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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) is the only unit of the Academy on the territory of the Vologda Oblast. The history of the Center started in 1990 from a Department of the Institute for Economic Studies of the Kola Science Centre of RAS on studying the problems of socio-economic development of the Vologda Oblast. Since then the Center has undergone manifold transformations. In 1993 it became an independent subdivision – the Vologda Scientific Coordinating Center of RAS. In 2009 it transformed into the Institute of Socio-Economic Development of Territories of RAS (ISEDT RAS).

In 2017 the socio-economic research was supplemented by agricultural issues. ISEDT RAS was joined by the Northwestern Dairy and Grassland Farming Research Institute, and was reorganized into the Vologda Research Center of the Russian Academy of Sciences.

In 2019 the Center continued expanding having launched the Laboratory of Bioeconomics and Sustainable Development within the framework of the national project "Science". The Laboratory is engaged in scientific research aimed at introducing biotechnologies into the practice of agriculture.

The VolRC RAS Director is Aleksandra A. Shabunova (Doctor of Economics). The Academic Leader of the Center is Vladimir A. Ilyin (RAS Corresponding Member, Doctor of Economics, Professor, Honored Worker of Science of the Russian Federation).

MAIN RESEARCH DIRECTIONS

In accordance with the Charter, the Vologda Research Center carries out fundamental, exploratory and applied research 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;
- development of scientifically based systems of dairy cattle breeding in the conditions of the North-Western region of Russia;
- development of new breeding methods, methods and programs for improving breeding work with cattle;
- development of scientifically based feed production systems, norms, rations and feeding systems for cattle in the conditions of the North-Western region of Russia;

- development of zonal technologies for the cultivation of agricultural crops;
- development of technologies for the creation, improvement and rational use of hayfields and pastures in the conditions of the North-Western region of Russia;
- development of technologies and technical means for agricultural production in the North-Western region of Russia;
- assessment of biodiversity in the North-Western region of Russia;
- development and implementation of biotechnologies in agricultural production;
- improvement of breeding methods and creation of new varieties of forage crops.

INTERNATIONAL TIES AND PROJECTS

VolRC RAS is actively developing its international activities. It is involved in joint international grant projects and regularly holds international conferences and workshops. The Center has Cooperation agreements and Memoranda of understanding with research organizations:

2007 – Cooperation agreement is signed with the 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 the Institute of Economics of the National Academy of Sciences of Belarus (Minsk, Belarus, 2010).

2011 – Cooperation agreements are signed with National Institute of Oriental Languages and Civilizations (Paris, France, 2011), Institute of Business Economy at Eszterhazy Karoly College (Hungary, 2011), Republican research and production unitary enterprise "Energy Institute of NAS" (Belarus, 2011). Memoranda of understanding 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 – Memorandum of understanding 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 agreement is signed with Center for System Analysis and Strategic Research of the National Academy of Sciences of Belarus (Belarus, 2014). Memoranda of understanding are signed with Jiangxi Academy of Social Sciences (Mao Zhiyong, China, 2014), National Institute for Oriental Studies INALCO (Julien Vercueil, France, 2014).

2015 – Memorandum of understanding is signed with Jiangxi Academy of Social Sciences (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 the Center for the Study of Industrialization Modes of the School of Advanced Studies in the Social Sciences (EHESS) (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). Memoranda of understanding are signed with Jiangxi Academy of Social Sciences (China, 2016).

2018 – Cooperation agreements are signed with the Department of Agrarian Sciences of the National Academy of Sciences of Belarus (Belarus, 2018); the Republican Unitary Enterprise "Scientific and Practical Center of the National Academy of Sciences of Belarus for Agricultural Mechanization" (Belarus, 2018). Memorandum of understanding is signed with the European School of Social Innovation (ESSI) (Germany, 2018).

2019 – Memorandum of understanding is signed with Jiangxi Academy of Social Sciences (China, 2019).

2020 – Memorandum of understanding is signed with Jiangxi Academy of Social Sciences (China, 2020).

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EDITORIAL

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The Russian Federation in the First Quarter of the 21st Century. The President Has Set Tasks until 2030

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Abstract. March 15–17, 2024, the presidential election will be held in Russia. The election will take place in a very specific context due to the ongoing special military operation, aggravating threats to national security posed by NATO countries, and a range of internal changes that Russia has been going through since the beginning of the special military operation. Against the background of the alarming situation around Russia, the RF President delivered his annual Address to the RF Federal Assembly on February 29, 2024; he presented a program of actions and specific public policy measures for the next six years (until 2030). The Address had certain aspects reminding of an election speech and was intended not only for government bodies at all levels of public authority, but also the broad strata of Russian society. In fact, the head of state outlined the contours of Russia's future for the next political cycle, and this is important amid uncertainty and a high level of risks that the country is facing at

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the present historical moment (after the start of the SMO). The article presents our own approach to analyzing the current situation in the country (including the 2024 presidential election), based on our long-term monitoring of public administration effectiveness, the system-wide nature of which is determined by the comprehensiveness of the empirical base (analysis of national and regional statistics, including those of own compilation; sociological surveys, analysis of expert assessments and key decisions taken by the President and the RF Federal Assembly). Scientific novelty of the study lies in a comprehensive analysis of the effectiveness of public administration during Vladimir Putin's first four presidential terms (2000–2024), that is, during the first quarter of the 21st century. In this context, we analyze general goals, objectives, and principles of public administration formulated by Vladimir Putin as he assumed office as president for the first time; key initiatives and decisions he adopted in order to address the tasks set; internal and external conditions in which the head of state had to achieve national development goals; key stages that the country went through over the past 23 years; and the main results with which it "approached" the beginning of a new political cycle.

Key words: 2024 presidential election, Address to the Federal Assembly of the Russian Federation, national development goals, civilizational crisis, sovereignty, national identity.

February 29, 2024, Russian President Vladimir Putin delivered his annual Address to the Federal Assembly of the Russian Federation, which (as experts noted) became **"one of the most powerful presidential addresses in recent years"**[1]. "Vladimir Putin has clearly set Russia's priorities on the world stage, our goals and interests, development strategy and the future of the world order"[2].

Addressing the Federal Assembly and the citizens of the country as a whole, Vladimir Putin stressed that "even during the most difficult periods, Russia has never given up on addressing its fundamental imperatives, has always thought about the future, and we must do the same now"[3].

In 2024, the Presidential Address has a special significance for the country.

> **"The primary purpose of every Address to the Federal Assembly is to offer a forward-looking perspective.** Today, we will discuss not only our short-term plans**, but also our strategic objectives** and matters which, I believe, are **instrumental in ensuring steady long-term development for our country"**[4].

First, it has some features of an election campaign speech: on March 15–17, 2024, the presidential election will be held in Russia, and the assessments of almost all experts, as well as opinion polls, indicate that Vladimir Putin will be second-to-none.

[1] The time of heroes. Experts on the main theses of Vladimir Putin's Address: An opinion of political scientist Yu. Baranchik. Available at: https://dzen.ru/a/ZeCW4uD3O2gHCJ-s

[2] Russia acts as a driver for the formation of a future just world order: An opinion of V. Shapovalov, project manager of the Expert Institute for Social Research. Available at: https://vz.ru/news/2024/2/29/1255873.html

[3] Presidential Address to the Federal Assembly, February 29, 2024. Available at: http://www.kremlin.ru/events/president/news/73585

[4] Ibidem.

According to VCIOM, 76% of Russians plan to participate in the presidential election, while 75% are going to vote for Vladimir Putin[5].

"The presidential election is, doubtless, the crucial political event in the life of the country. And it may sound dramatic, but the 2024 election will have **global importance.** It will be watched all over the world – by our friends and by our so-called partners...

The upcoming election will be unique, because never in recent history have we been at such a difficult and, perhaps, fateful phase in the country's life... We can assume that the upcoming campaign will be one of the defining moments in the process of forming an **updated value framework of Russian society.** The country will choose both the president and the **long-term semantic and ideological trend of its future life...** Of course, Vladimir Putin will have competitors, but their role has already been largely **predetermined by the situation"**[6].

This is largely why (or, in part, as an indication of the importance of complying with the Law on Strategic Planning[7]) "the program of actions and concrete measures" voiced in the Presidential Address was considered "in the horizon of the next six years"[8] (2024–2030; *Insert 1*).

Second, the main feature of the latest Presidential Address consists in the fact that the election of the head of state in 2024 will be held **in a very special context** due to the SMO (which has been going on for two years) and the unprecedented threats to Russia's national security from NATO member states. This circumstance makes the results of the vote so important: indeed, the country, as experts note, "will choose both the president and the **long-term semantic and ideological trend of its future life**"[9].

The acute phase of the Russia–NATO conflict, into which our country was drawn as a result (there is no denying that) of a rather successful U.S. strategy to foment a de facto civil war between fraternal Slavic peoples, takes place not only on the battlefield, but also in all spheres of life:

[5] Russian presidential election 2024: The first rating. VCIOM analytical review. February 10, 2024. Available at: https://wciom.ru/analytical-reviews/analiticheskii-obzor/vybory-2024-reitingi-kandidatov

[6] RIA-novosti. December 10, 2023 (an opinion of K. Kostin, head of the Civil Society Development Fund). Available at: https://ria.ru/20231210/vybory-1914947523.html

[7] Federal Law 172-FZ, dated June 28, 2014 (amended February 17, 2023) "On strategic planning in the Russian Federation" assumes the development and adjustment of key strategic planning documents **every six years**. Such documents include:

- ✓ Strategy for socio-economic development of the Russian Federation (Article 16),
- ✓ National Security Strategy of the Russian Federation (Article 18),
- ✓ Long-term forecast of socio-economic development of the Russian Federation (Article 24),
- ✓ Main activities of the Government of the Russian Federation (Article 27),
- ✓ Plan of actions for the federal executive authority (Article 31),
- ✓ Forecast of socio-economic development of the constituent entity of the Russian Federation (Article 33).

[8] Presidential Address to the Federal Assembly, February 29, 2024. Available at: http://www.kremlin.ru/events/president/news/73585

[9] RIA-novosti. December 10, 2023 (an opinion of K. Kostin, head of the Civil Society Development Fund). Available at: https://ria.ru/20231210/vybory-1914947523.html

Insert 1

Some key goals and objectives planned for the next six years (by 2030)[10]

- ✓ **Poverty level in Russia should be below 7%; among large families, it should decrease more than twofold, at least to 12%;**
- ✓ **maternity capital and the family mortgage program should be prolonged;**
- ✓ **life expectancy in Russia should reach at least 78 years;**
- ✓ by 2030 to complete the major repairs of all schools; to open 12 leadership-level educational schools, 25 university campuses; to carry out major repairs of about 800 dormitories of higher education institutions and universities;
- ✓ **minimum wage in Russia should reach 35 thousand rubles;**
- ✓ **total investments of the state and business in research and development should be more than doubled, their share should reach 2% of GDP;**
- ✓ **to increase investments in science by private business at least twofold;**
- ✓ **the volume of production of the Russian agro-industrial complex should grow by at least a quarter compared to 2021, exports should increase 1.5-fold;**
- ✓ **by 2030 it is necessary to create digital platforms in all key sectors of the economy and social sphere;**
- ✓ **to fix the main tax parameters until 2030 and thereby ensure stable and predictable conditions for the implementation of any, including long-term, investment projects;**
- ✓ by 2030 to restore at least a thousand cultural heritage sites, to improve more than 30 thousand public spaces;
- ✓ by 2030 to allocate 4.5 trillion rubles for the modernization of municipal infrastructure;
- ✓ **by 2030 the tourist flow should double and reach 140 million people per year; at the same time, the contribution of tourism to Russia's GDP will also double to 5%;**
- ✓ **by 2030 the intensity of air traffic in Russia should increase by one and a half times the level of last year;**
- ✓ **to prepare a draft budget for the next three years and make up all the main expenses and investments further – for the period up to 2030;**
- ✓ in the next six years more than a trillion rubles will be additionally allocated for the construction, repair and equipping of healthcare facilities;
- ✓ extension of the Priority 2030 Program until 2030, aimed at supporting the potential and quality of the higher school and universities;
- ✓ **the share of Russian high-tech goods and services in the domestic market over the next six years should increase 1.5-fold and the volume of non-primary, non-energy exports by at least two thirds;**
- ✓ **in the next six years the level of gross value added of the Russian manufacturing industry should increase by at least 40% compared to 2022;**
- ✓ average income per employee in the field of small and medium-sized business in the next six years should grow faster than the rate of GDP growth;
- ✓ to allocate at least 700 billion rubles for the implementation of the Data Economy project in the next six years;
- ✓ **allocate more than 100 billion rubles for educational, historical and other popular creative projects in cinema, on the Internet and social medias;**
- ✓ over the past 16 years one million 730 thousand people have moved into new apartments; in the next six years it is important not to reduce the dynamics; the Government should prepare and launch a new program for the resettlement of emergency housing;
- ✓ at least 50 sites with high environmental risks (the most dangerous objects of accumulated environmental damage) should be eliminated.

[10] Presidential Address to the Federal Assembly, February 29, 2024. Available at: http://www.kremlin.ru/events/president/news/73585

politics, economics and, most importantly, culture, in the field of moral values. In this sense, one cannot but agree with experts who claim that this conflict is of a **civilizational nature**. "Now Russia is facing not only a traditional military and political challenge, but also a threat **at the level of identity and history, which determines the existential nature of the current conflict**"[11].

This is also evidenced by numerous public statements made by western politicians since the beginning of the SMO and revealing the true goals of the Collective West: the goals that have nothing to do with "protecting democracy in Ukraine"; the goals that imply "cancelling Russia" and "inflicting a strategic defeat on Russia".

"In order to effectively confront the West in the war of civilizations that Russia is already involved in, it is necessary to take into account the hierarchy of plans. The highest level is identity:

– what is the identity of the enemy (who are we fighting?);

– what is our own identity;

– what is the identity of other civilizational actors?

It is necessary to start with the above civilizational map... **only a civilizational approach allows us to talk about sovereign public consciousness, and, therefore, about sovereign science and sovereign education...** This is a final warning for Russian humanities: either we move quickly to the paradigm of a civilizational approach (Russia = sovereign civilization), or we write a letter of dismissal"[12].

In the Editorial section of our journal, we regularly present the opinions of experts (such as A. Dugin, A. Fursov, etc.) who adhere to the civilizational approach, considering the history of Russia's development in the context of the **centuries-old** confrontation between the Russian and the Anglo-Saxon civilizations.

"The Western elite make no secret of their goal, which is, I quote, 'Russia's strategic defeat'... **This means they plan to finish us once and for all**"[13].

"The whole of geopolitics is based on the consideration of the eternal confrontation between the civilization of the Sea (thalassocracy) and the civilization of the Land (tellurocracy). Vivid expressions of these principles in ancient times were found in the confrontations of land-based Sparta and the harbor city of Athens, land-based Rome and the maritime Carthage... As politics became global, these two civilizations finally acquired a spatial embodiment. Russia – Eurasia became the core of the Land civilization, and the pole of the Sea civilization became entrenched in the zone of Anglo-Saxon influence: from the British Empire to the United States and the NATO bloc. **This is how geopolitics sees the history of the latest centuries..."**[14]

"Our task is to survive and preserve ourselves as a special socio-cultural type, as a special variant of civilization... **the survival and preservation of the population, the preservation of us as a socio-cultural type, a special historical one, which is at least a thousand years old. This is, if you like, a national idea. But I would say it is a civilizational idea"**[15].

[11] Yakovenko A.V. The world in the horizon of 2040. Horizon 2040. November 14, 2023. P. 475. Official website of the Agency for Strategic Initiatives. December 29, 2023. Available at: https://asi.ru/library/main/198226/

[12] Dugin A.G. Civilizational approach. Available at: https://zavtra.ru/blogs/tcivilizatcionnij_podhod

[13] Presidential Address to the Federal Assembly, February 21, 2023. Available at: http://www.kremlin.ru/events/president/news/70565

[14] Dugin A.G. Ukraine as an Armageddon field. Available at: https://izborsk-club.ru/24378

[15] What awaits Russia. Opinion of Andrey Fursov. Available at: https://proza.ru/2022/07/26/404

However, the specifics of our approach lies in analyzing the transformation of the Russian state and society over a more limited historical period of time: in the post-Soviet period, or, rather, during Vladimir Putin's presidential terms (from 2000 to the present), largely because this period of time is taking place "here and now", "before our eyes", and we are not just researchers of the past, but direct participants in the current events.

Considering this phase in Russia's history (national and global events; key decisions made by the President; processes taking place in the public administration system; dynamics of public sentiment, etc.), we see that the 2024 presidential election is important not only in in the context of the events taking place after February 24, 2022; it is also a critical stage in the **entire historical development of the Russian Federation over the past 24 years and a foundation for its further development in the coming decades.**

It is worth noting that if Vladimir Putin wins the upcoming election, this will be one of the longest periods in the history of Russia when one and the same person is the head of state[16]. If such a period is interrupted, this may cause another "trauma" in society, like it was after the collapse (or rather the demise) of the USSR, a purposeful act orchestrated by the United States within the framework of the Cold War, with direct participation of Russian elites who committed national betrayal in the 1986–1990s.[17]

Objective data from official statistics clearly demonstrate the extent and depths of social implications of the "trauma", which is putting the very existence of the country at risk *(Tab. 1, 2)*.

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[16] Only six people in the history of Russia ruled the country for 30 years or more:
Ivan IV Vasilyevich (Ivan the Terrible) (January 16, 1547 – March 18, 1584; 37 years);
Mikhail Fedorovich Romanov (February 21, 1613 – July 13, 1645; 32 years);
Alexey Mikhailovich (July 13, 1645 – January 29, 1676; 31 years);
Peter the Great (April 27, 1682 – October 22, 1721; ruled jointly with Ivan V until 1696; 39 years);
Catherine II (Catherine the Great) (June 28, 1762 – November 6, 1796; 34 years);
Joseph Stalin (April 3, 1922 – March 5, 1953; 31 years).

[17] In our opinion, comprehensive information about this is presented in the newspaper Pravda in its section "Disguises of werewolves" which publishes materials of interviews with RAS Corresponding Member Zh.T. Toshchenko. The purpose of these articles (according to the section contributors) is "to consider the personal historical guilt of especially odious traitors [Yeltsin, Kalugin, Yakovlev, Sobchak, Nemtsov, etc.], **which has no statute of limitations…**". Some issues of the section are as follows:

1. Political nonentity. *Pravda*, 2021, no. 69, July 2–5.
2. Disguises of werewolves. *Pravda*, 2021, no. 93, August 27–30.
3. "Shock therapist" Gaidar acted recklessly and mercilessly. *Pravda*, 2022, no. 20, February 25–28.
4. How many people remember who Burbulis is? *Pravda*, 2022, no. 28, March 18–21.
5. This Kozyrev used other people's trumps in his game. *Pravda*, 2022, no. 40, April 15–18.
6. Berezovsky's Diaboliad. *Pravda*, 2022, no. 64, June 17–20.
7. The abyss of betrayal – Alexander Yakovlev. *Pravda*, 2022, no. 91, August 19–22.
8. An insidious knife in the back of state security. *Pravda*, 2022, no. 106, September 23–26.
9. He became a murderer of his country. *Pravda*, 2022, no. 108, October 1–4.
10. Sobchak is a narcissistic talker and poseur. *Pravda*, 2022, no. 114, October 15–18.
11. The Nemtsov family outdid Khlestakov himself. *Pravda*, 2022, no. 132, November 25–28.

Table 1. Dynamics of the spread of some social pathologies in Russia in 1990–1999, per 100 thousand people

Indicator	1990	1999	Dynamics, 1999 to 1990, %
Suicide death rate	26.4	39.3	149
Homicide death rate	14.3	26.2	183
Death rate from accidental alcohol poisoning	10.8	20.5	190
Incidence of drug addiction and substance abuse	4.3	43.0	1000
Number of persons who committed a crime, thousand people	897.3	1716.7	191
Source: Federal State Statistics Service.			

Table 2. Dynamics of the standard of living indicators (1994–1999)

Indicator	1994	1999	Dynamics, %
Number of people with incomes below the subsistence level, million people	33.3	43.8	132
Number of people with incomes below the subsistence level, % of the population	22.4	29.9	133
Unemployment rate, % of the economically active working age population	8.2	13.0	159
Source: Federal State Statistics Service.			

We should emphasize that the main cause of the "traumatization" of Russian society in the late 1980s and early 1990s was the very collapse of the USSR, which (as Zh.T. Toshchenko points out) **"disrupted the progressive development of the state and society"**[18].

"Progressive development of the state and society" is a feature that can be applied to modern Russia. The unified management style implemented by Vladimir Putin since 2000 and up to the present allows us to consider the past 24 years **as a separate historical phase in Russia's development.** This period has its own goals and objectives; it is united by the basic principles of government. It has its own periodization, logic of development, and its own results, as well (so far, they are intermediate).

> "The radical changes that took place in Soviet/Russian society during perestroika and then in the 1991–2000s caused the emergence and consolidation **of new traumatic features (characteristics) of public consciousness... First of all, there was a disorientation and disorganization of public consciousness...** Of particular importance... was its **traumatization, expressed in a split, bifurcation, inconsistency and conflict of development"**[19].

The **goals and objectives** of national development were outlined by the President back in 1999 in his first program article "Russia at the turn of the Millennium", in which Vladimir Putin noted: "The chances for a decent future are as follows: **the Russian idea, a strong state and an efficient economy**"[20].

These guidelines, although they seem rather broad, actually became the basis for Vladimir Putin's practical actions, concrete legislative decisions taken by the head of state and the Federal Assembly of the Russian Federation throughout the period from 2000 to the present *(Insert 2)*.

[18] Toshchenko Zh.T. (2015). *Phantoms of Russian Society.* Moscow: Center for Social Forecasting and Marketing. Pp. 19, 37.

[19] Ibidem.

[20] Russia at the turn of the Millennium. *Nezavisimaya gazeta*. December 30, 1999. Available at: https://www.ng.ru/politics/1999-12-30/4_millenium.html

Insert 2

Key decisions taken by the RF President during the period from 2000 to the present, for the implementation of the three national development goals outlined in the article "Russia at the turn of the Millennium"

GOAL – THE "RUSSIAN IDEA" (DIRECTION / OBJECTIVES: RESTORING PUBLIC TRUST IN THE GOVERNMENT, STRENGTHENING THE NATIONAL IDENTITY OF RUSSIAN SOCIETY)
April 4, 2005 – Federal Law 32 "On the Civic Chamber of the Russian Federation". The RF Civic Chamber and civic councils have been established.
September 5, 2005 – the launch of priority national projects in the Russian Federation was announced; the purpose of the projects was to concentrate budgetary and administrative resources in the main areas of socio-economic development (October 21, 2005, the Council for the Implementation of Priority National Projects was formed under the head of state for the purpose of developing measures aimed at the implementation of national projects).
January 1, 2006 – Russia started the implementation of four national projects: "Health", "Affordable and comfortable housing for Russian citizens", "Education", and "Development of the agro-industrial complex (AIC)".
June 28, 2007 – Presidential Decree 825 "On evaluating the effectiveness of the executive authorities of constituent entities of the Russian Federation". For the first time, the list of criteria for evaluating the effectiveness of the work of executive authorities was supplemented by assessment of the degree of satisfaction on the part of the population.
May 6, 2011 – RF President proposed the formation of the All-Russian Popular Front.
March 21, 2014 – Federal Law "On ratification of the treaty between the Russian Federation and the Republic of Crimea on the admission of the Republic of Crimea to the Russian Federation and the formation of new constituent entities within the Russian Federation".
December 31, 2015 – Presidential Decree 683 "On the National Security Strategy of the Russian Federation". For the first time, it is indicated that the main task is to prevent threats from NATO (USA).
June 25 – July 1, 2020 – all-Russian vote on amendments to the Constitution; 77.9% of voters (57.7 million people) voted for changing the Constitution.
July 2, 2021 – a new National Security Strategy was adopted (in which, as experts noted, for the first time, the system of national values or moral and spiritual values was "prominently marked ... and ideological leadership, which is necessary in the world, is designated as a separate priority"[21]).
July 30, 2021 – Interdepartmental Commission on Historical Education was created.
December 17, 2021 – the website of the Russian Foreign Ministry posted Russian draft documents on ensuring legal guarantees of security by the United States and NATO; the documents contain the following provision (Article 4): "The Russian Federation and all the Parties that were member States of the North Atlantic Treaty Organization as of 27 May 1997, respectively, shall not deploy military forces and weaponry on the territory of any of the other States in Europe in addition to the forces stationed on that territory as of 27 May 1997". These and other demands for security guarantees from Russia were ignored by the United States and NATO countries, as they announced through the media on January 26, 2022.
February 24, 2022 – in his address to Russians, the RF President announced the beginning of a special military operation on the territory of Ukraine.

[21] An opinion of A. Podberezkin, director of the MGIMO Center for Military and Political Studies (source: Experts assessed the changes in the national security strategy signed by Putin. Available at: https://www.rbc.ru/politics/03/07/2021/60e0a1c79a7947a36edadc3d).

Continuation of Insert 2

July 14, 2022 – Federal Law 261 "On the Russian Movement of Children and Youth".
July 31, 2022 – the Naval Doctrine of the Russian Federation and the Naval Charter of the Navy were approved.
October 4, 2022 – federal constitutional laws 5–8 on the entry into the Russian Federation of four new constituent entities (DPR, LPR, Zaporozhye and Kherson regions).
November 9, 2022 – Presidential Decree 809 "On approval of the foundations of state policy for the preservation and strengthening of traditional Russian spiritual and moral values".
January 25, 2023 – Decree 808 "On amendments to the fundamentals of state cultural policy approved by Presidential Decree dated December 24, 2014".
February 28, 2023 – Federal Law "On amendments to the federal law on the state language of the Russian Federation".
March 31, 2023 – Presidential Decree 229 "On approval of the Foreign Policy Concept of the Russian Federation".
June 24, 2023 – Federal Law 264 "On amendments to the federal law "On education in the Russian Federation'".
GOAL – "STRONG STATE" (DIRECTION / OBJECTIVES: STRENGTHENING THE VERTICAL OF POWER AND INTERNAL POLITICAL SITUATION IN THE COUNTRY; STRENGTHENING THE STATE'S DEFENSE CAPABILITY)
May 13, 2000 – Presidential Decree 849 "On the Plenipotentiary Representative of the President of the Russian Federation in the federal district". The Northwestern, Central, Siberian, Volga, Southern, Far Eastern, and Ural federal districts were formed. In 2010, the North Caucasus Federal District was added to them.
December 1, 2000 – a decree was signed on the establishment of the Committee of the Russian Federation for Military-Technical Cooperation with Foreign States (KVTS) – the federal executive authority for the regulation and control of arms exports (in 2004, KVTS was reorganized into the Federal Service for Military-Technical Cooperation under the Ministry of Defense of the Russian Federation; State Defense Order – into the Federal Service for Defense Order under the Ministry of Defense of the Russian Federation)
March 23, 2003 – the Constitution of Chechnya was adopted, a referendum was held on draft laws on the election of the President and Parliament of the Republic. As a result, "all constituent entities of the federation were returned to a single legal field and started functioning as a single organism"[22].
October 6, 2003 – Federal Law 131 "On the general principles of organizing local self-government in the Russian Federation". A uniform territorial organization of local self-government was established for all constituent entities of the Russian Federation.
March 20, 2006 – the Military-Industrial Commission under the Government of Russia was formed.
March 1, 2007 – Rosoboroneksport became the single state mediator in military-and-technological cooperation.

[22] Reliance on the majority of Russians. March 28, 2023 (an assessment by E. Bulychev, arbitrator of the Arbitration Center at the Russian Union of Industrialists and Entrepreneurs, member of the Academic Council and head of the Department of Research on Administrative Law Problems at the Eurasian Research Institute of Law Problems). Available at: https://ufa.bezformata.com/listnews/opora-na-bolshinstvo-rossiyan/115663442/

Continuation of Insert 2

June 8, 2012 – Federal Law 65-FZ "On amendments to the Code of Administrative Offences of the Russian Federation and the Federal Law 'On assemblies, rallies, demonstrations, marches and picketing"'. The maximum fines for violations at mass rallies were increased.
July 21, 2012 – "Law on NPOs – foreign agents".
July 30, 2012 – Federal Law "On amendments to the Criminal Code of the Russian Federation and certain legislative acts of the Russian Federation" ("defamation law").
August 2012 – Since this year, experts have noted the emergence of the "Politburo 2.0." in the public administration system, which is characterized as "a conglomerate of clans and groups that compete with each other for resources... inside Putin's "big government"[23].
From 2014 to 2017, there were a number of "high-profile" criminal cases against officials of various levels: on November 14, 2016, for the first time in the history of Russia, acting Minister of Economic Development A. Ulyukayev was detained. Governors V. Yurchenko (Novosibirsk Region, 2014), A. Khoroshavin (Sakhalin, 2015), N. Denin (Bryansk Region, 2015), V. Gaizer (Komi, 2015), N. Belykh (Kirov Region, 2016), A. Solovyov (Udmurtia, 2017), etc. were also arrested.
January 21, 2020 – the new Cabinet of Ministers under the leadership of M.V. Mishustin started working. Out of 11 deputy and first deputy prime ministers there are only three people from the previous team.
June 4, 2021 – Federal Law 157 "On amendments to Article 4 of the Federal Law "On basic guarantees of electoral rights and the right to participate in a referendum for citizens of the Russian Federation" and Article 4 of the Federal Law "On elections of deputies of the State Duma of the Federal Assembly of the Russian Federation". The Federal Law officially prohibits extremist organizations from participating in elections, which in fact "nullified" the activities of Navalny's headquarters*
March 4, 2022 – Federal Law 31 "On amendments to the Code of Administrative Offences of the Russian Federation" and Federal Law 32 "On amendments to the Criminal Code of the Russian Federation and Articles 31 and 151 of the Criminal Procedure Code of the Russian Federation". Administrative liability was established for public actions aimed at discrediting the Armed Forces of Russia, and criminal liability for the public dissemination, under the guise of reliable reports, of deliberately false information containing data on the use of the Armed Forces of Russia.
July 14, 2022 – Federal Law 255 "On control over the activities of persons under foreign influence".
September 21, 2022 – Decree "On the announcement of partial mobilization in the Russian Federation".
September 24, 2022 – Federal Law 365 "On amendments to the Criminal Code of the Russian Federation and Article 151 of the Criminal Procedure Code of the Russian Federation". The Criminal Code of the Russian Federation is supplemented with the terms "mobilization", "martial law" and "wartime" (penalties are tightened in appropriate periods); new articles "Voluntary surrender" (Article 352.1; from 3 to 10 years of imprisonment) and "Looting" (Article 356.1; up to 15 years).
November 27, 2023 – Federal Law 555 "On amendments to the Federal Law on the state defense order"'. A federal product cataloging system for federal needs is being created.

[23] "Vladimir Putin's Big Government and the Politburo 2.0": The report by Minchenko Consulting Communication Group. August 2012. Available at: https://minchenko.ru/analitika/?curPos=65

* The activities of Navalny's headquarters are recognized as extremist and banned in the territory of the Russian Federation.

End of Insert 2

GOAL – "EFFICIENT ECONOMY" (DIRECTION / OBJECTIVES: STRENGTHENING ECONOMIC SOVEREIGNTY, IMPROVING THE STANDARD OF LIVING AND QUALITY OF LIFE)
January 1, 2001 – a flat scale for income tax with a rate of 13% was introduced (which, 20 years later, the head of the Government of the Russian Federation called "a revolutionary and tough decision for that time"[24]).
2001 – Vladimir Putin proposed to create a reserve of funds from oil and gas revenues.
January 1, 2002 – amendments were made to the Tax Code of the Russian Federation (a tax on mining was introduced), which forced the oligarchic clan to share its income with the state, as a result of which by 2002 budget revenues increased to 2204.7 billion rubles, that is, 3.6-fold, compared with 1999.
2004 – the Stabilization Fund was established, which provided additional stability to public finances.
May 7, 2012 – 11 "May decrees" of the RF President containing more than 2,018 instructions to the Government of the Russian Federation
June 15, 2012 – Decree "On the Commission under the President of the Russian Federation on the development strategy for the fuel and energy complex and environmental safety".
June 18, 2012 – Presidential Decree 859 "On the Council under the President of the Russian Federation for economic modernization and innovative development of Russia".
May 7, 2018 – Presidential Decree 204 "On national goals and strategic objectives of the development of the Russian Federation for the period up to 2024".
July 21, 2020 – Decree on the national development goals of Russia until 2030.
May 3, 2022 – Presidential Decree 252 "On the application of retaliatory special economic measures in connection with unfriendly actions of some foreign countries and international organizations".
December 31, 2022 – Presidential Decree 996 "On additional social guarantees for military personnel and persons with special police ranks undergoing military service (service) in the troops of the National Guard of the Russian Federation, and their family members".
April 3, 2023 – Presidential Decree 232 "On the creation of the state fund "Defenders of the Fatherland" to support participants in the special military operation".
September 11, 2023 – Presidential Decree 669 "On monthly compensation payments to certain categories of military personnel".
January 15, 2024 – Decree 36 "On amendments to Presidential Decree 1666, dated December 19, 2012 "On the Strategy for the state national policy of the Russian Federation for the period up to 2025" and to the Strategy approved by this Decree".
January 23, 2024 – Decree 63 "On measures of social support for large families".

