the authors includes cancer and cardiovascular diseases, diabetes mellitus, renal failure, chronic diseases of the respiratory system, psychological disorders, non-communicable diseases, diseases of the sensory organs, skin and subcutaneous diseases. The researchers for the first time managed to show the gap between the countries of the world in terms of indicators characterizing the burden of diseases of the population. They note that "the results of the equivalent age [old age] analysis show a staggering 30-year difference between the countries with the highest and lowest equivalent age compared to the world average age of 65" and that "even among countries with the same levels of the overall age-standardized burden of age-related mortality, the patterns of burden accumulation vary greatly from age to age, with some populations receiving the age burden of disease at an earlier age than others". At the same time, according to the calculations of researchers, the Russian equivalent indicator of old age was 60 years, which is 5 years below the world average and 16 years below the Japanese indicator that is the best in the world. The authors concluded that their indicator of ageing, “which informs not only about life expectancy, but also about the health status and severity of diseases at the population level”, helps identify countries that “have achieved relative success in delaying the accumulation of age-related burden of disease compared to their “peers” with similar levels of age-related burden of disease” [29].

The relationship between the quality of life and the state of public health is evidenced by the results obtained by researchers from England. They conducted a longitudinal observational demographic study of the health of a single cohort of people aged 50 years and older (2 measurements at intervals of 6 years: in July 2010–June 2011 and in May 2016–June 2017). Respondents’ perceived age discrimination was found to be associated with an increased likelihood of poor self-esteem and a risk of serious illness over a six-year period. These findings, according to the authors, emphasize the need to take effective measures to combat stigma and discrimination based on age [30].

In the above-mentioned foreign works, the subjects of the study differ, but their conclusions agree that the state policy in the areas of health conservation and quality of life is the most important factor creating conditions for the preservation and strengthening of public health. Investment of developed countries in human potential is an investment in improving competitiveness at the global level. But the greater the per capita cost, the higher the marginal cost per case of disability or premature death. Therefore, the slowdown in the growth of LEB index in most EU countries after 2011 is seen as a threat to their sustainable development [31].

On the basis of our analysis of literary sources, we can distinguish two of the most common observations related to the problem of disability growth. First, demographic ageing is accompanied by an increase in the proportion of persons with disabilities in the population of countries. Second, residents of countries where there are problems in ensuring universal access to health services and systems for prevention and early diagnosis of these diseases are particularly vulnerable to disabling pathologies. In general, although the problem of disability is narrower than the problem of maintaining public health, its solution can have a “cascade” effect. Against this background, efforts to develop new, more effective and affordable methods of treatment and rehabilitation of patients suffering from disabling pathologies, to further improve preventive medicine, to eliminate any forms of discrimination in obtaining medical services, to prevent the spread of self-destructive practices among the population are of particular relevance. These circumstances necessitate a comprehensive consideration of disability in the context of demographic ageing in order to ensure the effectiveness of public health policies.

The goal of our work is to identify distinctive characteristics of disability growth in groups of European countries with different levels of *economic development and conducting different policies in the field of health*.

The chosen goal of the study determined the formulation of the following tasks:

1. To arrange European countries in groups according to their geographical location and participation in modern political associations in terms of LEB, disability and the proportion of older persons in the population.
2. To carry out comparative assessment of disability growth in the countries in the selected groups.
3. To consider the quality and availability of medical care as one of the factors affecting the indicators of disability growth.

4. Formulation of recommendations aimed at reducing disability growth in Russia.

Implementation of the tasks was provided by the use of representative data and the use of mathematical methods of analysis.

Research materials and methods

The information base of the study comprises the data of Russian and international official statistics. The object of the study is the growing disability of the population of Europe, including the Russian Federation. The subject of the study is the connection of disability growth with socio-economic development of countries.

These research tasks make it necessary to use open international statistical databases: Global Health Observatory (database of the World Health Organization), Eurostat (database of the European Commission), United Nations Disability Statistics Data Portal (portal of open statistical data on disability, created in the framework of the United Nations Disability Statistics Programme), Global Burden of Disease Study (the study on the assessment of the disease burden in different countries), World Population Prospects 2017 (UN). In addition, during the preparation of this article, we used the data on population health in different countries, published in the reports of international organizations: OECD Health Working Papers, United Nations Demographic Yearbook. Due to the fact that at the international level there is no practice to collect and systematize comparable data on disability, our work makes special mention of situations where data for different countries cannot be compared directly.

Europe as a geographical region of the world includes more than 40 independent countries. The UN identifies the regions of Northern, Eastern, Southern and Western Europe. In order to analyze the disability rates in these countries with reference to their level of economic development, they were grouped by income level, according to the World Bank classification[3]. At the same time, the quality of social policy is also a significant regulator of the level of disability. In this respect, the countries that make up the European Union are the most homogeneous group. Their social policy is built within the framework of common goals and objectives. The other group of countries in the region includes countries outside the EU. Taking into account these three criteria: geographical division, income level and membership in the EU, we have arranged the countries into 11 groups *(Tab. 1)*.

Most European countries are highly profitable, including all the countries of Northern and Western Europe (19 countries). The Eastern Europe region is more differentiated: there are 4 high-income countries, 9 upper-middle-income countries and 2 lower-middle-income countries. In Southern Europe, upper-middle-income countries include Albania, Bosnia and Herzegovina, Northern Macedonia, Serbia and Montenegro. Among the 27 European countries that make up the EU, the majority are high-income, only 2 countries – Bulgaria and Romania – have income at the level of "above average". It should be noted that the subsequent analysis will also provide data for Cyprus as one of the EU member states geographically belonging to Asia, according to the UN.

A significant limitation in the analysis of disability growth in Europe is the lack of statistical data on non-EU countries. For them, only the data on the proportion of older persons in the population and the value of the indicator of healthy life expectancy as of 2016 are available. The Eurostat website presents data on the number of persons with disabilities for EU member states, but the latest update was done

[3] World Bank Country and Lending Groups. URL: http://databank.worldbank.org/data/download/site-content/CLASS.xls (Accessed 24 April 2019).

Table 1. Grouping of European countries by geographic region, EU membership and income level

Groups of European countries by income	Northern Europe		Western Europe		Southern Europe		Eastern Europe	
	EU member (year of accession)	EU non-member	EU member (year of accession)	EU non-member	EU member (year of accession)	EU non-member	EU member (year of accession)	EU non-member
High-income countries	Denmark (1992) Ireland (1992) Latvia (2004) Lithuania (2004) United Kingdom (1992 to 2016) Finland (1995) Sweden (1995) Estonia (2004)	Iceland Norway	Austria (1995) Belgium (1992) Germany (1992) Luxemburg (1992) The Netherlands (1992) France (1992)	Liechtenstein Monaco Switzerland	Greece (1992) Spain (1992) Italy (1992) Malta (2004) Portugal (1992) Slovenia (2004) Croatia (2013)	Andorra San Marino	Hungary (2004) Poland (2004) Slovakia (2004) Czech Republic (2004)	
Upper-middle-income countries						Albania Bosnia and Herzegovina Macedonia Serbia Montenegro	Bulgaria (2007) Romania (2007)	Belarus Russian Federation
Lower-middle-income countries								Moldavia Ukraine

Sources: Standard country or area codes for statistical use. United Nations Secretariat. Available at: https://unstats.un.org/unsd/publication/SeriesM/SeriesM_49rev4corr4R .pdf; What is the euro area? European Commission. Available at: https://ec.europa.eu/info/business-economy-euro/euro-area/what-euro-area_en#whos-already-in; World Bank Country and Lending Groups. Available at: http://databank.worldbank.org/data/download/site-content/CLASS.xls (accessed: 12 April 2019).

in 2012. We took these limitations into account when formulating the conclusions of the study.

Results

According to the World Population Ageing report, the population aged 60 and over doubled between 1980 and 2017, reaching 962 million people, and experts expect another doubling by 2050. The process is going on faster in developing countries, and according to the forecast, by 2050, eight out of ten older persons will come from a developing country. In developed countries, the process of demographic ageing has slowed down because the main factors that led to premature mortality are largely under control and further reduction of mortality in older ages is difficult. Opportunities in this direction are mainly associated with the development of the focus on gerontology in medicine. The highest proportion of the population aged 60 and over in 2017 was recorded in Europe – 35%. In other regions of the world, the values are lower: in North America – 28%, Latin America – 25%, Asia – 24%, Oceania – 23%. The "youngest" population was observed in Africa, where the proportion of people 60 years of age and older was only 9%[4].

[4] World Population Ageing 2017: Highlights. Department of Economic and Social Affairs. United Nations. New York, 2017. 40 p.

Table 2. Proportion of persons aged 60 and over in the European population, 2016

Country	Geographical region	EU membership	Proportion of persons aged 60 and over in the population, %
Finland	Northern Europe	Yes	27.8
Latvia		Yes	26.2
Estonia		Yes	25.9
Sweden		Yes	25.5
Denmark		Yes	25.3
Lithuania		Yes	25.3
United Kingdom		Yes	23.9
Norway		No	22.3
Iceland		No	20.1
Ireland		Yes	19.1
Germany	Western Europe	Yes	28
France		Yes	25.7
Austria		Yes	25.1
Netherlands		Yes	25
Belgium		Yes	24.6
Switzerland		No	24.1
Luxembourg		Yes	19.6
Italy	Southern Europe	Yes	29.4
Portugal		Yes	27.9
Croatia		Yes	26.8
Greece		Yes	26.5
Slovenia		Yes	26.3
Malta		Yes	26.1
Spain		Yes	25.3
Serbia		No	24.5
Bosnia and Herzegovina		No	23.4
Montenegro		No	21.3
Republic Of Northern Macedonia		No	19.5
Albania		No	19
Bulgaria	Eastern Europe	No	27.7
Hungary		Yes	26
Czech Republic		Yes	25.6
Romania		Yes	24.9
Poland		Yes	24
Ukraine		No	23.2
Slovakia		Yes	21.8
Belarus		No	21.3
Russian Federation		No	21.1
Republic of Moldova		No	17.6
Cyprus	Asia	Yes	18.5
Total average value			24.03
Variation coefficient			12%

Notes: in column 1: high-income countries are highlighted in green, upper-middle-income countries – in purple, lower-middle-income countries – in pink; in column 4: countries where the proportion of elderly in the population is over 25.5% are highlighted in bright orange, countries with the proportion of elderly from 22.3 to 25.5% – in light orange, countries with the proportion of elderly less than of 22.3% – in light blue. Ranked in descending order of values of the indicator of the share of the elderly in the population within each of the geographical regions.

Source: World Population Ageing Report, 2017. Available at: https://www.un.org/en/development/desa/population/publications/pdf/ageing/WPA2017_Report.pdf (accessed: 15 April 2019).

In Europe, the proportion of persons over 60 in the population varies from 17.6% in the Republic of Moldova to 29.4% in Italy. The average value of this indicator is 24.03%. The group of countries where the share of older persons is higher than this level is made up of 14 EU member states, among which there are 6 countries from Southern Europe, 3 countries from Eastern and Northern Europe, and 2 countries from Western Europe. The second group of states, where the proportion of older persons in the population varies from 22.3 to 25.5%, includes 10 EU countries and 5 other countries. Countries of Northern Europe dominate geographically (5). Also, the group includes 4 countries from Western and Southern Europe and 3 countries from Eastern Europe. Another 3 EU member states and 7 non-EU countries form a group where the share of older people in the population is not more than 22.3%. Thus, most of the countries in Southern Europe were in group 1, most of the countries of Western and Northern Europe were in group 2. Eastern Europe has the greatest variation in the values of the analyzed indicator *(Tab. 2)*.

Taking into account the fact that population ageing leads to an increase in primary access to disability in older cohorts, we shall analyze the distribution of European countries in terms of the proportion of persons with disabilities in the 60–74 age group. Below are the data of the European statistics service for EU member states, as well as for Norway and Iceland *(Tab. 3)*. The highest values in 2012 were recorded for Latvia (42%), Hungary (40%), Bulgaria (38%), Lithuania (38%), and Romania (37%). The lowest values were observed in France (16%), Belgium (18%), The Netherlands (19%), and Sweden (19%). It should be noted that Sweden and France, as shown above, have a high proportion of persons aged 60 and over, which, combined with a low level of disability in persons aged 60–74, indicates a high quality of life in these countries. It can be assumed that in them the increase in life expectancy is due to the increase in the period of active longevity of citizens.

In the theoretical part of the article we mentioned that the growth in healthy life expectancy (HLE) in the population aged 60 is one of the most urgent tasks for Europe. In addition, bridging the gender gap in the indicator remains on the agenda for many countries. According to the World Population Ageing report, in most European countries, the increase in HLE in women was lower than in men. The continuation of this trend in the future is likely to bridge the gender gap. The increase in HLE at the age of 60 was more intense in countries that have recently joined the European Union, and in some non-member states. Ireland, which ranked first in terms of the increase in HLE in older men and women, was an exception to this observation. The second place in terms of growth rate for men was occupied by Russia, the third – by Slovenia, the fourth – by Estonia, the fifth – by Slovakia. In the growth of HLE in older women, Estonia ranked second, Belarus – third, Russia – fourth, Serbia – fifth *(Tab. 4)*.

The question arises: what are the differences in the levels of disability growth in the older population in European countries? It can be assumed that they are formed under the influence of living conditions, which, in turn, depend on social policy (including health policy), depending on the participation of countries in political associations. To test this assumption, we carried out a cluster analysis of European countries according to five indicators: healthy life expectancy for men and women aged 60 (according to 2016 data), the proportion of the elderly in the population, the proportion of persons with disabilities in the population aged 15 and older and in the elderly aged 60–74.

Table 3. Percentage of persons with disabilities in the population 15 years of age and older and 60–74 years of age in Europe*, 2012

Country	Geographical region	EU membership	Percentage of persons with disabilities in the population 15 years of age and older, %	Percentage of persons with disabilities in the population 60–74 years of age, %
Latvia	Northern Europe	Yes	**24**	**42**
Lithuania			**23**	**38**
Estonia			20	33
United Kingdom			20	25
Norway		No	20	23
Iceland		No	16	22
Denmark		Yes	20	21
Finland			17	20
Sweden			15	19
Ireland			no data	no data
Austria	Western Europe	Yes	16	28
Portugal			15	28
Germany			21	27
Luxembourg			16	21
Netherlands			17	19
Belgium			17	18
France			14	16
Greece	Southern Europe	Yes	18	31
Slovenia			18	27
Spain			17	25
Italy			14	21
Malta			12	20
Croatia			no data	no data
Hungary	Eastern Europe	Yes	**25**	**40**
Bulgaria			21	38
Romania			18	37
Poland			18	32
Slovakia			18	31
Czech Republic			14	31
Cyprus	Asia	Yes	15	24
Average for the countries listed above, %			18	27
Variation coefficient			17%	27%
Source: Population by sex, age and disability status. Database. Eurostat. Available at: https://ec.europa.eu/eurostat/data/database# (accessed: 16 April 2019).				