[24] Mishustin called the introduction of a flat personal income tax scale revolutionary. Available at: https://www.rbc.ru/rbcfreenews/602a28b79a79479e34c54db0

The facts presented in *Insert 2* indicate that all the key management decisions made by Vladimir Putin over the past 24 years were aimed at the implementation of the guidelines he had announced at the very beginning of his work as president.

And during the same period, he publicly announced the **principles of public administration** that he was guided by throughout his presidential terms: **personal responsibility and state interests**.

> "In Russia **the head of state has always been and will always be the person who is responsible for everything** in the country... my work will be guided **solely by the interests of the state. Perhaps it will not be possible to avoid mistakes,** but what I can promise and what I do promise is that I will work openly and honestly"[25].

We should note that these principles manifested themselves not in the public rhetoric of the head of state, but in practice, when the President had to deal with one of the most "painful" issues at that time – the power of the oligarchs.

February 28, 2000 (in fact, on the eve of the presidential election held on March 26), Vladimir Putin announced to the "high and mighties" the principle of "equidistance of all market entities from power". He stressed that nothing can be done in the country without creating "absolutely equal conditions" for all market participants and participants in the game on the political stage; and that this is "essentially the **process of creating a new image of the country**".

> "We believe that all the players in politics and the economy **must have a level playing field so that nobody can gain any advantages by cozying up to the authorities from the left or the right...** Nothing can be accomplished without solving this issue. That is why the building of a legal structure and the fight against corruption take on such importance. This is not just routine work in the law enforcement field. It is, in effect, about **creating a new image of the country"**[26].

At the same meeting, the oligarchs received a clear signal that work should be conducted around **the national idea, rather than a particular political figure;** this dealt a blow to the very essence of the so-called "semibankirshchina"[27], the most notorious representatives of which were subsequently either arrested or ousted from the country.

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[25] Vladimir Putin's speech at the Inauguration Ceremony, May 7, 2000. Available at: http://www.kremlin.ru/events/president/transcripts/21399/videos

[26] Vladimir Putin's opening address at a meeting with high-level campaign workers, February 28, 2000. Available at: http://www.kremlin.ru/events/president/transcripts/24146

[27] The term *"semibankirshchina"* ("seven bankers") was used in the Russian media in 1996 and several subsequent years to name a group of the largest representatives of the Russian financial business (oligarchs) who played a significant political and economic role, owned the media, and informally united, despite internal disagreements, in order to ensure the re-election of Boris Yeltsin for the next term in the 1996 presidential election.

November 1, 1996, an interview with Boris Berezovsky was published in the *Financial Times* newspaper, in which he named seven people who control **more than 50% of the Russian economy** and jointly influence **the adoption of the most important domestic political decisions in Russia:**

1. Vladimir Potanin (ONEXIM Bank),
2. Vladimir Gusinsky (Most-bank),
3. Mikhail Khodorkovsky* (MENATEP),
4. Pyotr Aven (Alfa-bank),
5. Mikhail Fridman (Alfa-bank),
6. Alexander Smolensky (Capital Savings Bank, since 1997 – SBS-Agro),
7. Boris Berezovsky (United Bank).

According to some media, *semibankirshchina* also included Vladimir Vinogradov (Inkombank) and Vitaly Malkin (Russian Credit) (source: https://ria.ru/20111108/483944714.html)

* Included in the register of foreign agents.

"I don't think our campaign should center around a concrete political figure; instead, we **should effectively unite around a political theme, around ideas** that appeal to the majority of the country's people"[28].

The principle of "hands-on control" manifested itself throughout virtually all of Vladimir Putin's presidential terms:

- ✓ in the very nature of the public administration system, which experts called "Politburo 2.0" in 2012[29], and in which the President plays the role of "chief arbiter";
- ✓ in making a decision on the accession of Crimea and Sevastopol to the Russian Federation (2014);
- ✓ in the amendments to the Constitution of the Russian Federation initiated by the head of state, which required, among other things, a change of the Government (2020)[30];
- ✓ during the COVID-19 pandemic;
- ✓ and, of course, in making a decision to start the SMO and in Vladimir Putin's actions in the subsequent period, when he, as "the person responsible for everything in the country", was required to fulfill the role of not only the head of the public administration system, but also the supreme commander-in-chief, and the national leader around whom society is consolidating.

Thus, the goals, objectives, practical actions and principles that guided Vladimir Putin over the past 24 years were formulated and publicly announced at the very beginning of his presidential activity, and today they form the unity of the historical process within which the country was developing during this period.

Moreover, the progression of Russia's historical development was preserved, even though the external and internal conditions were changing, and the world itself changed dramatically.

"...both Russia and the world have seen drastic, and even **dramatic, colossal changes.** Twenty years is not a long period by historical standards, but during eras when **the entire world order is crumbling,** time seems to shrink... **More events have taken place in the past 20 years than over decades in some historical periods before, and it was major changes that dictated the fundamental transformation of the very principles of international relations"**[31].

[28] Vladimir Putin's opening address at a meeting with high-level campaign workers, February 28, 2000. Available at: http://www.kremlin.ru/events/president/transcripts/24146

[29] "Vladimir Putin's Big Government and the Politburo 2.0": The report by Minchenko Consulting Communication Group. August 2012. Available at: https://minchenko.ru/analitika/?curPos=65

[30] Voting on amendments to the Constitution took place between June 25 and July 1, 2020 (78% of voters, or 58 million people, voted in favor of amending the country's Basic Law). But for the first time, it was the President of the Russian Federation who made this initiative during his annual Address to the Federal Assembly of the Russian Federation on January 15, 2020.

[31] Vladimir Putin's speech at the meeting of the Valdai International Discussion Club, October 5, 2023. Available at: http://www.kremlin.ru/events/president/transcripts/72444

The context in which the President implemented national development tasks prove that the **entire history of Russia over almost a quarter of a century has been the history of its struggle to strengthen national sovereignty, to revise the results of the Cold War and the positions the country had lost under the leadership of Mikhail Gorbachev and Boris Yeltsin, and a struggle against the Collective West trying to hamper this process.**

1. "For a country like Russia, existence, **mere existence, is impossible without sovereignty. Without sovereignty, Russia would cease to exist"**[32].

2. "...I think this is important for everyone that **no enduring international order is possible without a strong and sovereign Russia"**[33].

"The concentration of power in the hands of Yeltsin and his clique has led to a **historical disaster**. It brought about the **death of almost 10 million people** who did not survive the "reforms" of the 1990s; the **collapse of most of the industry and agriculture; the loss of all foreign policy positions. This is, in fact, an external management regime,** when American advisers were sitting in Russia's ministries and dictating what to do and how to do it"[34].

In his recent public speeches, Vladimir Putin pointed out that in the early 2000s he tried to integrate Russia "into the family of so-called civilized countries", and "suggested Russia's accession to NATO" *(Insert 3)*.

However, the only Russia that was acceptable to the West and with which it could coexist was a Russia of the 1990s, or (in the words of Western politicians themselves) a "gas station masquerading as a country"[35]. The reasons for this (according to experts) are **"the unwillingness to deal with Russian Federation as a global competitor, the desire at all costs to preserve the formal and informal rules of the game that were established in 1987–1994 and that are unilaterally beneficial for the Collective West"**[36].

"The so-called West, with its colonial practices and penchant for inciting ethnic conflicts around the world, not only seeks to impede our progress but also **envisions a Russia that is a dependent, declining, and dying space where they can do as they please"**[37].

The President found such a Russia unacceptable, and he openly stated this, **addressing the Western political establishment directly** on February 10, 2007, during his speech at the Munich Security Conference: "Russia is a country with a history that spans more than a thousand years and has practically always used the privilege to carry out an independent foreign policy. **We are not going to change this tradition today...**"[38]

[32] Results of the year with Vladimir Putin, December 14, 2023. Available at: http://www.kremlin.ru/events/president/news/72994

[33] Presidential Address to the Federal Assembly, February 29, 2024. Available at: http://www.kremlin.ru/events/president/news/73585

[34] Afonin Yu. Yeltsin is a traitor and the personification of catastrophes. Available at: https://kprfrzn.ru/analitika/jurij-afonin-elcin-predatel-i-olicetvorenie-katastrof

[35] U.S. Senator John McCain. Available at: https://russian.rt.com/inotv/2014-03-16/Makkejn-Rossiya---eto-benzokolonka

[36] Belousov D.R. Socioculture-2040: A challenge to the integrity of society – a view from the side of technology development. *Horizon 2040*. P. 391. Official website of the Agency for Strategic Initiatives. December 29, 2023. Available at: https://asi.ru/library/main/198226/

[37] Presidential Address to the Federal Assembly, February 29, 2024. Available at: http://www.kremlin.ru/events/president/news/73585

[38] Vladimir Putin's speech at the Munich Security Conference, February 10, 2007. Available at: http://www.kremlin.ru/events/president/transcripts/24034

Insert 3

Excerpts from public speeches by Russian President Vladimir Putin on attempts to build peaceful relations with NATO countries

1. "...I've already said that, no secret here, **we did offer every option to our Western partners, as I used to call them, we thought we were one of them, we wanted to be in the family of so-called civilized nations.** I reached out to NATO suggesting that we look into that possibility, but we were quickly shown the door; they didn't even bother to consider it"[39].

2. "I have said this publicly to both our allies and partners. There was a moment when I simply suggested: **perhaps we should also join NATO? But no, NATO does not need a country like ours.** No. I want to know, what else do they need? We thought we became part of the crowd, got a foot in the door. What else were we supposed to do? **There was no more ideological confrontation. What was the problem? I guess the problem was their geopolitical interests and arrogance towards others. Their self-aggrandizement was and is the problem"**[40].

3. "...The second point is a very important one. I want you as an American citizen **and your viewers to hear about this as well.** The former Russian leadership assumed that the Soviet Union had ceased to exist and therefore there were no longer any ideological dividing lines. Russia even agreed, voluntarily and proactively, to the collapse of the Soviet Union and believed that this would be understood by the so-called (now in scare quotes) "civilized West" as an invitation for cooperation and associateship. That is what Russia was expecting both from the United States and the so-called Collective West as a whole ...after 1991, when Russia expected that it would be welcomed into the brotherly family of "civilized nations," nothing like that happened... Well, I became President in 2000. I thought: okay, the Yugoslav issue is over, but we should try to restore relations. **Let's reopen the door that Russia had tried to go through.** And moreover, I've said it **publicly**, I can reiterate. At a meeting here in the Kremlin with the outgoing President Bill Clinton, right here in the next room, I said to him, I asked him, "Bill, do you think if Russia asked to join NATO, do you think it would happen?" Suddenly he said: "You know, it's interesting, I think yes." But in the evening, when we had dinner, he said, "You know, I've talked to my team, no-no, it's not possible now." You can ask him, I think he will watch our interview, he'll confirm it. I wouldn't have said anything like that if it hadn't happened. Okay, well, it's impossible now.... **I asked the question, "Is it possible or not?" And the answer I got was no... If he had said yes, the process of rapprochement would have commenced, and eventually it might have happened if we had seen some sincere desire on the part of our partners. But it didn't happen"**[41].

[39] Vladimir Putin's meeting with war correspondents, June 13, 2023. Available at: http://www.kremlin.ru/events/president/news/71391/videos

[40] Vladimir Putin's speech at the meeting of the Valdai International Discussion Club, October 5, 2023. Available at: http://www.kremlin.ru/events/president/transcripts/72444

[41] Vladimir Putin's interview to Tucker Carlson, February 9, 2024. Available at: http://www.kremlin.ru/events/president/news/73411

Subsequent events (the 2008 war in Georgia, mass protests in 2011 – early 2012[42], which were fueled by the Western media[43] and which occurred exactly when Joe Biden failed to persuade the then Russian President Dmitry Medvedev to run for a second term so as to prevent the possibility of Vladimir Putin becoming president for the third term[44], the 2014 coup d'etat in Ukraine) – **all these were attempts by the Collective West to stop the process of strengthening Russia's national sovereignty.**

Since the very beginning of his work as president, Vladimir Putin was focusing on strengthening national defense capability, the vertical of power and the national identity of Russian society. Thus, he understood that the **Collective West would not be able to accept Russia's sovereignty so easily** because its hatred (or maybe even fear) toward the successor of the USSR runs too deep; and the USSR represented an effective alternative to the liberal ideology of the Western "consumer society".

Here it will be appropriate to recall exactly how historical documents describe the U.S. foreign policy in relation to the Soviet leadership.

Excerpt from NSC 20/1: U.S. Objectives with Respect to Russia, August 18, 1948: *"Our basic objectives with respect to Russia are really only two:* ***a. To reduce the power and influence of Moscow...; b. To bring about a basic change in the theory and practice of international relations observed by the government in power in Russia..."***

December 15, 2021 (that is, 21 years after Vladimir Putin talked to Bill Clinton about the possibility of Russia joining NATO), the Ministry of Foreign Affairs of the Russian Federation handed over to the American side a draft treaty between the Russian Federation and the United States of America on security guarantees and an agreement on measures to ensure the security of the Russian Federation and Member States of the

[42] Here are some examples:

✓ the rallies on December 5 at Chistye Prudy and on December 10, 2011 on Bolotnaya Square in Moscow, according to estimates of the Moscow Police Department, gathered up to 25 thousand people;

✓ December 24, 2011, a protest rally on Sakharov Avenue gathered 29 thousand people;

✓ February 4, 2012, the rally "For Fair Elections" on Bolotnaya Square, according to various estimates, gathered from 36 thousand to 120 thousand participants;

✓ February 26, 2012, two protest actions called "The Great White Circle" and "Seeing Off Putin's Political Winter" took place in Moscow; according to various sources, from 11 to 34 thousand people took part in the action;

✓ March 5, 2012, a coordinated mass rally took place on Pushkin Square, from 14 to 30 thousand people participated in the rally;

✓ March 10, 2012, another rally was held on Novy Arbat. According to official data, about 10 thousand people participated in it, according to the organizers – 25 thousand people;

✓ May 6, 2012, the action "People's March" or "March of Millions" in Moscow gathered from 30 to 120 thousand people.

[43] Examples:

✓ White House press secretary Jay Carney called the rallies a positive sign of support for democracy in Russia;

✓ Reuters wrote that many were hurt by the castling in the tandem;

✓ The Washington Post believes that before the elections, the government made too many mistakes and the aura of invulnerability began to dissipate around Putin;

✓ The Los Angeles Times noted a huge number of cases of abuse of power;

✓ Le Figaro pointed out a popular question in Russia concerning the lack of an alternative to Vladimir Putin.

[44] "On the eve of the next presidential election in 2012, U.S. Vice President Joseph Biden paid a working visit to Moscow (March 9, 2011). According to experts, this demonstrated "the West's support for Dmitry Medvedev's potential candidacy for a second presidential term" or, in other words, was directed against Vladimir Putin's return to the post of President of the Russian Federation" (source: Will Joe Biden try to dissuade Vladimir Putin from running for president of the Russian Federation in 2012? Available at: http://www.moscow-post.com/politics/000129922924180/).

North Atlantic Treaty Organization. Moreover, as noted on the official website of the Russian Foreign Ministry, "the American side **was given the necessary explanations of the logic of the Russian approach in a detailed form, and the relevant arguments were presented**"[45].

In fact, it was another attempt to come to an agreement with the United States, like the one that the President had undertaken in the early 2000s. We may call it the **second proposal for peaceful coexistence of sovereign Russia and the Collective West.** But it was an attempt to reach an agreement at a **qualitatively different level**: it was not put forward by a "post-Yeltsin" Russia, but a stronger Russia, with a high level of consolidation of society around the President and patriotic values, with an amended Constitution, with a neutralized "fifth column", with a reviving military-industrial complex, with large-scale international relations...

Therefore, the nature of this attempt was appropriate – **from the standpoint of the national interests of sovereign Russia**, it was Putin's "ultimatum", as "dubbed" by the Western media (the American magazine *National Interest*)"[47]. In particular, one of the key conditions of this "ultimatum" was as follows (Article 4): "The Russian Federation and all the Parties that were member States of the North Atlantic Treaty Organization as of 27 May 1997, respectively, shall not deploy military forces and weaponry on the territory of any of the other States in Europe **in addition to the forces stationed on that territory as of 27 May 1997**"[48].

However, instead of looking for compromises[49], NATO countries put into effect their "Ukraine as an anti-Russia" plan, and our country was forced, **instead of just strengthening its national sovereignty, to defend it, and to fight for its preservation.**

> **"... we were doing everything in our power to solve this problem by peaceful means,** and patiently conducted talks on a peaceful solution to this devastating conflict. Behind our backs, a very different plan was being hatched. As we can see now, the promises of Western leaders, their assurances that they were striving for peace in Donbass turned out to be a sham and outright lies.... **Now they admit this publicly and openly, and they feel no shame about it...**
>
> In December 2021, we officially submitted draft agreements on security guarantees to the USA and NATO. In essence, all key, fundamental points were rejected. **After that it finally became clear that the go-ahead for the implementation of aggressive plans had been given and they were not going to stop"**[46].

[45] Official website of the Russian Foreign Ministry. A message to the media. December 17, 2021. Available at: https://www.mid.ru/ru/foreign_policy/news/1790809/

[46] Presidential Address to the Federal Assembly, February 21, 2023. Available at: http://www.kremlin.ru/events/president/news/70565

[47] Petrov G. NATO will discuss "Putin's ultimatum" collectively. Available at: https://www.ng.ru/world/2021-12-19/1_8330_nato.html

[48] Agreement on measures to ensure the security of the Russian Federation and member States of the North Atlantic Treaty Organization. December 17, 2021. Available at: https://mid.ru/ru/foreign_policy/rso/nato/1790803/

[49] January 26, 2022, U.S. Secretary of State A. Blinken stated that "the United States will not abandon the principle of 'open doors' in NATO" (source: Blinken: The United States will not abandon the principle of "open doors" in NATO. Available at: https://tass.ru/mezhdunarodnaya-panorama/13535663), and NATO Secretary General J. Stoltenberg noted: "We cannot compromise on the principles on which our security has been based for decades" (source: NATO and the United States rejected Russia's security proposals. How will Putin respond? Available at: https://www.business-gazeta.ru/article/537506).

Therefore, the inevitability of the SMO, its forced nature (which the President has always emphasized) is perhaps the main thing that one needs to know about Russia's position in this conflict. Vladimir Putin pointed out many times: "It was not us who started the so-called "war in Ukraine." On the contrary, we are trying to end it"[50].

"We were not the ones who started the war in Donbass, but, as I have already said many times, we will do everything to put an end to it"[51].

And, as we see, only a complete and in-depth analysis of the entire period of Vladimir Putin's presidential terms allows us to fully understand the essence of this inevitability: starting with his first steps to "equidistant" the oligarchs from power, through the 2007 Munich speech and the 2014 "Crimean Spring"; and, on the other hand, considering all the numerous attempts of the Collective West to stop the process of strengthening Russia's national sovereignty, to return it to the "semi-colonial" state in which it existed after the defeat in the Cold War and the collapse of the USSR in 1991.

Thus, schematically, the entire chronology of the stages that have led to the phase of active confrontation between Russia and NATO looks like this:

1. 2000 – rejection of Vladimir Putin's proposal to build partnership relations with the West.

2. February 10, 2007 – Vladimir Putin's Munich speech.

3. 2014 – *coup d'etat* in Ukraine. Accession of Crimea and Sevastopol to the Russian Federation[52] after a referendum held in Crimea on March 16, 2014[53]. "Crimean Spring".

4. 2021 – Russia's demands for security guarantees (in fact, Vladimir Putin's second attempt to build peaceful relations with the Collective West, which was also ignored).

5. February 24, 2022 – present – special military operation.

6. October 5, 2022 – admission of four new constituent entities to the Russian Federation – the Donetsk People's Republic, the Lugansk People's Republic, the Zaporozhye Region, and the Kherson Region[54].

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[50] Vladimir Putin's speech at the meeting of the Valdai International Discussion Club, October 5, 2023. Available at: http://www.kremlin.ru/events/president/transcripts/72444

[51] Presidential Address to the Federal Assembly, February 29, 2024. Available at: http://www.kremlin.ru/events/president/news/73585

[52] On the admission of the Republic of Crimea to the Russian Federation and the formation of new constituent entities within the Russian Federation – the Republic of Crimea and the Federal City of Sevastopol: Federal Constitutional Law 6-FZ, dated March 21, 2014. Available at: http://www.kremlin.ru/acts/bank/38220

[53] During the referendum on March 16, 2014, the majority of the population of the Crimean Peninsula (96.77%) voted in favor of reunification with Russia. According to the head of the Crimean referendum commission M. Malyshev, turnout was 83.1% (source: https://ria.ru/20150316/1052210041.html).

[54] A brief chronology of the accession of four new regions to the Russian Federation:

September 23–27, 2022, referendums on joining the Russian Federation were held on the territory of the DPR, LPR, Kherson and Zaporozhye regions. According to their results, 99.23% of residents of the Donetsk People's Republic voted for joining Russia; 98.42% of residents of the Lugansk People's Republic; 93.11% of residents of the Zaporozhye Region; 87.05% of residents of the Kherson Region.

September 29, 2022, Vladimir Putin signed the decrees recognizing the independence of the Zaporozhye and Kherson regions (decrees 685, 686).

September 30, 2022, a ceremony was held to sign agreements on the admission of the Donetsk People's Republic, the Lugansk People's Republic, the Zaporozhye Region and the Kherson Region to Russia and the formation of new constituent entities of the Russian Federation.

October 2, 2022, the Constitutional Court approved a package of documents on the admission of the Donetsk and Lugansk people's republics, the Kherson and Zaporozhye regions to Russia.

October 3, 2022, deputies of the State Duma of the Russian Federation unanimously ratified the relevant treaties on the admission of four new territories to Russia.

October 4, 2022 – the treaties on the accession of of the DPR, LPR, Kherson and Zaporozhye regions to the Russian Federation were ratified by the Federation Council.

October 5, 2022 – the President signed the relevant federal constitutional laws.

In addition, the process of strengthening Russia's national sovereignty, implemented by the RF President over the past 24 years, has been complicated not only by the situation in the international arena (regular attempts by the Collective West to interrupt this process), but also by the internal situation in the country, which can be called the "legacy of the 1990s": the presence of a significant number of high government officials, who (here we agree with many experts) can hardly be called "elites" *(Insert 4)*.

In his Address to the Federal Assembly, the President pointed out: "The word "elite" has lost much of its credibility. Those who have done nothing for society and consider themselves a **caste endowed with special rights and privileges... are definitely not the elite**"[55].

The so-called "elites" impede[56] the implementation of national projects, facilitate the inclusion of Russia in the Bologna education system, promote the optimization of healthcare, guide the activities of the Central Bank that receives instructions from the "global financial backstage" (as some experts have long noted)[57]; the "elites" are behind many other processes, which are also aimed at including Russia in the system of the Western world, **but with one caveat – on any terms, but without preserving national sovereignty.**

According to experts, before the start of the SMO, the President could only "slowly push aside the liberal 'coterie', but he could not oust it completely, so as not to quarrel with the West"[58].

"Former Russian Prime Minister Mikhail Kasyanov* has left Russia and now lives in Latvia. Deputy Prime Minister Aleksandr Dvorkovich has left for the United States. Israel was chosen as a place of residence by former deputy heads of government I. Klebanov, A. Khloponin and Ministers Ya. Urinson and M. Akimov. Former head of State Property A. Kokh lives in Germany. V. Khristenko has an apartment in Spain. Former Deputy Prime Minister O. Golodets lives in two countries, one of them is Spain. Former heads of the Presidential Administration of the Russian Federation live abroad (V. Voloshin, V. Yumashev with B. Yeltsin's daughter Tatyana), as well as former ministers and their deputies (A. Kozyrev, E. Skrynnik, A. Vavilov, I. Chuyan, A. Reimer, etc.), many former governors and their deputies, hundreds of federal government officials!"[59]

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[55] Presidential Address to the Federal Assembly, February 29, 2024. Available at: http://www.kremlin.ru/events/president/news/73585

[56] Extra money. Why is the implementation of national projects stalling in Russia. Available at: https://fedpress.ru/article/2407222

[57] See, for example:

"This is virtually a criminal act, those who did it would have been imprisoned long ago in a normal country" Glazyev is tough about the collapse of the ruble and the betrayal of the Central Bank. Available at: https://dzen.ru/a/ZNs82nPxV0kOhfFB;

Khazin M. The collapse of the ruble – a revolt of the elite? Available at: https://tsargrad.tv/news/specoperacija-cb-protiv-rublja-kurirovalas-izvne-cepochku-prosledil-hazin_847657;

The State Duma called the Bank of Russia a "foreign agent" because it is fulfilling the West's plan for the collapse of the ruble. Available at: https://newdaynews.ru/moscow/802765.html;

Katasonov V. The Central Bank is conducting subversive work inside Russia. Available at: https://news.rambler.ru/science/49211433-tsentrobank-vedet-podryvnuyu-rabotu-vnutri-rossii-ekonomist/

[58] Delyagin M.G. The second period of V. Putin's rule: The destruction of liberal myths. Available at: http://www.nakanune.ru/articles/17523/

[59] Toshchenko Zh.T. Old and new faces of betrayal. *Pravda*, 2023, no. 86, January 30.

* Included in the register of foreign agents.

Insert 4

Expert opinion on the quality of the modern (post-Soviet) "elites"

1. "A representative of the elite is not the one who has power or capital (and the more, the better), but the one who is characterized by the necessary set of civil **and moral qualities** that allow him/her, without discounts, affectations and deception, to be called a representative and bearer of **all the best that humanity has accumulated in the process of its development… there is no elite in today's (and yesterday's) Russia; it is out of the question.** The elite has been gone for a long time, nor is there any at present"[60].

2. "…if we consider the true features and aspirations of the modern ruling stratum in Russia, then we should first of all pay attention to three characteristics: two obvious ones – **the possession of power and capital,** and a hidden one – **the desire to rise above the people...** The main goal of such an "elite" is **to retain power under any circumstances, preserve and increase their wealth,** no matter what the cost"[61].

3. "The de facto model established in the early 1990s was a colonial system operating in the regime of external management. The 1993 Constitution was also written under these realities. **The comprador nature of the "elite" consisted in carrying out the function of mediator in dealing with the mother country…** in 2014–2022, many ties with the former mother country were severed. Some of the former compradors could not bear this breakup and fled the country, while **others remained, secretly dreaming of restoring the former intermediary relations**"[62].

4. "In modern Russia, that part of the elite, which historically formed as a **class of preferential trade and a "great throatful", remains the same at present and is not oriented toward pro-national changes**"[63].

5. "What do we see today? The most vocal haters of Russia, especially those who could be penalized by law enforcement agencies for various "exploits", left the country – good riddance. A negligible number of Western agents ... were, by coincidence, taken into custody. **But after all, the bulk of potential collaborators have been keeping a low profile and waiting in the woods, and everyone knows this…** Has the danger of returning to the old course, resuming the attempts to abandon all our new achievements and submit to the Western decision-making center, as it was in the late 1980s and early 1990s, been eliminated forever? Nothing of the sort! **In order to completely protect the country and the people from a new "perestroika", it is necessary to conduct a comprehensive purge of the state apparatus so as to rid it of officials who have or had foreign accounts and real estate abroad and are seen to be disloyal to the ideology of the special operation in Ukraine, and also by many other criteria…**"[64]

[60] Toshchenko Zh.T. (2008). *The Paradoxical Man: A Monograph*. 2nd edition, revised and supplemented. Moscow: UNITY-DANA. 543 p.
[61] Eremin V.I. Post-Soviet autocracy: Clan, nomenclature or elite? Available at: https://dzen.ru/a/Y3vqNgzH4Eh8K2El
[62] Bagdasaryan V. Order and power. Available at: https://izborsk-club.ru/23984
[63] Lepekhin V. The government, the elite and the people. From mobilization to modernization. Available at: https://centrasia.org/newsA.php?st=1676868480
[64] Sorokin N. Criteria of the future. Available at: https://zavtra.ru/blogs/kriterii_budushego

After February 24, 2022, when the situation changed dramatically and there was a surge in threats to national security, many representatives of the so-called 'elites', who did not see how they can link their personal lives with that of Russia, left the country on their own. As the President noted on March 16, 2022, the process of **"natural and necessary self-purification of society"** began in Russia[65].

At the same time, many experts started pointing out that the head of state should take more decisive steps toward the nationalization of the elites.

> "The state has done a lot to marginalize radical liberals. **This process began in 2000 and took 24 years** with several administrations changing. **The influence of the liberals on the ideology of Russia has steadily declined, but it remains very significant, primarily in culture, education and science.** Only liberals, or those who have not received clear and precise instructions from above, can fight **liberalism so uncertainly and for such a long time.** While just as steadily, but just as slowly – sometimes freezing in the same frame for a year or more – patriotism was rising. This was demanded by "Crimea Is Ours", and even more so by the SMO. But even here, the government acted as **cautiously and uncertainly** as it did with the dismantling of liberalism"[66].

However, while all the goals of the SMO have not yet been achieved ("demilitarization and denazification of Ukraine"[67]) and while agreements on peaceful (albeit "cold") coexistence with the Collective West have not been reached, it is hardly possible to solve the problem of nationalization of the elites.

First, the process of formation of new elites is still "stalling"[68] in Russia. As the President pointed out, a new Russian **elite must be formed from the participants of the special military operation.** "They should take leading positions in the system of education and upbringing of young people, in public associations, state-run companies and privately held businesses, federal and municipal administration. They should head regions and enterprises, as well as major national projects"[69] (to this end, in his Address to the Federal Assembly of the Russian Federation, the President announced a **new mechanism for the formation of managerial personnel – a special personnel program "Time of heroes"**).

> "... today I met with students who temporarily quitted studying, many of them went to the war zone – **it these people that should form the elite of the country in the future"**[70].

[65] Vladimir Putin's speech at the meeting on socio-economic support measures for regions, March 16, 2022. Available at: http://www.kremlin.ru/events/president/news/67996

[66] Dugin A. Drone-ideology for volunteers. Available at: https://zavtra.ru/blogs/dron-ideologiya_dlya_volonterov

[67] The address of the President of the Russian Federation to the Russians on February 24, 2022. Available at: http://www.kremlin.ru/events/president/transcripts/statements/67843

[68] Khaldey A. What is the nationalization of the elite? Available at: https://regnum.ru/news/polit/2606896.html

[69] Presidential Address to the Federal Assembly, February 29, 2024. Available at: http://www.kremlin.ru/events/president/news/73585

[70] Vladimir Putin's speech at the meeting on socio-economic development of Saint Petersburg metropolitan area, January 26, 2024. Available at: http://www.kremlin.ru/events/president/news/73329

"Starting March 1, 2024, the veterans of the special military operations, as well as soldiers and officers who are currently fighting in active units, will be able to apply to be in the first class of a **special personnel training program. Let us call it Time of Heroes.** This program will be built according to the standards of our best projects, namely, the Higher School of Public Administration, also known as the "school of governors," and the Leaders of Russia contest. Their graduates tend to reach high positions in many spheres, and even become ministers and heads of regions"[71].

Second (according to experts), the "personnel revolution from above" will lead to the "inevitable weakening of the state and the emergence of so many vulnerabilities that, under the current civilizational confrontation with the West, will give the latter a lot of opportunities to take advantage of the situation"[72].

Thus, today, after two years of the SMO, as well as on the eve of the presidential election, the situation inside and around Russia remains extremely tense:

✓ we see attempts to drag our country into a full-fledged war with NATO, without any reservations (at least, many Western politicians are actively "preparing" the population of their countries for such a scenario[73]);

✓ in this regard, the forecasts of many experts about the prospects for the use of nuclear weapons are becoming more alarming;

"In fact, everything is heading toward the use of nuclear weapons and, possibly, the destruction of humanity... Liberalism and its agenda have brought humanity to a dead end. Now the choice is either the liberals or humanity"[74].

"The main customers for the sovereignty strategy are Putin and several people in his entourage... the emergence of Putin and his group is not natural, but accidental, spontaneous. I**f Yeltsin's group had seen Putin through, they would never have chosen him. If there had been another person instead of Putin, we would have had a different Russia, a second Ukraine. In fact, a Yeltsin's Russia is still alive and hidden behind Putin's back in many ways. And everyone is scared: if Putin leaves, they will come out. Everyone understands this; therefore, the main goal of the West is to remove Putin.**

They know: if Putin is removed, the elite will falter. And the people in Russia know it. The elite is deceitful and corrupt. It is dully silent and keeps up the facade. **No one has combed it out yet, and even Putin's inner circle lacks those whom the people could trust and who could continue the struggle for sovereignty.** But there are plenty of those who either will not cope, or will bring back Yeltsinism"[75].