To divide the countries into groups, we conducted a cluster analysis using SPSS Statistics. We used hierarchical cluster analysis. The clustering of countries was carried out by the method of intergroup connection, the calculation of the Euclidean squared distance was used as a method of determining the distance; z-transformation of the initial data was performed. The analysis involved 28 countries for which the full set of data was available (indicators listed above). The optimal number of clusters for the analyzed data set was six. The results of the distribution of countries by cluster and the average values of the analyzed indicators for each of them are presented in *Table 5.*

Table 4. Healthy life expectancy at the age of 60, broken down by groups of countries of Europe, 2016

European country	European region	EU membership	Year of accession to the EU	HLE_{60}		Rank by HLE_{60}		Growth of HLE_{60}		Rank by the growth of HLE_{60}	
				m	w	m	w	m	w	m	w
France	WE	Yes	1992	19.1	21.9	1	1	16%	9%	15	29
Switzerland	WE	No		19	21.2	2.5	3	16%	9%	14	27
Iceland	NE	No		19	20.3	2.5	10	11%	7%	29	39
Spain	SE	Yes	1992	18.7	21.8	4	2	14%	11%	22	21
Italy	SE	Yes	1992	18.6	21	5	4	14%	8%	21	32
Norway	NE	No		18.4	20.7	6	5.5	16%	10%	17	25
United Kingdom of Great Britain and Northern Ireland	NE	Yes	1992 (until 2016)	18.3	20.1	7	14	17%	11%	6	19
Sweden	NE	Yes	1995	18.2	20.1	8.5	14	11%	6%	30	40
Ireland	NE	Yes	1992	18.2	20.1	8.5	14	26%	18%	1	1
Portugal	SE	Yes	1992	17.9	20.7	11.5	5.5	17%	14%	9,5	10
Malta	SE	Yes	2004	17.9	19.9	11.5	18	13%	12%	26	15
Austria	WE	Yes	1995	17.9	20.6	11.5	7	15%	10%	19	24
Luxembourg	WE	Yes	1992	17.9	20.5	11.5	8	17%	8%	9,5	31
Denmark	NE	Yes	1992	17.8	19.9	14.5	18	17%	13%	7,5	13
Netherlands	WE	Yes	1992	17.8	19.9	14.5	18	17%	9%	7,5	30
Greece	SE	Yes	1992	17.5	20.1	16	14	10%	10%	34	23
Finland	NE	Yes	1995	17.4	20.4	18	9	15%	10%	18	22
Belgium	WE	Yes	1992	17.4	20.1	18	14	13%	8%	27	34
Cyprus	A	Yes	2004	17.4	20.2	18	11	10%	12%	33	17
Germany	WE	Yes	1992	17.3	19.8	20	20	12%	7%	28	37
Slovenia	SE	Yes	2004	16	19	21	21	22%	14%	3	8
Albania	SE	No		15.3	17.4	22	29	13%	8%	24,5	33
Czech Republic	EE	Yes	2004	14.9	18.2	23	24	16%	14%	11	9
Poland	EE	Yes	2004	14.5	18.4	24	23	16%	13%	13	14
Croatia	SE	Yes	2013	14.4	18	25	25.5	13%	13%	23	11
Estonia	NE	Yes	2004	14.3	18.9	26.5	22	21%	17%	4	2
Montenegro	SE	No		14.3	17	26.5	32	11%	12%	31	16
Slovakia	EE	Yes	2004	14.2	18	28	25.5	18%	14%	5	6
Republic of Northern Macedonia	SE	No		14	16	29	39	9%	7%	37	36
Bosnia and Herzegovina	SE	No		13.8	16.8	30	33.5	9%	7%	36	38
Serbia	SE	No		13.6	16.3	31	38	13%	14%	24,5	5
Romania	EE	Yes	2007	13.5	17.2	32	30.5	10%	14%	35	7
Latvia	NE	Yes	2004	13.3	17.6	33	28	15%	9%	20	26
Bulgaria	EE	Yes	2007	13.2	16.8	34	33.5	7%	11%	38	18
Hungary	EE	Yes	2004	13	16.7	35.5	35.5	10%	9%	32	28
Lithuania	NE	Yes	2004	13	17.9	35.5	27	4%	8%	40	35
Ukraine	EE	No		12.5	16.4	37	37	16%	13%	16	12
Russian Federation	EE	No		12.4	16.7	38	35.5	23%	16%	2	4
Belarus	EE	No		12.3	17.2	39	30.5	16%	17%	12	3
Republic of Moldova	EE	No		12	15.1	40	40	7%	11%	39	20

Notes: WE – Western Europe, EE – Eastern Europe, NE – Northern Europe, SE – Southern Europe high-income countries are highlighted in yellow, upper-middle-income countries – in lilac, lower-middle-income countries – in light blue; (according to the World Bank grouping of countries).

Source: World Population Ageing Report, 2017. Available at: https://www.un.org/en/development/desa/population/publications/pdf/ageing/WPA2017_Report.pdf (accessed: 15 April 2019).

Table 5. Composition and profiles of clusters of European countries

Indicators (average values)	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5	Cluster 6
HLE in men aged 60	18.9	18.1	17.9	15.9	14.3	13.1
HLE in women aged 60	21.5	20.3	20.4	19.2	18.0	17.3
Proportion of the elderly (60 years of age and older) in the population	27.6	19.4	25.4	26.7	24.1	26.3
Percentage of persons with disabilities in the population aged 15 and older	14.0	15.7	17.0	19.7	17.0	23.3
Percentage of disabled persons in the 60-74 age group	18.5	22.3	23.1	29.0	32.8	39.5
Countries included in the cluster	France Italy	Iceland Luxembourg Cyprus	Spain Norway United Kingdom of Great Britain and Northern Ireland Sweden Portugal Malta Austria Denmark Netherlands Greece Finland Belgium	Germany Slovenia Estonia	Czech Republic Poland Slovakia Romania	Latvia Bulgaria Hungary Lithuania
Total number of countries	2	3	12	3	4	4

Note. Verification of the obtained solution was carried out according to the Kruskal–Wallis test, total error was 0.019 at a significance level of p=0.05.
Source: own compilation.

The resulting distribution indicates that the best health indicators, including those in old age, are observed in the countries of the first cluster: in Italy and France. In comparison with the countries included in the third cluster, the level of disability growth in the population aged 15 and older and the population of 60–74 years of age is significantly lower. Cluster 2 is distinguished from clusters 1 and 3 by the lower proportion of older persons in the population; and according to the rest indicators it is intermediate between these neighboring groups. Clusters 5 and 6 were formed by Eastern Europe and former Soviet republics. These clusters are characterized by low healthy life expectancy and high levels of disability. The difference between them relates to age-related disability rates: in the fifth cluster, the proportion of persons with disabilities is high only among the population aged 60–74, while the sixth cluster is also characterized by a high rate of disability among the population aged 15 and over. The fourth cluster occupies a transitional position between the third and fifth clusters according to all the indicators.

The results indicate that the state of public health is affected by the difference in the "initial conditions" of socio-economic development of European countries, including those that are caused by the characteristics of participation in political associations (in the past or at present).

The content and effectiveness of public health policies have a direct impact on the prevalence of non-communicable diseases that can lead to disability. The largest scale of disability losses in Europe is due to such groups of diseases as disorders of the musculoskeletal system, mental disorders, and neurological diseases. These are followed by chronic respiratory, cardiovascular diseases, and neoplasms. There are differences between the averages for Western, Central and Eastern

Table 6.Years Lived with Disability (YLDs), broken down by individual groups of disorders, in some countries of Europe, per 100,000 population, 2017

Region	Group of disorders					
	N (neoplasms)	CVD (cardiovascular diseases)	CRD (chronic respiratory diseases)	MSD (musculoskeletal disorders)	MD (mental disorders)	ND (neurological disorders)
European region (WHO classification)	216.6	756.6	613.0	2576.0	1773.4	1280.8
Western Europe	299.9	713.8	646.5	3089.4	2018.2	1383.2
Central Europe	192.1	1085.9	722.2	2511.4	1471.4	1191.2
Eastern Europe	176.9	904.1	536.9	2146.2	1634.5	1311.9
UK	340.8	626.2	868.2	3138.9	1954.4	1266.6
Germany	332.4	838.8	756.2	3475.4	2021.6	1339.6
France	263.7	752.8	460.9	2739.5	2756.9	1730.2
Hungary	210.8	1148.4	815.0	2767.4	1577.7	1215.8
Czech Republic	245.6	1213.1	704.8	2498.9	1521.6	1184.5
Belarus	166.6	921.3	562.1	2309.2	1703.7	1276.7
Russia	176.4	879.9	525.1	1985.8	1600.6	1314.4

* Abbreviations: N – neoplasms, CVD – cardiovascular diseases, CRD – chronic respiratory diseases, MSD – musculoskeletal disorders, MD – mental disorders, ND – neurological disorders.
Source: Global Health Data Exchange. GBD Results Tool. Available at: http://ghdx.healthdata. org/gbd-results-tool (accessed: April 16, 2019).

European countries[5]. The highest losses due to these causes are observed in Western Europe, with the exception of cardiovascular and chronic respiratory diseases, the losses from which are higher in Central Europe. Russian indicators are most similar to the average in Eastern Europe, and the greatest losses, as well as throughout the European region as a whole, are associated with diseases of the musculoskeletal system, mental disorders, and neurological diseases *(Tab. 6)*.

According to our analysis of disability data and healthy life expectancy in European countries, the most similar pattern is observed in high-income countries in Western and Northern Europe that have formed the core of the European Union in 1992–1995. They formed clusters 1, 2 and 3. In these countries, the proportion of persons with disabilities is lower and HLE rates are higher. Norway, never a member of the European Union, and Malta and Cyprus, which joined the Union later (in 2004) stand apart in this regard. Germany, which along with Estonia and Slovenia was included in cluster 3 that occupies an intermediate position, probably continues to experience the negative consequences of adverse historical events of the 20th century (participation in wars and the division of the country). Estonia and Slovenia, by contrast, were able to get the most out of joining the European Union. Indirect evidence of this is the marked growth of HLE in men and women in these countries (see Tab. 4). In other countries that joined the European Union during the "second wave" (in 2004 and later), the situation is different for the worse. They have a higher proportion of people with disabilities in the population, and the values of HLE in men and women are lower. A feature of these countries that formed clusters 5 and 6 is a more significant difference between the proportion of disabled persons in the population 15 years of age and older and the share of disabled persons among the population 60–74 years of age, which suggests greater vulnerability of the elderly population facing the threat of disability.

[5] Here the division of Europe into regions is given according to the research methodology "Global Burden of Disease Study 2017". Available at: http://ghdx.healthdata.org/gbd-results-tool

The values of life expectancy in men and women in Russia (12.4 and 16.7 years) are the closest to the values typical for the countries included in cluster 6. The share of the elderly in the Russian population is one of the lowest among European countries (21.1%). These facts show that the situation in Russia is characterized by the worst state of health of the population, especially among the elderly.

In the light of these problems, it becomes especially relevant to develop a system for medical prevention of disabling diseases. To maintain the health of the population of older ages, it is necessary to implement targeted measures to create comfortable conditions in health care institutions, to introduce special diagnostic programs for the timely detection of signs of the development of disabling pathologies. But the key factor is to ensure the maximum availability of quality medical care for the population at the place of residence.

The quality and availability of medical care – a prerequisite for increasing healthy life expectancy of Russians

The possibility of obtaining effective medical care is an indispensable condition for achieving the high quality of life, which, in turn, contributes to the growth of life expectancy and helps reduce losses associated with disability.

In the European Union there is a very low proportion of the population with unmet needs for health care (according to self-assessments) – 3.1% for 2017. At the same time, the main reasons why people do not receive medical care include the high cost of these services (1% of respondents), unwillingness to make an appointment with the doctor in the hope that the problem "will be solved on its own" (0.6%), and queues in medical institutions (0.6%)[6]. In our country, the Federal State Statistics Service also conducted a sample survey of the quality and availability of health services provided to the population in 2017[7]. Its results give an idea of the proportion of citizens whose need for healthcare was not satisfied. Among the respondents, 15.8% found themselves in situations where they could not get a consultation (medical examination) with medical specialists or postponed it indefinitely. Another 7.4% of the respondents "failed to undergo the required health checkup or postponed it indefinitely". These data indicate that among Russians, the proportion of those whose needs for medical care were not satisfied is higher than among EU residents. At the same time, major reasons for not receiving the necessary medical care in Russia are different and have territorial specifics.

The main obstacles to receiving a timely medical consultation and medical examinations in the cities were "long waiting in line and the inconvenient working schedule of medical specialists" (29%), in rural areas – "remoteness of medical organizations where you can get a consultation (undergo medical examination; 27%)". At the same time, in the million-plus cities of millions, the main reason for such difficulties lies in the lack of time for people to undergo a medical examination (37% of respondents noted that they had to postpone the necessary medical examinations or abandon

[6] Self-reported unmet needs for medical examination by sex, age, main reason declared and educational attainment level. Eurostat. Database. Cross cutting topics. Quality of life. Health. Access to healthcare. Available at: https://ec.europa.eu/eurostat/data/database?p_p_id=NavTreeportletprod_WAR_NavTreeportletprod_INSTANCE_nPqeVbPXRmWQ&p_p_lifecycle=0&p_p_state=normal&p_p_mode=view&p_p_col_id=column-2&p_p_col_pos=1&p_p_col_count=2# (accessed: 18 April 2019).

[7] Selective monitoring of the quality and availability of services in the fields of education, healthcare and social services, employment promotion. Federal State Statistics Service. Available at: http://www.gks.ru/free_doc/new_site/quality17/index.html (accessed: 18 April 2019).