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[71] Presidential Address to the Federal Assembly, February 29, 2024. Available at: http://www.kremlin.ru/events/president/news/73585

[72] Korovin V. Where are you, Putin's commissars? Available at: https://izborsk-club.ru/23998

[73] Some examples:

1. NATO Secretary General J. Stoltenberg (Brussels, January 26, 2024): "If Putin wins in Ukraine, there is a real risk that he will use force again".

2. Head of the Norwegian Armed Forces E. Kristoffersen (interview to *Dagbladet* newspaper, January 21, 2024): "When this war is over, no one knows what Putin's next move will be".

3. German Defense Minister B. Pistorius (interview to *Der Tagesspiegel* newspaper, January 19, 2024): "We hear threats from the Kremlin almost every day... Therefore, we must take into account that Vladimir Putin may one day attack a NATO country".

[74] Dugin A. The turn of history. Available at: https://izborsk-club.ru/25366

[75] Khaldey A. The transfer and strategy of sovereignty: Customers and performers. Available at: https://zavtra.ru/blogs/transfer_i_strategiya_suvereniteta_zakazchiki_i_ispolniteli

✓ **in the internal situation, as before, only the President and several people in his entourage (as experts note) remain the only "customers" of Russia's movement toward full national sovereignty. Many representatives of elite circles continue to live as they used to, hoping that everything will return to normal.**

✓ According to VCIOM, the majority of Russians support Vladimir Putin's decision to launch a special military operation (throughout the entire period of the SMO, the proportion of those who share this opinion remains stable – 65–68%[76]); however, some analysts still pay attention to the fact that 28% of citizens do not agree to live according to the principle "Everything for the front, everything for the Victory!". This figure is a "significant indicator. It is almost a third of the respondents; it is difficult to declare them cowards, traitors, weaklings, foreign agents, to drive them out of the country"[77].

✓ In addition, Russian political scientists predict that the U.S. will tamper with the very presidential election, using technologies that began to be developed a year before the start of the special operation[78].

In these alarming conditions, it is extremely important that the head of state and the Federal Assembly of the Russian Federation, from the very beginning of the special military operation, have adopted many managerial decisions that are aimed at the highest priority tasks ensuring Russia's national security: supporting SMO participants and their family members, improving the financial situation of the population and the economy of the country, increasing the defense capability and information security of the state, etc. *(Insert 5)*.

The "Horizon 2040" project was launched in November 2022 by the Agency for Strategic Initiatives and the Russian Export Center. **The supervisory board (the highest collegial management body) is headed by the President of the Russian Federation Vladimir Putin. According to the authors, "the main objectives of the project are to form a vision of key challenges and trends that can occur with varying degrees of probability in major areas of socio-economic life of both the Russian and global communities, as well as identify key opportunities and threats to development on the horizon of 2040...** "Horizon 2040" brought together **more than 130 leading Russian experts** in the fields of demography, ecology, climate, energy, technology, space, healthcare, food, socio-cultural issues and economics"[79].

[76] Special military operation: Two years later. VCIOM analytical review. February 24, 2024. Available at: https://wciom.ru/analytical-reviews/analiticheskii-obzor/specialnaja-voennaja-operacija-dva-goda-spustja

[77] On the willingness of Russians to adjust their lives according to the needs of the SMO. *Nezavisimaya gazeta*. February 27, 2024. Available at: https://www.ng.ru/editorial/2024-02-27/2_8957_red.html

[78] Mukhin A. External interference in the 2024 election in Russia and possible implications: Report. January 2024. 18 p. Available at: https://polit-info.ru/images/data/gallery/0_311_vmeshatelstvo_2024.pdf

[79] Horizon 2040. November 14, 2023. Pp. 3, 7. Official website of the Agency for Strategic Initiatives. December 29, 2023. Available at: https://asi.ru/library/main/198226/

Insert 5

The monitoring of regulatory legal acts (laws, decrees) signed by the RF President in the period from December 26, 2023 to February 28, 2024 [80]

MEASURES TO SUPPORT THE PARTICIPANTS OF THE SMO AND THEIR FAMILY MEMBERS, TO DEVELOP THE MILITARY-INDUSTRIAL COMPLEX, MEASURES ON MOBILIZATION, ORGANIZATION OF MARTIAL LAW, IMPROVEMENT OF ANTI-TERRORIST PROTECTION OF FACILITIES
January 4 – Decree 10 "On the admission to citizenship of the Russian Federation of foreign citizens who have signed a contract for military service in the Armed Forces of the Russian Federation or military formations, and their family members".
February 14 – Federal Law "On Amendments to Article 121 of the Federal Law "On the civil service system of the Russian Federation" and Article 531 of the Federal Law "On the state civil service of the Russian Federation". The law provides for retaining the position of civil servants for those undergoing military service".
February 14 – Federal Law "On amendments to the Criminal Code of the Russian Federation and the Criminal Procedure Code of the Russian Federation". Along with sabotage, other crimes related to sabotage activities (assistance to sabotage activities, training in order to carry out sabotage activities, organization of a sabotage community and participation in it) are classified as crimes that, in accordance with the Criminal Code of the Russian Federation, are recognized as activities directed against the security of the State. Increased liability is established for public calls to carry out activities directed against the security of the State, committed for selfish motives or for hire, motivated by political, ideological, racial, national or religious hatred or enmity, or motivated by hatred or enmity against any social group. It provides for the possibility of punishment in the form of deprivation of a special, military or honorary title, class rank and state awards for committing not only grievous and extremely grievous crimes, but also crimes of small and medium gravity directed against the security of the Russian Federation. The list of crimes, the commission of which entails confiscation of property, is expanded. In particular, property obtained as a result of committing crimes for selfish motives, such as public dissemination of deliberately false information about the use of the Armed Forces of the Russian Federation, about the execution of powers by state bodies of the Russian Federation, about the provision of assistance by volunteer formations, organizations or persons in the implementation of tasks assigned to the Armed Forces of the Russian Federation or the troops of the National Guard of the Russian Federation, and public calls for activities directed against the security of the State, will be subject to compulsory gratuitous seizure and conversion into state ownership on the basis of a guilty verdict. In addition, property used or intended to finance not only terrorism, extremist activities, an organized group, an illegal armed formation, a criminal community (criminal organization), but also activities directed against the security of the Russian Federation will be subject to confiscation.
February 26 – Presidential Decree 141 "On the military-administrative division of the Russian Federation". As of March 1, 2024, the Leningrad, Moscow, Southern, Central and Eastern military districts are formed.

[80] The insert is a continuation of the monitoring of the most important regulatory legal acts signed by the RF President; we have been conducting the monitoring since June 2022. Thus, it has been going on for 19 months; its results have been published in 10 articles (the first issue of the monitoring is presented in the article: Ilyin V.A., Morev M.V. (2022). A difficult road after the Rubicon. *Economic and Social Changes: Facts, Trends, Forecast,* 15(3), 9–41).

End of Insert 5

MEASURES TO PROTECT INFORMATION SECURITY AND REGULATE THE ACTIVITIES OF FOREIGN AGENTS, MEASURES AIMED AT THE EDUCATION AND UPBRINGING OF THE YOUNGER GENERATION
February 14 – Federal Law "On amendments to the Code of Administrative Procedure of the Russian Federation and Article 13 of the Federal Law 'On countering extremist activity'". The jurisdiction concerning the consideration of administrative cases on the recognition of information materials as extremist is changing. For these purposes, consideration of these categories of cases is provided not by district courts, but by the supreme court of the republic, territorial court, regional court, the court of the city of federal significance, the court of the autonomous region, the court of the autonomous area. It establishes the obligation of the court to involve copyright holders, publishers, authors of works and (or) translations in the case, and if an administrative claim is filed for the recognition of an extremist religious publication, then specialists in the field of the relevant religion are also involved. In addition, corresponding amendments are being made to the Federal Law "On countering extremist activity", according to which information materials are recognized as extremist in accordance with the procedure established by the legislation on administrative proceedings.
MEASURES TO PROVIDE SOCIO-ECONOMIC SUPPORT TO THE GENERAL POPULATION, STRENGTHEN THE NATIONAL ECONOMY, INCLUDING IN THE INTERNATIONAL ARENA
January 15 – Decree 36 "On amendments to Presidential Decree 1666, dated December 19, 2012 'On the strategy for the state national policy of the Russian Federation for the period up to 2025' and to the Strategy approved by this Decree". V. Zorkin: "This is a very important event in the life of our country and its domestic policy... It is not only about the changes in the procedure for working with the main documents on the implementation of the state national policy, which were previously in the President's field of vision. **Today, a new procedure for working with such documents has been legally established, the range of participants to whom they will be provided has been expanded – in full, with all the attached analyses and recommendations. This will be a more analytical package covering the entire range of interethnic relations.** The practice of decision-making on interdepartmental issues will be strengthened; it is known that state national policy issues are under the jurisdiction and competence of about 20 federal executive authorities. **It is very important that now the government will accumulate all these materials at its level, summarize and report them to the President, as well as to the chambers of the Federal Assembly of the Russian Federation. In addition, these documents will be published, they can be discussed, and measures for their implementation can be proposed**"[81]. **January 23 – Decree 63 "On measures of social support for large families".** A single and permanent status of a large family (a family with three or more children) has been legally established. Large families will be issued credentials confirming their status. Measures of social support for such families have been defined: state benefits and payments in connection with the birth and upbringing of children, support in the field of labor relations, the right to free visits to museums, parks of culture and recreation, exhibitions. Mothers with many children can count on the early appointment of an insurance pension. Social support for large families will be provided until the eldest child reaches the age of 18 or 23, if he/she is studying full-time. Regions are recommended to introduce additional support measures. It is also decided to maintain a data bank on large families. **February 28 – Decree 145 "On the strategy for scientific and technological development of the Russian Federation".** As the President noted in his Address to the Federal Assembly of the Russian Federation on February 29, 2024, the Strategy has been "adjusted to take into account current tasks and challenges". It states that "Russian science serves as the basis for the sovereign development of the country"; "from 2022 to the present, the stage of mobilization development of the scientific and technological sphere is taking place"; "the purpose of scientific and technological development is to **ensure the independence and competitiveness of the country, achieve national development goals and implement strategic national priorities by creating an effective system for building up and making the fullest use of the intellectual potential of the nation".**

[81] Official website of the Civic Chamber of the Russian Federation. Available at: https://www.oprf.ru/news/vneseny-izmeneniya-v-ukaz-o-strategii-gosudarstvennoy-natsionalnoy-politiki-na-period-do-2025-goda

Insert 6

Excerpts from the article "A century of wars? Article two. What to do?" by S.A. Karaganov, Doctor of Sciences (History), scientific director of the Department of World Economics and World Politics at the Higher School of Economics[82]

*1. An extremely dangerous world of the next two decades requires a revision of foreign policy and defense policy... they should be based on the concept of "**fortress Russia" – the maximum possible independence, sovereignty, security, self-sufficiency, concentration on internal development**... Reasonable openness is needed for profitable economic, scientific, cultural, and information cooperation with friendly countries of the World Majority. **But openness is not an end in itself, but a means to promote internal material and spiritual development**.*

*2. The role of interdependence as a tool for maintaining peace has been overestimated before, but now it is mostly dangerous. We must try to create "value chains" **on our territory** in order to increase its connectivity, especially with regard to the interaction of the country's center with Siberia and, more carefully, with friendly countries. Now it is Belarus, most of the Central Asian states, China, Mongolia, the SCO and BRICS countries.*

*3. The policy of "fortress Russia" requires **maximum non-involvement in conflicts** that will flare up during the ongoing "geostrategic earthquake". In the new conditions, direct involvement is not an asset, but a liability.*

*4. In the development of the only **partially successful** Eastern turn through the Far East, it is necessary to design a **new comprehensive Siberian strategy** calling forward, but also "back" to the allure of the development of the Trans-Urals.*

*5. **Belatedly** (it would have been be better if we had done it a century earlier) completing the Western, European voyage ..., **we will leave ourselves the great European culture rejected by post-European fashion**. Without it, we would not have created the greatest literature. And without Dostoevsky, Pushkin, Tolstoy, Gogol, Blok, we would not have become a great country and a great people.*

*6. In the current global conditions, the development of **defense consciousness** in society and readiness to defend the Fatherland, including with weapons in hand, should become an absolute priority.*

*7. The vector of today's foreign policy is **comprehensive development of relations with the countries of the World Majority**... In a new diverse, multireligious, multicultural world we must develop another competitive advantage – internationalism, **cultural and religious openness**... It is necessary to build **parallel [to the UN] structures** based on BRICS+, the expansion of the SCO, their integration with the Organization of African Unity, the League of Arab States, ASEAN, Mercosur....*

*8. Beijing is the **main external resource of our internal development, an ally and partner for the foreseeable future...** India is another natural ally in creating a new world system and in preventing a movement toward World War III... In the North American direction, it is necessary to **promote the long-term departure of the United States into its natural neo-isolationism at a new global level...** the main vector in relation to the subcontinent [Europe] is **moral and political exclusion.***

*9. An important element should be an **offensive ideological policy, rather than a defensive one, as it used to be in the past**. Attempts to "please" the West and negotiate with it are not only immoral, but also counterproductive.*

*10. The only reasonable goal of our policy regarding the lands of Ukraine is quite obvious. **Liberation and inclusion of the entire South, East and, probably, the Dnieper region.***

*11. **Strengthening the reliance on nuclear deterrence,** accelerating the movement up the escalation ladder, is designed to convince the West that it has three options in relation to the military conflict in Ukraine. First, to retreat with dignity... Second, to be defeated... Or, third, to get all the same, but only with nuclear strikes on their territory and the accompanying collapse of societies... **Without a sharp intensification and modernization of the nuclear deterrence policy** it is impossible to prevent the world from sliding into a series of conflicts and a subsequent global thermonuclear war, to ensure the continuation of the peaceful revival of our country and its transformation into one of the architects and builders of a new world system.*

*12. **Russia's policy should openly proceed from the fact that NATO is a hostile bloc** that has proved its aggressiveness through its past policy and is de facto **waging war against Russia.***

[82] Karaganov S.A. A century of wars? Article two. What to do? Available at: https://karaganov.ru/vek-vojn-statja-vtoraja-chto-delat/

Insert 7A

Titles (thematic areas) of expert reports of the "Horizon 2040" project[83]

- ✓ ***Demography (A.V. Milekhin)***
- ✓ *Climate and ecology. The situation in the field of climate (B.N. Porfiriev, V.M. Kattsov)*
- ✓ *Climate and ecology. The situation in the field of ecology (V.I. Danilov-Danilyan, B.N. Porfiriev)*
- ✓ ***Technology. Global technological trends of 2022–2040 (part 1). Scenario forecast assessment by 2040 in key areas of technology development (key theses) (D.R. Belousov)***
- ✓ ***Technology. Global technological trends of 2022–2040 (part 2). Scenario forecast assessment by 2040 in key areas of technology development (key theses) (D.R.Belousov)***
- ✓ *Technology. Big growth drivers and bifurcations of catching-up modernization (E.B. Kuznetsov)*
- ✓ *Quantum technology: A general introduction (A.K. Fedorov)*
- ✓ ***Healthcare and pandemics (D.V. Melik-Guseynov)***
- ✓ ***Food. Global trends in food and a window of opportunity for the domestic agro-industrial complex (S.N. Ivanov)***
- ✓ *Food. Problems of world food security in the period up to 2040. Scenario forecast assessment of key trends in the food market for the period 2022–2040 (S.V. Yushin)*
- ✓ ***Energy. Key challenges and priorities of Russia in the field of energy on the horizon of 2040 (team of authors)***
- ✓ ***Space. Forecast assessment for 2023–2050: Supporting infrastructure, trends, key solutions, growth drivers (E.B. Kuznetsov)***
- ✓ *Space. Problems of Russian cosmonautics (I.M. Moiseev)*
- ✓ ***Space-2040 (N.N. Sevastyanov)***
- ✓ ***Socio-culture (E.A. Kalachikova)***
- ✓ ***Socio-culture-2040: A challenge to the integrity of society – a view from the side of technology development (D.R. Belousov)***
- ✓ ***Technology and social culture (E.B. Kuznetsov)***
- ✓ ***Russia as a subject. Special report (A.G. Dugin)***
- ✓ *Russia on the world map. Transcript of the plenary session of the SPIEF on June 15, 2023 (A.O. Bezrukov, A.R. Belousov, D.R. Belousov, A.G. Dugin, D.N. Peskov)*
- ✓ ***The world in the horizon of 2040 (A.V. Yakovenko)***
- ✓ *Review of global trends, global threats and scenarios of Russia's development by 2040 through the prism of U.S. expert opinion (A.Yu. Petrov)*
- ✓ *USA as a project (A.O. Bezrukov)*
- ✓ *Brazil (L.N. Simonova)*
- ✓ *China (P.V. Kuznetsov)*
- ✓ *China (A.A. Maslov)*
- ✓ *Türkiye (team of authors)*
- ✓ *United Arab Emirates (V.S. Eliseev)*
- ✓ *India (E.V. Griva)*
- ✓ *Algeria (P.V. Kuznetsov)*

[83] Horizon 2040. The White Book: Collection. Official website of the Agency for Strategic Initiatives. December 29, 2023. Available at: https://asi.ru/library/main/198226/

Insert 7B

Some excerpts from the expert reports of the "Horizon 2040" project[84]

1. "The search for a subjective position and issues of rights and grounds for asserting oneself as an "independent agent of action" (subject) by both societies and individuals ***are becoming one of the central tasks for social research in the 21st century****"[85].*

2. "In the context of a sharp increase in direct pressure on Russia and the "chaotic" component in world politics and the economy, ***it is necessary to determine the place of the country's citizens in this process; addressing the problem of overcoming total alienation****, which is forming in the context of a new round of technological development and makes a person unnecessary in a significant part of both production and creative processes; ensuring that society accepts development (scientific, technological, institutional, social, human) should become the basis for reproducing the* ***unique Russian identity now and in the long term****"[86].*

3. "We are talking about 2040, because ***if it happens and we do not become a subject now, then the year 2040 will not be ours. In order for 2040 to be the Russian two thousand fortieth, we need to determine the subjectivity now, and quite clearly. And this is a very, very important challenge… the spiritual orientation of being plus traditional values, and it is the most important thing…"[87]***

*4. "…****the opposition of the spheres of worldview, ideology and cultural and historical identification seems inevitable****. This will create prerequisites for restoring the importance of the tools of the so-called soft power in international relations, but on a balanced and truly competitive basis"[88].*

5. "It is worth noting that both family and migration policies make sense and can be successful ***only if there is an attractive value principle that forms the desire to live and work in Russia. No support measures and relocation programs can be effective if a person does not have internal answers to the questions, what kind of future awaits them and their children in this country, in which society they will live and what common goal this society, the people of Russia, pursue"[89].***

[84] Horizon 2040. The White Book: Collection. Official website of the Agency for Strategic Initiatives. December 29, 2023. Available at: https://asi.ru/library/main/198226/

[85] Kalachikova E.A. Socio-culture. Horizon 2040. P. 357. Official website of the Agency for Strategic Initiatives. December 29, 2023. Available at: https://asi.ru/library/main/198226/

[86] Belousov D.R. Socio-culture-2040: A challenge to the integrity of society – a view from the side of technology development. Horizon 2040. P. 391. Official website of the Agency for Strategic Initiatives. December 29, 2023. Available at: https://asi.ru/library/main/198226/

[87] Dugin A.G. Russia as a subject. Horizon 2040. P. 425. Official website of the Agency for Strategic Initiatives. December 29, 2023. Available at: https://asi.ru/library/main/198226/

[88] Yakovenko V.A. The world in the horizon of 2040. Horizon 2040. P. 481. Official website of the Agency for Strategic Initiatives. December 29, 2023. Available at: https://asi.ru/library/main/198226/

[89] Milekhin A.V. Demography. Horizon 2040. P. 35. Official website of the Agency for Strategic Initiatives. December 29, 2023. Available at: https://asi.ru/library/main/198226/

We should note that not only the head of state, but also the expert community has a clear idea about the future of Russia, about the priorities of its internal development, international relations and, in general, about the role of our country in an emerging multipolar world *(Inserts 6, 7)*. After the beginning of the SMO, there appeared a large number of publications on this topic[90], as well as large-scale projects bringing together dozens of experts from various fields of knowledge, such as "Horizon 2040" and "Worldview of Russian Civilization. Through Polyphony to Symphony".

The "Worldview of Russian Civilization. Through Polyphony to Symphony" project was first presented on December 9, 2023 at a conference at the Saint Petersburg State University organized by the Izborsk Club. **Experts from the Izborsk Club are authors of the project** (A. Prokhanov, V. Averyanov, M. Maslin, A. Ivanov, A. Boldyrev, V. Bagdasaryan, etc.). According to V. Averyanov, "the goal of the project is **to formulate the foundations of the national worldview** as a result of the sum of collective efforts of many generations of thinkers, the "conciliar mind"... The successful implementation of the project will make it possible to equip the **Russian administrative and political elite with a worldview apparatus in order to manifest a more unambiguous and effective vector of state identity"**[91].

A clear understanding of Russia's future, expressed in the Presidential Address and in the assessments of many experts, inspires optimism and urges us to focus on the present-day issues: how effectively will Russia be able to overcome this dangerous historical period in all respects? When will this happen and what position in the geopolitical space will our country have after the end of the SMO? Will the ideological, spiritual and moral trend set by the "Crimean Spring" and launch of the SMO continue and forever change the face of the country (society, culture, ruling elites ...)?

All these issues are acute, and it is still difficult to find answers to them (there are too many unknowns in the equation). But in the end, we need to remember how effectively the President and Russia as a whole have managed to cope with all the challenges that have stood in the way of the historical movement toward strengthening national sovereignty over almost a quarter of a century.

This is clearly evidenced by objective data from official statistics and indicators of subjective assessments of public opinion: according **to the key indicators of national and social development** (such as the area of Russia's territory, population, life expectancy, objective and subjective indicators of the dynamics of the standard of living and quality of life, death rate from murders and suicides, assessment of activities of the authorities, etc.) **Russia under Vladimir Putin has made a significant step forward compared to the condition in which Boris Yeltsin "left" it in 1999** *(Tab. 3)*.

And it is no less important that over the past 20 years **the understanding of the country's development vector toward the "revival of the great power", "the return of socialist ideals and values"**

[90] See, for example:
Toshchenko Zh.T. (2023). Social contract as a noumenon: The experience of sociological understanding. *Sotsiologicheskie issledovaniya=Sociological Studies*, 6, 3–15;
Balatsky E.V., Ekimova N.A. (2022). Social contract in Russia: Before and after 2022. *Journal of Institutional Studies*, 3, 74–90;
Dementiev V.E. (2023). Communicative concept of the social contract and formation of the course of economic development. *Economic and Social Changes: Facts, Trends, Forecast*, 16(4), 57–70;
Dugin A. The basics of Russian ideology. Available at: https://izborsk-club.ru/25133

[91] Sources: https://izborsk-club.ru/25060; https://zavtra.ru/blogs/russkoe_mirovozzrenie_ot_manifesta_k_politike_vosstanovleniya_suverennosti_i_velichiya

Table 3. The results of Vladimir Putin's presidential terms according to official statistics and people's subjective assessments

Indicator	1999 (last year of Boris Yeltsin's presidential term)	2023*	Dynamics (+/-), 2022 to 1999
Official statistic indicators*			
Area of the Russian Federation, thousand square kilometers	17075.4	17125.2	+49,8
Population (at the end of the year), million people	145.6	146.4	+0,8
Life expectancy at birth, years	65.93	72.73	+6,8
Ratio of average incomes of the richest 10% to the poorest 10%, times	14.1	13.8	-0,3
Number of unemployed, thousand people	9094	2951	-6143
Number of people with money incomes below the subsistence level, % of the total population	28.4	9.8	-18,6
Number of registered crimes, thousand	3001.7	1966.8	-1034,9
Death rate from homicide, per 100 thousand people	26.2	3.7	-22,5
Death rate from suicide, per 100 thousand people	39.3	9.2	-30,1
Indicators of subjective assessments of the population, % of respondents***			
Level of approval of the RF President's work	8.6	61.4	+53
Share of positive assessments of purchasing power of incomes	*27.9*	62.7	+35
Share of positive assessments of social self-identification	*23.3*	45.2	+22
Share of positive assessments of social mood	*31.0*	65.6	+35
Share of positive assessments of stock of patience	*43.6*	76.6	+33
Dynamics of protest potential	*35.2*	17.7	-18

* Statistical data – for 2022; data from opinion polls – for 2023.
** Sources: Federal State Statistics Service, Prosecutor General's Office of the Russian Federation.
*** Source: VoIRC RAS public opinion monitoring.

Table 4. Perceptions of the region's population concerning the idea of uniting Russian society*, % of respondents

Answer option	2002	2023	Dynamics (+/-), 2023 to 2002
The idea of uniting the peoples of Russia in order to revive it as a great power	**22.6**	**49.3**	**+27**
The idea of strengthening Russia as a state governed by the rule of law	**22.1**	**35.8**	**+14**
The idea of uniting peoples to solve the global problems facing humanity	**7.8**	**23.9**	**+16**
Return to socialist ideals and values	**6.6**	**19.7**	**+13**
The idea of uniting all Slavic peoples	**5.0**	**17.4**	**+12**
The idea of confrontation with the West, self-reliance	**3.2**	**13.7**	**+11**
The idea of individual freedom, the priority of the interests of the individual over the interests of the state	3.9	8.5	+5
The idea of national uniqueness, a special historical mission of the Russian people	2.3	9.0	+7
The idea of rapprochement with the West, Russia's entry into the pan-European community	3.9	4.4	+1
The idea of cleansing society through the Orthodox faith	4.1	3.1	-1
Other idea	0.2	2.3	+2
Difficult to answer	31.9	22.1	-10

The wording of the question "What idea, in your opinion, is capable of uniting our society?" No more than three possible answers.
Source: VoIRC RAS public opinion monitoring.

and "confronting the West with our own means" has strengthened in society and in public consciousness (and not only in strategic documents or targets set out by the head of state) *(Tab. 4)*.

In our opinion, the change in Russian society over the past 20 years (strengthening its national identity) is the overall result of the entire period of Vladimir Putin's presidential terms (including his Munich speech, "Crimean Spring", amendments to the Constitution of the Russian Federation, etc.), and not only a consequence of the growing threats to national security in the context of the SMO.

Thus, a fact-based analysis of the political course pursued by Vladimir Putin over the past 23 years shows that it has always been based on the task of restoring Russia's sovereignty, which it lost after the collapse of the USSR. In order to continue to fulfill this task in the face of threats and obstacles purposefully created by the Collective West so as to slow down the process of strengthening our country's national sovereignty, the head of state had to radically change the course of the Russian Federation's foreign policy: from sincere intentions and real attempts to integrate Russia into the Western world to a direct opposition to the NATO bloc (and the only reason for such a "U-turn" was the refusal of the Collective West to recognize Russia's national sovereignty).

Currently (after the beginning of the SMO), Russia is going through an extremely difficult and dangerous, but crucial historical period accompanied by comprehensive internal changes, which should be considered **exclusively in the context of the entire historical path of Russia's development in the first quarter of the 21st century.** And the 2024 presidential election is one of the important intermediate stages of this path.

Ultimately, at stake in the civilizational conflict between Russia and the Collective West is the possibility of our country moving toward the future, the guidelines of which were announced in the Presidential Address on February 29, 2024. The question is whether this movement will be interrupted, and Russian society plunged into another state of "trauma"...

Therefore, it is for a reason that the head of state ended his Address with what is the crucial point at the moment: "Today, making good on all these plans **directly depends on our soldiers, officers and volunteers – all military personnel that are now fighting at the front...** It is our fighters that are creating today the **absolutely essential conditions for the future of the country and its development**"[92].

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[92] Presidential Address to the Federal Assembly, February 29, 2024. Available at: http://www.kremlin.ru/events/president/news/73585

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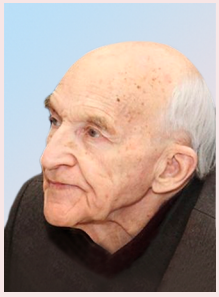
On Ideologies and Their Bearers: Revisiting the Issue



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Abstract. With the advent of the era of information and knowledge, ideologies are becoming increasingly important in the life of societies and determine their history. The role of ideologies has especially increased during the period of aggravation of the civilizational confrontation between the Collective West and those non-Western countries that are friendly toward Russia and China. The article defines the concept of ideology and provides a brief description of modern ideologies of the West and Russia. We prove that even a scientifically developed theory is very limited in its ability to identify the main patterns of societal development (due to the incomparable complexity of the knowable and the knower), and even more so to purposefully influence this development. There is a well-known Leninist formula: "An idea becomes a power when it takes hold of the masses". But it is the elite, the ruling stratum, that develops an ideology, protects it from hostile influences, and communicates it to society. Based on the works of Russian and Western historians and sociologists, the paper describes the development of ideas about the ruling stratum, the elite as the bearer of ideologies and the dangers associated with its split. In Western countries, the function of selecting personnel for the elite is largely performed by the market mechanism of capital accumulation. In Russia and China, in the "ruling stratum – government" tier, the leading role is more often played by the government, which largely forms both the ideology and the ruling stratum. In modern Russia, one of the crucial tasks is to create mechanisms for the selection of personnel and creation of privileged conditions for the ruling stratum in a situation of existing unjustified socio-economic inequality. The article discusses methods for practical solution of this problem. The presented material can be used to determine the priority of the tasks facing Russia and to form institutional mechanisms for their solution.

Key words: ideology, ideological bearers, civilizational confrontation, elite, ruling stratum, government.

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Introduction. The confrontation of ideologies in the 20th and 21st century

The paper continues a series of works (Volkonsky, 2022; Volkonsky, 2023), that consider major ideological (semantic) factors determining the historical development of peoples and power structures. In order to formulate the aim of the study, we should first describe the current situation in the political and socio-ideological spheres. The above works investigate crucial processes of global historical development of the past century on the basis of the following fairly realistic postulate (or a fairly well-founded hypothesis): since the beginning of the 20th century (perhaps more precisely, since the creation of the socialist state of the USSR), the confrontation between Western countries and countries of non-Western civilizations, or supporters of a unipolar world (UPW) and supporters of a multipolar world (MPW) has become a "semantic core", a configuration of dominant ideologies that define the majority of other semantic and target structures. The era of confrontation can become very long and contain alternating periods similar to the current escalation on the verge of the "great war" and periods of relatively peaceful coexistence of the West and non-West civilizational poles, similar to the "d tente" of the 1970s (with the continuation of the cold, information and ideological war and occasional local hot wars).

The nature, meanings and drivers of this civilizational confrontation in the 21st century differ sharply from its characteristics in the 20th century. Throughout the 20th century, the main factor in the confrontation was the opposition of the ideological paradigms "socialism – capitalism" (with the temporary dominance of the ideology of Nazism in Europe) and the institutional structures of economic management. In the 1920s, the party and governmental center of the USSR had to build an unprecedented economic system that provided sufficient motivation for the effective work of a huge people without using the capitalist mindset for personal enrichment and without the stimulating role of economic inequality. More precisely, this factor had to abandon its role as the main driving force and remain on the sidelines. Assessment of merit to society became the crucial factor (one of the key factors distinguishing socialism from capitalism). There was no developed theory to build this; the design and construction were carried out largely through trial and error. Basically, this task was completed: an unprecedented management system for the economy and the entire vast country was designed and built according to the type of management of a large company.

Under the influence of several factors, the ideology of socialism was fading alongside a steady decline in the USSR's economic growth rate. The idea of the need to combine the plan and the market was naturally asserted, and this brought the communist ideology closer to the ideology of convergence, which was developed by the most prominent Western political scientists (in particular John Galbraith). The foundations of Marxist theory needed to be updated. Fundamental problems of dividing capitalist society into classes of the bourgeoisie and the proletariat and the class struggle have ceased to rule over public attention. Among the domestic problems, the formation of the ruling elite, for example, has become no less important.

Challenges related to intercountry and cross-country relations, primarily induced by the confrontation between the West and the USSR, have become much more acute. This confrontation, like all intercountry contradictions, was unfolding not only in the ideological sphere. An individual usually identifies themselves primarily with a particular community or with its center, or governing organization, rather than an ideology. Ideologies are important in the confrontation of civilizations, but the confrontation of their bearers is even more important.