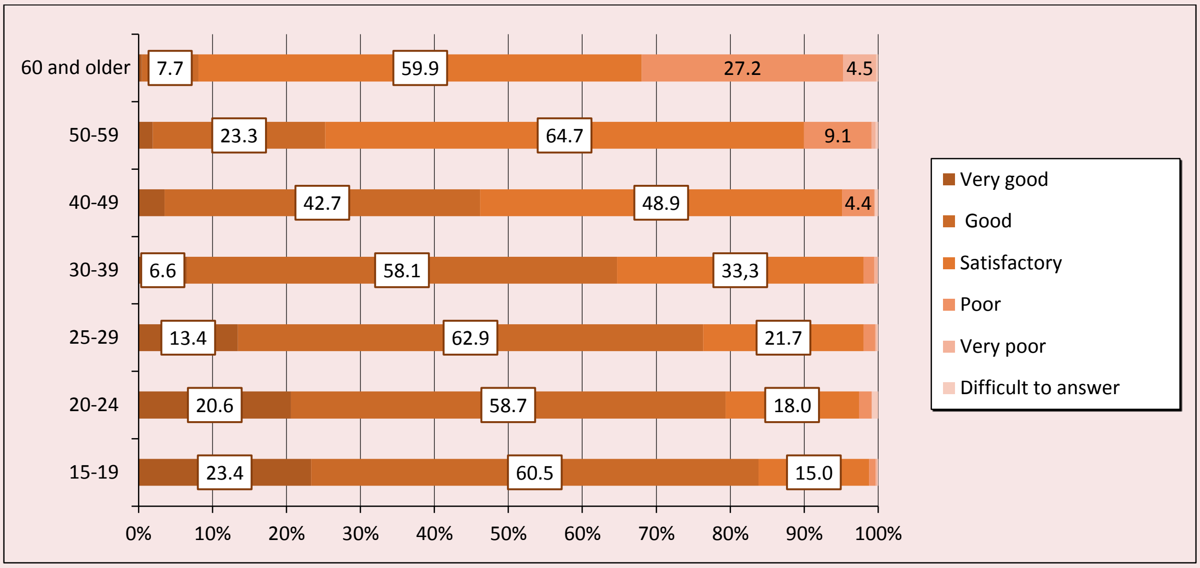
the idea completely). The main barriers to a timely medical examination in 2017 in the cities included the respondents' lack of time to do this (25.9%), the length of waiting in line, inconvenient working schedule of medical specialists (25.8%). Residents of million-plus cities cannot undergo a timely medical examination due to some unclassified causes ("other circumstances" – 35.1%) and due to a lack of time (32.5%). The main problems for residents of rural settlements are as follows: "remoteness of medical institutions where it is possible to undergo medical examination" (27.8%), lack of time (24.7%), long queues and inconvenient working schedule of the doctors (18.8%). On average, 19.9% of respondents indicated that they could not undergo a medical examination due to the fact that they were offered only a paid option for which they had no money. Most often, respondents indicated that they were unable to undergo ultrasound examination (the largest proportion is in cities – 34.4%), MRI (36% in villages) and laboratory tests (33.5% of cases in million-plus cities). Respondents who were unable to get a consultation or examination of a specialist doctor most often pointed to the same range of reasons: queues and inconvenient working hours of doctors (26.1%), lack of time (24.1) and remoteness of medical organizations (11.6%). In general, judging by respondents' answers, the least accessible consultations are such specialists as neurologist, endocrinologist, cardiologist, dentist, gynecologist and ophthalmologist (oculist).

Private organizations are an alternative for providing medical services to the population. Russian free medical care lags behind paid medical care due to the fact that the latter has better laboratory and diagnostic equipment, flexibility of schedules of specialists, and employs physicians of in-demand specializations. In 2017, 25.1% of respondents paid for medical research, 32.4% paid for appointments with medical specialists. Citizens use paid medical services in order to overcome such problems as the inconvenience of the doctors' schedule or the lack of necessary specialists in public health organizations, and the lack of quality of free medical services. At the same time, the coverage of the population by paid medical organizations remains lower compared to their coverage by public health services. Obviously, low income reduces people's opportunities to use paid medical services. According to this criterion, unemployed persons older than the able-bodied age are in a less advantageous position. According to Rosstat, in 2016, they accounted for 11.2% of the needy population[8]. At the same time, according to a sample survey conducted by Rosstat, 13% of people 60 years of age and older noted that they did not have enough money to buy food, medicines and clothing. Among people aged 30–39, the proportion of those who can afford everything they want was 9%, the share of those who do not experience "considerable financial difficulties" was 55%. Among those aged 60 and over, this proportion was 35 and 7%, respectively[9]. The share of those who received paid medical services was the highest in the age group of 30–39 (26%), while among the respondents 60 years of age and older this share did not exceed 17% (the indicator is lower only in young people aged 15–19 – 15%). Due to the deterioration of health, the need for specialized medical care among older citizens is higher than among the

[8] Distribution of the total poor population by major groups. Social status and standard of living of the population of Russia, 2017. Federal State Statistics Service. Available at: http://www.gks.ru/bgd/regl/b17_44/IssWWW.exe/Stg/d01/06-18.doc (accessed 18 April 2019).

[9] Distribution of respondents by self-assessment of their financial situation (in %). Selective observation of behavioral factors affecting people's health. Federal State Statistics Service, 2018. Available at: http://www.gks.ru/free_doc/new_site/ZDOR/Factors2018_2812/index.html (accessed 18 April 2019).

Distribution of health self-assessments in different age groups in Russia, 2018



Source: Selective observation of behavioral factors affecting public health. Federal State Statistics Service. Available at: http://www.gks.ru/free_doc/new_site/ZDOR/Factors2018_2812/index.html (accessed: April 18, 2019).

younger population. Moreover, the fact that people cannot receive these services is most often due to a lack of money to pay for them or the need to wait in line in public health organizations[10]. In general, given the fact that the paying capacity of elderly citizens is low, the development of private medicine cannot have a positive impact on their health. To a certain extent, an alternative to paid services for the population, especially during the crisis period, was an appeal to state medical organizations using personal connections – through the doctors who are one's acquaintances [38].

According to Rosstat's sample survey of behavioral factors that affect health, self-assessment of health status in the population 60 years of age and older are shifted toward unfavorable. The majority (60%) of the older generation call their health satisfactory, and another 27% – bad. It should be noted that the majority of population under the age of 40 assess their health positively. Further, the situation is changing. At the age of 40–49, the answers "good" and "satisfactory" are almost equally represented, but in the group of those 50–59 years of age, the proportion of people who assess their health as "good" sharply decreases and the prevailing assessment is "satisfactory" (65%; *Figure*).

One of the leading causes of disability among adults is cardiovascular diseases, there are no favorable conditions for their detection and prevention: consultations of cardiologists in public health organizations, as noted above, are included in the list of the least accessible services. Another leading cause of primary disability is malignant neoplasms. Consultations of oncologists were not among the least available. However, this fact can also indicate that people are less likely to turn to such specialists on their own, without the recommendations of a therapist. The diagnosis "diabetes mellitus" implies constant

[10] Needs for specialized medical care by age groups of respondents in 2016. Social status and standard of living of the population of Russia – 2017. Federal State Statistics Service. Available at: http://www.gks.ru/bgd/regl/b17_44/IssWWW.exe/Stg/d02/10-18.doc (accessed 18 April 2019).

supervision of the doctor, cardinally changes a way of life of the person in terms of food habits, physical activity, need of careful self-control of the state of health. The high prevalence of this disabling disease among people aged 60 and older requires increased availability of specialist endocrinologists, which, according to the above data, is now insufficient.

It is typical of Russians to consult a doctor when the symptoms of their disease interfere with performing their job. At the same time, their attitude toward medical examination is skeptical. This measure of preventive medical care is considered by the population as a formal procedure that does not contribute to improving health [39]. In combination with the indicated negative phenomena, these behavioral features may prevent the timely detection of the risk of chronic disabling pathologies.

In the study by S.E. Pokrovskaya it is shown that the medical activity of the population has age-related specifics. Persons of pre-retirement and retirement age tend to apply for medical care to public health organizations in case of illness to a greater extent than younger groups of the population. They are less likely to hope for spontaneous recovery, as many young people do. At the same time, in older ages, the proportion of people who believe that a person's own efforts can largely determine his or her state of health is significantly lower. The author also points to the fundamental difference between elderly citizens and people with disabilities. Among the latter, they failed to identify anyone who would consider personal efforts to maintain health completely insignificant [40].

The recognition of a person as disabled and defining his/her disability group actually impose additional responsibilities for maintaining their health on the person and on the healthcare system. In the context of demographic ageing, prevention of disabling pathologies and improving the effectiveness of rehabilitation of disabled people are one of the most important areas in health development. According to the already mentioned sample observation of Rosstat, in 2017, among people with disabilities, 45% indicated that an individual rehabilitation program (IRP) had not been developed for them. Among those who had IRP, 39% said that it did not fully meet their needs. In addition, 7% of respondents indicated that the activities prescribed in the program were not being implemented. The provision of rehabilitation facilities and medical supplies to the disabled remains a separate problem. In cities, 38% of disabled people reported that they were not provided with technical means of rehabilitation, 73% said that they were not provided with means of care. In rural areas, the proportions of such answers were 41 and 67%, respectively.

Conclusion

In terms of healthy life expectancy, disability, as well as the proportion of older people in the population, European countries can be grouped into six clusters. The similarity of these criteria is related to the geographical position of countries and their participation in political associations (now or in the recent historical past). Thus, disability rates in Russia are the closest to those observed in Eastern Europe, especially in the former Soviet republics. In Russia, the main factors contributing to the growth of disability of the population are, on the one hand, demographic ageing, and on the other – unfavorable living conditions of a significant part of citizens. Moreover, low income can be an independent motive for obtaining a disability group or it can lead to this event indirectly – through poor nutrition, reduced availability of quality medicines and paid medical care. It is particularly alarming that the Russian healthcare system is not yet ready for a significant increase in people's need for medical services. This is evidenced by the above results of Rosstat surveys and by the data from regional sociological studies [41]. It will not be possible to decrease the burden on public institutions through the development of paid medicine as long as the income of older citizens, who make up the bulk of patients of public health institutions, remains low. Moreover, experts expect an increase in the number of disabled people in older age groups due to the recent increase in the retirement age [42].

In the world practice there is an experience of negative consequences of reforms in the field of healthcare. Optimization of the network of medical institutions in many countries has led to a decrease in the availability of medical care [43]. D. Sakellariou & E.S. Rotarou (2019) analyze the impact of neoliberal reforms on the access to health services for people with disabilities on the example of Chile (the country is a pioneer on the path of neoliberal reforms in healthcare) and Greece (it actively implements these reforms in recent years). According to the results of their analysis, the authors of the study call neoliberal reforms in healthcare a form of "structural violence", which disproportionately affects the most vulnerable categories of the population, including people with disabilities [44].

Bearing in mind that in any society there are vulnerable groups that have the least opportunities to receive paid medical services, it is necessary to develop medical services of public health institutions and make them more accessible. However, for the most successful identification of disability risks, preventive work should be carried out, taking into account the gender and age specifics of the risks of developing disabling diseases.

In the context of demographic ageing and the growing demand of the older generation for free medical services, the most comprehensive outcome in terms of disability prevention can be expected from the measures aimed at improving the health of this category of population. These measures are as follows: developing and improving gerontological medical care; supplementing the program of medical checkups for older generations with the surveys that help timely identify the signs of brain and cardiovascular diseases; explanatory and educational work with the population aimed at increasing the trust in doctors, adherence to the prescribed course of treatment, medical literacy and promoting health-saving behavior skills.

The most important way to reduce disability among older people is to provide them with a decent standard of living. In addition to the fulfillment of existing obligations (provision of benefits and guarantees in the field of pensions and employment), it is necessary to promote financial literacy of the older generation, i.e. to inform them about the ways to protect themselves against fraudsters and involvement in risky financial schemes, since the inability to dispose of one's income is one of the reasons why people cannot get out of poverty [45].

Among the population of working age, the reduction of disability rates can also be achieved by improving the availability of consultations of medical specialists for the employed population, encouraging employers to take care of their workers' health, improving methods of diagnosis of disabling diseases and their use during regular medical examinations.

Preventing the years of healthy life lost due to disability is possible only after solving the problem of poor quality of life of Russians, which requires the use of a range of management tools. At the same time, the consequences of disability also require regulation. Three areas of work can be proposed to reduce the level of disability and to reduce the social and economic damage caused by this phenomenon:

1) prevention of disability: includes measures to predict, identify and prevent threats to public health;

2) compensation of the current economic cost of disability growth by creating an equal

opportunities society, designing an accessible environment, development and use of the ethics of communication with disabled persons, development and implementation of programs and projects to promote employment for persons with disabilities;

3) secondary prevention necessary to prevent losses associated with further health deterioration in persons with disabilities, which involves the improvement of the rehabilitation system and includes measures aimed at maintaining the high quality of life for persons with disabilities.

These areas, of course, do not cover the full range of problems associated with disability, but help streamline the activities aimed at minimizing the economic and socio-demographic losses of society due to disability.

Our study suggests that disability is associated with a poor quality of life of the population or its individual categories. Demographic ageing in itself does not lead to the growth of disability, but only overlaps with existing socio-economic conditions. Depending on these conditions and the quality of social management, disability acquires observable dimensions and structural characteristics. This determines the possibility of using the characteristics of this process as indicators of the effectiveness of health policy.

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The Role of Individual Responsibility in Territorial Development

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Abstract. Within regional science, there has always been a great deal of emphasis on examining territorial differences. When defining development directions, it is important that territorial levels can be identified individually. One of the characteristics of settlements is a lively social life. This will provide an opportunity for the population to live their individual social and cultural life. In settlements where the population is active, people usually love to live, and their inhabitants want to improve their physical and cultural life. They work like a great family, they form a community. In some of cases, settlement leaders place great emphasis on community development. The leaders of the settlement formally try to ensure the development of the settlement with local regulations, however they also have informal tools that they can use for the benefit of their community. In addition to executives, the individual has an important role in community building. The active behavior of individuals in community building can greatly contribute to a successful settlement. The study examines several local communities with qualitative and quantitative modifiers, and presents success factors within each community. The purpose of the study is to approach communities from a new perspective. Previous research has generally examined communities on the basis of their characteristics, ethnicity (minorities), spatial concentration (school communities). This study attempts to highlight the relationship between territorial development and individual responsibility, taking into account all aspects of communities. It is important to note that the purpose of this study is not to present complete research findings (correlation studies on individual factors: age, educational attainment, income, and their impact on communities), partly because of the scale and partly because of future research plans. The research results confirm that the level of development and development potential of the regions are largely determined by the composition of the human factor living in the given space. Decisions made by decision-makers taking these principles into account can really contribute to the development of areas. Scientific study of such development results coud be a goal for future research.

Key words: community, identity research, individual responsibility, local leaders, endogenous development.

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Introduction

One of the most important tasks of regional development is to reduce the differences between regions with different levels of development. In order to create favorable living conditions, not only financial support is needed, but also the existence of many other factors. Geographical location and natural conditions, which at the same time greatly affect the potential of the regions, may be least affected in regional development. Another decisive factor is the economic environment in which the settlements operate. Man is the formative of natural resources and the economic environment. In this process, the responsibility of community actors and the conditions provided by the policy are indisputable. The study presents the role of communities in shaping the settlement image through the example of six Hungarian settlements and describes ways to experience community life and personal engagement.