But not everyone could appreciate the severity and inevitable importance of these challenges. The problems of economic and technological development and international cooperation in this area came to the fore. Apparently, it should be recognized that the Cold War was won by Western politicians and ideologists who managed to create the impression in a significant part of the Soviet governing stratum that the West is ready to recognize the Soviet Union as an equal and sovereign member of the "universal" community of developed countries on an equal basis with the countries of Western Europe and North America. In fact, Western (mainly Anglo-Saxon) leaders and ideologists hatched a project to split the Soviet elite and support that part of it that is ready to sacrifice sovereignty and submit ("temporarily!"). Later, this project will be called the "color revolutions"[1] method. It was a deception of the Soviet elite, which not only Gorbachev believed, but ... "I long to be deceived myself!" (many call it betrayal).

The demise of the USSR and the socialist commonwealth led to a sharp decline in the role of communist ideology in the world and the importance of the struggle of ideologies as the crucial driving force of history. There is a well-known Leninist formula: "An idea becomes a power when it takes hold of the masses". Older generations are used to considering ideology as an unconditionally dominant system of ideas and semantic paradigms among the people, as an inspiring image of the Future, as a system comparable to religious faith. They perceive the current situation when ideological factors cease to play critical part in the process of historical development as a "spiritual vacuum".

Meanwhile, periods when ideology plays such a role and the people show unconditional unity are exceptions rather than the rule. In other periods, the role of ideologies, the processes of their development and confrontation do not act as key factors in the life of society, but are concentrated in its more or less narrow layer, which is called the ruling stratum or elite. It is this stratum (or class) that develops an ideology, protects it from hostile influences, and communicates it to society. It is the main bearer of ideology.

Thus, the work aims to revise the idea of the bearer of ideology that is familiar to a large part of Russians, but is not quite in line with the modern period, and to consider the problems that arise when representing this idea more adequately.

Ideologies and their bearers

The modern historical period is a difficult time for Russia not only because of the special military operation that evolved into a "hybrid war" waged by the Collective West against Russia. The avalanche of sanctions that has fallen on the system of foreign economic relations has produced a range of not only technological and logistical, but also political challenges. Currently, for Russia, one of the critical tasks is to get out of the ten years of economic stagnation. If we look at the 2009–2019 period alone (before the coronavirus pandemic and the SMO), we see that GDP growth at that time was only 9%[2]. In a multipolar world, civilizational poles in the form of associations are being formed. One of these poles is the Eurasian one with Russia as its center. The goal is to ensure the attractiveness of Russia's socio-economic structure for those countries that have become or may become friendly or cease to be hostile. The Russia–Africa and Russia–Latin America summits, and the expansion of the BRICS coalition prove that the goal is feasible.

There have been many situations in the history of Russia when the existence of the country depended on rapid and radical transformations.

[1] Judging by the fundamental role that the ideology of superiority plays in the structure of Western societies (see the following sections), it could not be otherwise.

[2] The economic development of Russia after the destruction of the Soviet Union, the main problems and the necessary economic reforms are discussed in detail in an extensive paper by A.G. Aganbegyan (Aganbegyan, 2022).

People are able to cope with a multitude of grave challenges. And the foundation lies in the unity of the people, the revival of their spirits, the rise of passionarity, which depend on their moral state, the viability of their ideology. So far, what we see is a clear lack of passionarity. And we can hardly say that we know how to get the people and their elite to "awake" (as for the possibilities of the social sciences, see the next section). But the continuous study of the socio-psychological life of the people, their **system of values and meanings**, and methods of influencing this aspect of societal life is a priority task for the government. In addition, in order to address the complex of tasks facing the country, it is necessary, first of all, to specify them and determine priorities for their implementation; what we need is a **worldview**. In our opinion, the definition of the concept of ideology can be as follows. **Ideology** is a system of ideas about the world and value-based and semantic paradigms that dominates in a certain community, promoting and directing the life of its members[3]. Ideologies can be scientifically substantiated or based on religious faith; they can be clearly perceived by their bearers intellectually, or present a combination of intuitive beliefs and unconscious assessments and aspirations.

In the modern information and knowledge society, in the context of a tough ideological confrontation between the West and the Non-West, the role of ideology is not reduced to the task of socio-economic development; it literally determines the question of life and death, unification or disintegration of society. Since Soviet times, we have been used to the fact that the most important condition for ideology to fulfill its function is its reliance on the social sciences. The possibilities and limitations of the social sciences are discussed in the next section. The major conclusion (lesson) from the history of the tragic death of the beautiful ideocracy of the USSR is as follows: ideology should not become a rigid lifeless dogma. This thesis has become familiar due to its being repeated a thousand times, but it rarely gives a clear and concrete presentation of what it means in life, in practice. Ideology should be a **living ideology**, responding to all new events and challenges, always fighting and defending its system of values and meanings. And it should be open to broad discussions and necessary changes. The top officials of the party and government should fully participate in it. Of course, special institutions are needed to develop the sciences of society and ideology, to study its perception and assimilation by society (we should say that the tasks of updating the theoretical part of the official ideology were also very serious). Under a tough confrontation with the information and ideological institutions of the West, the Soviet elite could not create such conditions. Repression and prohibitions had to be used. The dogmatization and the loss of energy and influence of the official ideology was followed by the expansion of the influence of the capitalist ideology – consumerism and the enrichment mindset.

It is advisable to distinguish between two concepts that are named ideology. Society is always guided by a certain set of generally accepted knowledge, principles, moral rules and restrictions, value orientations and semantic paradigms that are not always perceived clearly and that have different extent of influence on the behavior of members of society and groups. This complex will be called deep ideology (DI). It is formed and based on the entire culture of the people, on their mentality and psychology[4].

But the formation of national policy and the education system, which is especially important for

[3] This definition does not contradict the concept of ideology in the philosophical dictionary (Kirilenko G.G., Shevtsov E.V. (2010). A Concise Dictionary of Philosophy. Moscow: AST: SLOVO, Poligrafizdat).

[4] Deputy Elena Drapeko explained in detail in her speech in the State Duma what the patriotic ideology should be and what role it plays in the process of educating youth (Drapeko, 2023).

the upbringing of the next generations, requires an intellectually formalized complex: basic knowledge about nature and society, rules of thinking and conduct, value orientations and semantic paradigms (in particular, an image of the future). Intellectually formalized ideology (IFI) is a kind of stem or core of deep ideology. In Soviet times, this core was represented by Marxism–Leninism and historical materialism[5].

Currently, alongside a decline in the political role of ideologies (possibly, the emergence of a "spiritual vacuum"), the importance of IFI turns out to be less prominent than the more complex and multidimensional phenomenon of DI. IFIs can be universal and not related to a specific carrier community, while the dominant DIs in various communities usually differ significantly. An ideology (both formalized and deep) of such a large community as a people does not cover the entire complexity of its internal and external relations, needs, traditions, and culture.

Smaller communities that emerge and function – social strata, ruling groups, financial and political corporations, etc. – remain outside the framework of ideology. Each of them can form its own ideology, which the community uses for its own purposes. All this applies to the ruling stratum, the bearer of the dominant ideology.

The ruling stratum

To understand the mechanism of interaction between ideology and society, it is necessary to consider the formation of its bearer – the ruling stratum. The creators of Marxism have established that the main role in the formation of ideology belongs to the bourgeois class. This ideology reflects the interests of the capitalist class, and its representatives have the opportunity to extend it to the whole society. But the ruling class plays a decisive role not only in the economy. It influences society through power relations. The main instrument of power is the state. Even in the era of rapid development of capitalism, the ruling stratum included not only financial and industrial magnates, but also government officials.

Back at the turn of the 19th and 20th century, Italian sociologists Gaetano Mosca and Vilfredo Pareto[6] showed that the ruling stratum (class), or elite, which has more power than the state, often plays a major role in the social structure, and uses it as a tool to their advantage. This stratum defines the foundations of politics and forms the personnel of the government. The interests of the ruling stratum may coincide with those of the state and society as a whole, but at times they may differ significantly. While the interests and semantic paradigms of both the state as a fairly cohesive community and the ruling stratum may differ from the deep ideology that has developed in the rest of society. Such situations can lead to serious political crises.

Mosca and Pareto studied the political sphere of society and the phenomenon of power. The bourgeoisie constituted the majority of the ruling stratum and enjoyed most of its influence. But the elite, the main social stratum endowed with power, combines different elements according to their origin (inheritance), social status, and type of activity. In 1956, American sociologist and political scientist Wright Mills put forward a clear and quite specific description of the structure of the U.S. ruling elite[7] (Mills, 1959). Thus, according

[5] For modern Russia, with the continuing danger of a split of the ruling stratum, a rethinking of history, especially the Soviet period, is of the utmost importance. V. Baghdasaryan (Bagdasaryan, 2023). What is wrong with it? About the new history textbook. *Zavtra*. No. 36) discusses in detail the problems of such reinterpretation based on the material of the new textbook of Russian history for grades 10 and 11 by authors V.R. Medinsky and A.V. Torkunov. He calls this textbook the beginning of the creation of a "unified conceptual version of the presentation of the historical process of the 20th – 21st century".

[6] Russian translations: (Mosca, 1994; Mosca, 1995; Pareto, 2007).

[7] A detailed description of the development of ideas about the ruling stratum is given in the book by M. Khazin and S. Shcheglov (Khazin, Shcheglov, 2017, chapter 4).

to Western sociology, the actor guiding the development of society is in most cases the ruling elite, and the state is the main tool in its hands.

Conclusions about the priority role of the ruling elite in relation to the state were made by Western sociologists based on the study of societies of Western civilization. A comparison of the structure of societies in Russia, China and in the countries of East Asia with the countries of the West indicates profound differences[8]. In particular, in these non-Western countries, the state has significant independence and much greater authority and power compared to other parts of the ruling stratum. It usually defines the foundations of social ideology and the directions of necessary transformations in society. In the "state–elite" pair, it is the state that turns out to be the actor that forms the elite as a tool for solving the problems of society (in the way it understands them).

We should point out an interesting fact: Chinese historians – ideologists of Confucianism write that in China, in the ideology of society and in real practice, the state does not serve as an expression and executor of the ideas and attitudes of society (the prevailing view in modern developed countries). The state has always been and remains the educator of society; the state can and should develop and adjust human nature "because of its disposition to goodness" (Renaissance..., 2011). In Russia, in most historical epochs, the fact of belonging to the elite (nobility) was inextricably linked to the duty of service to the sovereign. Historians call this type of elite the service class people.

G. Mosca raises the question regarding the reasons for the change of one ruling stratum (the ruling class, the ruling elite) along with its state to another (Quigley later wrote about this in relation to the change of any "tools" of Western expansion). Mosca considers the common reason for the weakening of the ruling stratum to be its separation from society, suppression of any possibility of control by society, elimination of the need to respond to its changing demands and take into account the possibility of loss of power. In the context of social mobility, there should be a gradual (rather than radical) renewal of its composition and its ideology. When separated from society, the ruling stratum begins to feel permissiveness, it becomes infected with moral degradation. The state apparatus is affected by the disease of bureaucracy, corruption is growing.

In the conditions of modern confrontation of civilizations, the reason for the change of the ruling stratum can be found in the transformation of its politics, ideology, and partly its composition under the influence of foreign power centers and their special services imposing their own ideology. Such transformations took place during the orchestration of "color revolutions" by Western centers. In fact, Mosca's concept turned out to be the theoretical basis of G. Sharp's "color revolutions" technology.

Splits in the ruling stratum

Mosca, as a historian, makes the following non-trivial conclusion: the stability of the ruling stratum (class) with its ideology is determined by the presence of a "second stratum" that is not allowed to have personal contacts with the governing core of power and therefore acting and making decisions based on the ideology they adhere to[9]. The "first stratum", and even more so its governing core, which forms a new ideology and a new power structure, usually represents a too narrow, small group. It uses a much more numerous "second stratum" to connect with a wide mass of potential supporters, to spread a new ideology, and to ensure the stability of power. Thus a split in the ruling class takes place.

[8] A brief description of these differences is given, for example, in the book (Volkonsky, 2021, section 2.2).

[9] It is an interpretation of Mosca's concept given in the book (Khazin, Shcheglov, 2017).

One of the most productive approaches to studying the dynamics of elites and their ideologies is presented in a book by Peter Turchin (Turchin, 2023). Based on many historical examples, the author shows a situation where the number of applicants for the status of a member of the ruling stratum is growing rapidly, while the number of "places" in this stratum, in the elite, remains relatively unchanged. "Disappointed" applicants whose expectations to get a "place" in the elite have failed form a counter-elite with an alternative ideology and start fighting the "first stratum" of the ruling class (according to G. Mosca).

Sometimes the split can be overcome without serious shocks, but some conflicts of this kind escalate to coups d'etat and even to civil wars. Bourgeois revolutions are usually an escalation of conflicts between the rapidly growing bourgeoisie (contenders for places in the political elite) and the old feudal elite. P. Turchin calls the reasons for such processes "overproduction of elites".

His book also provides examples of how to address the "overproduction of elites" without socio-political upheavals. Such an example can be found in a rapid growth of the capitalist class in terms of their number and wealth in the United States in the second half of the 19th century. For example, in 1860–1870, the number of millionaires in the United States increased from 41 to 545 people. The overgrown bourgeois class was unable to effectively perform the functions of the governing stratum – to form and implement a unified policy and ideology. It was still the "second stratum", while the "first stratum" consisted of politicians and aristocrats.

The period of the 1870s and 1900s, which is called the Gilded Age, was extremely chaotic and contradictory. However, the process of acquisitions and mergers was steadily underway, which made it possible to reduce the number of contenders for elite positions – the top management of major companies. The members of this small community, had real power in society just in virtue of their position as heads of large organizations. Gradually, they joined forces with professional politicians after the model of the English establishment. The remaining members of the capitalist class made up the "second layer" of the elite or joined the middle class. Alongside the processes in the socio-economic sphere, there was a process of revising the old ideology, a struggle of supporters and opponents of strengthening the "second layer" and its unification with the old elite. There emerged the Great Merger Movement (1895–1904). Business leaders put forward an idea that unlimited competition was harmful to both society and economy. Business circles (containing a small number of members) easily united and acquired more and more power over the legislative and executive bodies of government.

A. Fursov and M. Delyagin, in their works on the history of Britain and the Anglo-Saxons, systematically use a crucial term: the subject of strategic action (SSA). M. Delyagin defines SSA as "an intra-elite group that is united by long-term interests well understood by its members and that possesses tools to reproduce and maintain its influence" (Delyagin, 2023, pp. 8–9). Such a subject is undoubtedly necessary for modern Russia. Only it should not be about interests, but primarily about the ability to maintain continuity for a long time in understanding and preserving the patriotic sentiment as the main transpersonal meaning. At different historical stages the group may include representatives of different social strata, and the image of the future may change. But for Russia in the modern historical situation, the very realization of the need for such a strategic entity seems to be a priority task. Judging by the use of the concept of SSA by A. Fursov and M. Delyagin, in G. Mosca's model of the ruling class it corresponds to its governing core rather than the entire "first stratum".

The role of the "second stratum" is especially important when the "first stratum" is decaying, in

conditions when the actions of the governing core, its policies, for one reason or another, cease to meet the requirements of society, the dominant ideology. During such a period, the "second stratum" may "become infected with the same disease". This may lead to a radical change in the ruling stratum, and in the modern era of confrontation between civilizations – to a severe crisis in the country, and turn its development in the other direction (to the victory of a "color revolution").

However, the presence of a "second stratum" can also provide the opposite effect – help to preserve the ruling stratum, ideology, and the direction of historical development. The "second stratum", "charged" with the dominant ideology, puts forward a new group that is claiming power and that purifies and renews the ruling stratum and grants it an additional period of rule. Such historical results include the J. Kádár group coming to power in Hungary after the suppression of the 1956 uprising, and the group of L. Svoboda and G. Gusak – in Czechoslovakia after 1968. Without the presence of a "second stratum" in the communist parties of these countries, further development along the socialist path would have been impossible.

In many societies, institutions are emerging and being specially built to distinguish the elite stratum from the rest of society in order to ensure its privileged position, its cohesion and the reliability of its patriotic sentiment. An example can be found in a phenomenon such as the establishment in British society; it is formed primarily with the help of the elite education system (private schools and elite universities) aimed at developing "administrative intelligence and strengthening physical health (Delyagin, 2023, chapter VII). The entire English elite sent their children from the age of six to private boarding schools, where merciless long-term "cramming and training" awaited them. They were actually removed from the family (they visited their families only on vacation).

Examples of the application of the presented concepts to modern problems

Currently, most of the ruling class in developed countries comprises workers of science, education, healthcare, and managers of enterprises and institutions, i.e. a community of people of high intellectual and cultural level. Back in the early 20th century, this rapidly growing sector of the population in many countries was poorly represented in government structures – this is the most important part of the contenders for elite places. In English society, the establishment has lost its socially recognized status of superiority. One of the important reasons, though not the main one, was the discrepancy between elite education and the new tasks and needs of society: university graduates were able to lead a huge empire, but had no scientific engineering, pedagogical or medical knowledge.

Describing this conflict in the UK, M. Delyagin compares it with a similar conflict in Soviet society (Delyagin, 2023, pp. 195–206). The analogy with the British process consists mainly in the composition of the conflicting parties. One side of the contradiction was the party elite (the real government), the other was the intellectual youth working in scientific and high-tech institutions and enterprises. M. Delyagin attaches great importance to this conflict in the destruction of the USSR: it "led to catastrophic consequences" (Delyagin, 2023, p. 195). We find it difficult to agree with this opinion. The youth did not seek power, they needed information and creative freedom. The social mobility elevators continued to operate, although they began to malfunction. Party leaders were restricting this freedom not because they feared that physicists and mathematicians would oust them from government. There was an onset of a period when the energy of transpersonal meanings started to weaken, a period of "ideological vacuum". Most party leaders and ideologists understood the need to include the energy of a market-based

semantic concept, i.e., the transition to a system of "combining the plan and the market". The ideology of perestroika was oriented toward such a transition.

Since the 1970s, several options for deep reform in the economic and political system have been developing in government structures. However, there is not yet a sufficient amount of open materials about these developments and about the groups that were their carriers. Such a factor as the "overproduction of elites" can explain little in the processes of the late 1980s and the collapse of the Union. Conversely, one of the most important factors (if not the main one) was the influence of information and ideological centers and special services of the West on these processes[10]. The standard of living in the USSR remained significantly lower than in Europe and North America, and was no longer rising. A significant proportion of the ruling class consisted of people who were convinced that the way out of the crisis for Russia was to become an "ordinary liberal capitalist country" and return to the community of Western countries.

Due to a rapid growth of the social stratum of educated intellectuals, there is always a danger of the emergence of a community of those who claim to participate in the management of society, and a split of the type of "overproduction of elites". Such a split did not become a serious problem either in the British Empire or in Soviet society. The fact is that in both cases the opportunity was constantly open for dissident passionaries to come forward and climb the ladder of the socio-political hierarchy away from the center, where there is always a shortage of active intellectuals. In the British Empire, these were colonies, in the Soviet Union – regions of Siberia, the Arctic, the Far East, or assistance to friendly forces in Africa or Latin America. More generally, the task of preventing elite splits can be described as creating a political and semantic inspiring perspective for dissident passionaries.

One of these prospects is the implementation of one's potential in the field of culture, healthcare, scientific and technological research and development, as well as in the field of education – the "production" of the cultural and intellectual part of human potential. A significant part of the highly intellectual and cultural stratum, i.e. the elite, works here. In developed countries, privileged and most attractive conditions are created for the effective work of this valuable part of employees, primarily an increased level of remuneration. Unfortunately, in modern Russia, this does not apply to all of the above sectors. E. Uzyakova (Uzyakova, 2023) provides a comparison of the structure of wage levels by industry for Russia (2021) and for the United States (2019). The work considers the ratio (in %) of nominal wages of employees of the industries in question to the average for the economy as a whole. In particular, in the "Education" sector in the United States the wage level practically coincides with the average in the economy (most likely, private elite education is not taken into account in this indicator), in Russia – 76.7% of the average. In the "Research and Development" sector in the United States the payment is twice the average for the economy, in Russia – 165%.

We clearly see an underestimated level of remuneration for the work of teachers. A lot has been said about the need to improve the quality of the modern education system, which in Soviet times was considered one of the best in the world. This problem is multidimensional, and it cannot be argued that a simple increase in teachers' salaries will lead to a quick solution. However, it is necessary that this problem should become a most significant and urgent national task.

[10] Undoubtedly, the Soviet special services (KGB and GRU) played an important role in these processes; by the 1980s these agencies had become largely independent of the party-state center (Fursov, 2016; Fursov A.I. (2021). The life and death of capitalism. *Zavtra*. No. 26, 27, 28, 29; Delyagin, 2023). The evidence provided by historians suggests that it was the parts of the special services in the late Soviet decades that formed the core of the "second layer" of the ruling class and its semantic goals.

The theory of Mosca, Pareto, and Turchin about the role of the ruling stratum is based almost exclusively on the historical experience of Western European countries, without relying on the experience of Asian or Eurasian countries. This is due to the profound differences in the social structure and experience of countries whose civilizations differ.

In the countries of Western civilization in the last few centuries, in the "ruling class – state" pair, it was more often the ruling class, the elite, that was the subject forming the state as a tool for its goals and interests. In Russian civilization, the state often formed the ruling (service) class (Sergeitsev et al., 2020). This was manifested especially clearly in the Soviet era: at that time the formation of the ruling stratum became the most important task of the state (party-state apparatus) – the task of forming a human resource to achieve its goals.

Currently, the pivotal factor in the ideology of any country is the role of an unprecedented, all-encompassing process of technology development. D. Acemoglu and S. Johnson write: "Every day we hear from executives, journalists, politicians and even some of our colleagues at the Massachusetts Institute of Technology that we are relentlessly moving towards a better world thanks to the unprecedented development of technology... Of course, problems remain, but talented entrepreneurs and scientists will invent solutions – more advanced robots, artificial intelligence at the human level and any other breakthroughs that will be required" (Acemoglu, Johnson, 2023). The authors list absolutely "unimaginable" and inspiring achievements in connection with artificial intelligence (AI): "Facial recognition software, search engines that guess what you want to find, and recommendation systems that select products for you that you are likely to like, the interaction between human speech and computer. AI programs can recognize thousands of different objects and images and provide basic translation from more than a hundred languages, can invest better than experienced financial analysts, can help attorneys and lawyers".

The opportunities and prospects opened up by technology development make it an important element of the value-semantic system both in the West and in non-Western civilizational poles. In non-Western countries, it is usually not a goal, but a means to ensure conditions for human life and its improvement. And in the West, it acts as an independent value, as a continuation (with the necessary adjustments) of the highest semantic orientation of the capitalist era – orientation toward the development of production and enrichment.

The main idea of the cited book by Acemoglu and Johnson is to study negative implications and issues that generate transformations of public relations in the uncontrolled (and often rapid) process of developing new technologies, and to criticize an overly optimistic attitude toward technology development (the study is based on the experience of Western countries). The main negative problems are related to the growth of economic inequality, deterioration of working conditions for large contingents of workers (due to automation of production) and the increased control of enterprise managers over employees, and ruling groups over the entire population (the book does not explore threats associated with the progress of military technologies). In general, the authors remain optimistic and are convinced that society should and is able to navigate the development of technology so as it would serve good purposes. To do this, the ideological space should contain an idea concerning the technologies that society and people need, and also which technologies will bring grief or provoke hostility between people. Such changing public perceptions in the book are called visions of a problem or its solution.

The community of historians describing the origin of socialist societies agrees that such societies result from the implementation of socialist ideology,

previously developed as a theory and to some extent even as a design project. In other words, the most important role here was played by the IFI, which corresponded well to the deep ideology of the working classes.

The process of formation of a modern societal structure in Western countries is completely different. Their ideology consists of a "capitalist" part – individualistic liberalism plus the goal of enrichment, formed jointly and interconnected with a system of socio-economic institutions, and an ideology of superiority (civilizational or racial), encompassing all social strata in one form or another. It is supported by a really high level of economy, technology and quality of life in Western countries. The unity and stability of both the social structure and this ideology are also ensured by the system of government institutions, which is often called the "deep state".

The capitalist part of the ideology was formed jointly with the system of socio-economic institutions, consistently advancing in different countries on different sides of public life without anything resembling a general plan or project. The ideology of superiority has existed for a much longer time than the system of capitalism, and is basically a deep ideology. Of undoubted interest are those socio-psychological traits that helped the West to achieve its historical leadership. Let us turn to Oswald Spengler. In his main work The Decline of the West (Der Untergang des Abendlandes) he shows the differences between the worldview of a Western person from the worldview of non-Western peoples. Here, for example, is how he describes the perception of the same actions related to the expansion and exploration of space. For a Westerner, this is an idea of "conquering space" which implies the physical energy of resistance of the space, "which would be completely impossible to explain to a Greek". This idea demonstrates the "claim of the soul to rule over the alien". The metaphysical passion of the Western man strives to overcome "all obstacles to his sense of power" (Spengler, 1998, pp. 449, 517). "The will to power, also in the field of morality, is the desire to give one's morality universal importance, to force humanity to obey it, the desire to alter, overcome, destroy any other morality... Whoever thinks differently, feels differently, desires differently, is bad, an apostate, an enemy. They must be fought without mercy" (Spengler, 1998, pp. 495, 499).

In the 20th century, an idea of aggressive boundless expansion and domination became the basis of the ideology of globalization. Spengler, in essence, argues that this is not just the result of prevailing historical and geographical circumstances, but the spiritual basis of the "Faustian soul" of Western peoples. The founder of DNA genealogy A.A. Klesov hypothesized that the aggressiveness of Westerners, their inability to come to terms with the dissimilarity, and even more so with the alternative of other ethnic groups, other civilizations, has a genetic character and source[11].

The ideology of superiority of the peoples of Western civilization is the most important factor ensuring their unity and activation. However, since the beginning of the 21st century the West has been gradually losing actual superiority; therefore, the preservation of real superiority and the idea of it, rooted in the consciousness of society, becomes an imperative for which Western elites are ready to discard any moral norms and restrictions, and higher values, and the meanings of being. Socio-political groups and movements are coming to power, ready to support neo-fascists, provoke local wars in order to weaken countries resisting their dictates, and take steps to escalate the war threatening a nuclear apocalypse.

In the deep ideologies of Russia and China, unlike in the West, the most important meanings

[11] The era of mobilization. On self-organization and human reserve capabilities: A conversation with the editor-in-chief of the journal "Nauka i religiya" S.Y. Klyuchnikov. *Zavtra*. 2023. No. 21.

are aimed not at achieving superiority, but at ensuring stability and cooperation between different ethnic groups and different social strata. The Russian people achieved the greatest success when they managed to unite for the common cause. Communist aspirations toward revolutionary transformations were mainly aimed at overcoming capitalist ideology, which was alien to the Russian and Chinese civilizational codes. The change of the socialist foundations of the social structure to capitalist ones in the 1990s led to disastrous results. And since the 2000s the process of restoring the system of priorities of the welfare state and the value of historical tradition, familiar to Russian civilization (including a significant number of socialist features in ideology), has begun.

In China, in June 2023, Xi Jinping announced a "new starting point" – a new, clarified formulation of the foundations of ideology. Its main idea is as follows: "The combination and integration of the basic tenets of Marxism with the best traditions of Chinese culture is the path that must be followed to study and develop socialism with Chinese characteristics on the basis of Chinese civilization"[12]. Given the need for rapprochement between Russia and China, one can be sure that a new step by Chinese ideologists will help the Russian leadership to use the semantic riches of socialism in ideological work. From the very first days of his leadership of the Communist Party and the country, Xi Jinping most often turned to the wisdom of Confucius. Addressing the youth on May 4, 2014, he cited 17 Confucian quotes, in particular: "to reach agreement in the presence of disagreements", "a noble man considers justice to be the most important thing in all matters". I think there is no need to prove how close these Chinese ideological paradigms are to the modern deep ideology of the Russian patriotic elite (even if it is not framed as a state ideology).

[12] Tavrovsky Yu. (2023) A new campaign. Xi Jinping combined Marxism and Confucianism. *Zavtra*. No. 31.

The elevation of tradition as the most important spiritual value, state support for the study and understanding of history and the creation of its balanced image, without unilateral distortions, corresponding to the "code of the Russian people", should become one of the main parts of the ideology of society and the state.

What can be demanded from the sciences of society?

Since the knowledge about the world is part of ideology, it should be recognized that ideology has to be scientific, i.e. based on provisions verified by science. However, the value-semantic paradigms that dominate society or its parts do not necessarily have to be transferred to ideology. The ideology of the elite or a part of it can set goals for improving the social structure and shape the image of the Future. The bearer of ideology, who has power, as a rule, sets tasks for science arising from his/her ideological views and directs the development of science.

Currently, due to the monopolization of the mass media and control over the content of social media, it is possible to centrally manage the set of ideas, perceptions, and assessments that we have called an intellectually formalized ideology. The confidence of a significant part of society and the elite in such an "artificial IFI" is supported, in particular, by the fact that its key ideas and provisions are presented as conclusions of science. It is the task of the political struggle to verify and, if necessary, refute such ideas and provisions. This section of our paper provides arguments in favor of the fact that it is not only a matter of using provisions that are not related to science, but that the social sciences themselves are often overestimated, that their ability to reflect actual patterns of social processes is very limited.

Nowadays the provision that science is one of the main driving forces of history is recognized as an undoubted truth. Its development is the basis for the creation of new materials, energy sources, new technology, and, in general, the creation and

improvement of the human habitat. Participation of science in the formation of human communities and man as a biological, psychological, and social phenomenon is becoming increasingly active. The impact of science can lead both to strengthening the morality of society, its unity, security, and to increasing threats to its existence – splits and fragmentation (for example, to the orchestration and triggering of "color revolutions"), exacerbation of conflicts, up to wars: cold, hot, hybrid. Obviously, the development of science is associated with serious moral and value-related issues beyond its scope. But it turns out that science itself and its capabilities encounter limitations and doubts related to the problem of verification and reliability.

When it comes to nature and the natural sciences, there arise no doubts and philosophical difficulties. But can we be sure that the findings of the social sciences provide a picture of society that meets the verification requirements? That the fundamental factors determining crucial upcoming events do not remain outside the framework of those patterns that are discovered and described by the social sciences? These questions are answered (negatively!) by A.N. Kolmogorov's theory of complexity. An apparatus with limited recognition ability cannot understand and distinguish from a pile of randomness the very "information message" that would "scientifically" describe a process that surpasses its recognition ability in complexity. This provision is also called Ashby's law.

Science is a part of public consciousness. Materialistic philosophers believe that the consciousness of an individual and society (including science) is a reflection of reality. We cannot agree with this provision. Accepting this postulate would mean denying the creative ability of consciousness. But human consciousness, in addition to reflecting existing objects, can create new ones – build new models and projects that do not exist in reality. The discerning ability of one's consciousness and thinking cannot be greater than the complexity, diversity of one's thinking and behavior, since consciousness itself is also the subject of comprehension, an object that it must realize. The same can be said about public consciousness and social science.

The task of science is to identify and reveal stable parameters and objective patterns of processes occurring in nature and society. There is no reason to believe that the discerning ability of scientists and scientific organizations researching the life of society is more complex than the object of research, i.e. those actions and ideas that are created by major historical figures, their communities and organizations. For any pattern, there is such a group of members of society whose actions and ideas do not fit into this pattern. Of course, regarding the patterns discovered by the natural sciences, it is also impossible to guarantee absolute reliability. However, possible violations of the pattern are very small or the probability of their occurrence is quite small.

Erich Fromm describes the difference between humans and animals in a similar way (Fromm, 1992, p. 43). An animal adapts to the environment, to its ecological niche and lives in harmony with it or dies. A person often goes beyond the limits outlined for them by nature. And they do not have an inherited instinctive program of behavior for any new situation and are looking for new solutions.

If violations of the pattern can be considered insignificant and unimportant, then the pattern is recognized as verified and scientifically substantiated. Any patterns that are used in practice are based on trust in them. The trust factor is especially important when using the social sciences.

A person has to make serious decisions in the context of uncertainty. Scientific knowledge makes it possible to drastically reduce uncertainty, identify highly probable and almost incredible consequences. The authority of science plays a crucial role when it comes to theory as the basis of ideology. An example is the Marxist–Leninist

theory, which largely determined the direction of historical development for the whole 20th century.

An individual and his/her community, their life and development are characterized by such high complexity that the question arises: how is it that for long periods of time (historically calm) not only scientists, but also ordinary people understand the causes of events and confidently predict the state of society for several years ahead? As a result of the cultural and civilizational development of peoples and other communities, institutions such as morality, law, customs, religions and ideologies arise that limit the "infinite" variety of possibilities for human actions and even thoughts (initially limited only by natural conditions). The same institutions can empower a person, but at the same time they are put under the control of the community.