Review of conceptual approaches and the research methodology

"Among the views on the content of territorial development, there is a group that considers territorial development from the socio-economic point of view and regards settlement development as essentially technical in nature. The weakness of this approach is that it does not respond to intermediate levels and only highlights some factors, neglects the others, leading to fundamental disturbances in analysis, understanding and influence. Another view is that the territorial development is subordinated to the settlement development. Territorial development must be interpreted at different levels, but always complex (taking into account all its elements)" [1, p. 1]. The current Hungarian territorial policy and the spatial development policy interpret territorial development basically according to the first concept. These policies analyze the spatial characteristics of society and the economy and concentrate on correcting the spatial structure of the spatial structure that is different from what is desired [2, 3]. Similar reasons lead to the development of the European Union (EU) Community policy. The EU has therefore set up various financial development funds (ERDF, ESF, etc.) to reduce regional disparities in development). Today, these have become the most important financial resources for spatial development in the regions, and they seek to reduce differences in development between regions.

Different levels of development or backwardness require different areas of intervention, development, and directions. When defining development directions, it is important that individual territorial levels can be uniquely identified. For example, a region can be uniquely characterized by elements of territorial capital that include geographic location, size, natural resources, heritage, infrastructure, and social capital. "Territorial capital is an aggregate asset that is site or area-specific; and development policy should focus on local values and their continuous renewal" [1, p. 25; 4]. The role of social capital within territorial capital is of paramount importance, as these qualitative characteristics greatly determine the development potential of an area.

When the regional development issues have emerged in regional policy, new methodological ideas have also emerged. In addition to the purely quantitative characteristics, the idea of qualitative indicators and the measurement of them was also raised. The measuring approach based on purely economic grounds is complemented by concepts such as human development, standard of living, and happiness. These are the characteristics of social capital. With the appreciation of these new concepts, measuring territorial development can give a much more nuanced picture of the social and economic characteristics of a region. On the other hand, this opportunity can be used by developing complex indicators and methodological approaches as well [6, 7].

This more subtle approach is reflected in the idea of Enyedi's territorial inequalities that the geographic differences in human knowledge lay behind the new territorial inequalities [6, 7]. Molnár has same opinion and thinks it is worth breaking with the paradigm that says that a settlement is successful only if it has a well-functioning economy. In his opinion, success is not due solely to economic factors [8]. Goda and Kassai also see human capital development as a key to mitigating territorial disparities and improving the effectiveness of economic development policies [9], as the key to improving regional disparities and improving economic competitiveness. The importance of the role of human factors is also emphasized by the new development trend that emerged in the early nineties, which became known as endogenous development in territorial policy.

"Human capital also plays a key role in endogenous development theories. These developments are based on local resources, such as the potential of the local economy, labour, and knowledge, which are then linked to larger production processes" [10; 11; 12; 13, p. 21]. However, it is also important to note with respect to this theory that only endogenous development alone does not solve the problem of reducing territorial inequalities. Failure to fully respect external circumstances and influencing factors also limits the development potential of a given area [14; 15; 16]. For this reason, the endogenous development cannot be ignored in the development, because the isolation would prevent the influence of external conditions [17].

The exploitation of endogenous resources is also crucial for development, as the functions and role of rural and urban space have changed significantly as a result of globalization. The proper functioning of these new spatial functions requires finding the factors that can contribute not only to the economic but also to the social development of an area. In this sense, Edel sees the community as an endogenous resource. In his opinion, these are solid, yet flexible and essential resources that can be the main drivers of transformation [18; 19; 20]. This assumption is also reflected in the use of financial resources for development. Those regions (regional centers, big cities) use a significant portion of development resources, where social activity is high at the local level and basic resources are found [9].

Social activity can be characterized by relationship and social capital, which, according to social psychology, is the individual's own. Based on Capello and Faggian's definition of relationships, we can consider cooperation between economic actors as well as knowledge transfer and exchange of experience, not just at company level, but also between countries, regions, and settlements. Contact capital is a kind of ability to achieve common goals [21; 22; 23]. Bourdieu [24; 25] founded the notion of social capital as a resource based on belonging to a group. In his theory, he made it clear that the size of a person's social capital depends on the extent of the network of relationships he can actually mobilize. Social capital typically consists of ties, norms, trust, and institutions.

Tönnies described this network of relationships with the concept of community. In his opinion, the concept implies a positive mutual relationship [26]. Therefore, its value is most often positive. It can also express:

– a group of people (youth, amateur community);

– quality (community, community, or atomized society);

– locality (or community);

– joint creation (community theater, community facility, communal investment);

– feeling, intent, belonging to somewhere;

– sharing the same ideas, goals and values [27].

For example, identity can be a common set of values within settlements, which “glues” the community [28; 29; 30; 31]. From the point of view of spatial development, the community is the relationship between the individuals that can promote the development of the given territorial level (settlement, region) and can only be interpreted through the formation of networks between individuals (social networks). In this network of relationships, the key actors in the life of the settlements are individuals (individuals, institutions/organizations, e.g. associations, local government leaders) who play a decisive role in both acquiring external resources and mobilizing internal resources. The connection network thus basically covers features that cannot be quantified. Their knowledge therefore requires qualitative research.

The study presents the experience of empirical research in communities with a successful network. It finds out how the members of communities have recognized the relationship between territorial development from social capital and individual responsibility in generating development. Under individual responsibility in this study we mean how an individual responds to and participates in the resolution of social problems in the environment, and contributes to maintaining the values.

The study contains the partial results of a complex study covering a number of topics, including the network of communities in the settlements. The selection of those settlements where successful community-building activities and contact networks can be observed within the communities was an important consideration in determining the sample area. Six Hungarian cities were included in the sample (Esztergom, Kecskemét, Érd, Csömör, Miskolc, Eger). The communities were analyzed using qualitative and qualitative characteristics. The quantitative indicators were analyzed primarily with the help of the available HCSO database.

The survey method used and accepted for field research and other data collection is the questionnaire, which is suitable for descriptive, explanatory and reconnaissance purposes [32]. The questionnaire covered the key players in the community, the strengths and weaknesses of the community. The questionnaire touched upon the network of contacts within and outside the settlement; and it shows the involvement of individuals within the community and those responsible for community building. In the six settlements (Esztergom, Kecskemét, Érd, Csömör (spring 2016), Miskolc and Eger (spring 2017)) the survey was done with the involvement of Szent István University, Agricultural and Rural Development Engineer, second year students. The method of sampling was arbitrary but it aspires for to be representative. The number of people to be evaluated is 796, of which 60% are women and 40% are men. There was a varied pattern of age, education, occupation and income. The overall evaluation of the responses was done using descriptive and variable statistical methods.

The content and the main findings of the research

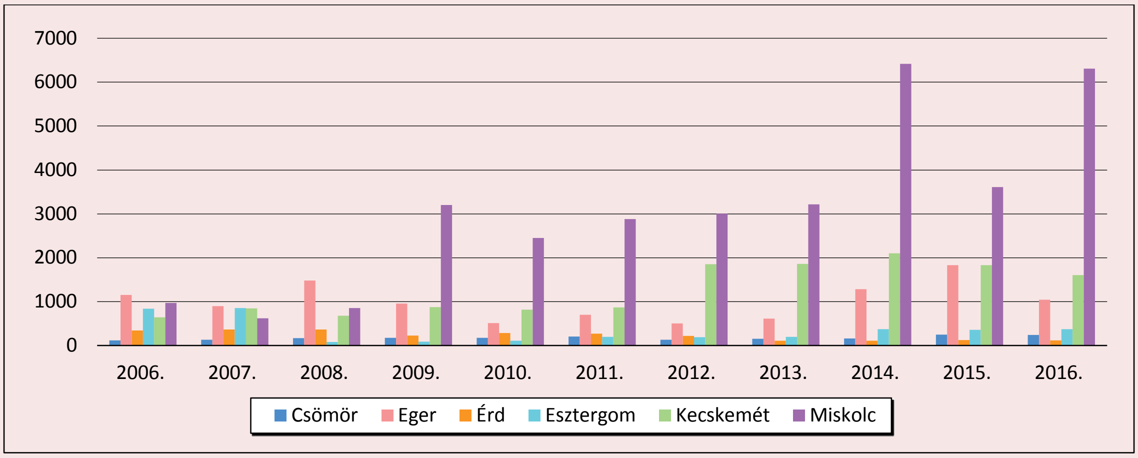
The remainder of the study presents qualitative and quantitative research findings. In particular, it first presents the characteristics of the communities in the studied municipalities, drawing on the available statistical databases. An important consideration in the selection of the statistical data was that it should be available and adequate in all settlements, each year of the survey period. It then focuses on the respondents’ general experiences within the community.

Physical characteristics of social networks

Not only is the human side essential to the development of the community network. At least as important are the physical factors and locations that provide the opportunity to experience and develop a sense of belonging to the community. The general community characterization of the settlements therefore focuses on indicators such as cultural events that provide a community experience; the number of regular cultural professions or creative communities.

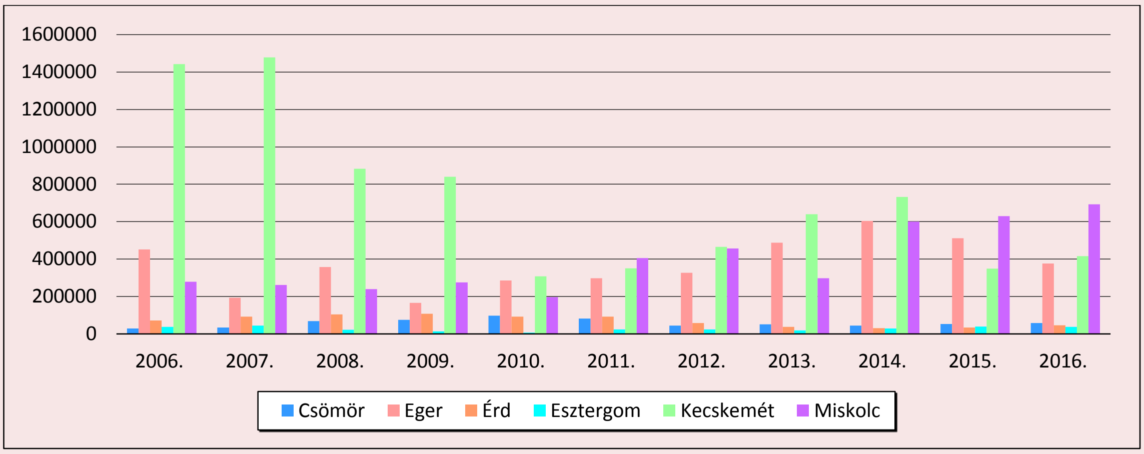
Cultural events organized either by the municipal government or by NGOs are one of the areas for experiencing a community. They provide an opportunity to meet people who are not in the same circle as a close relative or a group of friends but who are moving to similar interests. *Figure 1* shows that the number of events provided to the population in larger settlements over the past decade has risen almost year by year. The number of events decreased in the settlements of the Budapest agglomeration. The reason for this

Figure 1. Number of cultural events (per thousand inhabitants)



Source: HCSO database based on own editing, 2018.

Figure 2. Number of participants in cultural events (per thousand inhabitants)



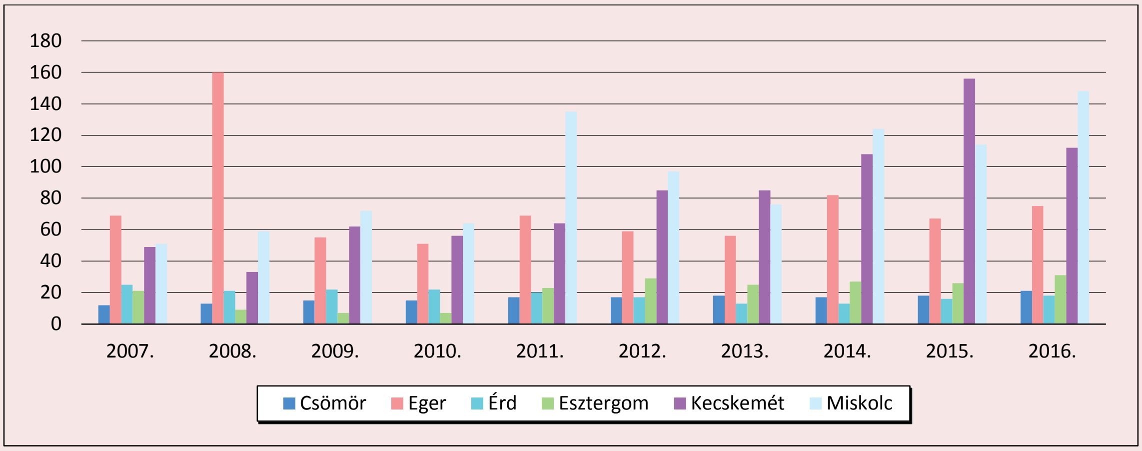
Source: HCSO database based on own editing, 2018.

is probably that the programs offered by the capital may have a suction effect. In Esztergom, however, some growth has been observed over the years. The number of participants at the events is illustrated in *Figure 2*. The number of participants draws a similar pattern to that of the number of events. In large rural towns, the population is visiting a rather large number of events, while the number of visitors in the capital's nearby settlements is quite underrepresented.

Another form of living in community consciousness can be joint creative activity. *Figure 3* shows the number of organizations created for this purpose.

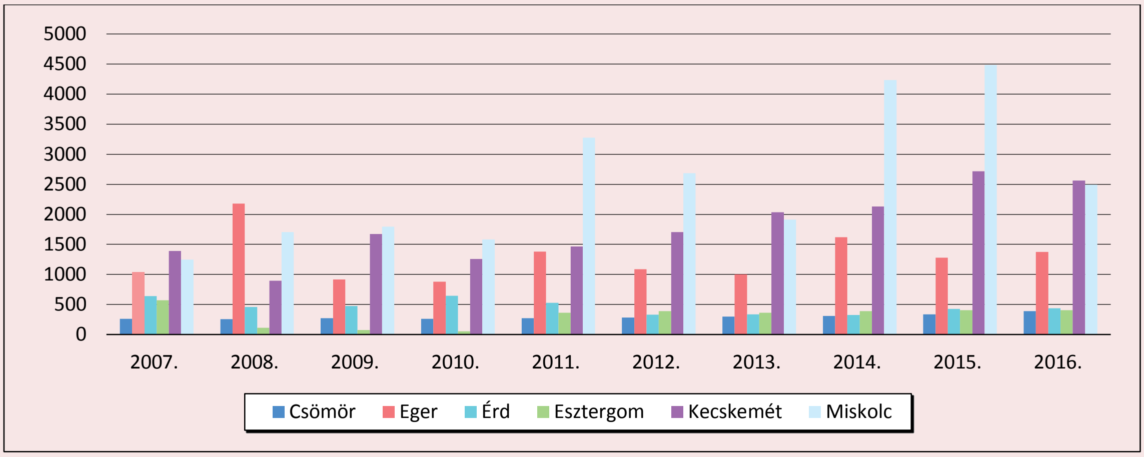
In almost all settlements it can be said that the number of creative communities in the examined period increased continuously. Creative communities are permanent, regularly engaged and mostly managerial communities that present the results of an individual or collaborative creative process to the public.