These considerations show that the science of society cannot be required to have the same reliable and universal knowledge as the natural sciences. The patterns discovered by science "exist" for a very short time, because modern society is rapidly changing. They do not look like the "products" of fundamental natural sciences. Knowledge about society can be very valuable, and most often its value and effectiveness is manifested if it is used "here and now". Long-term strategies have to be built on the basis of current knowledge. But one needs to be ready to constantly check and update both this knowledge and the strategy itself. We can say that, for the most part, the science of society is an applied science.

The use of Marxist science by Vladimir Lenin can serve as an illustration. According to Marx's theory, which arose as part of the study of the development of Western European countries, the communist socio-economic system can be established only after and on the basis of the development of capitalism. At the beginning of the 20th century, capitalism was underdeveloped in Russia, the bourgeoisie did not play a significant political role, most Marxists believed that the Marxist party should support the bourgeois-democratic revolution and the government whose policies would contribute to the development of capitalism.

At that time, civilizational differences between Russia and Europe had not yet been sufficiently studied and known. But Lenin understood that science could not be directly used as a basis for a plan of action. In particular, in Marxist science, state power does not play a decisive role that it has always played and is playing in Russia. At the same time, he was most aware and felt that for the profound transformation of society, which is the goal of the Communists, in Russia they need the fullness of state power and a powerful semantic, ideological foundation. A new type of party (modeled after religious orders) was intended to become its bearer. Marxist science served as an essential tool for this: it provided the communist Goal and Ideology with the authority of science (at that time, the Marxist trend was one of the most advanced ones). That is, Lenin used science not only and, perhaps, not so much as a theory; he mainly took into account its applied potential.

At the same time, Lenin went beyond those limits that history had built up and that social science had reflected. He showed that the way out is possible by taking and using power. Not the power as a main incentive and motivation for the actions of the majority of great historical figures and ruling elites – the power as a condition for the domination of their social group or their class. And, of course, not the power that Friedrich Nietzsche wrote about as a way for superman to go beyond the "too human" (Sergeitsev et al., 2020, pp. 275–276). For Lenin, power is necessary not as an end, but as a means of transforming society. The victory of Lenin's ideas demonstrates that the complexity of man and his history is higher than the ability of social science to "recognize" it.

The value of science in its "applied" meaning for the effective management of society is high. This requires people with great knowledge and charisma, endowed with a special talent (intuition) to understand the key issues of the situation that concern the people they are managing. Many of these qualities can be obtained as a result of learning about the sciences of society. In some cases, natural charismatics can be replaced by professionals.

Personnel for the elite and the problem of inequality

As already noted, in Russia and China, in the "ruling stratum – state" pair, during the phases of normal development of society, the state is the leading link forming the ruling stratum, the elite. The most important task of the state is to create an active, professional, patriotic elite. This section mainly discusses practical approaches to solving this problem.

In the Russian Federation, the modern personnel composition of financial and economic institutions and state sectoral and territorial management bodies was formed to a large extent during the period of the destruction of the Soviet management system. The existing "personnel corps" (including managers and owners of large companies) is far from perfect and arouses a lot of criticism in terms of professional suitability and even in terms of unpatriotic ideological views. Many journalists and political scientists raise the issue of the need to accelerate the process of updating the staff of economic managers, improve the dominant value and semantic paradigms, and the need for the "transformation of the elite"[13]. This task is implemented by the government. The question is the choice of methods, mechanisms for the "selection and promotion" of personnel for the ruling stratum, as well as ensuring its patriotic life views, preventing the impact of a hostile ideology.

Developed capitalist countries achieved high results at the expense of market competition, due to the fact that the most capable entrepreneurs and "managers" became more financially secure and influential in society. The ability to find acceptable ways in the most difficult market situations is no less valuable than achievements in science or medicine. But when the amount of personal property serves as the main factor determining a person's status in society, it creates such powerful "spontaneous" forces generating inequality, that the problem of limiting inequality becomes (and still remains) the most difficult problem of humankind[14]. The civilizational code of Russia and its historical experience are incompatible with the supremacy of capitalist principles. In addition, the excessive gap between the poor and the rich is becoming a serious drag on economic growth, as it hinders the growth of demand from the majority of consumers.

At the same time, the initial simplified view of socialism as a system of complete socio-economic equality is also undoubtedly erroneous. It would create an extremely unstable society fraught with constant danger that some part of the elite would be dissatisfied with their standard of living and social influence. In poor countries the gap between the rich top of society and the rest of the population is usually greater than in rich developed countries. The reason is that the elites of poor countries strive to provide themselves with the same lifestyle and opportunities for social influence as the elite of rich developed countries. And the governments of poor

[13] Pereslegin S. (2023). The Oprichnics strategy. On the prospects of transformation of the elites. *Zavtra*. No. 5.

[14] In 2020, a large book by Tom Piketty (Piketty, 2020) was published at Harvard University. It is devoted mainly to the problem of inequality and ideologies opposing or justifying inequality. Various types of inequality are described in detail: economic, related to the level of education, with the relations of the mother country and colonies, etc., as well as the history of the ideological and political struggle against excessive inequality and for the support of inequality. Although the author shows how attempts to create stable regimes that meet the concepts of justice have constantly collapsed throughout history, he concludes the book with the belief that a just society can be built. In his opinion, it will be created on the basis of the principles of participatory socialism and social federalism.

countries do not seriously set the task of limiting the wealth of the elite, since such a policy can provoke a significant part of the elite, i.e. active, qualified, capable entrepreneurs, to leave the country.

Excessive growth of economic inequality became one of the reasons for the rapid (by historical standards) strengthening and spread of the ideology of socialism in the 19th and 20th century and the fact that it became a great semantic complex on a par with world religions. It is now recognized that the socialist system can fully utilize the mechanism of market competition (following the example of the Chinese Communist Party). Russia undoubtedly needs to update the ideology of socialism, taking into account the best features of the Soviet socio-economic system and modern approaches. What Russia needs is an ideology of socialism with Russian specifics.

In Russia, as a result of the transformation of the economic and social structure in the 1990s, the problem of inequality sharply worsened. The ratio of incomes of the richest 10% to the poorest 10%, which in late Soviet times was 6–8 times, remained at the level of 15–16 times in 2010–2020. In terms of inequality, Russia has occupied one of the top positions among developed countries[15]. At the same time, studies by many Russian and foreign sociologists show that the perception of a high level of inequality by the Russian population differs from the perception of residents of other countries: Russians' assessment contains much more criticism. The Russian population considers the state responsible for the necessary reduction in inequality (Gorshkov, 2014; Belekhova, 2023).

In rich capitalist countries, as a rule, a significant part of the population considers a certain level of inequality to be a completely normal phenomenon or an inevitable "retribution" necessary to promote a stimulating effect of the capitalist semantic aspiration toward personal enrichment. The "code" of the Russian people contains strong elements of the "socialist aspiration", which allows for inequality mainly in the form of moral authority and rejects excessive material inequality.

The Russian state finds itself "between a rock and a hard place". On the one hand, the stalling of the implementation of publicly stated goals aimed at a more equitable distribution generates a decrease in trust in the government, apathy and passivity among the people (Ilyin, Morev, 2022). On the other hand, a dramatic change in the mechanisms of redistribution (seemingly justified by the military situation) in the context of an information and ideological war can lead to opposition sentiments in the stratum of large owners and to its split. If these dangers have at least a small chance of being implemented in real life, then it is necessary to learn to wait, adapting to an unacceptably high level of inequality: to maintain confidence that this is temporary; to create conditions so that the patriotic part of government does not feel poor compared to the oligarchs. Perhaps the best line of policy is a slow, step-by-step introduction of a progressive scale of taxation for income and property. Apparently, the introduction of personal income tax in the amount of 15% for high-income people was the first step in such a project. We will wait for further steps.

Let us return to the task of forming a "personnel corps" for the managing stratum. In the era of classical capitalism, the main mechanism for personnel change was market competition (with the ruin of bankrupt companies and creation of new ones). Now, in the era of the dominance of giant corporations and the increase in the size of the state apparatus of large countries, more significant personnel change processes are taking place within the bureaucratic structures governing these organizations. Accelerated personnel rotation by dismissing those who failed and appointing new ones most often faces the problem of strengthening

[15] Russia and Countries of the World: Statistics Collection (2022). Moscow: Rosstat. 400 p.

the power of clans, dominance of kinship and friendly ties, ignoring the business and moral qualities of applicants for the position. As a result, a new composition of the management structure often turns out to be worse than the previous one.

The method that can be described as a **design method** proved to be the best back in Soviet times. A contingent of employees and managers, as well as organizations involved in the implementation of a long-term project of priority importance for the economy or society (for example, a system for designing and building nuclear power plants for domestic and foreign customers), stand out and begin to act according to special rules that differ from the generally accepted ones, and use special opportunities. These differences, for example, may include the obligation of any Russian companies and government agencies to fulfill, as a matter of priority, requests for information, orders for certain types of equipment from the project participants.

The fact that the participants of such a project are aware of the paramount importance of their common cause for the country and the people inevitably becomes a factor uniting them and forming their semantic paradigms. Participation in a project has a particularly strong spiritual impact if the participants are united geographically or often communicate with each other due to their working together. Another important quality of the project is its long-term, strategic nature.

In this sense, projects for the creation and development of territorial production complexes (TPCs) can serve as a model. A number of TPCs in the fields of the Urals and Siberia were created back in Soviet times and were expected to be further developed over several generations. For example, initially, the extraction of metal-containing ores is established through the supply of mining equipment from other regions; then machine-building plants are constructed so as to satisfy their own needs and to supply products to other regions. Roads and energy facilities were built ahead of schedule in the expectation of future construction of factories with increasingly complex products. The inevitable rapid growth of settlements, then cities, and the development of the personnel training system – from schools and kindergartens to branches of the country's leading universities – are taken into account[16].

Treating a certain project (which may include both public and private companies) and its team as privileged puts it in a monopolist situation and eliminates competitive incentives for development. Lack of incentives can lead to degradation of the project's management system[17]. In such a situation, the state naturally assumes the main role in creating incentives, developing opportunities and long-term prospects for the development of the project. It can use a variety of tools: influence price ratios, subsidy systems, government orders, public investments, etc. The key importance, of course, will belong to the parameters of the strategic national economic plan. In the context of the economic war caused by sanctions, which destroys free markets, it is the state that can and should create conditions when import substitution turns out to be the most promising (more than finding ways to circumvent sanctions restrictions).

Many large financial, industrial and other corporations have the ability to create a spiritual and semantic unity of members of a large community and boost their labor activity. The country can and should take advantage of this.

[16] B. Martsinkevich writes about Soviet and modern TPCs and their role in the development of the Russian economy in a number of articles (see, for example, Martsinkevich B. (2022). What is a TPC? From import substitution to proactive import substitution. *Zavtra*. No. 48).

[17] An example can be found in a sharp deterioration of the situation in railway transport in the 1990s and 2000s. Experts characterize this deterioration as an example of an industry where the transition to the market has dealt the "most devastating blow"; mass theft and corruption, "absence of any clear prospects and plans to remedy the situation" (Maksimov G. (2016). Steel will. About the development of railways in Russia. *Zavtra*. No. 5).

So far, stability is more valuable than new horizons

At the beginning of the paper we listed many tasks facing Russia. Many of them require serious and, if possible, rapid transformations in the economy and other sectors. Journalists and scientists prove that it is necessary to constantly monitor and, when required, improve the ideology that guides the people, concretize the image of the Future for the country, introduce a progressive scale of taxation, create a special body that develops strategic plans... Putin's management center understands the need to solve most of these tasks. But he hesitates, why? After all, we are not talking about urgent actions that are impossible during the special military operation. We are talking about problems that came to light long before it began. Should we say, as we are already used to hearing (from both opponents and supporters), about the "lack of political will"? After such decisions as the admission of Crimea to the Russian Federation, the beginning of the SMO, the inclusion of new constituent entities into the Russian Federation, such an explanation is completely unacceptable.

The following explanation seems to be the most convincing. Recent years have shown that the monopoly possession of means of influencing public consciousness is a powerful weapon in the hands of the Western "deep state". In the context of the confrontation between the Collective West and non-Western countries, which has turned into a real war in the information and ideological space, any radical changes can create splits in Russian society. Although significant splits are unlikely to occur now, the risks associated with them are too high. During the period of aggravation of confrontation with the West, any changes and transformations must be carried out in **compliance with the rule or requirement of maintaining stability** of the basic structures of society and principles of life, unity and mutual trust between different social strata, between the government and society.

Conclusion

Let us summarize the main problems and provisions contained in the article.

1. The article defines the concept of ideology and suggests its "dual" structure: deep ideology (DI) – a set of knowledge, principles, moral norms and restrictions (not always clearly understood) that guide society in its life, and intellectually formalized ideology (IFI).

2. The main carrier of ideology is the ruling stratum, the elite, in Western countries, as a rule, directs the development of ideology and uses it for their own purposes. In Russia and China, the leading link is more often the state, which largely forms both the ideology and the ruling stratum.

3. Consideration of the problems of modern development proves the paramount importance of the ruling stratum for the development of society. For the Russian state, the most important problem is to improve personnel selection mechanisms and create privileged conditions for the ruling stratum in a situation of existing unjustified inequality. Approaches to the practical solution of this problem are considered.

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Managing the Development of Agglomerations in the Context of Multiple Competing Goals: Challenges and Solutions

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Abstract. The emergence of agglomerations as new objects in the public administration system makes it necessary to create and define a set of indicators that will assess their economic growth and development. This management problem justifies the relevance of the study, the aim of which is to assess the information and analytical sufficiency and quality of indicators recommended for use in the elaboration of long-term plans for the socio-economic development of large and largest agglomerations and determined by documents of strategic planning at the federal level, using the example of the Saint Petersburg agglomeration. The methodological basis of the research includes the publications of Russian and foreign scientists and experts on the problem of spatial development and management of urban agglomerations; the current legal framework regulating certain aspects of the national spatial development policy; official statistics data. Based on the results obtained during the study, the following conclusions are

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drawn: 1) indicators for assessing the economic growth of agglomerations, which are unambiguously defined by federal documents of strategic spatial planning, can be accepted as minimally sufficient and exclusively for the implementation of an extremely concise version of express analysis; 2) the process of institutionalization of urban agglomerations management has not been completed; at the current stage, we are dealing with a "soft" form of both requirements for determining the composition and boundaries of agglomerations and rules for the formation of long-term agglomerations development programs; 3) it is necessary to develop existing experience in creating strategic plans for the development of urban agglomerations. The new methodology should combine modern spatial development concepts that help to find a compromise between state control and the potential of agglomeration management; to overcome the problem of fragmentation of management and the blurring of the institutional structure of agglomeration management; to use the tools of quality economics (metrology, standardization and quality management) in the development of strategies and long-term plans for the development of urban agglomerations.

Key words: urban agglomerations, strategic planning, spatial development, planning indicators, management quality, planning quality, quality economics, Saint Petersburg agglomeration.

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Introduction

The key concept of the current Spatial Development Strategy of the Russian Federation up to 2025[1] (hereinafter referred to as the Strategy) is the policy of polarized development. The document defines the priorities of spatial development that represent agglomerations as drivers of territorial growth; priorities for the development of the infrastructure framework and the boundaries of macroregions. The emergence of agglomerations as new objects in the public administration system necessitates the development and definition of a set of indicators that will measure economic growth and development of agglomerations, which stimulates research in the field of substantiation of an agglomeration management model (Report on the Current State.., 2021) and in the field of formation of assessment approaches (Rastvortseva, Manaeva, 2023; Fauzer, Smirnova, 2023). In modern times characterized by shifts in the social structure and in the economy, and amid the geopolitical crisis, these issues are extremely relevant for Russia and no less relevant abroad (Castan Broto et al., 2019; Bell et al., 2020; Granqvist et al., 2020). This substantiates the importance of "the quality of management, and improvements in the quality of planning" (Okrepilov, 2021a). The management process is critically dependent on information – decisions are made on the basis of the information received (including planning), and the use of components of the quality economy – standardization, metrology, quality management – increases the efficiency and quality of planning, which is confirmed by the experience of creating strategic documents.

[1] Approved by RF Government Resolution, 207-r, dated February 13, 2019.

This management problem substantiates the relevance of our study, the aim of which is to assess the information and analytical sufficiency and quality of indicators recommended for use in the development of long-term plans for the socio-economic development of large and largest agglomerations and determined by documents of strategic planning at the federal level, using the example of the Saint Petersburg agglomeration. Thus, the object of the study is the Saint Petersburg agglomeration, which belongs to the category of the largest urban agglomerations[2].

To achieve the goal, the following tasks were set and solved in the study:

1) indicators for assessing the economic growth of agglomerations were established, and they are clearly defined by federal documents of strategic spatial planning;

2) a retrospective analysis of the state of the socio-economic system of the Saint Petersburg agglomeration was carried out on the basis of indicators unambiguously determined by documents of strategic planning at the federal level;

3) the main trends of spatial and socio-economic development of the Saint Petersburg agglomeration were revealed.

Based on the results obtained in the course of addressing the research tasks, we drew conclusions about the sufficiency of the recommended set of indicators for determining the main parameters of the economic growth of the agglomeration in order to make strategic decisions and understand the challenges related to the development of the agglomeration.

Research methodology and data

Methodological basis of the research includes publications of Russian and foreign scientists and experts on spatial development and management of urban agglomerations; the current legal framework regulating certain aspects of the national spatial development policy; official statistics data.

When starting to discuss the research methodology, it is necessary to take into account the following fact, which adds complexity in the field of urban agglomerations development management. This is the lack of legislative consolidation of the concept of urban agglomeration, criteria for classifying territories as such, and methods for determining the boundaries of agglomerations. The existing "Methodological recommendations for the development of long-term plans for the socio-economic development of large and largest urban agglomerations"[3] (hereinafter – Methodological Recommendations), discussed below, provide only recommendations for determining the composition of large and largest urban agglomerations, offering a list of municipalities recommended for inclusion in their composition. As a result, according to experts from the Institute for Urban Economics, based on the results of their research, today there is a situation when "the idea of the composition of agglomerations existing in constituent entities of the Russian Federation and reflected, among other things, in current planning documents, in most cases diverges, and sometimes radically, with the composition proposed by the Methodological Recommendations"[4]. We should note that with regard to the Saint Petersburg agglomeration, there is a convergence of opinions on its composition both

[2] A set of compactly located settlements and territories between them with a total population of more than 1,000 thousand people, connected by the joint use of infrastructure facilities and united by intensive economic, labor and social ties (according to the definition given in the Spatial Development Strategy of the Russian Federation for the period up to 2025 (approved by RF Government Resolution 207-r, dated February 13, 2019)).

[3] Approved by Order of the Ministry of Economic Development of the Russian Federation 669, dated September 26, 2023.

[4] On the composition of large and largest urban agglomerations of the Russian Federation. Institute of City Economics. 21 p. Available at: https://www.urbaneconomics.ru/sites/default/files/aglomeracii_-_ekspress-analiz.pdf (accessed: October 10, 2023).

at the federal level and at the level of constituent entity of the Russian Federation. The same territories are defined by both Methodological Recommendations and the law of the Leningrad Region[5].

As noted in L.V. Melnikova's study, which presents an analysis of the evolution of "ideas about efficiency and equality in the spatial development of the economy" (Melnikova, 2022) for the period from the 1990s to the present, a model of polarized development based on "the idea of the fundamental role of agglomerations in economic growth" (Melnikova, 2022), It came to the fore in Russian regional policy in the second decade of the 21st century. In 2017, "further development of the urbanization process, in particular the development of large urban agglomerations", was identified as one of the results of the state policy of regional development of the Russian Federation, which must be achieved by 2025[6]. The national goals and strategic objectives for the development of the Russian Federation worked out in 2018, first until 2024[7], and then until 2030[8], and the "Unified plan for achieving the national development goals of the Russian Federation for the period through to 2024 and for the planning period through to 2030"[9] identified territorial differences in living standards as one of the challenges, and "the emergence and development of new centers of economic growth" was designated as a response to this challenge.

According to the abovementioned plan, strengthening interregional ties should ensure improved connectivity of economic growth centers among themselves and create incentives for additional development of the centers themselves and the territories between them. This should lead to an increase in the quality of life throughout the country, not through the redistribution of resources, but through the economic development of territories, which increases the importance of managing centers of economic growth. At the same time, the document notes its role – to form "an upper-level system of indicators and the main tasks (factors and a description of the required actions within them)"[10]. This decision was substantiated by the intention to ensure the operational flexibility of a mechanism for managing the achievement of the national development goals. As a result, the details of tasks, activities, tools, and indicators are transferred to national projects, state programs, regional projects and state programs of the regions. The argument is to improve management efficiency and ensure a direct link between programs and work to achieve the national development goals.

As a result, the task of forming a system of indicators and a methodology for their formation, which are critical aspects of the agglomerations management system (centers of economic growth) is transferred to the level of specific projects and programs that will be planned for implementation in specific territories, where, in fact, agglomerations are located. Given the totality of national goals, the variety of problems and the difference in the level of their priority within the boundaries of a particular

[5] Regional Law of the Leningrad Region 76-oz, dated August 8, 2016 (amended December 19, 2019) "On the Strategy for Socio-Economic Development of the Leningrad Region until 2030 and the invalidation of the Regional Law "On the Concept for Socio-Economic Development of the Leningrad Region for the period up to 2025" (adopted by the Legislative Assembly of the Leningrad Region on July 13, 2016).

[6] See Presidential Decree 13, dated January 15, 2017 "On approval of the Fundamentals of the State Policy of Regional Development of the Russian Federation for the period up to 2025".

[7] Presidential Decree 204, dated May 7, 2018 "On national goals and strategic objectives of the development of the Russian Federation for the period up to 2024".

[8] Presidential Decree 474, dated July 21, 2020 "On the national development goals of the Russian Federation for the period up to 2030".

[9] Approved by RF Government Resolution 2765-r, dated October 1, 2021 (amended December 24, 2021).

[10] "A unified plan to achieve the national development goals of the Russian Federation for the period up to 2024 and for the planning period up to 2030". Approved by RF Government Resolution 2765-r, dated October 1, 2021 (amended December 24, 2021).

territory (Korshunov, 2023), as well as the fact that agglomeration itself as a national goal is not defined by these documents, we should obviously assume that there are several options for the development of events in terms of building the contour of the agglomeration management system.

Option 1. The wide variability of the set of indicators for the management of agglomerations, which is due to:

1) the presence of a significant number of management entities (responsible for the implementation of the program / project conditioned by the national development goals), since it is highly likely that not a single program / project will be implemented in a particular region, but some of them;

2) the presence of a large set of national projects, state programs, regional projects and state programs of the regions that will be implemented in the territory;

3) different levels of attention to agglomeration processes and individual aspects of this process, different approaches explained by the specifics of projects/programs, the level at which they are developed (state/regional/municipal), which will lead to a focus on a certain range of tasks and measurable indicators corresponding to these tasks.

Option 2. A standard set of indicators recommended (or mandatory) for use at all levels of management of agglomeration processes, fixed in methodological guidelines prepared at the federal level. The preparation of methodological guidelines will require the federal level of management to choose a specific theoretical concept on which the methodology determining these indicators will be built and to understand the institutional structure of agglomerations management.

Option 3 represents a combination of options 1 and 2: it is the use of a standard set of indicators and indicators extracted from systems created within the framework of program and project management for achieving the national development goals.

In this regard, we should note the following. The formation of an urban agglomeration management system is of great interest among Russian experts; nevertheless, the authors avoid the issue concerning the system of indicators on the basis of which management decisions should be made. Within the framework of the problem we are discussing, an article by Yu.V. Pavlov, E.N. Koroleva and N.N. Evdokimov (Pavlov et al., 2019) is of interest. It is noteworthy that at the level of representation of the synthesized urban agglomeration management system, obtained on the basis of the analysis of 144 studies, Table 7 of the above study, revealing the elements of the subsystem of direct and feedback links of the management system, provides such an element as state (including legal) regulation of the agglomeration development, within which such characteristics as indicators for management purposes are formalized. But in the authors' multilevel decomposition of the agglomeration management system proposed by the researchers, this element is excluded from the discussion in relation to all considered models of urban agglomeration management (contractual, two-level municipal, one-level, regional).

While agreeing with the researchers that the complexity of the management object and the features of the management model require a balanced approach to determining the indicators used for management purposes, we believe that avoiding discussion of this significant element of the agglomeration management system is not a constructive step.

The objective existence of the problem is indicated not only by the analysis of the "upper-level" strategic planning documents carried out above and the results of research by scientists and experts; this also follows from the analysis of documents on the state strategic planning of Russia's spatial development.

The Strategy adopted in 2019, defining the policy of developing promising centers of economic

growth as one of four priorities, simultaneously focuses on stimulating agglomeration effects not only in promising centers, but also on the periphery (these are the other two priorities of the four stated in the Strategy), which is defined, first, as "territories with a low level of socio-economic development, having their own potential for economic growth, as well as territories with low population density and a forecasted increase in economic potential"; second, as "stronghold settlements"; third, as "border municipalities". The fourth priority is linking the center and the periphery, which is implemented through ensuring transport accessibility, developing communication and information infrastructure. In this regard, we think that a well-founded opinion was voiced by those researchers who, even at the stage of discussing the Strategy, argued that it indicates the state's refusal to regulate the spatial organization of the economy and "the transition from integrated territorial development planning to infrastructure planning" (Musinova, 2019). In more recent studies, attention has also been drawn to the role of infrastructure planning, in particular to the fact that in the strategies of territories that fall within the zone of implementation of federal infrastructure projects, the manifestation of certain provisions determined by the Strategy is noted most often (Zhikharevich, 2021).

A large number of growth centers and their dispersion across the territory of the Russian Federation are recorded in Appendix 3 to the Strategy. Such an impressive number of management facilities with different characteristics makes it necessary to have a sound system of indicators used to determine the main parameters of economic growth of the agglomeration in order to make strategic management decisions.

The documents reviewed earlier pointed to the only way proposed by the legislator – the detailing of indicators in specific plans, programs, projects and strategies. This path is not easy and is in the focus of experts' attention. On the one hand, it reflects the position of the central government on how it plans to make agglomerations more attractive and competitive. There are many difficulties in extracting the potential of agglomeration management through the implementation of state control (Tolkki, Haveri, 2020). On the other hand, this solution creates a problem that is widely discussed today in foreign studies by independent experts (Dixon et al., 2023; Kitchin, Moore-Cherry, 2020) and at the UN sites[11]; the problem is called fragmented governance, which creates great difficulties for modern territorial planning and management.

Nevertheless, there is every reason to carefully study the documents issued in line with the development of the Strategy so as to identify methodological recommendations and indicators recommended for use in the management of large and largest urban agglomerations.

The first document in this category is the "Plan for the implementation of the Spatial Development Strategy for the period up to 2025"[12] (hereinafter referred to as the Plan). Indeed, paragraph 73 of the Plan provides for the "development of a procedure for coordinating, approving and monitoring the implementation of long-term plans for the socio-economic development of large and largest urban agglomerations; it was completed almost a year late (in May 2022 instead of June 2021), but this document[13] discusses

[11] 1st Global State of Metropolis: Metropolitan Management from Policy, Legislation, Governance, Planning, Finance and Economics. Preliminary Findings and Key Messages Booklet. United Nations Human Settlements Programme (UN-Habitat). Available at: http://creativecommons.org/licenses/by/3.0/igo/

[12] Approved by RF Government Resolution 3227-r, dated December 27, 2019.

[13] RF Government Resolution 996, dated May 31, 2022 "On approval of the rules for the coordination, approval and monitoring of the implementation of long-term plans for the socio-economic development of large and largest urban agglomerations".

procedures rather than indicators. At the same time Paragraph 75 of the Plan provides for the "elaboration of at least 20 long-term plans for the socio-economic development of large and largest urban agglomerations". Since the deadline for the event has been postponed from December 2021 to December 2023, it can be assumed that this is due to a delay in the preparation of a document regulating the process of developing plans. And this is true, the Methodological Recommendations that have already been mentioned above were prepared only in September 2023.

Unfortunately, the problem lies in the fact that the document does not provide certainty as to what constitutes a system of indicators established by strategic planning documents at the federal level for analyzing the state of socio-economic development of an agglomeration in order to prepare long-term plans for the socio-economic development of agglomerations, as well as the methodology substantiating them. In particular, Paragraph 1.7 recommends that when developing a long-term plan, it is necessary to use the calculation form "Preparation of a long-term plan for the socio-economic development of large and largest urban agglomerations", which is not attached to the document. It is indicated that the document (calculation form) "is posted on the website of the Ministry of Economic Development of the Russian Federation in the section "Regulatory support for strategic planning" (https://www.economy.gov.ru/material/directions/strateg_planirovanie/normativnoe_obespechenie_strategicheskogo_planirovaniya/)". But when trying to access the specified link (the last date of access is November 10, 2023), the document is not found.

Of great importance for our analysis is Section 3 of the Methodological Recommendations, which is called "Analysis of socio-economic development and forecasting of urban agglomeration development". Describing the analysis algorithm, this section was designed to form a clear understanding of the methodology and composition of the indicators that will be included in the system substantiating the management decision. The following algorithm is proposed:

1) conduct an analysis of the current and forecasted socio-economic development of the urban agglomeration in order to identify gaps and deficits and, based on the results of the analysis, set the values of targets that are to be achieved with the help of the Long-Term Plan (Paragraph 3.1);

2) identify gaps and deficits, analyze basic indicators of the socio-economic development of the urban agglomeration (current values and growth rates over the past five years) (Paragraph 3.2). It is also stated here that the list of basic indicators is contained in the section "Basic indicators of SED" in the calculation form, which can be reached via the link given in Paragraph 1.7 to an online source. But, as noted above, the calculation form is not found at this address.

Further, Paragraph 3.2 provides a list of indicators (four in total) defined by the Ministry of Economic Development of the Russian Federation as characterizing economic growth and recommended for analyzing socio-economic development and forecasting the development of urban agglomeration. The indicators are as follows:

– volume of shipped goods of our own production, own completed works and services;

– volume of investments in fixed assets;

– average number of employees of organizations;

– average monthly wage of employees of organizations.

Thus, the conclusion is substantiated that most likely the system of indicators characterizing the economic growth of agglomerations is a wide

list, which to some extent will coincide with the indicators generated within the framework of the management of national projects and programs. Nevertheless, the above four indicators are clearly and unambiguously defined precisely as characterizing the economic growth of the agglomeration; therefore, we will use them when conducting a retrospective analysis of the state of the socio-economic system of the Saint Petersburg agglomeration.

Another conclusion is that, presumably, since there is no clear indication of a certain methodology for the formation of indicators and methods for calculating them, then the entities carrying out planning have some degree of freedom to choose the methodology and the formation of indicators. The most important thing is to ensure their consistency with the "upper-level system of indicators" contained in the national development goals of the Russian Federation.

Let us pay attention to an interesting point that was revealed when comparing the indicators unambiguously defined in the Methodological Recommendations and the indicators established by the national development goals of the Russian Federation *(Tab. 1)*.

The comparison of indicators shows that the economic growth of the agglomeration should primarily contribute to the achievement of the following national goals: "Decent, effective work, successful entrepreneurship" and "Preservation of the population, people's health and well-being", which fully complies with the logic of developing measures to respond to a major challenge defined as "territorial differences in living standards", which was the reason for the adoption of a polarized development strategy representing agglomerations as growth drivers.

Next, let us analyze four indicators characterizing the economic growth of the agglomeration, given in the Methodological Recommendations, in order to form a substantiated judgment about the essence of the observed trends in the field of socio-economic development of the agglomeration.

Table 1. Correlation of indicators characterizing the economic growth of agglomerations with the national development goals

No.	Indicator defined by Order 669, dated September 26, 2023	Target indicator in accordance with Decree 474, dated July 21, 2020
1	Average number of employees of organizations	Increase in the number of people employed in the field of small and medium-sized enterprises, including individual entrepreneurs and the self-employed, to 25 million people*
2	Average monthly wage of employees of organizations	Ensuring the rate of sustainable income growth of the population not lower than inflation*; reduction of the poverty level by half compared to the indicator of 2017**
3	Volume of investments in fixed assets	Real growth of investments in fixed assets at least by 70% compared to 2020*
4	Volume of shipped goods of own production, own completed works and services	Ensuring the growth rate of the country's gross regional product above the global average while maintaining macroeconomic stability*

* The indicator refers to the national goal "Decent, effective work, successful entrepreneurship".
** The indicator refers to the national goal "Preservation of the population, people's health and well-being".
Source: own compilation.

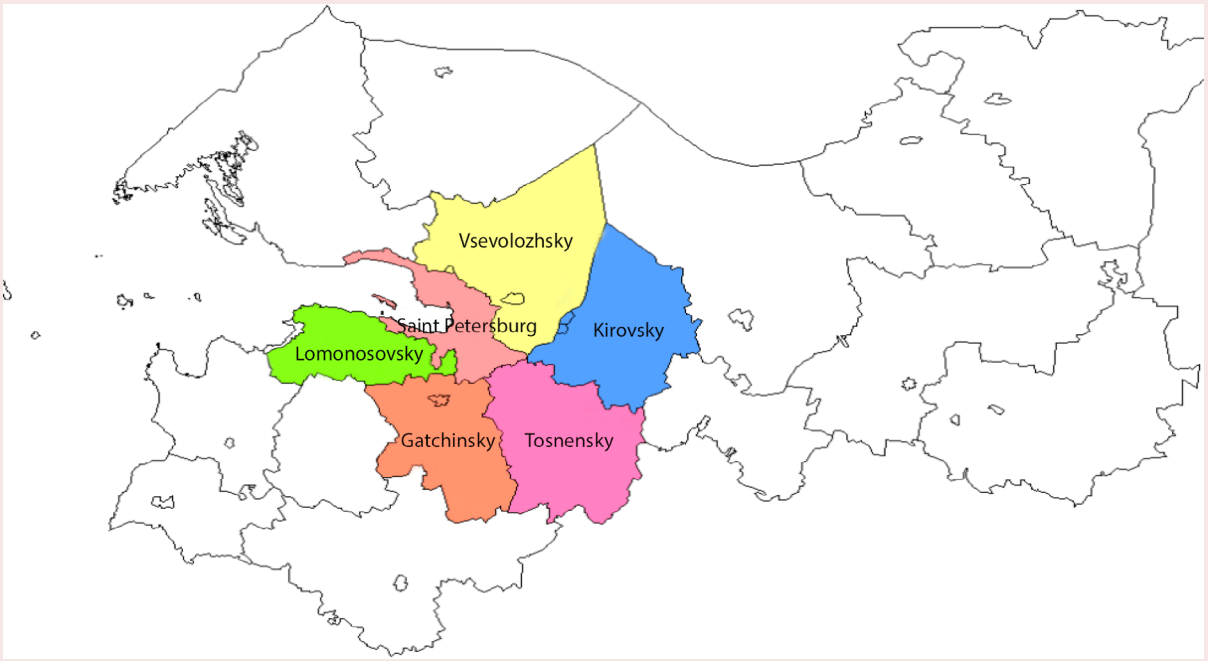
Results of the study

The Saint Petersburg agglomeration covers an area of 17.1 square kilometers, it includes the entire territory of Saint Petersburg and 19% of the territory of the Leningrad Region. These are the following municipal districts: Vsevolozhsky, Lomonosovsky, Tosnensky, Gatchinsky and Kirovsky[14]. The location of the Saint Petersburg agglomeration on the territory of the Leningrad Region is shown in *Figure 1*.

Production. We should note that although the Methodological Recommendations indicate that the proposed indicators are calculated by Rosstat at the municipal level, it is difficult to find them in the public domain (a typical situation is that the general data are presented, but the data in the context of branches of the municipal economy are absent) or the presentation is carried out in a format not comparable to the format of the data defined for statistics of the constituent entity of the Russian Federation (Saint Petersburg). This primarily applies to indicators characterizing economic activity, in particular, the volume of goods shipped. In this regard, gross regional product (hereinafter referred to as GRP) was taken as an indicator characterizing the volume of production, presented, among other things, with details by type of economic activity of the region.

For the same reason, the GRP indicator for the Leningrad Region was used to assess economic trends emerging within the boundaries of the agglomeration in the part formed by municipal districts included in the Leningrad Region. It was assumed that the trend observed for the region as a whole, for the most part, will be typical for municipal districts.

Figure 1. Saint Petersburg agglomeration on the territory of the Leningrad Region



Compiled according to: Unified State Register of Soil Resources of Russia. Available at: https://egrpr.esoil.ru/content/2DB.html (accessed: October 19, 2023).

[14] The composition of the territories is determined by Order of the Ministry of Economic Development of the Russian Federation 669, dated September 26, 2023 "On approval of the methodological recommendations for the development of long-term plans for the socio-economic development of large and largest urban agglomerations".

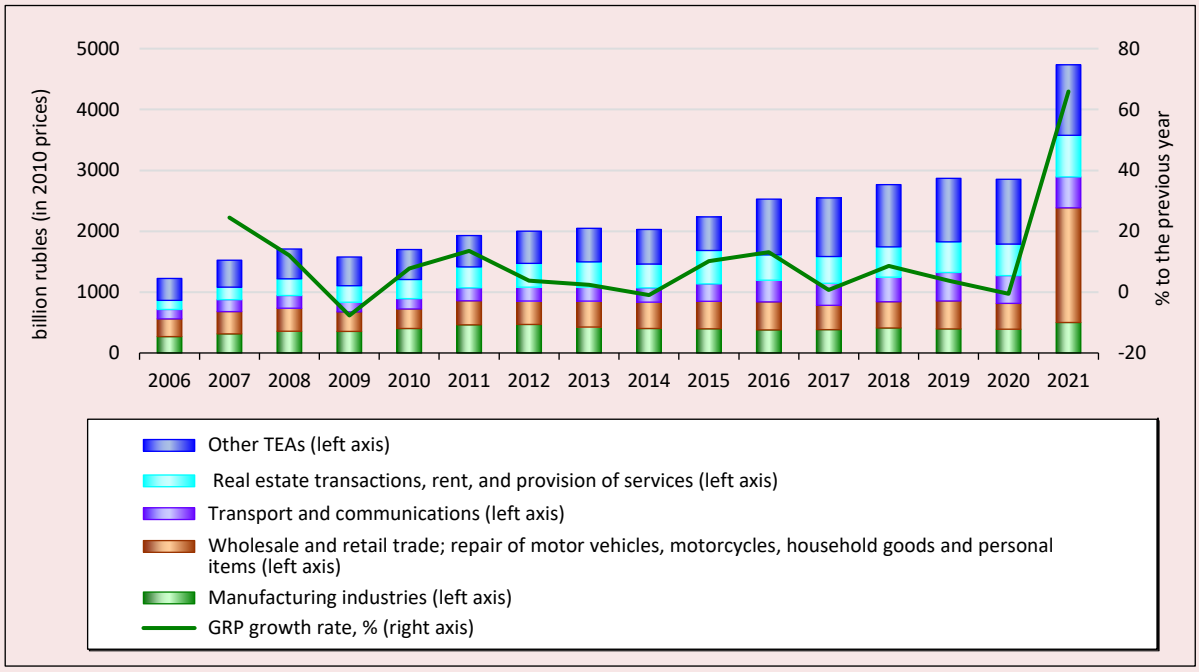
The analysis of statistical data leads to the following conclusions.

First, the main types of economic activity (hereinafter referred to as TEA), determined by the share of contribution of TEA to GRP, for Saint Petersburg in 2006–2021 are TEA "Wholesale and retail trade; repair of motor vehicles, motorcycles, household goods and personal items" (22% in GRP), TEA "Real estate transactions, rent, and provision of services" (18% in GRP), TEA "Manufacturing industries" (17% in GRP) and TEA "Transport and communications" (13% in GRP). The average annual GRP growth rate in Saint Petersburg amounted to 9.44% over the period under consideration *(Fig. 2)*.

The emerging industry vector is in clear contradiction with the "industry vector for the implementation of tasks set for the industry of Saint Petersburg" (Okrepilov, 2021b) in the Industrial Policy Concept developed by the Committee on Industrial Policy, Innovation and Trade of Saint Petersburg. The trend of sustainable economic growth based on the industries that form the basis of the innovative development of the city (radioelectronic industry, transport engineering, including shipbuilding, energy engineering), as well as the most high-tech industries (automotive, pharmaceutical, food) has not yet been developed.

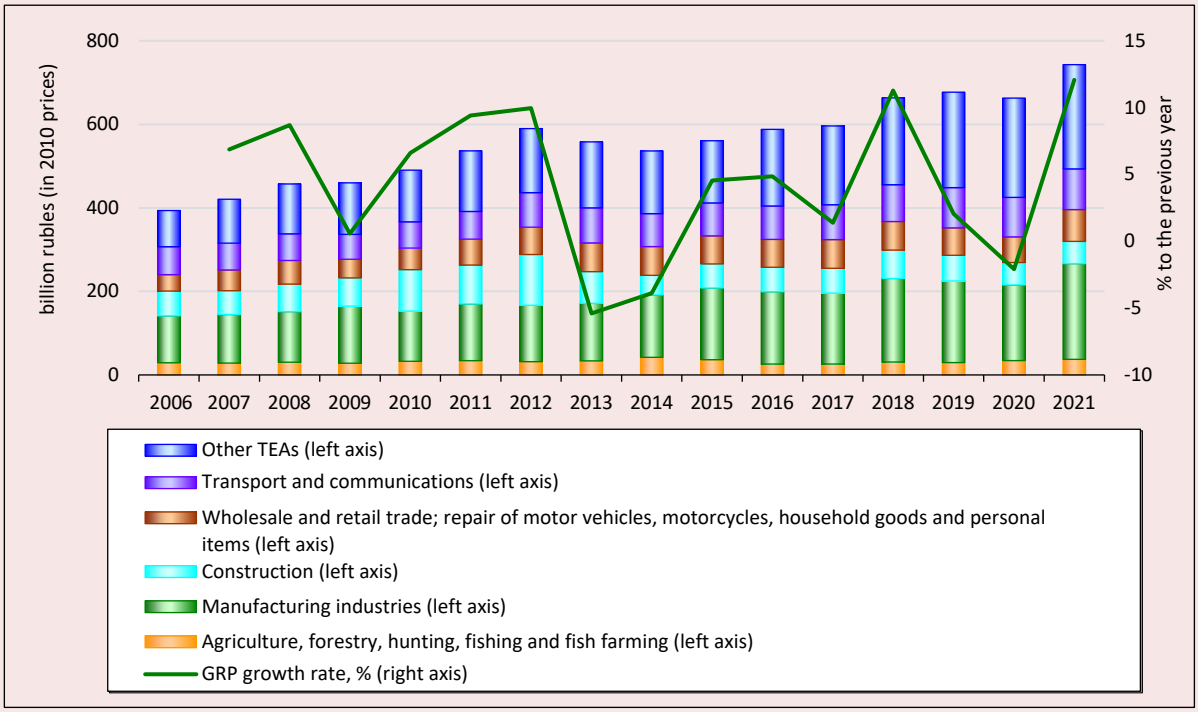
Second, the main economic activities of the Leningrad Region in 2006–2021 were TEA "Manufacturing industries" (28% in GRP), TEA "Transport and communications" (14% in GRP), TEA "Construction" (12% in GRP) and TEA "Wholesale and retail trade; repair of motor vehicles, motorcycles, household goods and personal items" (11% in GRP). The average annual GRP growth rate in the Leningrad Region was 4.33% over the period under consideration *(Fig. 3)*.

Figure 2. Dynamics and structure of the gross regional product of Saint Petersburg for 2006–2021, billion rubles in 2010 prices



Compiled according to: Gross regional product in basic prices (OKVED-2007). Available at: https://www.fedstat.ru/indicator/33379 (accessed: October 19, 2023); Gross regional product in basic prices (OKVED 2). Available at: https://www.fedstat.ru/indicator/61497 (accessed: October 19, 2023).

Figure 3. Dynamics and structure of gross regional product of the Leningrad Region for 2006–2021, billion rubles in 2010 prices



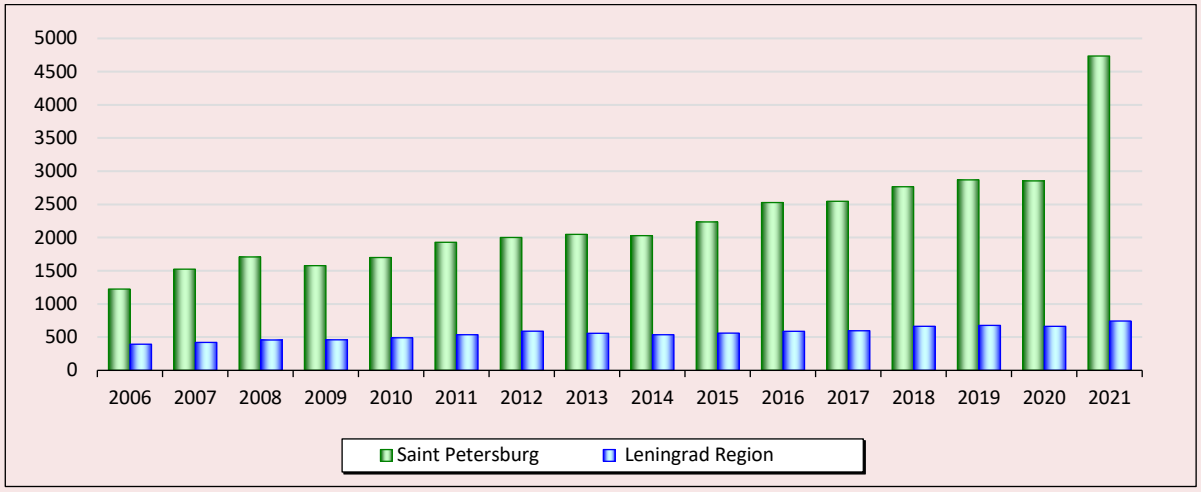
Compiled according to: Gross regional product in basic prices (OKVED-2007). Available at: https://www.fedstat.ru/indicator/33379 (accessed: October 19, 2023); Gross regional product in basic prices (OKVED 2). Available at: https://www.fedstat.ru/indicator/61497 (accessed: October 19, 2023).

It is noteworthy that, although there is no complete coincidence of the structure of those types of economic activity that form the economy of the territories included in the agglomeration, at the same time, the share of the contribution of three TEAs, which are simultaneously significant for Saint Petersburg and for the municipal districts of the Leningrad Region included in the agglomeration, practically coincides and amounts to 52% and 53%, respectively *(Tab. 2)*. It is also worth noting that TEA "Construction" is among the top four for the Leningrad Region and is absent from the topo four for Saint Petersburg, for which the four foreign economic activities that determine the main contribution to GRP, include TEA "Real estate transactions, rent, and provision of services".

Table 2. Comparison of foreign economic activity by share of contribution to GRP: Saint Petersburg and the Leningrad Region

Saint Petersburg		Leningrad Region	
TEA	% to GRP	TEA	% to GRP
Wholesale and retail trade; repair of motor vehicles, motorcycles, household goods and personal items	22	Manufacturing industries	28
Real estate transactions, rent, and provision of services	18	Transport and communications	14
Manufacturing industries	17	Construction	12
Transport and communications	13	Wholesale and retail trade; repair of motor vehicles, motorcycles, household goods and personal items	11
Source: own compilation.			

Figure 4. Dynamics of GRP in Saint Petersburg and the Leningrad Region for 2006–2021, billion rubles in 2010 prices



Compiled according to: Gross regional product in basic prices (OKVED-2007). Available at: https://www.fedstat.ru/indicator/33379 (accessed: October 19, 2023); Gross regional product in basic prices (OKVED 2). Available at: https://www.fedstat.ru/indicator/61497 (accessed: October 19, 2023).

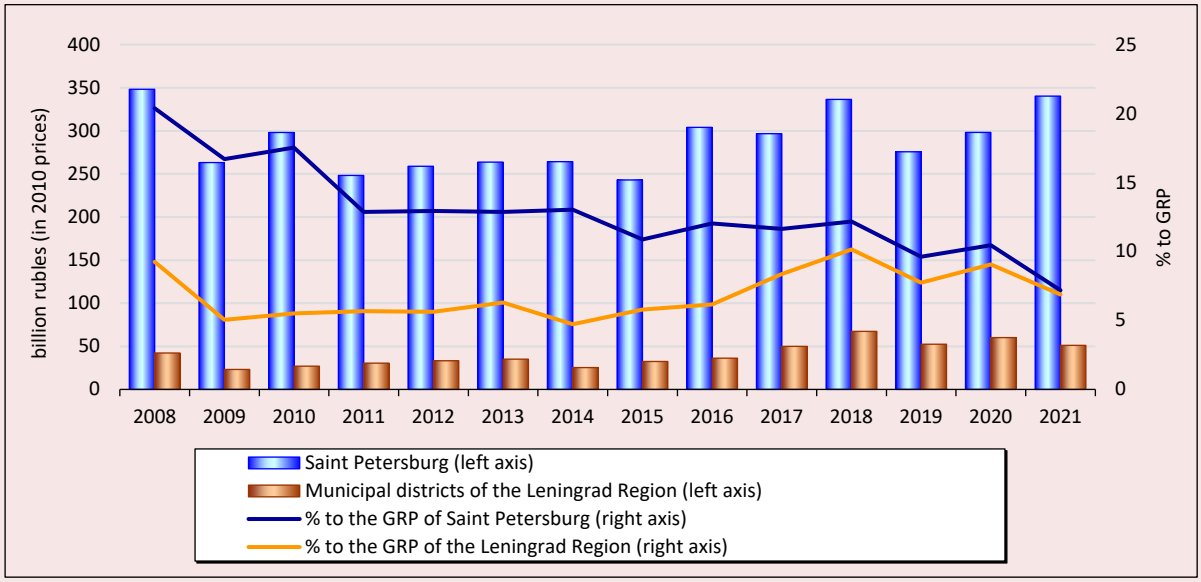
Here it is necessary to take into account how GRP indicators for Saint Petersburg and for the Leningrad Region relate to each other *(Fig. 4)*. Despite the fact that until 2021, the GRP of the region was about four times lower than the GRP of the city, and in 2021, as a result of the abrupt growth of the GRP of Saint Petersburg, this gap approached seven times, on average, the GRP of Saint Petersburg grew at a rate twice the growth rate of the GRP of the Leningrad Region, while the volume of GRP of Saint Petersburg is many times higher than the volume of GRP of the Leningrad Region.

Investments. If we consider the cost indicators of the volume of investments in fixed assets carried out by organizations located in the territory that makes up the Saint Petersburg agglomeration *(Fig. 5)*, then it can be assumed that Saint Petersburg is a driver of economic development.

But the analysis of the dynamics of the share of investments in relation to GRP urges us to consider what could cause a decrease in business investment activity in the territory of Saint Petersburg. In particular, the following fact was revealed: in 2008–2021, the share of investments in fixed assets in GRP of Saint Petersburg decreased from more than 20% to 7%. At the same time, the share of investments in fixed assets in municipal districts, which are also part of the Saint Petersburg agglomeration, in the GRP of the Leningrad Region, although it had a downward trend, did not decrease as rapidly as in the city, and in 2021 it almost equaled the share of Saint Petersburg (decreased from 10% to 7%).

As noted earlier, GRP growth rate in the Leningrad Region was two times lower than that of Saint Petersburg. As a result, it turns out that despite the high growth of GRP in Saint Petersburg, the business did not show investment activity, but invested approximately equal amounts annually in the city's economy, which by 2021 led to a more than twofold decrease in the share of investments in fixed assets relative to GRP. At the same time, for the part of the agglomeration that includes municipal districts of the Leningrad Region, a different trend was observed – a slight increase in GRP corresponded to sluggish investment activity,

Figure 5. Investments in fixed assets of the Saint Petersburg agglomeration



Compiled according to: Gross regional product in basic prices (OKVED-2007). Available at: https://www.fedstat.ru/indicator/33379 (accessed: October 19, 2023); Gross regional product in basic prices (OKVED 2). Available at: https://www.fedstat.ru/indicator/61497 (accessed: October 19, 2023); Investments in fixed assets carried out by organizations located on the territory of a municipality (without small businesses). Available at: https://pro.fira.ru/search/#themes (accessed: October 19, 2023).

which did not lead to an increase in the share of investments in fixed assets in the GRP of the region, but also did not lead to a significant drop in this share.

The fact that the Leningrad Region is characterized by moderate investment activity and the fact that TEA "Construction" is among key TEAs in terms of contribution to GRP in the region confirms the conclusions of another work devoted to the study of trends in the development of municipalities of the Leningrad Region located in the zone of intensive urbanization of the Saint Petersburg agglomeration, namely: the increase in the intensity of development activity in these municipalities is due to the development of industrial zones, location of new production facilities, organization of industrial parks, development of new investment sites, development of housing construction and modernization of infrastructure facilities (Sviridenko, 2020). A later study by this author draws attention to the problem of fragmented management, which we mentioned above; this problem had clearly manifested itself by 2022: it consists in the unsatisfactory quality and intensity of the investment process in the agglomeration area due to the insufficient level of cooperation between the two regions (Saint Petersburg and the Leningrad Region). The author sees the solution to this problem in achieving greater consistency of investment policy within the framework of development of the Saint Petersburg agglomeration. The "institutional interaction of the governing bodies of the two constituent entities of the Russian Federation" is proposed as a tool for solving the problem (Sviridenko, 2022).

This fact draws attention to the relevance of a broad expert discussion not only regarding what an indicator system should be for the purposes of managing the development of an agglomeration, but also regarding the form of institutions in which

the agglomeration management function should be implemented, since this is very important for determining the management quality standards that would be advisable to follow. Modern studies of the last three years (Medeiros at al., 2020; Knickel at al., 2021; Kellokumpu, 2023) show that the relevance of this issue is increasing. Different management models also have different goals, different tools for achieving goals; thus, using the same indicator template is unlikely to be a rational decision. Therefore, among the obvious advantages we can point out the recommendatory nature of the indicators proposed in the Methodological Recommendations analyzed above and a certain degree of freedom that allows forming a system of indicators based on one's own vision of the prospects for the development of the agglomeration (but with a focus on the "upper-level system of indicators") by the heads of territories and citizens living within its borders.

Population. Monocentricity is one of the problems of the Saint Petersburg agglomeration (Solodilov, 2021). Stimulating suburbanization, which leads to a decrease in the monocentricity of the agglomeration, seems to be a solution to this problem. In this regard, studying the dynamics and structure of the population of the agglomeration, as well as its settlement, is an important task, since this knowledge forms the basis for decision-making on managing the development of the agglomeration. Our analysis will not address the issues of territorial and sectoral development of the Saint Petersburg agglomeration, but individual indicators characterizing demographic processes are important for understanding the prospects for economic growth.

The first question that is of interest based on the objectives and aim of our study is the place of the Saint Petersburg agglomeration among the largest agglomerations in Russia. The composition of these agglomerations is determined by the Methodological Recommendations already given above. *Table 3* shows the dynamics of the population of these agglomerations in the last

Table 3. The average annual number of permanent residents (2019–2021, people)

Agglomeration	Years				Average annual growth rate, %
	2019	2020	2021	2019-2021	
Largest urban agglomerations					
Perm agglomeration	1 168 551	1 168 040	1 163 548	1 166 713	-0.21
Saratov agglomeration	1 199 165	1 193 227	1 182 027	1 191 473	-0.72
Omsk agglomeration	1 259 634	1 246 656	1 232 125	1 246 138	-1.10
Krasnoyarsk agglomeration	1 267 351	1 269 416	1 276 212	1 270 993	0.35
Voronezh agglomeration	1 272 926	1 273 518	1 270 140	1 272 195	-0.11
Krasnodar agglomeration	1 270 334	1 289 642	1 312 521	1 290 832	1.65
Ufa agglomeration	1 300 725	1 305 709	1 313 050	1 306 495	0.47
Volgograd agglomeration	1 493 693	1 489 498	1 484 102	1 489 098	-0.32
Chelyabinsk agglomeration	1 526 104	1 521 354		1 523 729	-0.31
Rostov agglomeration	1 527 599	1 534 538	1 536 458	1 532 865	0.29
Kazan agglomeration	1 576 153	1 587 570	1 598 287	1 587 337	0.70
Nizhny Novgorod agglomeration	1 814 652	1 807 919	1 736 572	1 786 381	-2.18
Novosibirsk agglomeration	2 081 888	2 086 486	2 087 584	2 085 319	0.14
Samara agglomeration	2 106 142	2 102 965	2 093 143	2 100 750	-0.31
Yekaterinburg agglomeration	2 108 623	2 113 653	2 113 449	2 111 908	0.11
Saint Petersburg agglomeration	6 359 051	6 391 543	6 410 019	6 386 871	0.40
Moscow agglomeration	16 621 311	16 127 719	16 141 112	16 296 714	-1.46

Compiled according to: The average annual number of permanent population. FIRA PRO information and analytical system. Available at: https://pro.fira.ru/search/#themes (accessed: October 26, 2023); Regions of Russia. Socio-economic indicators. Rosstat. Available at: https://rosstat.gov.ru/folder/210/document/13204 (accessed: October 26, 2023).

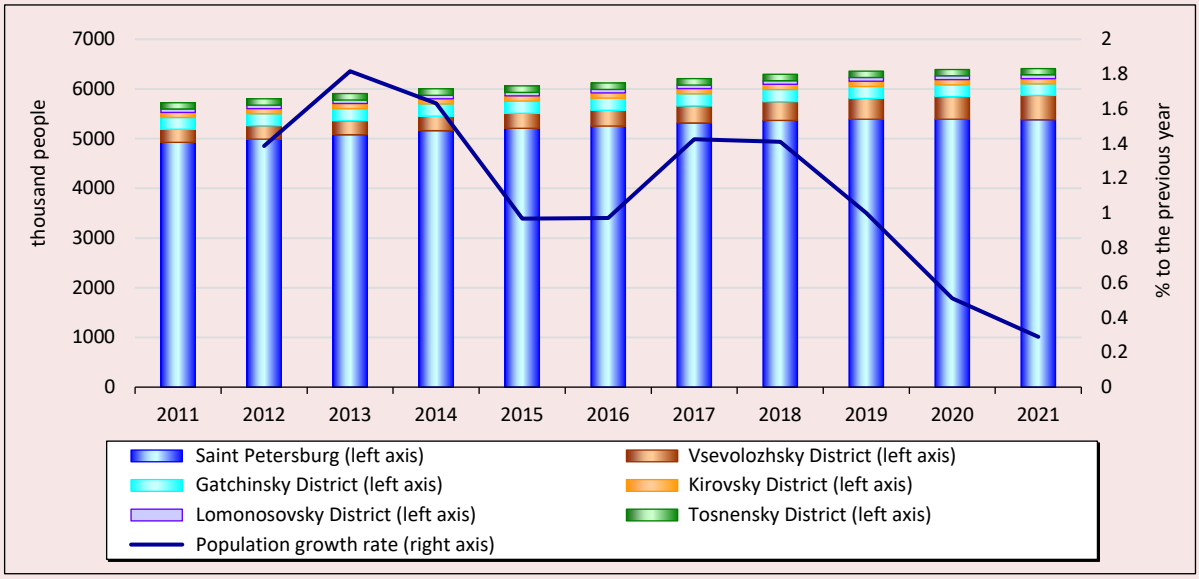
three years and the average annual growth rate. According to the data provided, out of seventeen agglomerations belonging to the largest, for twelve the population did not exceed two million people, for three agglomerations it slightly exceeds two million people, and only two agglomerations have significantly more than two million people. These are the Saint Petersburg agglomeration, numbering more than six million people, and the Moscow agglomeration, numbering more than sixteen million people. The growth rate of the permanent population for nine agglomerations was negative. The Saint Petersburg agglomeration was among the eight agglomerations that had positive growth rates regarding the permanent population.

The largest share of the population of the Saint Petersburg agglomeration as of 2021 lived in the territory of Saint Petersburg (84%), Vsevolozhsky District (8%) and Gatchinsky District (4%). The following structural changes were noted in 2011–2021: in Vsevolozhsky District, the share of the population increased by 2%, and in Saint Petersburg – decreased by 2%. In addition, we observe a decline in the annual population growth rate for 2011–2021 from 1.39% to 0.28% *(Fig. 6)*.

Since 2018, the demographic situation has been deteriorating: death rate has exceeded birth rate. The situation is complicated by a significant drop in migration growth; for example, in 2018, population growth was 9 people per 1,000 people, while in 2020 – 6 people *(Fig. 7)*.

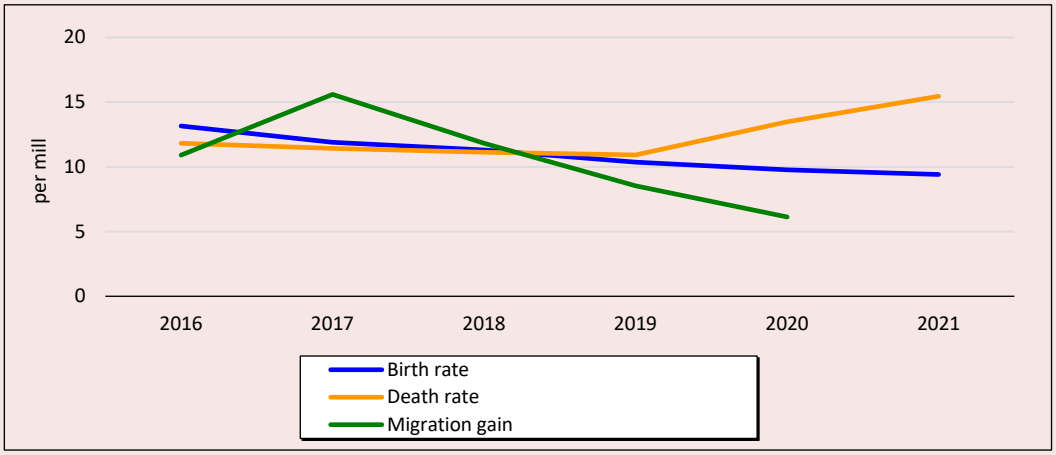
The highest level of average monthly real wages for employees of large, medium-sized enterprises and nonprofit organizations was recorded in Lomonosovsky Municipal District and in Saint Petersburg. Here, we also observe the largest average annual growth rates of wages, calculated for the period 2009–2021. The differentiation in the amount of wages between the highest and lowest average values in the agglomeration is 1.4 times for the three years under consideration *(Fig. 8)*.

Figure 6. Dynamics and structure of the population of the Saint Petersburg agglomeration



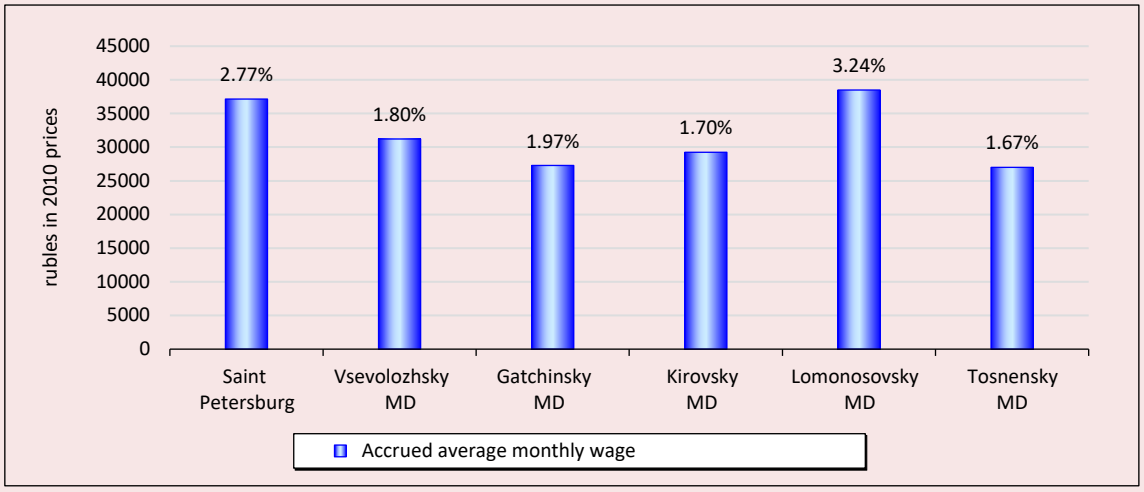
Compiled according to: Average annual number of permanent population. FIRA PRO information and analytical system. Available at: https://pro.fira.ru/search/#themes (accessed: October 19, 2023).

Figure 7. Birth rate, death rate, and migration gain in the Saint Petersburg agglomeration for 2016–2021, per mill (per 1,000 people)



Compiled according to: Population. FIRA PRO information and analytical system. Available at: https://pro.fira.ru/search/#themes (accessed: October 19, 2023).

Figure 8. Accrued real average monthly wage for 2019–2021 and its average growth rate for 2009–2021 (indicated above the columns)



Compiled according to: Average monthly nominal accrued wage of employees of large, medium-sized enterprises and nonprofit organizations of the urban okrug (municipal district). FIRA PRO information and analytical system. Available at: https://pro.fira.ru/search/#themes (accessed: October 19, 2023); Regions of Russia. Socio-economic indicators. Federal State Statistics Service (Rosstat). Available at: https://rosstat.gov.ru/folder/210/document/13204 (accessed: October 19, 2023).

Discussion and conclusions

The above analysis allows us to make a number of generalizations that we put forward for discussion and that are important for assessing the current state and forecasting the development of large and largest urban agglomerations.