Figure 3. Number of creative cultural communities (per thousand inhabitants)



Source: HCSO database based on own editing, 2018.

Figure 4. Number of members of creative cultural communities (per thousand inhabitants)



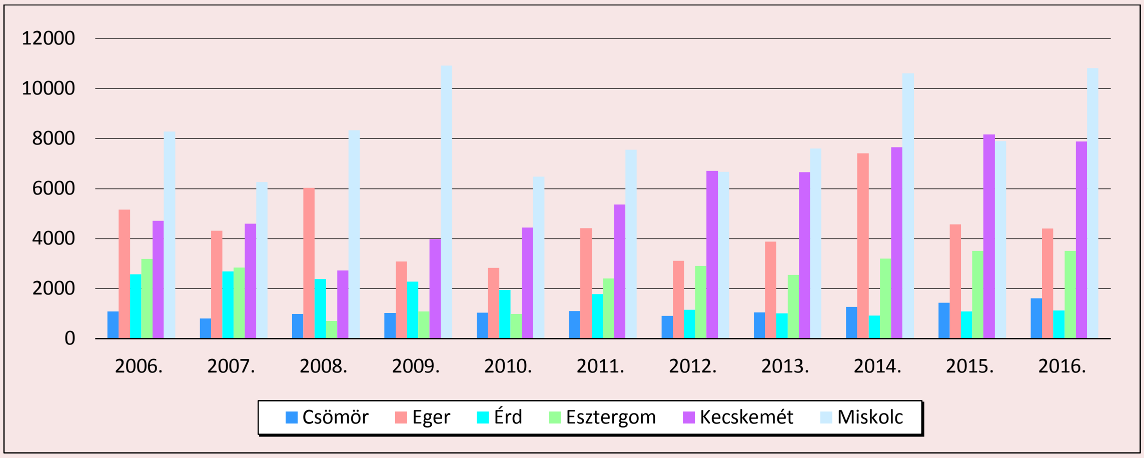
Source: HCSO database based on own editing, 2018.

They are grouped as follows: art groups, folk performing arts groups, creative art groups. This is probably related to the steady increase in the number of well-functioning smaller groups and communities. The increase in the number of cultural communities may be related to the increase in the number of applications. Most financial resources were made available to associations on more favorable terms. In this way, the implementation of developments and the operation of the association itself became more efficient. In large cities, the increase in the number of cultural communities can be facilitated by a more concentrated population density, the presence of a well-educated population, and better infrastructure. This assumption is also supported by *Figure 4*, which shows the changes in the number of members of the creative communities.

A similar trend can be observed in the number of regular cultural activities as illustrated in *Figure 5*.

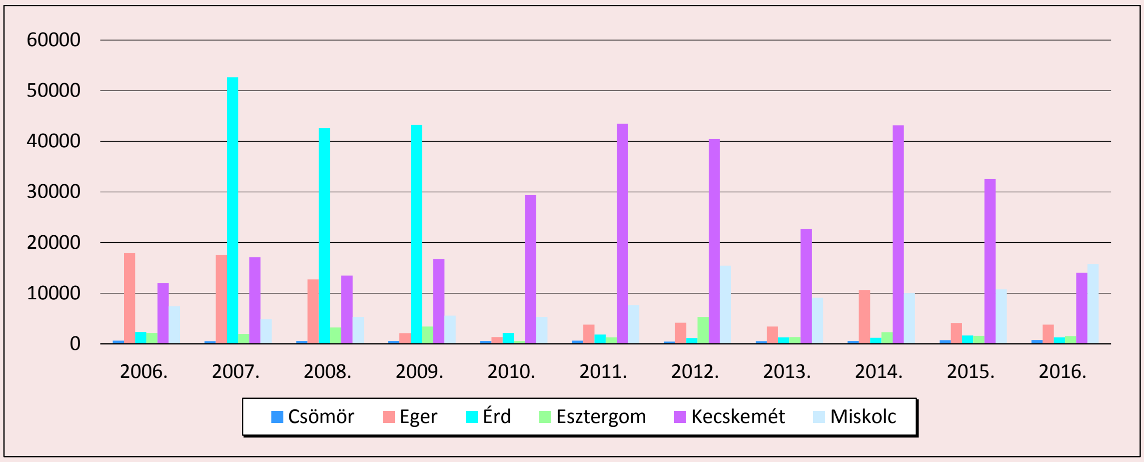
Figure 6 shows the number of participants in cultural activities. It can be seen that the

Figure 5. Number of regular cultural sessions (per thousand inhabitants)



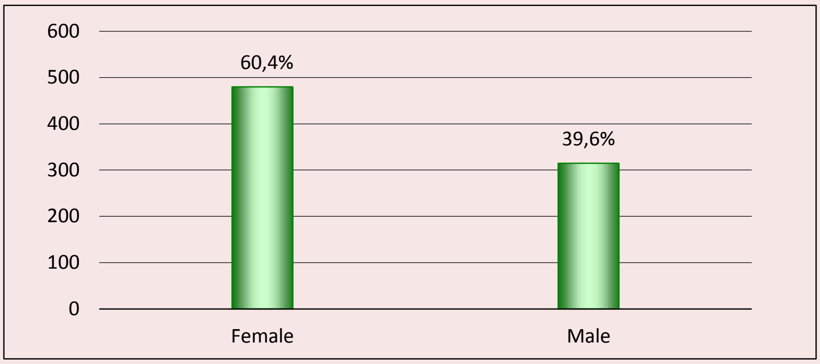
Source: HCSO database based on own editing, 2018.

Figure 6. Number of participants in the regular cultural occupations (per thousand inhabitants)



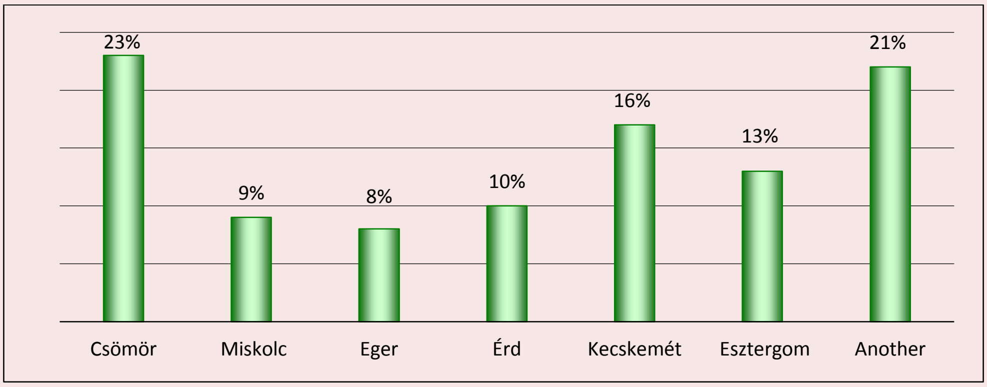
Source: HCSO database based on own editing, 2018.

Figure 7. Distribution of respondents by gender



Source: Own research (2016–2017).

Figure 8. Distribution of respondents by permanent address



Source: Own research (2016–2017).

attendance of these events was not nearly as popular in smaller rural towns or agglomeration settlements. Indeed, in Miskolc, compared to the number of inhabitants, there was a rather low participation rate among those interested. At the settlement level, these moves were not really successful in terms of community building.

Results of the questionnaire survey

The general characteristics of those involved in the field research are shown in *Figures 7–10.*

More than half (60.4%) of the respondents were women, and the percentage of men was 39.6%.

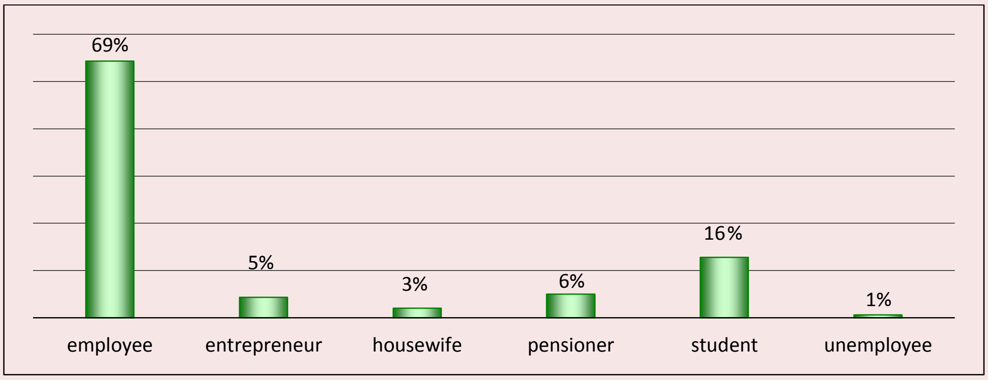
Twenty two percent of the respondents live in Csömör, 9% in Miskolc, 8% in Eger, 10% in Érd, 17% in Kecskemét, 13% in Esztergom and 21% in other settlements.

The average age of the sample was between 38 and 47 years. It was a goal to have a diverse age group in the sample that was achieved. The youngest respondent was 12, while the oldest was 86 years old.

The range of respondents was also broad in terms of characteristics such as income, occupation and education. (*Fig. 9, 10*).

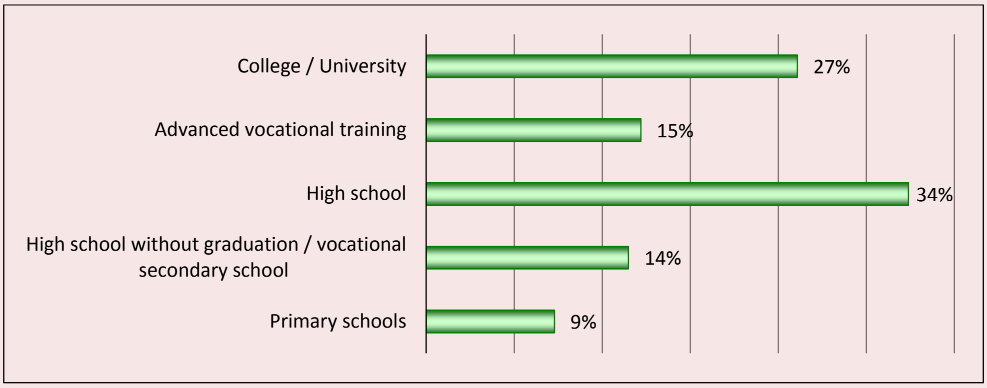
From the research point of view, it was important to first examine what the respondents think of the term "community" what this word means to them. The vast majority of the respondents identified it with togetherness, programs, friends, reliability, and the settlement itself.

Figure 9. Occupational breakdown of the sample



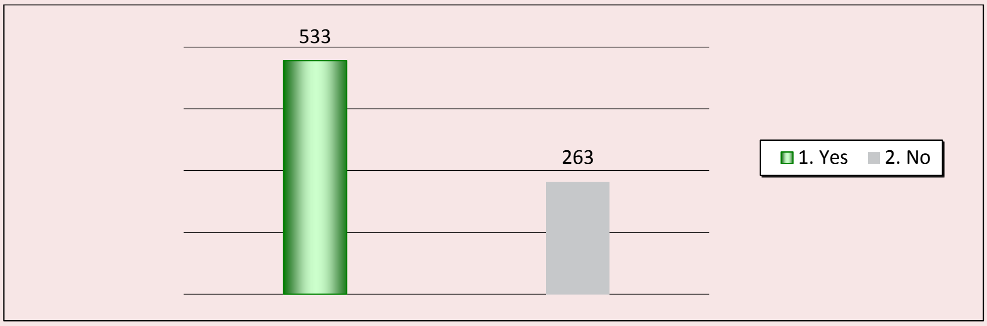
Source: Own research (2016–2017).

Figure 10. Distribution of sample by educational level



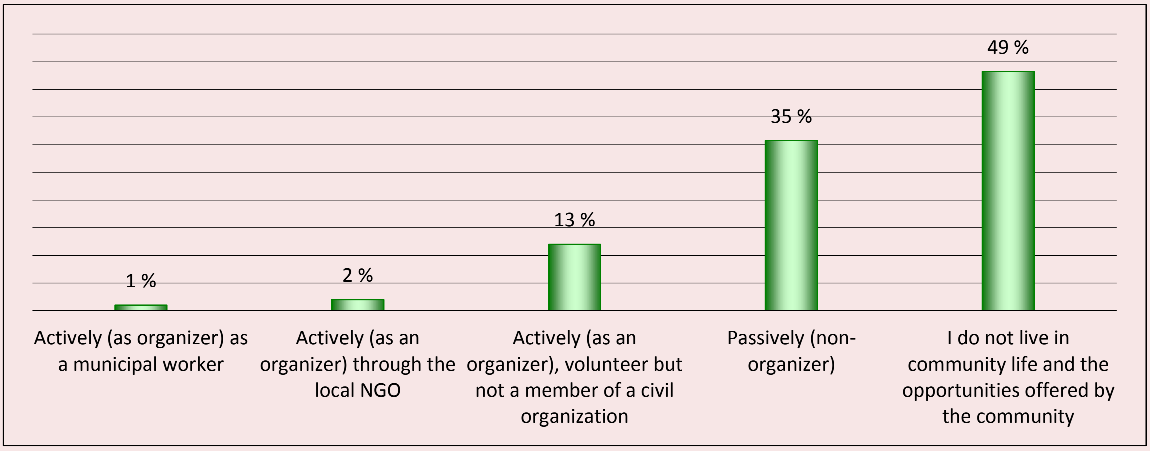
Source: Own research (2016–2017).

Figure 11. Can you tell about your settlement that you have community consciousness? (persons)



Source: Own research (2016–2017).

Figure 12. In what form do you participate in the community life in your settlement?