Using the information provided in federal strategic planning documents and obtained during the analysis of statistical indicators reflecting the development of the Saint Petersburg agglomeration, our study examines whether the indicator system established in the regulatory framework is sufficient to determine the main parameters of economic growth in agglomerations in order to manage their development. We should note that the indicators defined by federal strategic planning documents are minimally sufficient, and are suitable exclusively for the implementation of an extremely abbreviated version of express analysis. The available indicators do not allow us to identify, assess and forecast the factors that generate impulses for the development of an agglomeration.

The results of the analysis show that the federal level has a significant impact on the formation of the potential for managing urban agglomerations. This influence is related to the control that is implemented indirectly through a system of national goals and plans. At the present stage of development, a choice has not yet been made regarding the agglomeration management model and, accordingly, it is not yet clear what a planning system should be for the management of an urban agglomeration. The control that exists today creates a framework that defines the subjects of management and "upper-level goals", but at the same time creates another problem: fragmentation of agglomeration management.

The research allowed us to identify three key components that modern methods of strategic planning and management of agglomerations development should include:

1) ensuring a compromise between state control and agglomeration management potential;

2) overcoming the problem of management fragmentation and the blurring of the institutional structure of agglomeration management;

3) using quality economics tools (metrology, standardization and quality management) in designing strategies and long-term plans for the development of urban agglomerations.

As a result, we substantiate the necessity to introduce a new approach to management, which consists in managing spatial forms, rather than individual cities and municipalities, and designing new management concepts.

The conclusions of this study have certain implications for designing a methodology for strategic planning related to the development of urban agglomerations. First, it is necessary to further elaborate on the methodology for developing indicators to assess the economic growth of agglomerations. The research presented in the paper shows the relevance and expediency of a detailed study of the issue regarding the full-scale implementation of quality economics tools in order to ensure the effectiveness of planning and management. This is especially true for systems consisting of multiple management entities.

Second, in order to overcome the identified limitations, it is necessary to form agglomeration management institutions that coordinate the actions of many management entities, which is an urgent methodological and applied task.

The findings of the study contribute to the development of theoretical provisions of agglomeration management science in the following areas. First, we have systematized the conditions that influenced the approach to strategic planning of agglomerations in the Russian Federation. Second, we have assessed the possibility of

indicators used by federal strategic planning documents to identify factors that generate impulses for the development of agglomerations. Third, we have defined the range of the most significant principles for the Russian Federation in designing a methodology for the strategic planning and management of agglomerations development. In addition, it is possible to highlight the practical result of the study, which consists, in particular, in proposing ways to overcome the current difficulties in managing agglomerations.

The results obtained are important for stimulating the experiment on the use of quality economics tools (metrology, standardization and quality management) in designing strategies and long-term plans for the development of urban agglomerations in order to improve strategic planning methodology.

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Regional Experience of Studying and Developing Productive Forces (Case Study of the Republic of Komi)

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Abstract. As an attempt to extract positive experience to overcome difficulties of an extraordinary nature, we tried to appeal to historic examples of active participation of science in solving problems of regional development due to the general national tasks. The paper deals with the experience of the Commission for Study of Natural Productive Forces under the Head of the Republic of Komi (1993–2004), which is of scientific interest regarding the use of the results of research works of strategic planning and project management, taking into account the extraordinary circumstances caused by the sharp transformation of Russia's economic structure. The article shows that it happens in a more constructive way when researchers and practitioners are united organizationally within the framework of the "problem – program" methodology. The second line of analysis of such experience is to identify the correspondence between the scientific interpretation of the concept of "productive forces" and the content of state strategic planning documents. To return productive forces to the system "science – practice", it is necessary to eliminate the substitution of this concept by resources and production and to select appropriate indicators of their measurement. The main subject of this dimension becomes "force", which is presented as the force and result of natural processes, scientific and technological progress and new forms of production organization.

Key words: Commission – a form of organizing the solution of national economic problems, productive forces as a natural and social category, indicators of measuring forces, translation of theoretical knowledge into management practice.

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Introduction

The focus on Russia's technological self-sufficiency determines the search for optimal forms of connecting the economy of the northern regions to the solution of complex national economic problems. The urgent task is to produce materials that are extremely necessary for the development of machine building, instrument making, electronics and other manufacturing industries. At the same time, it is necessary to strengthen the regions' own potential by activating the sources of development – labor, science, education, engineering and technology, territorial organization of the economy, as well as driving forces – professional interest, institutions and relations, reasonable needs, etc. The improvement of socio-economic relations "region – country" and "region – population" in today's rather complex living conditions is associated with the mobilization of intellectual, natural and production potential of regions – everything that in previous years was denoted by the concept of "productive forces".

The return of this category to the scientific arsenal and management practice, but with the understanding of its specificity, was the motivation for writing our article. The paper aims to show the necessity of including research and development (R&D) in the field of development and location of productive forces in the general system of strategic planning on the basis of three postulates: 1) productive forces are a way of transforming the natural into the social, the unity of objective and subjective aspects of labor, connected by end-to-end technological systems; 2) scientific knowledge about productive forces is transformed into the field of practical activity in accordance with the stages of solving specific problems: scientific and research, scientific and practical knowledge of the productive forces is transferred to the field of management; 3) scientific centers and institutes of the Russian Academy of Sciences should independently carry out pre-plan and pre-project forecasts of scientific-technical and socio-economic development of the country and its regions while preserving the specific content of certain scientific categories and concepts.

Commission for the Study of Natural Productive Forces of the Komi Republic (KEPS RK) – historical facts

KEPS RK – civic position. Taking into account the increasing role of the RF constituent entities in the management of the state, and most importantly – in restraining the destructive impact on the "shock therapy" economy, conducted by the federal government, in December 1992, the Commission for the Study of Natural Productive Forces of the Komi Republic was formed under the chairmanship of Academician N.P. Yushkin.

The main task of the KEPS RK is the system analysis of available natural and human resources, determination of general directions of socio-economic development of the republic taking into account all-Russian and regional interests. Its mission, which was not initially thinkable, was also important, namely, the creation of an informal collective of like-minded people, standing on the position of evolutionary transformations and leveling the negative effects of the revolutionary imposition of market relations with a focus on privatization of state property in favor of private capital. The KEPS RK restrained (as far as it was feasible) not only economic perturbation, but also, figuratively speaking, "inflammation of brains" under the influence of socio-political chaos.

Academician N.P. Yushkin stood on the position of the public movement "Russian Scientists of Socialist Orientation (RUSO)", and this circumstance had a certain impact on the formation of ideas and plans of the Commission's activity. The fact is that the rational organization of productive forces was rightly considered one of the advantages of socialism over capitalism, since state ownership of key sources of development and planned economy served as a basis for saving public resources through

inter-sectoral cooperation and coordination of technological, economic, ecological and social aspects of the national economy.

Great importance was attached to the territorial organization of productive forces in the form of economic districts and production territorial complexes. In practice, it was expressed in the development and implementation of the GOELRO plan, in the territorial breakdown of the five-year plan, in the formation of program-targeted territorial production complexes (TPC) and in a number of other forms of organization of production. It is important to say that not everything went easily and smoothly (and the author reflected the note in the article written on the occasion of the centenary of the statehood of the Komi Republic) (Lazhentsev, 2021), but the ideas of comprehensiveness, efficiency and social justice were so firmly established in the minds of many scientific and practical workers that it was difficult to erase them with the propaganda of market regulators, reflecting the superiority of monetarism over the real design and creation of economic complexes. Although we should note the "successes" of such propaganda. The very concept of "productive forces" was removed from textbooks, scientific texts and state documents because of its belonging to Marxism.

Analogies. At creation of the KEPS RK there involuntarily appeared an analogy with the All-Russian *Commission for the Study of Natural Productive Forces (KEPS), created by the Imperial Saint Petersburg Academy of Sciences in 1915, chaired by Academician V.I. Vernadsky,* which in addition to staff members included scientific societies, as well as members of five ministries (finance, trade and industry, railways, maritime, public education), the Central Military-Industrial Committee, the General Directorate of Land Management and Agriculture.

There were substantial grounds for the formation of the Commission in such a composition: extreme living conditions and mobilization economy of wartime, the extreme need for accelerated creation of new production bases, awareness of the special role of science in improving the technological parameters of Russian industry, the need to include in the economy essentially all natural elements of the Periodic Table of Mendeleev. KEPS of Russia[1] carried out active expeditionary work, which is directly related to the development of productive forces of the European North. A huge contribution to the scientific substantiation of the development of northern territories was made by the *expedition to the Komi Region under the leadership of Academician A.P. Karpinsky, President of the USSR Academy of Sciences ("Pechora Brigade", 1933)* (Brovina, 2016; Roshchevskii et al., 2015). Scientific and analytical materials of the expedition served as a starting point for the implementation of a number of production projects, including the creation of the Northern coal-metallurgical base in the 1950s (construction of a ferrous metals plant in Cherepovets based on coking coal from Vorkuta, iron ores from Karelia and the Kola Peninsula, and electricity from the Rybinsk HPP)[2].

The experience of the *USSR Academy of Sciences Commission on mobilization of resour-ces of the Urals, Western Siberia and Kazakhstan for the needs of national defense (1941–1944) under the leadership of academicians V.L. Komarov and I.P. Bardin* was very useful for the organization of scientific-applied works within the framework of the KEPS RK. Positive aspects of the activities of the Commission were the following: program-targeted method of mobilization economy, mastering scientific knowledge "just-in-time", carte blanche in financing and logistical support of research programs, hard work and personal responsibility (Lazhentsev, 2023).

[1] In 1930, The KEPS was transformed into SOPS (Council for the Study of Productive Forces).

[2] Academician I.P. Bardin, Professors A.E. Probst and V.V. Rickman made a significant contribution to the feasibility study of the Northern Coal and Metallurgical Base.

Local experience was also of interest. The *Interdepartmental Commission for the formation of the Timan-Pechora TPC under the chairmanship of Academician M.P. Roshchevskii* (1978–1990) served as an example of comprehensive coverage of numerous scientific disciplines to solve a specific industrial and economic problem. The obstacle to its activity was the steep politicization around this complex as a hype object – the directives of the CPSU. But, in the end, the TPC managed to fit into the mainstream of program-target planning, which later fully transferred into the ideology of the work of the KEPS RK.

The three analog commissions and the KEPS RK had one common ground – *they were created to solve tasks of extreme importance*. It is quite inherent in the war years and the time of revolutionary reform, but even the period of creation of the Timan-Pechora TPC, seemingly calm, can also be characterized as very economically tense. In the 1970–80s, the Soviet Union attempted to overcome economic stagnation by concen-trating resources on the accelerated formation of program-targeted territorial-production complexes. The experience of hard times becomes useful every time when there is a need to choose non-standard methods of solving complex problems.

KEPS RK – a form of integration of science and practice

Support structure of science and practice. On the scientific side, *the Komi Science Centre of the Ural Branch of RAS* was the backbone structure for the KEPS RK. It is a classical academic center for fundamental and applied research in mathematics, physics, energy, chemistry, biology, physiology, earth sciences, social sciences and humanities. The Commission's task was to evaluate the research results obtained here and the possibilities of their use in practice, i.e. to organize scientific knowledge in a certain order. The Commission was supposed to be able to form a thematic plan of applied research works for solving technological and socio-economic problems (the plan not of the Komi Science Centre, but of the government of the republic).

On the practice side, the reference structure for the KEPS RK was the *Administration of the Program for Economic Development of the Komi Republic (1993–2004). The Collegium of the Administration was headed by the Head of the RK Y.A. Spiridonov, the Directorate was headed by I.B. Granovich, then by N.N. Gerasimov.* This is a unique organizational structure, the only one in Russia at that time, formalized by the RF Presidential Decree. It can be compared only with the federal (USA) corporation "Tennessee River Valley Authority" (from 1933 to present). Thanks to the successful activity of the Program Administration, even in the conditions of deep economic crisis in Russia it was possible to move "from a dead point" the issues of construction of the Sredne-Timansky bauxite mine, Yaregsky mining (oil-titanium) plant, reconstruction of Ukhta oil refinery, to start development of a number of fields in the Polar Urals, to introduce the Cardiology Center in Syktyvkar and a number of infrastructure facilities in rural areas, to design the railroad "Arkhangelsk – Syktyvkar – Solikamsk" ("Belkomur")[3].

The sequence of movement along the line of "science – practice". Initially, an attempt was made to correctly interpret applied science. Option one. If the R&D result can be immediately applied in some practical case, the science automatically becomes applied. Option two. Applied science is that part of science which develops the technology of transfer of scientific knowledge into the field of practice; it is a kind of methodology of scientific-

[3] The construction of the Belkomur railroad has been postponed indefinitely due to various kinds of inconsistencies of departmental, corporate and public interests, lack of coordination between potential investors, far-fetched competition with the project of construction of the railroad to Indiga, the reason for which was the political actualization of the Arctic theme, sluggish activity and liquidation of OAO Belkomur. The refusal to create this railroad and the corresponding strip of industrial development in the 1990s and early 2000s is a strategic mistake that will be realized sooner or later.

Figure 1. Organizational-activity scheme of designing regional economic systems

Types of analysis	Stages of regulation	Targets	Documents
Diagnostic analysis	Conceptualization	Values	Concept
Analysis of priority problems	Strategying	Aims	Strategy
Analysis of program implementation	Programing	Problems, tasks	Programs
Analysis of trends	Monitoring	Result	Projects
		Consequences	Reports on monitoring results

Source: (Dmitrieva, Lazhentsev, 1996, p. 22).

Figure 2. Scientific and organizational support of activities of the Government of the Komi Republic in the field of strategic planning (1993–2004).

Planning documents	Executors
Strategy	Komi SC UrB RAS + KEPS RK
Program	KEPS RK + Program Administration
Project	Program Administration + contractors

Source: own compilation.

practical activity about the transformation of knowledge, actualization of problems and choice of structures – attractors. The second option for the KEPS RK was more suitable because it corresponded to the nature of the problems to be solved, when the problem itself "lives" successively scientific and research, scientific and technical, and organizational and economic stages (Preobrazhenskii, 1972, p. 16).

The problematic approach to forecasting socio-economic development of the region received theoretical support in the form of a scheme of organizational activity, where the *analysis* determines the initial base of the forecast, the *concept* – a set of goals (ideals) and the vector of movement, the *strategy* – the means of achieving the ideal state of the system, the *program* – tactical methods and techniques for implementing the intended goals, the *project* – the practical solution of a specific problem, *monitoring* – control over the implementation of decisions *(Fig. 1)*.

Practically, the problem-based approach was implemented within the framework of interaction of the KEPS RK with Komi SC, Program Administration and executors of specific projects *(Fig. 2)*.

The "Scheme of development and location of productive forces of the Komi Republic for the period up to 2010" developed in 1993–1994 by the Komi Science Center and Lennpromstroyproekt served as a kind of inventory of the problems. The scheme was drawn up under contract with the Ministry of Economic Development of the Russian Federation, which wanted to understand whether it made sense to draw up such a document (standard for the Soviet period) in the conditions of a market economy. In addition to the Komi Republic, the scheme was developed by the Leningrad and Sverdlovsk regions. We are not aware of the conclusions on this issue, but the drawing up of schemes was not practiced in the future. They were replaced by territorial planning schemes and other district planning documents.

Public activity. This aspect includes the desire of the KEPS RK members to be in the public eye and their desire to provide useful information about their own involvement in solving current and future problems (Vityazeva, 1997). But the main thing was to organize scientific and practical conferences on predetermined topics with the invitation of speakers from Moscow, Yekaterinburg and other cities of Russia. Conference proceedings were published in the form of preprints and then in book editions[4]. Such conferences include:

1. "Natural resources and productive forces of the Komi Republic" (November 1993). Formation of information base for rational nature management and perspective economic developments. Market transformation of the legal and regulatory framework in the mineral and forestry economic sector.

2. "The Komi Republic: Economic strategy of entering the 21st century" (March 1995). A new approach to forecasting as a methodology for determining the ideal image of the future and systematic organization of movement along the chosen path – from scientific foresight to the practice of public administration at the regional level. Strategy of formation of mineral and raw materials, fuel and energy and bioresource complexes, transportation and energy systems, development of education and culture. Methods of harmonization of public and private interests.

3. "The Komi Republic: Scientific and technical policy" (October 1996). Organization of innovation activity on the basis of scientific and technical developments. The role of science in the system of nature management taking into account the ecological factor. Formation of a new technical and economic mode of production in which geo- and biotechnologies play a decisive role.

4. "Man in the North: Conditions and quality of life" (October 1998). Multidimensional analysis of living conditions of northerners, assessment of human potential, health and environment, risks and security issues, spirituality – education – culture.

The published works and scientific-analytical materials of the KEPS RK to a certain extent increased the importance of science in making concrete decisions of the government of the republic. Five members of the KEPS RK (V.A. Vityazeva, T.E. Dmitrieva, A.V. Kokovkin, V.N. Lazhentsev and N.P. Yushkin) for preparation of such works and active scientific and organizational activity in 2001 became laureates of the State Prize of the Komi Republic.

No initiative goes unpunishable. With the effective activity of the KEPS RK a certain element of self-sufficiency of the Republic emerged, which was noticed by the federal authorities. At the end of 2004 the Commission de jure ceased to exist; but we especially regret that the Program Administration was also abolished. They did not fit into the vertical of state power. The link between regional science and regional practice of strategic planning was significantly undermined.

The example of the KEPS RK and the Program Administration is only a particular case of the general contradictory situation in the relations between the center and the regions. These relations are well known and critically analyzed. Let us only draw attention to the possibility of a new aspect in the interpretation of these contradictions. Under the current circumstances in the field of economic federalism, all significant, and even minor, issues are decided by regional governments in Moscow, so scientific research in the regions has also become Moscow-oriented. If a scientific result is accepted by the central structures of public administration,

[4] The Komi Republic: Economic strategy of entering the 21st century. In: *Materials of the Scientific Conference (March 13–14, 1995)* (1996). KEPS under the Head of the Komi Republic. Syktyvkar, 160 p.; the Komi Republic: Scientific and technical policy. In: *Materials of the Scientific and Analytical Conference (October 17–18, 1996)* (1997). KEPS under the Head of the Komi Republic. Syktyvkar. 264 p.; Man in the North: Conditions and quality of life. In: *Proceedings of the Scientific and Analytical Conference (October 27–28, 1998)* (1999). KEPS under the Head of the Komi Republic. Syktyvkar. 296 p.

the probability of its practical application at the local level increases. The scientific space is definitely formed over administrative-territorial boundaries, and the procedure of implementation of R&D results should not necessarily be based on the principles of "shuttle diplomacy" between the center and the regions. But the mechanism of launching scientific and technical projects (financial and administrative resources) under the existing procedures is concentrated in the capital; moreover, corporate capital has not yet thoroughly engaged in regional science.

Return to a scientific interpretation of the concept of "productive forces"

Lessons from the past. Currently, it seems strange that the designers of schemes and programs for the development of productive forces have never once started from the very concept of "productive forces". Methodological recommendations on such developments, bypassing conceptual clarifications, immediately proposed to show the availability and prospects in terms of population and labor resources, natural resources, fixed assets, production in kind and cost, transport construction, capital investments, concentration of industry by cities and districts. That is, everything that was required for the subsequent compilation of five-year plans, and in the post-Soviet period – national projects, strategies and programs. Since long ago, productive forces began to be replaced by resources and production not only in state documents, but also in academic publications, for example, on the Komi Republic[5]. Was there any damage there? In practice, it did not manifest itself, and in theory – only sometimes it was fixed with the naive belief that such fixation would be noticed by the leadership of the country and regions.

The scientific concept of "productive forces". We are in solidarity with the philosophical interpretation of productive forces as a way of transformation of natural into social, the unity of objective and subjective sides of labor, connected by through technological systems (Marakhov, 1970, pp. 17, 18). At present, this formulation can be regarded as a synthesis of two theories of the development of productive forces: the change of technological modes and the formation of natural-social systems.

The origins of the theory of technological modes lie in K. Marx's works, where productive forces are treated as the main link of the mode of production, and the correspondence of production relations to the level of development of productive forces is manifested as a law. This is still the correct reference point for socio-economic strategies[6]. This is confirmed by the fact that in modern science, the change of technological modes is explained by the correspondence, on the one hand, of the leading factors of production, on the other – the socio-economic characteristics of life. N.D. Kondratiev based his theory of "long waves" (Kondratiev, 1989) on the regularities of the change of technological patterns, which was later taken into account by many designers of strategies for the development of the economy and society. Modern leaders in the development of the theory of technological (techno-economic) patterns are Academician S.Y. Glazyev (Glazyev, 1993; Glazyev, 2023) and Professor Carlota Perez (Perez, 2013).

[5] Development of productive forces of the Komi ASSR. In: *Materials of the Conference on the Development and Location of Productive Forces of the Komi ASSR, September 20–23, 1966* (1968). Council of Ministers of the Komi ASSR, Komi branch. USSR Academy of Sciences. Leningrad: Izd-vo Leningradskogo unta.

[6] Means of production in the sequence of their application: textile machinery – steam engine and machine tools – electric motor and mass-produced steel – internal combustion engine and energy-intensive chemical technology – microelectronic complexes and nanotechnology...

Socio-economic relations and institutions in the sequence of their emergence: destruction of feudal monopoly, free trade and competition – establishment of factory legislation, development of professional education and organization of research institutes – concentration of capital and separation of management from property, use of scientists and engineers directly in production – state institutions of social security, state regulation of economy, creation of R&D system and innovation...

In the analysis of the structure of social forces, usually we are talking about various kinds of sources (labor, division of labor, resources, education, science, technology) and driving forces (interests, needs, social forms of economic organization, economic and social relations); it also includes management structures (information systems, regulations, standards, incentives, etc.).

The theory of formation of natural-social systems creates and explains the schemes of transition from natural to social. It considers the forces of nature as the energy of the Space, the Sun and the Earth, the state of the bodies and elements of nature. Science establishes how mechanical, thermodynamic, gravitational, electromagnetic, geochemical, biochemical, and other forces create mineral and biological substances useful to humans. Within the framework of this theory, the possibilities of using the above forces in production processes are revealed – *through the design of production technologies as analogs of natural "technologies" and through their direct application for obtaining various types of energy.*

The scientific explanation of productive forces significantly increases its value when it unites natural and social forces into a single whole on a geosystem basis. Here, the main object of scientific analysis and forecasting is natural-economic complexes, in which natural resources are considered as national wealth and fixed assets, the economy is considered as a natural-social-technical system, and the well-being of the natural environment as one of the basic human needs.

The interaction of natural and social forces is the basis for the doctrines of geosystems (Sochava, 1978), energy-production cycles and production-territorial complexes (Kolosovskii, 1958), natural-resource cycles (Komar, 1975), and territorial combinations of natural resources (Mints, 1972). In our opinion, there is no reason to give such interaction a special, noospheric, meaning; it is quite consistent with the classical forms of motion of matter (physical, chemical, biological and social). All these forms of motion participate in the formation of productive forces, with the social one playing the final role. Only under certain social conditions do productive forces become a social category, it means that they acquire real meaning.

In both nature and society, the same forces can be *creative and destructive*. The thing, which leads to destruction should be studied and practiced in a particularly responsible way. This statement is perfectly understandable with regard to dangerous natural processes (permafrost degradation[7], floods, tsunamis, earthquakes, volcanic eruptions, soil erosion, desertification...); more or less understandable with regard to the negative consequences of predatory nature management; initially difficult to understand, but most of all harmful – radical political decisions, such as "shock therapy" of the economy, imposition of pseudo-culture, excessive social stratification, etc.

If we compare the above with the content of the schemes of development and location of productive forces of the Soviet times and modern strategic planning documents, we cannot but notice that they lack sections corresponding to the scientific interpretation of "productive forces". This concept more or less corresponded to the Comprehensive Program of Scientific and Technological Progress of the USSR, and at present – the Strategy of Scientific and Technological Development of the Russian Federation and the Forecast of Scientific and Technological Development of the Russian Federation[8]. But even in these documents much is underdeveloped, especially in terms of systemic analysis of science as a productive force.

[7] The economic assessment of permafrost degradation for the northern regions is highly relevant because it is associated with coping with billions of dollars of damage (Porfiriev, Eliseev, 2023).

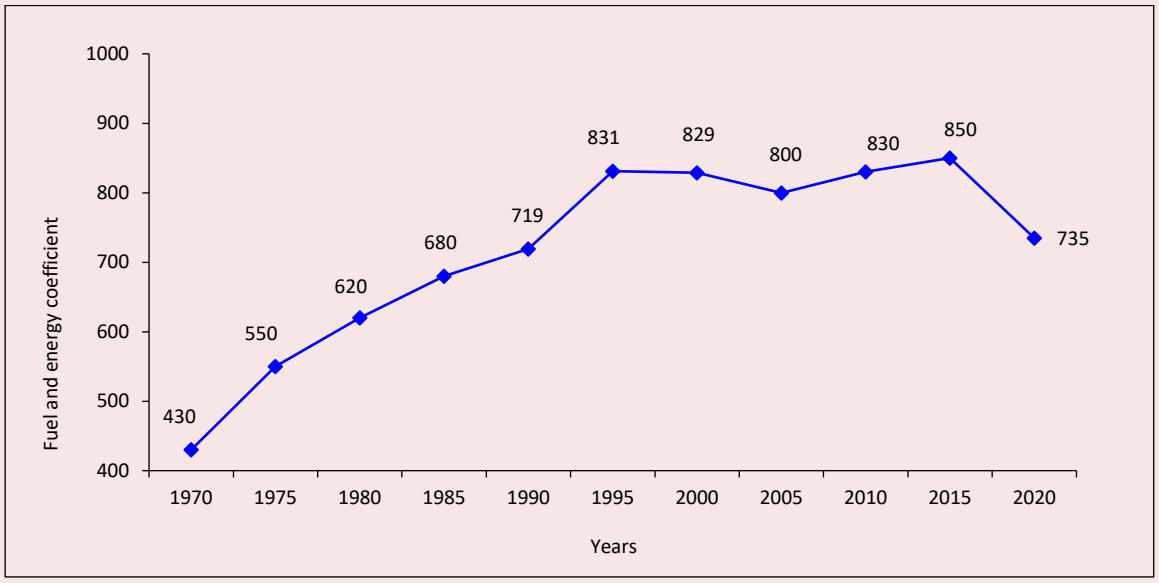
[8] On Strategic Planning in the Russian Federation: Federal Law 172-FZ, dated June 28, 2014 (Amended February 17, 2023).

Indicators of the development of productive forces. The study of natural productive forces focuses on the assessment of geologic and biological potentials. Geological (mineral-forming) potential is measured by rock density, seismic velocity, magnetic susceptibility, electrical resistivity, temperature regime, a number of geochemical indicators. The above mentioned can be labeled as cause indicators. The consequence indicators include the territorial density of local structures, their saturation, the rank and density of tectonic faults, the class and type of deposits, the volume of resources, the category of reserves, etc. Biologists calculate the bioclimatic potential of a certain area and its efficiency in forestry and agriculture. In this case, the main indicators are the ratio of heat and moisture, manifestations of climatic zonality and azonality, coefficients of weather rigidity. These and other natural potentials are basic for territorial planning (Lazhentsev, 1990).

In the study of *social productive forces*, the socio-economic assessment of natural-resource potentials is supplemented by a second set of characteristics: the capacity of means of production, their carrying capacity, speed of movement, technological contiguity, levels of mechanization and automation, the use of microelectronics and robot-like mechanisms, etc.

Special attention should be paid to the *energy characteristics of the development of productive forces.* For instance, the fuel and energy coefficient (Kte) shows the ratio of electricity consumption to fuel consumption. With its growth of approximately 1.5 times to the base value, the economy as a whole changes qualitatively. For the period 1970–1990 in the Komi Republic it increased from 430 to 719 conv. units; an increase was of 1.7 times. In the previous 30 years, there have been no such changes in Komi *(Fig. 3)*.

Figure 3. Fuel and energy coefficient in the economy of the Komi Republic



Source: own compilation according to the data of the Laboratory of Complex Fuel and Energy Problems of the Institute for Socio-Economic and Energy Problems of FRC Komi Science Centre of the Ural Branch of RAS.

The high growth of Kte in 1970–1990 was due to the transition from the predominance of direct fuel consumption (combustion in furnaces, stationary and mobile installations) to the predominance of the use of medium potential heat energy and electricity. It was assumed that in the future the consumption of high potential thermal energy would increase at a faster pace, and electrification would deepen due to the development of electromechanical, electrochemical and other high technologies. However, it did not happen, but the number of cars for personal use increased sharply, which again returned the situation to the growth of direct fuel combustion; there were no significant changes in the transfer of the housing stock to electric heating.

The sequence of formation of the transportation network, the growth of its capacity and reliability also serve as a reliable indicator of the development of productive forces. It is important to catch the moment when the transportation network begins developing according to the internal logic, i.e. acquires some autonomy from production and the established settlement of the population. Such a moment, apparently, starts when local communication routes are supplemented by a transit highway; then follows polymagistralization, ringing of roads and further – supermagistralization. In the Komi Republic, as well as in the Arkhangelsk Region, this process is far from being completed. The failure in the logical sequence of formation of the transportation network in these two regions occurred (as we have mentioned above) due to the failure to build the Belkomur railroad in time.

The situation is not simple in measuring the capital stock and labor productivity. In the absence of state control over the movement of fixed assets and their objective cost estimation, speculative behavior of owners regarding the capitalization of enterprises, the presence of "shadow" schemes of labor remuneration, and price hikes, these indicators lose their reliability. It is necessary to create a new system of measuring the organization of labor, its stock and productivity, which would be based on scientific and technological progress (Aganbegyan, 2023).

The regional aspect of such a dimension consists in the conjugation and synchronous modernization of the territorial combination of production and infrastructure industries. Failure in some links (as a rule, in auxiliary and servicing ones) makes the whole territorial-economic complex low-productive.

Attempts are made to economically measure the power of intellectual potential. We know only one method of such measurement – the ratio of the value of material and technical objects of an enterprise, which are listed on the balance sheet, with the value of capitalization of this enterprise, which is reflected in the statistics of stock markets. The difference between stock and balance sheet valuations is attributed by analysts to the level of training, experience and skills of enterprise's employees. Intellectual potential is one of the current topics of the scientific community.

These processes and indicators serve as information for thinking about the structural and functional characteristics of productive forces and their individual elements. It is a special subject of the forthcoming interdisciplinary research. For the time being, let us conclude that it is necessary not only to return the concept of "productive forces" to the scientific arsenal, but also to create a system of indicators adequate to its content.

Instead of conclusion

Two subjects – positive experience of activity of KEPS RK and criticism of neglect of the scientific concept of "productive forces" – logically need to be united. A simple judgment – the former should be revived and the latter should be substantially improved. But everything simple is questionable.

We suppose that there is no sense to repeat the KEPS RK. In modern conditions, it would be reasonable to introduce the scientific and

organizational functions of the Commission into the work regulations of the FRC Komi Science Centre of the Ural Branch of RAS. The experience of fulfillment of the state order of the Republic of Komi government for the development of the complex topic "The potential of the strategic alternative of the development of the Komi Republic" (2020; scientific supervisor, Cand. Sci. (Geography) T.E. Dmitrieva) showed the ability of the Centre's team to generate the R&D results of different disciplines under the general idea of strategic development of the republic. However, the same experience proves the low efficiency of practical use of recommendations formulated in the mentioned development. Such research results should be publicly available.

We are quite familiar with the R&D results and forms of scientific and organizational activities of the North-European centers of the Russian Academy of Sciences. Their example confirms the possibility of supplementing fundamental research with applied works and formalizing them in the form of a strategic forecast of regional development. The content of such works will definitely cover many directions and aspects of scientific, social and production activities, but it is advisable to start with the characterization of productive forces as a specific category of natural and social content.

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Agglomeration Processes in Russian Regions: Specifics and Challenges Related to the Intensification of Positive Effects

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Abstract. Urban agglomerations currently play an important role in the spatial development of most countries, since they are key centers of economic growth, generation and diffusion of innovations. In theoretical and practical terms, as a rule, the greatest attention is paid to studying the largest and large urban agglomerations (under current legislation, in Russia these include agglomerations with a population of more than 1,000 and 500 thousand people, accordingly), while insufficient attention is paid to the real prerequisites and features of the development of other emerging/potential agglomerations (the so-called "second-tier" agglomerations). In this regard, the aim of the study is to identify features and challenges related to the intensification of agglomeration processes in Russia's regions, taking into account the provision of positive effects. To achieve the goal, we use a wide range of general scientific (analysis, synthesis, systems) and applied economic and statistical methods (index, correlation analysis). Scientific

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significance of the study lies in the development of methodological approaches and tools for assessing agglomeration processes, determining their specifics in Russian agglomerations of the "second tier". We reveal that the continuing concentration of a significant share of regional production, investment and population in the agglomerations under consideration is the key feature in their development. At the same time, in fact, agglomeration processes extend only to the core of the agglomeration and the territory closest to it; this is manifested in the convergence of their growth rates in key socio-economic indicators. These facts indicate a rather low development of the satellite zone of "second-tier" agglomerations and a weak transmission of positive effects to the periphery, as well as an excessive development of the core, which in the future may be a threat to the stable development of such agglomerations. In the final part of the work, we substantiate priority directions to increase the internal integration of urban agglomerations as open socio-economic systems that will ensure the generation of positive externalities and turn "second-tier" agglomerations into growth points at the macro and regional levels.