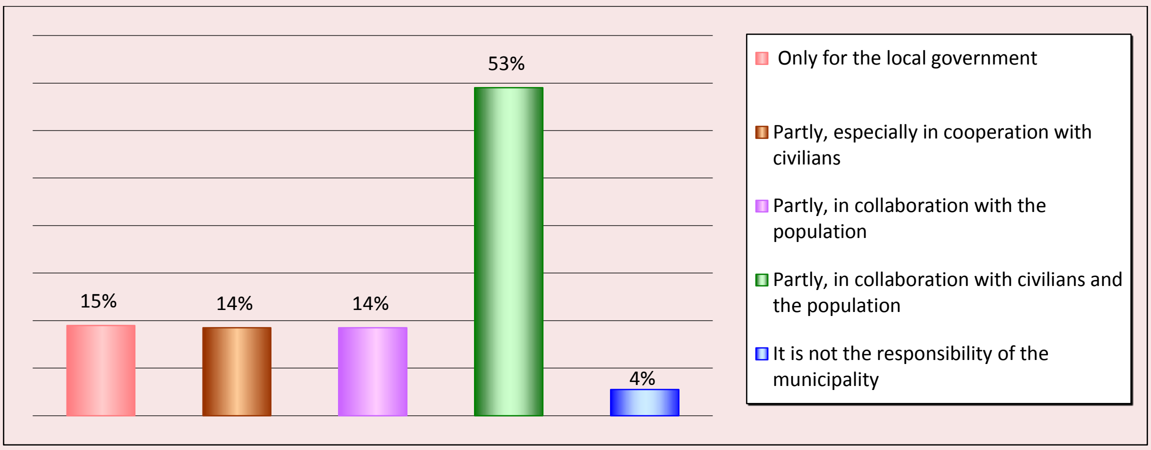


Source: Own research (2016–2017).

When asked if your community has community consciousness, more than 67% of the respondents answered with a definite yes, a negative answer was given by a little over a third of the respondents. (*Fig. 11*). It can be stated that, overall, the respondents feel that they have a community in some form.

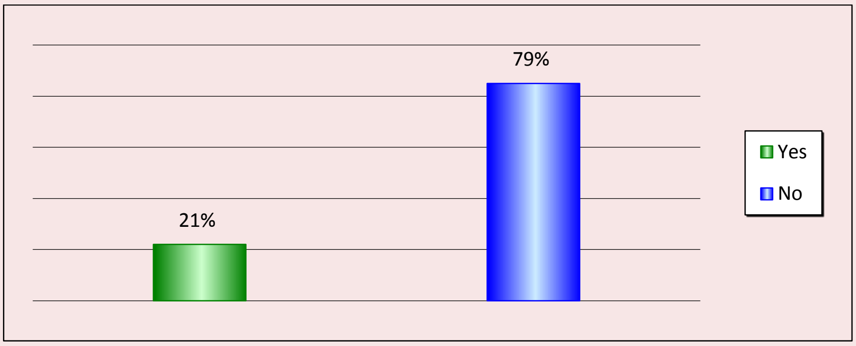
A large proportion of the respondents, 53%, are passive, they only visit events as onlookers; nearly 24% of them are not involved at all, even at the level of passive interest in action. Three percent of the respondents are part of the community organization as municipal workers, but the proportion of volunteers who are not members of any civil organization, and the proportion of active organizers is rather low (17%) *(Fig. 12)*. The main drivers of the community life of the settlements were those who, on the basis of local patriotism and loyalty toward their community, wanted to shape, and influence their immediate environment and the people living there.

Figure 13. How do you think the municipality is responsible for building a community?



Source: Own research (2016–2017).

Figure 14. Do you know the local government developments in the settlement?



Source: Own research (2016–2017).

Answering the question of individual responsibility, of how the individual and the local government would contribute to the development of the community and its population, only 6% of the respondents stated that this was a municipal task only; 18% saw it as workable with civilians; 26% of the respondents would involve the population in community building; the largest number was reported by the declarants who, as partners of the municipality, considered both civilians and the general public in terms of community building; the number of those who did not involve the municipality in the development of the community was insignificant (4%) (*Fig. 13*).

One of the aims of the research was to find out how the inhabitants of the settlement are aware of the events taking place in their immediate surroundings, how they monitor the local government interventions and developments (*Fig. 14*). Respondents' feedback shows that, unfortunately, most of them (53%) know nothing about the activities of the local government, which are the most influential in their settlement. This, of course, is not only due to the community's failure; however, due the publication obligation associated with the applicants, it is difficult to explain the lack of municipal marketing activity.

Municipal developments known by the population are mostly related to the tasks performed by the local government, such as the development of the road network, renovation of canals, kindergartens, the preservation of the institutions, landscaping, maintenance of the squares.

The majority of respondents (57%) gave a negative answer to the question of whether they would play an active role in solving settlement problems, and we conclude that although they are aware of the importance of community and identity, but the desire to do it for the community is still not appreciable from the answers.

As a result of cross-table analysis, there was a relatively weak relationship between the respondents' permanent residence and community activity. Csömör has the highest community activity (47%), as an organizer or as a member of an NGO (44%), which can be explained by the high number of young intellectuals working in the capital city. This percentage is quite low in the other settlements. Among the municipalities, Kecskemét is the most important part of the community building. In the other settlements there is a low willingness to participate in the community building from the municipal side. Almost all settlements have a relatively low number of passive layers. In Csömör, the number of those who do not live in the community at all is the smallest.

There is a further relationship between the place of residence and community consciousness. Analyzing responses, more than half of respondents said they had community identity in their community. Where previously social activity was at a rather low level, respondents were more likely to say that their community does not have a sense of community. In fact, in these settlements, individuals were the most passive and waited for the local government to build the community.

There is also a connection between the occupation and the community consciousness. Positive speakers typically come from high school graduates, college or university, or high school graduates and high-level graduates who are interested in either human relationships or their age or work for the community.

Suggestions and conclusion

In the first part of the study we reviewed international and domestic literature on the topic that we can consider social capital and connection networks as an integral part of regional development. Therefore, the development of human capital must be a fundamental objective of development policies aimed at reducing territorial disparities and improving economic competitiveness. Many examples of settlements in Hungary reinforce the earlier assumption that economic developments based on purely external resources do not, in the long run, provide a solution for the social and economic convergence of the regions. The assumption in the literature is that regions (regional centers, large cities) use a significant proportion of development resources where there is high social activity at the local level and basic resources are found. It has also been confirmed by the previous position that the local governments are key players in communities, as well as those actors who have a decisive role in mobilizing both external and internal resources. For regions with unfavorable natural conditions or social characteristics, active communities are often the only development opportunity. Based on the results of the empirical research, it can be said that there is a need for communities within the settlement. At the same time, there is some indifference to solving common issues, problems at the local level and in the field of personal responsibility. It has been proved that the role of the person responsible for the development of the community and the contact networks is typically considered important by the intellectual occupation persons. In most of the settlements examined, active community life takes place because of the intellectuals living in the settlements. These settlements show that the cultural events organized in them are welcomed by the public, which is also active in promoting the establishment of creative communities. Promoting these good examples and the extra energy from collaborations can also act as incentives for less dynamic communities. One of the key points of future development policy can be the role of communities in self-development.

After reviewing the literature related to the research topic, it can be stated that the level of development and development potential of the regions is largely determined by the composition of the human factor living in the given space. Reducing the differences in development between areas cannot be achieved simply by outsourcing financial resources, but it is also necessary to mobilize the endogenous resources of the settlements. Among endogenous resources, social capital and social relationships can be a key driver of development. Developments based solely on external resources do not, in the long run, solve social and economic problems. In order to achieve such goals beyond the drawing of resources, it is necessary to have knowledge of the existing conditions (natural, economic, human). If the settlements have these endogenous resources, it is indispensable for the community or some of its members to be active in community life. Empirical research has shown that developments are characterized by duality. On the one hand, leaders' way of thinking is decisive in determining the trends, but actual interventions must adapt to the specifics of the existing spatial system. The results of this research supported this earlier assumption, which emphasizes the importance of an individual's role in society. It has also been proved that those settlements are able to reach a long-term development path, where they are active in their community, collaborate and have a lively community. In addition, it is necessary to concretise the objectives that are generally to be achieved in terms of development. It is necessary to formulate the needs tailored to local conditions and to get to know the community. The developments must be implemented with the active participation of community members. Knowledge of the goals can encourage community members to further collaborate. Later, the promotion of developments in a given community greatly contributes to the success of the settlement and its development path. The combination of all these factors can make a settlement truly liveable and successful in the long run.

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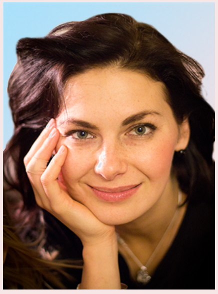
Managing an Economic Journal Efficiently: Trends and Challenges



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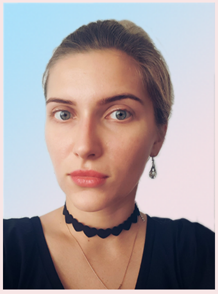

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What are the changes that happen to the context in which a national economic journal is developing? What new flows and trends shape the journal agenda today? What impact do they have on editorial policy and is there a tool to assess the effectiveness of managing scientific periodicals?

Such controversial issues were raised at one of the meetings of the Section of Economic Journals of the Association of Science Editors and Publishers (ASEP)` held on April 25, 2019 within the framework of the 8th International Scientific and Practical Conference "World-Class Scientific Publication – 2019: Strategy and Tactics of Management and Development".

The participants of the section – leading economists, representatives of the editorial offices of Russian economic publications and administrators of science – discussed the introduction of new practices to promote and increase the citation of domestic publications. The round table was moderated by *O.O. Medvedeva*, Chairperson of the Section of Economic Journals of the ASEP and *A.O. Zhuk*, Secretary of the Section of Economic Journals of the ASEP (RANEPA).

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In their speech, the moderators made an overview of the latest innovations in the scientific world; the innovations are related to the fact that Western practice of publishing preprints of articles in open databases and specialized repositories is being gradually disseminated in the Russian academic community. This practice, despite its wide popularity in the foreign scientific and publishing community, causes a mixed reaction on the part of the Russian academic community. The experience of research work shows that some journals refuse to accept a manuscript on this basis, since they perceive it as part of the unfair practice of replicating the publication by its author. In this regard, the speakers tried to reveal such concept as "preprint"[1] in detail, its importance in terms of development and promotion of scientific knowledge, as well as the specifics of the attitude toward preprints in the Western scientific publishing environment. According to O. Medvedeva, the first thing that can be done in order to change the attitude of domestic scientists and publishers toward preprints is to describe in detail the editorial policy to address such practices and make this information publicly available on the website of the publication. According to the analysis of the data on open access publications in the RSCI, the information on the practice of publishing preprints is available at the websites of only 4.76% of open access economic journals. A survey of editorial representatives has shown that up to 70% of the respondents have a negative attitude toward this practice. However, the growing popularity of preprints requires journals to provide more detail and be more precise when describing their editorial policy. As a result of the discussion, the participants and speakers were invited to *get acquainted with* the Declaration "Preprints in Russian Economic Science" in order to support the introduction of the popular European practice of publishing articles based on preprints posted in the public domain, as well as to submit their comments and suggestions.

E.V. Balatsky and N.A. Ekimova (Center for Macroeconomic Research of the Financial University under the Government of the Russian Federation) – leading experts in the field of scientific journals ratings – spoke about new trends in ranking scientific economic journals. The point is that the focus in the approach to a unified assessment of a journal's quality has shifted virtually in the course of one year. If until recently the very fact of a journal's indexing in an international database (WoS and/or Scopus), regardless of quartile or percentile, was considered as the highest score, then now there is a trend toward assessing a publication on the basis of changes in its ranking positions within international scientific databases (ISDB); it becomes necessary to take into account the quartile of the domestic edition. The second new imperative in the evaluation of a journal is the awareness of domestic editors that if the journal has Russian-language content, it can be admitted into international databases, but it cannot move inside them. It is almost impossible to get into the first and second quartiles if a journal has only a Russian version; it must have at least a full-scale English version. These circumstances led to a change in the algorithm for constructing the rating. Additional coefficients were calculated, taking into account the quartile of the journal in the ISDB and the availability of the English version of the content. The final ranking results reflect the actual success of the journal in the domestic market and its potential success in the external market. The ranking methodology and the list of leading economic journals are presented in detail in the article published in the previous issue of our journal[2].

At the end of their presentation, the speakers made a forecast that in the near future domestic authors will almost exhaust their ability to publish

[1] Preprint is a text placed in the public domain before publication in a peer-reviewed scientific journal.

[2] See: Balatsky E.V., Ekimova N.A. Competition of Russian economic journals in the world market. *Economic and Social Changes: Facts, Trends, Forecast*, 2019, vol. 12, no. 3, pp. 124–139. DOI: 10.15838/esc.2019.3.63.8

their papers in Russian journals that have entered the "foreign market"[3]; it is due to the increase in the number of international authors in the portfolio of articles: for example, in 2018, 60.7% of the content of the journal *Forsait* (Foresight and STI Governance) was represented by foreign researchers.

A.A. Peresetsky, deputy editor-in-chief of the journal *Prikladnaya ekonometrika* (Applied Econometrics), delivered a report in the context of studying the mechanisms for domestic journals promotion in international rankings. The speaker conducted a study on the procedures for mechanical citation counting on the basis of the data obtained from the thematic (economic) international database RePEc[4]. It is known that one of the main problems of Russian science consists in the lack of citation of Russian-language texts in the international space. Many actions have already been taken to deal with this problem: bilingual journals and hybrid versions are issued, English-language versions of journals are created; besides, there are original versions of publications in a foreign language that accept papers of domestic researchers exclusively in English. However, there are also certain simple actions that do not require serious additional funding; they can and should be taken by the editor of any journal to prevent the "loss of citations". The editor should verify the references in reference lists; the data for citation should be posted on the website of the publication. Sometimes, directly in the process of citation, the name of the journal in which this article will be published is indicated incorrectly in the lists of references. It is important that the editor should take into account the requirements of ISDB to reference lists and be guided by specialized international databases on economics, because today all this helps to succeed in promoting a Russian journal in the international scientific community.

For example, *T.Yu. Kuznetsova*, editor of the journal *Baltiiskii Region* and its English version, *Baltic Region*, shared her experience in publishing and promoting a journal, which has a translated version[5]. The success factors in this case include, first of all, a thoughtful approach to the project, since it was planned from the very beginning that the periodical would be published in two versions; thus, the editor adopted different ways of development for both publications, despite their identical content. The original Russian-language journal has gradually entered into the core of the RSCI and the RSCI on the Web of Science platform; and the English version was indexed in Scopus and WoS ESCI, both versions are indexed in DOAJ and ERIH+. This approach is most interesting for "young" publications that have never been indexed in any ISDB before. However, when choosing this approach, editors should take into account the need for two types of the most serious and costly work in the journal: first, to pay maximum attention to the quality of English and Russian translation; second, to streamline the procedure of synchronous page layout: if the article in the English version is on pages 1–17, then the page numbers in the Russian version of this article should be the same. The procedure helps preserve citation and develop a competent strategy to promote the publication. The use of modern technologies in the form of DOI[6] also avoids the binary perception of the data on articles by ISDB robots. Summing up her speech, T.Yu. Kuznetsova formulated two main advantages of publishing a journal in two versions. The first advantage is the availability of articles both to international readers and to Russian scientists who do not speak fluent English; the second one is expressed in effective practices of expanding the circle of peer reviewers, because almost every reviewer is an author, and every author is a reviewer.

[3] I. e. authoritative world-class journals indexed in ISDB and characterized by dynamic movement by quartiles within the databases.

[4] Research Papers in Economics.

[5] That is, a journal, which publishes its original version in Russian and an analogous full version in English.

[6] The same DOI is assigned to the article in Russian and to its English translation.

N.A. Gavrilicheva (editor responsible for promoting the journal *Forsait/Foresight and STI Governance* in the international scientific space) spoke about the experience in the development and promotion of their journal, which also has a translated version, but it was founded after the Russian version was admitted to ISDB. *Forsait* was one of the pioneers in designing and promoting two versions of the publication, but its Russian version had been included in Scopus before the English version was founded, and in the future this fact caused a number of considerable difficulties. The second and almost insurmountable difficulty was the forced need to change the English-language name of the journal, since the similar name already existed and was used by another international publisher. Both of these “peculiarities” resulted in the fact that two profiles of the journal were created in Scopus, and its citations were lost due to the splitting of the data, etc. What followed was a long period of negotiations and hearings with experts from Scopus, during which it was necessary to prove that the two profiles belonged to a single edition. The single profile in ISDB was formed after almost three years of the efforts. The technical procedure for creating two versions of the journal coincides with the one previously described by T.Yu. Kuznetsova; it is interesting to note that the English version of the journal *Forsait* exists only in electronic form; this approach does not eliminate the procedure of layout and the cost of it, but reduces the publishing costs of printing the English version. The English-language edition is printed in minimum quantity for the purposes of presenting the journal at foreign events and in communication with foreign authors.

The editor also pays much attention to the promotion of the publication from the technical perspective, which implies creating a mobile application and electronic edition for the journal; and from the social perspective, when the representatives of the editorial staff are actively involved in scientific discussions, lectures, seminars, round tables, conferences; they promote the journal in social media, try to monitior and participate in new international events on the topics of the journal, and organize their own events. Such a multilateral approach to the promotion of the publication allows *Forsait* to occupy a leading position in the economic field of scientific knowledge.

O.V. Tret’yakova shared her experience in implementing promising practices in the journal *Ekonomicheskie i sotsial’nye peremeny: fakty, tendentsii, prognoz* and its English version *Economic and Social Changes*. In managing the journal in 2010, its editorial staff began to use a new tool, which has proved it effectiveness over the years. Formally, this tool is a survey that includes open-ended and closed-ended questions; the questionnaires are sent on behalf of the editor-in-chief to respondents in order to receive feedback on the quality of articles and to collect suggestions concerning the development and promotion of the journal. Members of the Editorial Board, editorial staff, reviewers, authors, readers, and the staff of Vologda Research Center (the founder of the journal) take part in the survey. All the information in the filled-in questionnaires is structured and used by the editors to prepare the analytics on the dynamic performance of the publications and to revise the annual plan of the journal’s goals, taking into account the proposals.

The survey reveals how the readership of the journal assesses the scientific level of its materials, evaluates the work of the editorial staff and the changes the journal is undergoing. According to the speaker, it is important that the feedback the scientific journal receives can act as a tool that allows articles to be reviewed after they have been published. For this purpose, the questionnaire contains a question about the choice of articles that, in the opinion of respondents, are most interesting. Experts can give each publication a short comment, noting both its strengths and points of discussion that require a different view. By collecting this information, the editors form an annual impact rating of published articles.

The results of this post-review allow the editor to manage the content and thematic focus of new issues of the journal effectively.

Respondents' suggestions concerning the promotion and development of the journal are an important outcome of the annual expert evaluation of the journal. Speaking about the practices of promoting the English version of the journal, O.V. Tret'yakova mentioned several directions that the journal's editors had implemented at the suggestion of foreign members of the Editorial Board and the editorial staff. For example, the editors arranged the distribution of the journal to foreign national libraries, and now it is represented in the collections of the Library of Congress and the German National Library of Economics. At the same time, participation in foreign conferences helps strengthen the journal's position in the international scientific community: for example, the journal acted as a "supporting journal" at the conferences in Italy, Slovenia, and Croatia. Moreover, the journal became an official partner of the European School of Social Innovation, and the experience it acquired in the course of direct cooperation with ESSI is of considerable importance, as well.

Summing up, O.V. Tret'yakova named the factors that ensure the effectiveness of expert assessment in a scientific journal; the main one is to implement this assessment on a system basis.

T.A. Lapina – executive editor of the journal *Vestnik Omskogo universiteta. Seriya "Ekonomika"* (Herald of Omsk University. Series Economics) – continued speaking on the topic related to the implementation of effective management principles. Her presentation was devoted to the difficulties in and prospects for the development of a regional journal. In this case, the main difficulties are often caused by the absence of goal-setting in the journal and, as a consequence, by chaotic actions of the editor, which can hardly be called a development strategy. From the standpoint of promotion, the journal strives to be as accessible to authors and readers as possible; in this regard, it adheres to the principles of open access, guarantees free publication and openness of content in the ELS, databases and repositories. Mostly these advantages drew the attention of the participants of a survey conducted by the journal's editors in 2018. On the other hand, the journal already has good performance indicators in the RSCI and strives to move forward and meet the requirements of ISDB. Perhaps now this is already enough to improve the application of effective practices of managing a journal.

* * *

The participants of the section thanked the speakers for the applied nature of their reports, due to which it became possible to share practical experience in the course of the discussion. The speakers expressed the general opinion that, despite new challenges and threats, Russian editors constantly get new opportunities to promote and develop the tools for managing their publication effectively. The reports offered specific cases on the development of journal administration practices and its promotion in the international scientific community.

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Public Opinion Monitoring of the State of the Russian Society

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

The following tables show the dynamics of several parameters indicating the social feeling and socio-political sentiment of the Vologda Oblast population in the period from February 2018 (the beginning of the first year of V. Putin's fourth presidential term) to August 2019

We compare the results of the surveys with the data for 2007 (the last year of V. Putin's second presidential term, when the assessment of the President's work was the highest), 2011 (the last year of Dmitry Medvedev's presidency) and 2012 (the first year of V. Putin's third presidential term).

We also provide yearly dynamics of the data for the last two years (2017–2018).

In June – August 2019, the level of approval of the work of the President of the Russian Federation did not change significantly: the share of positive assessments is 56%, the share of negative assessments is 28–29%.

The dynamics of public opinion concerning the performance of the head of state show no tangible changes since April 2019 (that is, during the latest three surveys). It was then that we saw the reversal of the negative trend of reducing the share of positive judgments caused primarily by the reaction of society to the changes in the pension legislation (during the period from June 2018 to April 2019, the share of positive assessments of the President's work decreased by 14 p.p., from 70 to 56%; however, since April 2019 it has been stable at 56%).

[1] The polls are held six times a year in Vologda, Cherepovets, and in eight districts of the oblast (Babayevsky District, Velikoustyugsky District, Vozhegodsky District, Gryazovetsky District, Kirillovsky District, Nikolsky District, Tarnogsky District and Sheksninsky District). The method of the survey is a questionnaire poll by place of residence of respondents. The volume of a sample population is 1,500 people 18 years of age and older. The sample is purposeful and quoted. The 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%.

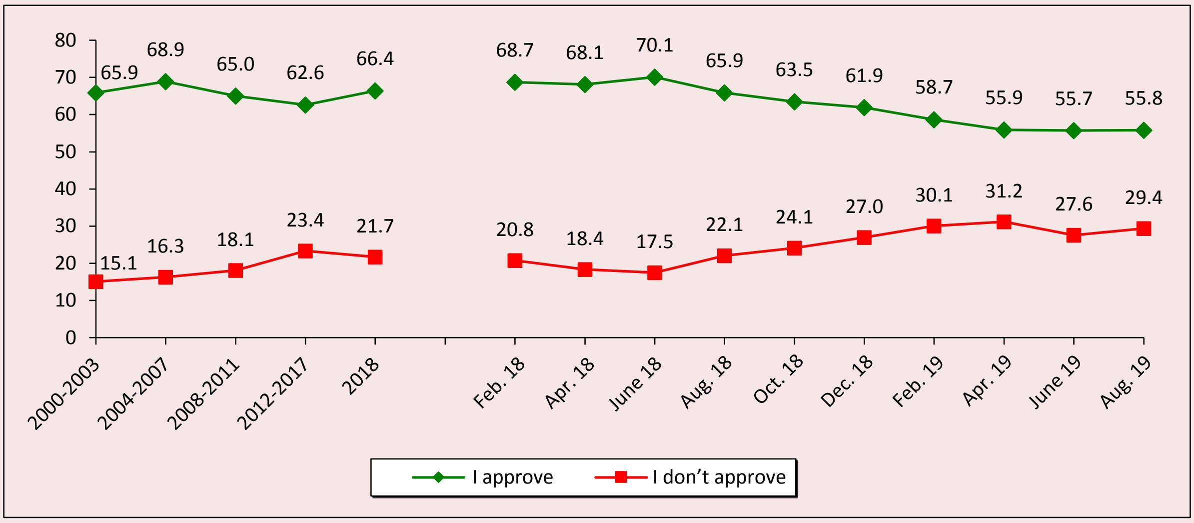
More information on the results of VolRC RAS polls is available at http://www.vscc.ac.ru/.

For reference

According to VTsIOM, the share of positive assessments in June – August 2019 nationwide was 64%, negative – 27–28% (for comparison: in February 2018, the level of approval of the President's activities, according to VTsIOM, was 78%, the level of disapproval was 12%[2]).

According to Levada-Center, support for the President's work in June – July 2019 was 68%, the share of negative judgments was 28% (for comparison: in February 2018, the share of positive assessments of the President's work, according to Levada-Center, was 76%, negative – 22%).

In general, do you approve or disapprove of the work of the President of Russia? (% of respondents)*



* Here and further, the tables and graphs present the data of VolRC RAS on the results of the monitoring of public opinion conducted in the Vologda Oblast.

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

Answer	2007	2011	2012	2017	2018	Feb. 2018	Apr. 2018	June 2018	Aug. 2018	Oct. 2018	Dec. 2018	Feb. 2019	Apr. 2019	June 2019	Aug. 2019	Dynamics (+/-) Aug. 19 to… June 19	Feb. 18
Chairman of the RF Government*																	
I approve	-*	59.3	49.6	49.5	48.0	48.3	49.9	52.0	47.4	45.2	45.3	41.6	38.8	40.9	43.1	+2	-5
I don't approve	-	24.7	33.3	31.1	31.6	30.8	27.8	27.5	31.9	34.8	36.9	39.3	40.2	38.0	36.3	-2	+6
Governor																	
I approve	55.8	45.7	41.9	39.8	38.4	39.3	39.5	40.5	37.3	35.7	38.3	36.5	34.7	35.4	36.1	+1	-3
I don't approve	22.2	30.5	33.3	39.3	37.6	37.9	36.1	35.3	36.9	39.1	40.3	41.5	41.4	38.6	38.5	0	+1
* Included in the survey since 2008.																	

[2] It should be noted that in February 2018, VTsIOM conducted a telephone survey (apparently in connection with the upcoming presidential election). To compare the current indicators, it is more correct to analyze the results of the January survey, according to which the share of positive assessments of the President's work was 83%, negative – 11%.

Over the past two months, the share of Vologda Oblast residents who believe that the President is successfully coping with the problems of strengthening Russia's international positions (51–52%), restoring order in the country (45–46%), protecting democracy and strengthening citizens' freedoms (35-36%) has remained virtually unchanged.

At the same time, the assessments of the success of the work of the head of state aimed at economic recovery and increasing the welfare of citizens worsened slightly: the share of positive judgments decreased from 29 to 26%, the proportion of negative judgements increased from 58 to 60%.

In general, as of August 2019, the share of positive assessments of the President's activities to address the country's key issues is 4–6 percentage points lower than in February 2018 and the average for 2017 and 2018.

In your opinion, how successful is the RF President in coping with challenging issues?* (% of respondents)

Answer	2007	2011	2012	2017	2018	Feb. 2018	Apr. 2018	June 2018	Aug. 2018	Oct. 2018	Dec. 2018	Feb. 2019	Apr. 2019	June 2019	Aug. 2019	Dynamics (+/-) Aug. 19 to…	
																June 19	Feb. 18
Strengthening Russia's international standing																	
Successful	58.4	46.2	43.1	55.7	54.2	55.2	56.1	55.6	53.3	51.3	53.5	51.5	50.2	51.9	51.0	-1	-4
Unsuccess-ful	24.9	33.7	37.9	26.8	28.4	26.9	26.9	26.7	29.1	30.7	30.3	31.7	32.7	30.3	30.6	0	+4
Success index	*133.5*	*112.5*	*105.2*	*129.0*	*125.7*	*128.3*	*129.2*	*128.9*	*124.2*	*120.6*	*123.2*	*119.8*	*117.5*	*121.6*	*120.4*	*-1*	*-8*
Imposing order in the country																	
Successful	53.2	36.6	35.4	50.6	51.1	50.9	54.2	55.1	51.0	48.5	46.9	44.2	42.4	44.5	46.1	+2	-5
Unsuccess-ful	34.0	50.0	50.7	36.1	35.0	32.7	30.8	32.9	36.2	37.9	39.5	40.7	42.6	39.3	39.3	0	+7
Success index	*119.2*	*86.6*	*84.7*	*114.5*	*116.1*	*118.2*	*123.4*	*122.2*	*114.8*	*110.6*	*107.4*	*103.5*	*99.8*	*105.2*	*106.8*	*+2*	*-11*
Protecting democracy and strengthening citizens' freedoms																	
Successful	44.4	32.4	28.8	40.3	40.5	42.8	42.9	43.4	39.8	37.3	36.5	33.5	32.3	34.6	35.5	+1	-7
Unsuccess-ful	37.0	48.3	52.3	40.2	40.2	38.7	37.1	38.1	41.4	42.7	43.3	45.3	47.7	45.5	46.1	+1	+7
Success index	*107.4*	*84.1*	*76.5*	*100.2*	*100.2*	*104.1*	*105.8*	*105.3*	*98.4*	*94.6*	*93.2*	*88.2*	*84.6*	*89.1*	*89.4*	*0*	*-15*
Economic recovery and increase in citizens' welfare																	
Successful	47.2	30.7	28.5	29.3	31.0	31.0	31.3	32.3	30.6	30.6	29.9	28.1	28.1	29.1	26.5	-3	-5
Не успешно	39.1	56.1	57.9	56.9	56.2	53.7	55.3	55.2	58.3	57.2	57.6	56.9	58.2	57.8	59.7	+2	+6
Success index	*108.1*	*74.6*	*70.6*	*72.4*	*74.7*	*77.3*	*76.0*	*77.1*	*72.3*	*73.4*	*72.3*	*71.2*	*69.9*	*71.3*	*66.8*	*-5*	*-11*

* Ranked according to the average value of the index of success for 2018.

In June – August, the structure of people's preferences concerning political parties did not change: the United Russia party is supported by 34–35%, LDPR and the Communist Party – by 9–11%, the Just Russia party – by 3–4%.

We should note that in comparison with the first half of 2018 (February–June), of all parliamentary parties, only United Russia has lost its positions (a decrease of 4–5 percentage points, from 38–39 to 34–35%)

In June – August 2019, the share of Vologda Oblast residents who believe that none of the parties represented in Parliament reflects their interests was 32%. It is less than in April 2019 (35%), but more than in early 2018 (29%) and also more than average annual estimates for 2017 and 2018 (29%).

Which party expresses your interests? (% of respondents)

Party	2007	2011	Election to the RF State Duma 2011, fact	2012	2016	Election to the RF State Duma 2016, fact	2017	2018	Feb. 2018	Apr. 2018	June 2018	Aug. 2018	Oct. 2018	Dec. 2018	Feb. 2019	Apr. 2019	June 2019	Aug. 2019	Dynamics (+/-) Aug. 19 to… June 19	Dynamics (+/-) Aug. 19 to… Feb. 18
United Russia	30.2	31.1	33.4	29.1	35.4	38.0	34.7	37.9	38.4	39.7	38.9	38.1	36.5	36.0	34.6	33.3	34.8	33.5	-1	-5
LDPR	7.5	7.8	15.4	7.8	10.4	21.9	11.0	9.6	10.1	9.6	9.7	9.7	9.7	8.8	8.9	8.2	9.1	10.5	+1	0
KPRF	7.0	10.3	16.8	10.6	8.3	14.2	7.6	9.2	7.1	8.1	8.7	10.3	11.1	9.9	9.1	8.0	8.5	8.7	0	+2
Just Russia	7.8	5.6	27.2	6.6	4.2	10.8	4.8	2.9	3.5	2.5	2.3	2.7	3.4	2.8	2.9	2.9	2.5	3.9	+1	0
Other	1.8	1.9	–	2.1	0.3	–	0.5	0.7	0.9	1.2	0.5	0.6	0.4	0.4	0.6	0.3	0.3	0.4	0	-1
None	17.8	29.4	–	31.3	29.4	–	29.2	28.5	28.8	26.2	26.7	28.5	29.0	31.9	34.2	34.7	32.3	32.1	0	+3
It's difficult to answer	21.2	13.2	–	11.7	12.0	–	12.2	11.2	11.1	12.7	13.3	10.0	9.9	10.2	9.7	12.6	12.4	10.9	-2	0

Like two months earlier, in August 2019, the proportion of residents of the Oblast who positively characterize their daily mood was 71%. The proportion of those who believe that “everything is not so bad; it’s difficult to live, but it’s possible to stand it” in was 77–78% in June – August.

At the same time, it is difficult to assess positively the lack of changes in the dynamics of self-assessments of the standard of living and quality of life of the population. Over the past two months, the proportion of people who subjectively classify themselves as “poor and extremely poor” was 46–47% (this is more than the proportion of those who consider themselves to have “average income” – 43%).

In fact, the consumer sentiment index for the entire period from February 2018 to August 2019 varies from 89 to 92 points (that is, less than 100 points), which indicates the prevalence of pessimistic judgments in the estimates of the population regarding the future prospects of the Russian economy and their own financial situation.

Estimation of social condition (% of respondents)

Answer	2007	2011	2012	2017	2018	Feb. 2018	Apr. 2018	June 2018	Aug. 2018	Oct. 2018	Dec. 2018	Feb. 2019	Apr. 2019	June 2019	Aug. 2019	Dynamics (+/-) Aug. 19 to…	
																June 19	Feb. 18
Mood																	
Usual condition, good mood	63.6	63.1	67.3	70.4	71.2	68.6	71.5	72.5	72.5	71.3	70.7	68.0	68.8	71.4	70.9	-1	+2
I feel stress, anger, fear, depression	27.8	28.9	27.0	24.2	23.1	23.4	23.1	22.8	22.5	23.1	23.5	25.6	25.5	23.5	23.4	0	0
Stock of patience																	
Everything is not so bad; it’s difficult to live, but it’s possible to stand it	74.1	74.8	76.6	77.7	77.1	76.2	79.0	76.5	78.0	75.7	77.1	74.3	76.7	78.0	76.8	-1	+1
It’s impossible to bear such plight	13.6	15.3	15.8	15.8	16.3	16.3	14.8	16.6	15.5	17.1	17.5	19.1	17.5	16.5	16.2	0	0
Social self-identification*																	
The share of people who consider themselves to have average income	48.2	43.1	44.7	43.1	42.3	41.2	41.8	43.1	43.3	42.8	41.6	43.8	41.3	43.3	42.9	0	+2
The share of people who consider themselves to be poor and extremely poor	42.4	44.3	44.5	46.6	45.4	46.2	46.5	45.3	44.1	45.4	44.7	44.8	46.9	45.8	47.0	+1	+1
Consumer sentiment index																	
Index value, points	105.9	89.6	91.5	84.6	89.9	89.2	90.3	92.2	89.2	89.2	89.1	90.1	90.0	91.2	91.8	+1	+3

* Question: “Which category do you belong to, in your opinion?”

Over the past two months, the proportion of people who positively characterize their mood has not changed significantly in most socio-demographic groups.

The proportion of positive assessments among people 30–55 years of age increased slightly (by 4 p.p., from 70 to 74%).

At the same time, we point out negative changes among the residents of the Oblast over 55 years of age (the share of people with “good mood; normal condition”, decreased by 7 p.p., from 67 to 60%), as well as among people with secondary vocational education (by 5 p.p., from 77 to 72%)

We should also note that in two of the 14 analyzed socio-demographic groups for the period from February 2018 to August 2019, the share of positive assessments of social mood decreased significantly: among people over 55 years of age (by 5 p.p., from 66 to 61%) and among people with higher and incomplete higher education (by 4 p.p., from 78 to 74%)

Social mood in different social groups (answer: “Good mood, normal condition”, % of respondents)

Population group	2007	2011	2012	2017	2018	Feb. 2018	Apr. 2018	June 2018	Aug. 2018	Oct. 2018	Dec. 2018	Feb. 2019	Apr. 2019	June 2019	Aug. 2019	Dynamics (+/-) Aug. 19 to…	
																June 19	Feb. 18
Sex																	
Men	65.9	64.5	69.1	70.6	72.8	71.0	73.4	74.5	73.9	70.8	73.4	69.9	68.6	72.1	71.8	0	+1
Women	61.7	62.0	65.8	70.2	69.8	66.6	70.0	70.9	71.3	71.8	68.4	66.4	69.0	70.8	70.1	-1	+4
Age																	
Under 30	71.3	70.0	72.3	78.1	80.0	74.2	79.6	81.3	77.9	85.1	81.6	76.3	81.2	82.9	85.2	+2	+11
30-55	64.8	62.5	67.9	71.5	72.6	68.8	74.0	75.1	74.9	70.9	71.6	68.0	71.5	70.5	74.0	+4	+5
Over 55	54.8	58.3	62.1	64.9	65.2	65.6	64.2	64.7	66.5	65.4	64.7	64.3	59.8	67.4	60.7	-7	-5
Education																	
Secondary and incomplete secondary	58.4	57.4	57.2	63.6	64.8	60.5	65.5	64.8	66.5	63.8	67.8	61.5	60.4	64.4	65.6	+1	+5
Secondary vocational	64.6	63.6	66.7	72.0	72.2	68.9	72.7	74.9	72.6	73.5	70.5	68.6	73.0	77.3	72.8	-5	+4
Higher and incomplete higher	68.6	68.3	77.0	75.8	76.8	77.9	76.2	77.4	78.4	76.5	74.1	73.8	73.3	72.1	73.9	+2	-4
Income groups																	
Bottom 20%	51.6	45.3	51.5	52.9	57.3	47.7	61.8	60.0	53.1	59.6	61.3	50.4	56.1	54.9	53.2	-2	+6
Middle 60%	62.9	65.3	68.7	72.0	71.9	70.3	71.7	72.3	74.5	73.1	69.7	67.2	69.9	74.1	72.1	-2	+2
Top 20%	74.9	75.3	81.1	83.7	82.9	82.2	81.5	85.5	83.4	81.3	83.4	86.2	81.0	81.0	81.4	0	-1
Territories																	
Vologda	63.1	67.1	73.6	72.6	71.0	71.0	73.5	75.4	70.4	68.8	67.1	65.5	68.5	70.3	68.0	-2	-3
Cherepovets	68.1	71.2	76.2	75.7	75.8	71.5	75.0	76.7	79.1	77.7	74.5	71.1	67.8	72.1	74.4	+2	+3
Districts	61.6	57.1	59.8	66.1	68.7	65.6	68.3	68.6	69.8	69.2	70.5	67.6	69.6	71.7	70.5	-1	+5
Oblast	63.6	63.1	67.3	70.4	71.2	68.6	71.5	72.5	72.5	71.3	70.7	68.0	68.8	71.4	70.9	-1	+2

Conclusion

According to the results of the monitoring, there have been no tangible positive trends in the dynamics of public opinion on key issues characterizing the situation in the country. From about April to June 2019, the following indicators remain stable:

✓ the level of support for the head of state (56%) and United Russia (34%);

✓ the share of positive assessments of psychological well-being (71%) and the stock of patience (77%);

✓ the share of Vologda Oblast residents who relate themselves to the category of people with middle income (43%), and consumer expectations of the population (consumer sentiment index is 91–92 points).

One could say that in the summer months of 2019 it became possible to overcome the negative trend of declining support for the President, which was observed for nearly a year (from June 2018 to April 2019), and was caused by a negative perception of the pension reform (let us recall that over this period the proportion of positive assessments of the President's work decreased by 14 p.p., from 70% to 56%, and negative – increased by 13 p.p. from 18 to 31%).

However, first of all, it should be noted that the summer months – the period of holidays and working at private subsidiary plots – is not the most representative period to draw long-term conclusions. Second, it is not clear yet, which monitoring indicators must be changed so that we could see tangible positive changes: so far, there are no stable positive trends either in the head of state finding solutions to the key problems of the country, or in the dynamics of self-assessments of the financial situation, or in the trends of social mood. Finally, third (and most important), we must not forget what goals the state and society had to achieve at the beginning of the current political cycle: so far, it is only about preserving the legitimacy of the government, but not about "a decisive breakthrough in the well-being of our people"[3].

Against the backdrop of skeptical forecasts of experts on the tangibility of the implementation of national projects[4], worrying expectations about an imminent (perhaps this year) recession of the Russian economy[5], as well as pessimistic official statistics indicating the absence of positive changes in the dynamics of the standard of living and quality of life[6], the probability that in the

[3] Presidential Address to the Federal Assembly of the Russian Federation, March 1, 2018. *Official website of the RF President*. Available at: http://www.kremlin.ru/events/president/news/56957

[4] See, for example:

Why trillions of spending on national projects do not improve the situation. *Ekho Moskvy*, April 9, 2019. Available at: https://echo.msk.ru/blog/openmedia/2404337-echo/; Simchera V., Kalitin P., Averyanov V. *At the break of generations. Human "capital" or human "ballast"?* Available at: http://zavtra.ru/blogs/na_izlome_pokolenij; An extended meeting of the Regional Council of "OPORA Russia", March 22, 2019. *Official website of "OPORA Russia"*. Available at: http://opora.ru

[5] Titov's experts predicted a recession in 2019. *RBK Website,* August 5, 2019. Available at: https://www.rbc.ru/economics/05/08/2019/5d443a6d9a79470cb3c28cbc?utm_source=yxnews&utm_medium=desktop

[6] According to official statistics, the share of Vologda Oblast residents with monetary income below the subsistence minimum is growing for the third year in a row: in 2016 – 13.4%; in 2017 – 13.6%; in 2018 – 13.8%. In the first quarter of 2019, real wages amounted to 96.4% of the level of the fourth quarter 2018; real disposable monetary income – 78.1%. The consumer price index at the same time increased slightly: 101.5% in the first quarter of 2019 to the fourth quarter of 2018 (source: territorial office of the Federal State Statistics Service in the Vologda Oblast. Available at: http. //vologdastat.gks.ru; *Socio-economic situation in the Vologda Oblast in January – June 2019: report.* Vologdastat. Vologda, 2019. 83 p.). In the first quarter of 2019, real wages amounted to 96.4% of the level of the fourth quarter of 2018; real disposable monetary income was 78.1%.

autumn-winter period, public opinion the assessments will begin to deteriorate is quite high. And so far, we can only guess what the pace of these negative trends may be.

Under the circumstances, it is extremely important to achieve the goal set out by the President: "this year people should feel real changes for the better"[7]. Speaking at a meeting of the Council for Strategic Development and National Projects, V. Putin noted: "People are not interested in abstract promises. The result is what matters for people, here and now, not in some distant future. In any case, people should see that the process is underway, that it is positive and leads to these results"[8].

Will this ideological, but, at the same time, quite specific, message of the head of state addressed, first of all, to the ruling elites responsible for implementation of national projects, be realized; or will this target once again "sink" in the sea of bureaucratic excuses, interpretations and manipulations with statistical data? Further measurements of the public opinion monitoring will show.

The materials were prepared by M.V. Morev, I.V. Paranicheva, I.M. Bakhvalova.

[7] Presidential Address to the Federal Assembly of the Russian Federation, February 20, 2018. *Official website of the RF President*. Available at: http://www.kremlin.ru/events/president/news/59863

[8] The meeting of the Council for Strategic Development and National Projects, May 8, 2019. Available at: http://www.kremlin.ru/events/president/news/60485

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[1] Information about the modified Harvard standard is given in the book: Kirillova O.V. *Redaktsionnaya podgotovka nauchnykh zhurnalov po mezhdunarodnym standartam: rekomendatsii eksperta BD Scopus* [Editorial Preparation of Scientific Journals according to International Standards: Recommendations of a Scopus Expert]. Moscow, 2013. Part 1. 90 p.

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