Key words: "second-tier" urban agglomerations, large city, satellite area, agglomeration processes, integration of space, strategic priorities of spatial development.

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Introduction

The Spatial Development Strategy of the Russian Federation for the period until 2025 (approved by the Government Resolution 207-r, dated February 13, 2019) identifies urban agglomerations as one of the key priorities of the country's spatial development. Along with this, the following list was consolidated:

– 20 cities that are promising centers of economic growth in the Russian Federation and form the *largest and large urban agglomerations* (Moscow, Saint Petersburg, Yekaterinburg, etc.);

– 22 cities – promising centers of economic growth in the *constituent entities of the RF*, forming agglomerations with a population of more *than 500 thousand people* (Yaroslavl, Kaliningrad, Saratov, etc.)[1];

– 23 cities – promising centers of economic growth in the *constituent entities of the RF*, including those forming urban agglomerations with a population of *less than 500 thousand people* (the so-called *"second-tier" agglomerations*, which can be formed around a number of large cities of the country: Belgorod, Arkhangelsk, Veliky Novgorod, Vladimir, Vologda, Kaluga, Komsomolsk-on-Amur, etc.).

Studies by leading scientists[2] (Lola, 2013; Polyan, 2014; Fang, Yu, 2020, etc.), as well as the world practice indicate that agglomeration forms of economic activity concentration differ significantly from each other not only by their place in the hierarchical system of urban settlements of the country, but also by the composition of elements,

[1] In the Strategy, the 20 largest (with population of more than 1 million people), large (500–1000 thousand people) urban agglomerations are also called "metropolitan"; together with 22 other agglomerations with a population of more than 500 thousand people, they seem to be contrasted with small/medium-sized cities, rural areas and smaller agglomerations in terms of their potential for concentration of economic activity. At the same time, 23 "second tier" agglomerations with a population of less than 500 thousand people are considered as a tool to ensure balanced spatial development of Russia, a counterbalance to "metropolitan" agglomerations.

[2] Pivovarov Yu.L. (1999). *Fundamentals of Geo-Urbanistics: Urbanization and Urban Systems: Textbook for Students of Higher Educational Institutions.* Moscow.

stage and direction of development, place in the system of geographical division of labor. For instance, Chinese researchers (Fang, Yu, 2017) include urban agglomeration, which is a hierarchical system of interconnected cities of different ranks (three cities and more with a total population of more than 20 million people), as well as "metropolitan inter-locking region" among the most developed ones. In a separate category they distinguish town agglomeration, formed around Chinese cities of one hierarchical level, usually small, i.e. with a population of up to 500 thousand people. Such agglomerations are not centers of national and international, but regional competitiveness and can arise not only in regions with industrial economies of new technological modes, but also in areas where there are currently processes of intensification of socio-economic connectivity of the city and adjacent rural areas.

Taking into account the existing specifics of spatial development of contemporary Russia, "urban agglomeration" by its nature and role in the national economy has more similarity with large and largest (metropolitan) agglomerations identified in the Spatial Development Strategy of the Russian Federation, and "town agglomeration" – with the rest of the poorly developed/forming agglomerations of the "second" and "third tier", the core of which are smaller cities (for example, 23 promising centers of economic growth).

As applied to the USSR and modern Russia, the leading Russian researcher of agglomeration processes G.M. Lappo (Lappo, 2012) noted that in the regions of the country the processes of agglomeration of cities of different levels of hierarchy can go in the direction both "from the city" and "to the city", but they are necessarily characterized by an increase in the connectivity of intra-agglomeration space; the closed nature of such links allows for the generation and transmission of positive agglomeration effects to the periphery.

Thus, the necessary condition for resilience and transition to more mature stages of agglomerations' development, generation of positive effects for the country is to ensure internal integration of the core and satellite zone. Such integration should occur not only with regard to production, but also in social, infrastructural, environmental and other spheres of agglomeration space (Rastvortseva, 2013; Volchkova et al., 2016; Fang, Yu, 2020).

We should note that science and management practice currently focus on the analysis of socio-economic processes in the largest and large urban agglomerations. In turn, the specifics of the development of "second tier" urban agglomerations (with population of less than 500 thousand people) are studied to a lesser extent. Among the few Russian works on this issue we can note the studies of specialists from the Institute for Urban Economics[3], the Center for Infrastructure Economics (Dmitriev et al., 2018), the Institute of Economics and Industrial Engineering within the Siberian Branch of RAS (Mel'nikova, 2017). Based on the calculations made, the author of the latter work came to the conclusion that currently not all Russian cities generate positive agglomeration effects, which actualizes the task of a deeper study of the problems that limit the development of agglomerations on their basis.

Insufficient research into the specifics of socio-economic processes taking place in the "second tier" urban agglomerations, including in terms of ensuring the co-development of the core and satellite zone, actualizes the scientific and practical significance of our study.

[3] Economics of Russian Cities and Urban Agglomerations. Issue 5: Russia's largest urban agglomerations in the global economy (2020). Fond "Institut ekonomiki goroda". Available at: https://urbaneconomics.ru/sites/default/files/vypusk_5_rossiiskie_aglomeracii_v_globalnoi_ekonomike.pdf?ysclid=lmyp9veqol204615622 (accessed: February 10, 2024).

The research object is eight "second tier" agglomerations, the cores of which are the cities identified in Russia's Spatial Development Strategy as promising centers of economic growth of the constituent entities of the RF (Vologda, Arkhangelsk, Tambov, Kaluga, Yuzhno-Sakhalinsk, Khanty-Mansiysk, Surgut, Norilsk). We chose these cities taking into account their geographical location in various federal districts and differences in the specialization of their economy.

The aim of the work is to identify the features and problems of agglomeration processes activation in Russian regions, taking into account the provision of positive effects and implementation of priorities of the Spatial Development Strategy of Russia.

The research hypothesis is that weak internal integration is one of the key problems of development of Russian "second tier" urban agglomerations and limits the potential of their transformation into growth points of macro- and regional levels.

The aim and hypothesis of the work required solving a set of the following ***tasks***:

1) to substantiate and validate the methodological approach to the study of agglomeration processes[4], taking into account the internal integration of agglomeration space;

2) to identify the specifics of socio-economic processes taking place in Russian "second tier" urban agglomerations;

3) to substantiate the priority directions of increasing the internal integration of urban agglomerations.

Scientific novelty of the presented research lies in identifying the specifics of the agglomeration processes in the "second tier" agglomerations, which will reveal the problems that limit their development as open socio-economic systems and their transformation into growth points of macro- and regional levels.

Materials and methods

The research algorithm includes the realization of a set of interrelated *stages*.

Stage 1. Determining the composition of the studied urban agglomerations.

We determined the composition of urban agglomerations taking into account simultaneous compliance with the following conditions:

a) 1.5-hour transport accessibility of administrative centers of urban and rural settlements of municipal areas to the agglomeration core city (in the case of municipal districts, former settlements of the district transformed into a district are considered)[5]; a municipal area is included in the agglomeration if more than 2/3 of the number of its settlements are within the isochron of 1.5-hour accessibility;

b) presence of references to agglomeration and its composition in socio-economic development strategies and spatial planning documents of the constituent entities of the RF and municipalities, publications of leading Russian scientists and expert organizations;

c) presence of stable socio-cultural and production links between agglomeration territories (Volchkova, Minaev, 2014)[6].

Accordingly, we determined the composition of eight Russian "second tier" urban agglomerations, which are the object of this study *(Tab. 1)*.

[4] In this paper, we use the phrases "agglomeration processes" and "socio-economic processes occurring in urban agglomerations" as synonyms and reflect the phenomena within the agglomeration space, including along the line "core – satellite zone".

[5] This threshold level of transport accessibility of agglomeration settlements was determined empirically in practice and is called the Goltz constant. The gradual decay of economic activity and decrease in the productivity of economic entities with the distance from the core has been proved quite thoroughly and convincingly in (Dmitriev et al., 2018; Kozlova, Makarova, 2014).

[6] Reports on the activities of local self-government authorities and key business entities collected from SPARK and Contour.Focus resources were studied.

Table 1. Composition of Russian "second tier" urban agglomerations under consideration

Agglomeration	Agglomeration structure
Arkhangelsk	Urban Okrug city of Arkhangelsk, Urban Okrug city of Novodvinsk, Urban Okrug city of Severodvinsk, Primorsky Municipal District
Vologda	Urban Okrug city of Vologda, Vologodsky, Gryazovetsky, Sokolsky municipal districts (since January 1, 2023 these municipal districts became municipal okrugs)
Kaluga	Urban Okrug city of Kaluga, Babyninsky, Dzerzhinsky, Peremyshlsky and Ferzikovsky municipal districts
Norilsk	Urban Okrug city of Norilsk, Taimyrsky Dolgano-Nenets Municipal District
Surgut	Urban Okrug city of Surgut, Urban okrug city of Nefteyugansk, Urban Okrug Pyt-Yakh, Surgut and Nefteyugansk municipal districts
Tambov	Urban Okrug city of Tambov, Urban Okrug city of Kotovsk, Urban Okrug city of Rasskazovo, Tambovsky, Rasskazovsk, Znamensk and Sampur municipal districts
Khanty-Mansiysk	Urban okrug city of Khanty-Mansiysk, Khanty-Mansiysk Municipal District
Yuzho-Sakhalinsk	Urban Okrug city of Yuzhno-Sakhalinsk, Korsakovsky Urban Okrug, Anivsky Urban Okrug, Dolinsky Urban Okrug
Source: own compilation.	

Stage 2. Methodological approach development to assessing agglomeration processes, including the "core–satellite zone" line.

At present, there is no established unified methodological approach to the assessment of agglomeration processes. Most studies (Rigatti, 2009; Tripathi, 2018; Uchida, Nelson, 2010) actively use the calculation of various kinds of coefficients (coefficient of development, Theil index, Gini coefficient, etc.), which characterize the processes of socio-economic activity concentration and, based on this, assess the impact of agglomeration processes on the change in intra- and interregional heterogeneity (Prakash et al., 2017; Pütz, 2016). In the work (Mirgorodskaya, 2017) they were considered and tested in detail on the materials of the Rostov agglomeration. However, these indicators, in our opinion, do not fully allow studying the processes occurring within the agglomeration in terms of assessing its internal cohesion.

Consequently, based on the results of summarizing the existing studies, we note that the key development trends indicating the activation of agglomeration processes in the territory are:

– concentration of population, production, investment, innovation activity (Sarymova, Guseva, 2022; Rastvortseva, 2013), infrastructure facilities (Grinchel, Antonova, 2012);

– reduction of differences between agglomeration municipalities in terms of the main parameters of socio-economic and infrastructural development (Strange, 2009; Tripathi, 2018); and the reduction of such differences is due to ensuring internal integration and co-development of various elements of the socio-economic space of agglomerations (Fang, Yu, 2020; Volchkova et al., 2016);

– a consequence of the integration of intra-agglomeration space is the synchronization of economic growth rates of municipalities included in the agglomeration (Volchkova. Minaev, 2014).

The previous two trends actually indicate that developed agglomerations are highly integrated spatial socio-economic systems, where co-development of the core and satellite territories is ensured.

Agglomeration is considered as a developing socio-economic system in the framework of our proposed methodological approach to the study of the specifics of agglomeration processes. A set of the following interrelated tasks is solved.

2.1. Assessment of agglomeration development as a spatial socio-economic system:

2.1.1. Calculation of the *development coefficient* to assess the level of formation of the agglomeration's settlement system (urban settlements).

According to the classical approach of the Institute of Geography of the Russian Academy of Sciences (Polyan, 2014), the development coefficient is calculated as follows:

$$K_{dev} = P \cdot (M \cdot m + N \cdot n), \quad (1)$$

where P – population of agglomeration (million people); M – number of cities of agglomeration; N – number of urban-type settlements in agglomeration; m – share of population of cities in the total population of agglomeration; n – share of population of urban-type settlements in the total population of agglomeration.

The class of agglomeration development is determined based on the values of this coefficient: 1) more than 50 – the most developed urban agglomerations; 2) from 10 to 50 – highly developed; 3) from 5 to 10 – developed; 4) from 2.5 to 5 – underdeveloped; 5) from 1 to 2.5 – least developed; 6) less than 1 – potential (or prospective) urban agglomerations.

In addition, the dynamics of a number of other indicators characterizing the agglomeration settlement system and socio-labor relations will be presented (the share of the core in the agglomeration population; indicators of the transport network development; the scale of commuting[7], which is considered in the vast majority of studies as a key indicator of the presence of agglomeration processes (Volchkova et al., 2014; Lola, 2012); at the same time, in accordance with the approach used in OECD, agglomeration includes a city and a commuting zone, i.e. an area with at least 15% of its employed population working in a city (Dijkstra et al., 2019; Reisich, 2020).

2.1.2. Calculation of the *agglomeration economic gravity coefficient*, which makes it possible to assess the potential for economic interaction of territories within the agglomeration, taking into account the estimated density of economic activity concentrated within these boundaries. This indicator in one or another modification was used in a number of domestic works (Volchkova et al., 2014; Kozlova, Makarova, 2014; Mirgorodskaya, 2017). In our study, the approach presented in (Voroshilov, 2019) and tested on the materials of the European North of Russia was taken as a basis. Unlike existing studies, it calculates the coefficient values on average for the agglomeration, taking into account the adjustment for interregional differences in the price level, which, in our opinion, allows for more objective comparisons between agglomerations, including those of different levels of hierarchy:

$$G_A = \frac{\sum_{j=1}^{n}(G_{cj} \cdot f_j)}{\sum_{j=1}^{n} f_j}, \quad (2)$$

where G_A – gravity indicator (economic power of interaction) of agglomeration A, million rubles/kilometer; G_{cj} – interaction indicator between the agglomeration core (c) and its constituent municipality (j); f_j – population of the municipal entity (excluding the agglomeration core) included in the agglomeration A; n – number of municipalities (excluding the core) included in the agglomeration.

In turn, the indicator of interaction between the agglomeration core (c) and the municipality (j) included in this agglomeration (G_{cj}) is calculated according to formula 3:

$$G_{cj} = \sqrt{\frac{p_c \cdot p_j}{d_{cj}^2}}, \quad (3)$$

where G_{cj} – interaction index between the agglomeration core (c) and the municipality (j) included in this agglomeration; p_c – indicator of the importance of the agglomeration core municipality (volume of products shipped, population, etc.); p_j – indicator of significance of the municipality (j) included in the agglomeration (except for the agglomeration core: volume of product shipment, population, etc.); d_{cj} –

[7] Commuting is understood as daily or several times a week trips of the population from one settlement (place of residence) to another to work and back.

distance between the agglomeration core (*c*) and the administrative center of the municipality (*j*) included in it.

The information base for calculating the coefficient is statistical data on the indicator "Own-produced goods shipped, works and services performed by own forces (without small businesses)" and data on the distance between the core city and the administrative center of the municipal entity included in the agglomeration, determined using the service "Yandex Maps" (https://yandex.ru/maps/).

Along with this, the indicators characterizing the concentration of production, investment, organizations and individual entrepreneurs will be presented both in general for the studied agglomerations and in the projection "core – satellite zone".

The comparison of the studied agglomerations according to these parameters allows assessing their scale of development and their formation as settlement-economic systems.

2.2. Assessment of internal integration of agglomeration space

2.2.1. Comparison of *the rates of change in the indicators of socio-economic development of agglomeration municipalities, including between the core city and satellite territories,* based on the use of the index method. The presence of internal integration of agglomeration and the spread of agglomeration processes to the periphery is evidenced by the level of differences in the growth rates of municipalities, usually not exceeding 15 percentage points (Volchkova, Minaev, 2014). The relationship between agglomeration processes and the growth/reduction of disparities in the development of the core and satellite zone at different stages of agglomeration development is considered in quite detail in the work of A. Puzanov, R. Popov[8].

2.2.2. Assessment of the *degree of synchronization of intra-agglomeration space development processes* related to obtaining the effects of resource sharing, combining the efforts of enterprises, organizations and authorities within the agglomeration. In our work, to assess these processes we use the method of correlation analysis, which allows us to identify the presence over a long period of time of interdependence of key indicators of development of the core city and the satellite zone of the agglomeration, which somehow indicates the presence of socio-economic links between them[9].

We made all calculations in the study on the basis of official statistics presented in the Database of Indicators of Municipal Entities of Rosstat (https://rosstat.gov.ru/dbscripts/munst/), which contains a significant amount of information on key indicators of socio-economic development of all municipalities in Russia; data from the All-Russian Population Census 2020, SPARK system, Contur. Focus; information from official websites of public authorities of the constituent entities of the Russian Federation, etc. Due to the need to comply with the principle of completeness and comparability of information at the municipal level, the main period of the study includes 2010–2022.

Research results

Let us start the study of the specifics of socio-economic processes occurring in Russian "second tier" urban agglomerations with the key indicators of the development of these agglomerations as open socio-economic systems, i.e., systems that can not only attract resources from the external circuit, but also spread external effects to the periphery.

For instance, the results of calculations of the *coefficient of development of the settlement system* indicate that at present only one *Surgut agglomeration (Tab. 2)* belongs to the class of *under-*

[8] Puzanov A., Popov R. (2017). *Approaches to Assessing the Development of Urban Agglomerations*. Moscow. Available at: http://www.urbaneconomics.ru/sites/default/files/iue_press.pdf (accessed: February 10, 2024).

[9] According to the Chaddock scale, a certain value of the correlation coefficient R modulo corresponds to the degree of closeness of connection between two parameters: 0.1–0.3 – weak connection, 0.3–0.5 – moderate, 0.5–0.7 – noticeable, 0.7–0.9 – strong, 0.9–0.99 – very strong.

Table 2. Dynamics of the coefficient of urban agglomerations development in 2010-2022

Agglomeration name	Coefficient			
	2010	2021	2022	2022 to 2010, %
Arkhangelsk	1.74	1.68	1.46	84.1
Vologda	1.46	1.45	1.46	100.4
Kaluga	0.82	0.83	0.83	101.7
Norilsk	0.40	0.41	0.39	97.1
Surgut	2.36	2.72	2.74	116.0
Tambov	1.10	1.09	1.02	92.8
Khanty-Mansiysk	0.09	0.11	0.11	129.1
South Sakhalin	0.96	1.02	0.94	97.6
Source: own compilation.				

developed agglomerations, and *four agglomerations* (Arkhangelsk, Vologda, Tambov, also conditionally Yuzhno-Sakhalinsk) – to the *least developed*. The other three (Kaluga, Norilsk and Khanty-Mansiysk) can only conditionally be classified as agglomerations according to this criterion. These facts can be explained by the fact that the cores of such agglomerations are relatively small cities in terms of population (from 110 thousand people in Khanty-Mansiysk to 356 thousand people in Kaluga), as well as poorly developed settlement network of their satellite zone (from 0 to 8 urban settlements). However, in 2010–2022, Khanty-Mansiysk, Surgut and Kaluga agglomerations showed an increase in this coefficient (by 29, 16 and 2%, respectively), which indicates some development of their settlement network.

At the same time, the analysis shows that in 2010–2022 the *number of residential population* increased only in four agglomerations (Khanty-Mansiysk agglomerations – by 28.6%, Surgut agglomeration – by 18.1%, Kaluga agglomeration – by 3.2%, Vologda agglomeration – by 0.1%; *Tab. 3*). However, even in the "shrinking" agglomerations the population reduction was noticeably lower than in the corresponding constituent entities of the Russian Federation as a whole. As a result, all of them strengthened their positions as centers of concentration of the population of their constituent entities of the Russian Federation (in 2022, 59% of the region's population lived in the South Sakhalin agglomeration, 54% in the Arkhangelsk agglomeration, and 50% in the Tambov agglomeration).

Another key trend in the transformation of the settlement system within all the studied agglomerations is the ongoing processes of population concentration in the core: in Khanty-Mansiysk agglomeration 85% of the population already lives here (5 p.p. growth in 2010–2022), in Norilsk agglomeration – 85% (2 p.p. growth), in Surgut agglomeration – 55% (6 p.p. growth), in Arkhangelsk agglomeration – 58% (0.4 p.p. growth). According to P. Polyan, the core weight of 66% is already quite impressive and its further growth may lead to the degradation of the satellite zone of the agglomeration[10] (Polyan, 2014).

These processes lead to the emergence of *imbalances in the development of the core and satellite zone*. In particular, in 2010–2022 the differences in the rate of change in the population of the core city and satellite zone municipalities were maximum in the Tambov agglomeration (104% in the city of Tambov and 72% in Tambov District, which exceeds the conventional 15 p.p., Tab. 3), Sakhalin agglomeration (119% in Anievsk Urban District and 86% in Dolinsk Urban District), Khanty-Mansiysk agglomeration (136% in Khanty-Mansiysk and

[10] In many developed urban agglomerations of foreign countries, on the contrary, there is a long-term decrease in the population of the centers with constant growth in the satellite zone.

Table 3. Dynamics of residential population of urban agglomerations, thousand people

Agglomeration and municipalities, constituent municipalities	2010	2015	2021	2022	2022 to 2010, %
Vologda Region	1201.2	1187.7	1139.5	1128.8	94.0
Vologda agglomeration	447.4	455.5	443.0	448.1	100.1
UO city of Vologda	310.0	320.6	313.4	318.1	102.6
Vologodsky MD	50.5	52.4	51.8	52.7	104.5
Gryazovetsky MD	35.6	33.1	31.2	32.1	90.0
Sokolsky MD	51.3	49.4	46.6	45.1	88.0
Share of agglomeration, %*	*37.2*	*38.4*	*38.9*	*39.7*	*+2.4 p.p.*
*Share of core**, %*	*69.3*	*70.4*	*70.7*	*71.0*	*+1.7 p.p.*
Arkhangelsk Region	1182.8	1130.2	1069.8	964.3	81.5
Arkhangelsk agglomeration	615.6	609.1	591.6	521.7	84.7
UO city of Arkhangelsk	355.6	358.3	349.2	303.4	85.3
UO city of Novodvinsk	40.6	38.9	36.8	32.8	80.9
UO city of Severodvinsk	193.1	186.1	180.7	156.7	81.2
Primorsky MD	26.3	25.8	24.9	28.8	109.6
Share of agglomeration, %	*52.0*	*53.9*	*55.3*	*54.1*	*+2.1 p.p.*
Share of core, %	*57.8*	*58.8*	*59.0*	*58.1*	*+0.4 p.p.*
Tambov Region	1089.7	1050.3	981.0	966.3	88.7
Tambov agglomeration	515.5	518.1	502.7	485.4	94.2
UO city of Tambov	280.1	288.4	287.4	291.5	104.0
UO city of Kotovsk	31.8	30.7	28.3	26.3	82.8
UO city of Rasskazovo	45.4	44.2	41.8	47.0	103.5
Tambovsky MD	102.8	103.4	99.8	74.5	72.4
Rasskazovsky MD	22.9	21.8	19.4	20.5	89.2
Znamensky MD	18.3	17.1	14.7	14.0	76.1
Samporsky MD	14.1	12.6	11.2	11.8	83.3
Share of agglomeration, %	*47.3*	*49.3*	*51.2*	*50.2*	*+2.9 p.p.*
Share of core, %	*54.3*	*55.7*	*57.2*	*60.0*	*+5.7 p.p.*
Kaluga Region	1009.2	1009.8	1012.8	1070.9	106.1
Kaluga agglomeration	450.4	461.6	452.9	465.0	103.2
UO city of Kaluga	339.3	358.4	350.7	355.5	104.8
Babynsky MD	21.0	18.7	18.0	20.7	98.6
Dzerzhynsky MD	60.2	53.6	52.6	56.6	94.0
PeremyshIsky MD	14.0	13.7	13.3	14.4	102.3
Ferzikovsky MD	15.8	17.3	18.3	17.8	112.6
Share of agglomeration, %	*44.6*	*45.7*	*44.7*	*43.4*	*-1.2 p.p.*
Share of core, %	*75.3*	*77.6*	*77.4*	*76.5*	*+1.1 p.p.*
Sakhalin Region	496.7	487.3	484.2	460.5	92.7
Yuzhno-Sakhalinsk agglomeration	273.6	284.1	292.3	270.4	98.8
UO city of Yuzhno-Sakhalinsk	188.9	200.7	208.7	187.4	99.2
UO Korsakovsky	41.3	40.2	40.0	39.9	96.6
UO Anivsky	17.6	18.9	19.7	20.9	119.2
UO Dolinsky	25.8	24.3	23.9	22.2	85.9
Share of agglomeration, %	*55.1*	*58.3*	*60.4*	*58.7*	*+3.6 p.p.*
Share of core, %	*69.1*	*70.7*	*71.4*	*69.3*	*+0.2 p.p.*
Khanty-Mansi Autonomous Area – Yugra	1537.1	1626.8	1702.2	1730.4	112.6
Khanty-Mansi agglomeration	100.0	116.6	125.3	128.6	128.6
UO city of Khanty-Mansiysk	80.5	96.9	106.0	109.7	136.2
Khanty-Mansiysky MD	19.4	19.6	19.3	18.9	97.1
Share of agglomeration, %	*6.5*	*7.2*	*7.4*	*7.4*	*+0.9 p.p.*
Share of core, %	*80.6*	*83.2*	*84.6*	*85.3*	*+4.8 p.p.*

End of Table 3

Surgut agglomeration	632.1	682.9	736.0	746.8	118.1
UO city of Surgut	308.5	348.6	395.9	406.9	131.9
UO city of Nefteyugansk	123.3	125.4	128.7	125.0	101.4
UO city of Pyt Yach	41.5	40.9	39.3	40.3	96.9
Surgutsky MD	114.1	123.0	126.9	127.6	111.9
Nefteyugansky MD	44.7	45.0	45.2	47.0	105.1
Share of agglomeration, %	*41.1*	*42.0*	*43.2*	*43.2*	*+2.0 p.p.*
Share of core, %	*48.8*	*51.1*	*53.8*	*54.5*	*+5.7 p.p.*
Krasnoyarsk Territory	2829.1	2866.5	2849.2	2845.5	100.6
Norilsk agglomeration	210.4	211.0	215.9	205.4	97.6
UO city of Norilsk	176.1	178.1	184.6	175.5	99.6
Taimyrsky Dolgano-Nenets MD	34.4	32.9	31.3	29.9	87.0
Share of agglomeration, %	*7.4*	*7.4*	*7.6*	*7.2*	*-0.2 p.p.*
Share of core, %	*83.7*	*84.4*	*85.5*	*85.4*	*+1.8 p.p.*

Note: hereinafter in the tables: UO – urban okrug, MD – municipal district.
* Share of agglomeration in the regional value of the indicator.
** Share of the core city in the value of the indicator for the agglomeration as a whole.
Source: own compilation.

97.1% in Khanty-Mansiysk District). At the same time, agglomerations with a fairly developed satellite zone (except for Tambov), as a rule, do not observe significant differences in the rate of population change in the core and immediately adjacent municipalities. *All this testifies to the prevalence of agglomeration processes actually only on the territory adjacent to the central city and their weak influence on the periphery of the satellite zone.*

Characterizing the demographic processes observed within each agglomeration, we *note certain transformations in the settlement system, including the development of rural settlement network as one of the manifestations of agglomeration processes.* For instance, the analysis of the results of the All-Russian population censuses of 2010 and 2020 allows drawing a conclusion about the growth of the share of rural settlements with more than 10 inhabitants during the intercensal period. In the Vologda agglomeration, it was from 21.5 to 24.5% (by 3.0 p.p.; in the region as a whole it decreased by 2.8 p.p.); in the Tambov agglomeration – from 83.5 to 86.2% (by 2.7 p.p.; in the region as a whole it decreased by 3.7 p.p.); in the Kaluga agglomeration – from 54.2 to 58.6% (by 4.4 p.p.; in the region as a whole it increased by 2.5 p.p.).

At the same time, the data on the commuting scale on the materials of the Vologda and Tambov agglomerations indicate a noticeable spread of this phenomenon to only one municipal district adjacent to the core city (Vologda and Tambov, 16 and 18% of the employed population of which, respectively, regularly travel to the city for work; *Tab. 4*). In the next largest districts of the commuting share, it is only 6%. At the same time, only one-way direction of this migration is actually recorded: the share of residents of the core cities of agglomeration working in the districts does not exceed 0.3%. All this also indicates a low level of labor and business ties between the municipalities of agglomerations and, in general, the weak development of the core zone of the agglomerations under consideration.

In terms of economic gravity indicator[11], the Surgut agglomeration is the leader (164 billion rubles/km), which is due to the high density of economic activity due to the specialization of this agglomeration in the fuel and energy complex

[11] When calculating the indicator, the cost data were brought to comparable between the constituent entities of the RF, taking into account their adjustment for the index of deviation from the average Russian level of the cost of a fixed set of goods and services in the corresponding constituent entity of the Russian Federation.

Table 4. Commuting of the Vologda and Tambov agglomerations, % of the total employed population

Territory	Share of the employed population of the Urban Orkug city of Vologda traveling to work daily or several times a week to the agglomeration districts	Share of the employed population of the agglomeration districts who commute daily or several times a week to Urban Okrug city of Vologda for work
Vologodsky MD	0.32	16.47
Gryazovetsky MD	0.10	5.99
Sokolsky MD	0.10	2.43
Territory	Share of the employed population of the Urban Okrug city of Tambov traveling to work daily or several times a week to districts/okrugs of agglomeration	Share of the employed population of the districts/ okrugs of the agglomeration traveling to work daily or several times a week in the Urban Okrug city of Tambov
Tambovsky MD	0.27	18.29
Sampursky MD	0.01	6.00
UO city of Kotovsk	0.10	4.75
Znamensky MD	0.04	4.13
Rasskazovsky MD	0.01	3.10
UO city of Rasskazovo	0.03	1.73
Source: own compilation based on data on the results of the All-Russian population census in 2020 (conducted in October–November 2021), provided by the Territorial Bodies of Rosstat in the Vologda Region and the Tambov Region in the context of municipalities at the request of the authors of this article.		

with very high production volumes. The minimum values of this indicator were recorded in the Norilsk agglomeration (4.2 billion rubles/km), which is explained by significant undeveloped space even within the agglomeration boundaries and the actual presence of only two relatively large settlements within it – Norilsk and Dudinka (which is a port and has a number of branches of PJSC "MMC "Norilsk Nickel"); the Kaluga agglomeration (2.4 billion rubles), where there are no urban settlements other than Kaluga. In this regard, low density of economic activity and significant distances between key population centers, in our opinion, act as key barriers to the development of such agglomerations.

At the same time, all the agglomerations under consideration saw growth in the volume of products shipped per 1 inhabitant in both current and comparable prices in the period under study. The highest values were observed in the Yuzhno-Sakhalinsk agglomeration (3.0 times growth even in comparable prices; this is largely due to the implementation of major projects, opening and expansion of production facilities in the field of mineral extraction in these territories).

There are significant differences in production growth rates between the municipalities of each agglomeration, mainly due to the different structure of the economy, as well as the degree of economic specialization and diversification. In many municipalities of the satellite zone, the values of the indicator of average per capita shipment of goods and services significantly exceed the values in the core city because some of the latter perform mainly the functions of administrative, financial, cultural, transport and logistics center, and large industrial production (including mining) is located in the agglomeration zone. Multidirectional trends are also noted in intra-agglomeration differences by this indicator: in 2015–2022, the differentiation in terms of per capita shipment of products between municipalities of the Vologda (from 2.3 to 4.2 times), Tambov (from 11.4 to 15.0 times), and Yuzhno-Sakhalinsk (from 17.8 to 113.0 times) agglomerations increased; differences in the Kaluga (from 9.0 to 3.2 times) and Norilsk (from 6.1 to 1.3 times) agglomerations decreased; differences in the Khanty-Mansiysk, Surgut and Arkhangelsk agglomerations remained at approximately the same level.

We should say that the agglomerations in question continue to be *centers of concentration not only of human resources, but also of economic activity*. For instance, the Arkhangelsk agglomeration in 2022 accounted for 2/3 of the volume of regional shipment of goods and investment in fixed assets, the Yuzhno-Sakhalinsk agglomeration – 55 and 77% respectively, the Kaluga agglomeration – 42 and 39%, the Norilsk agglomeration – 34 and 50%, the Surgut agglomeration – 48 and 46%, the Tambov agglomeration – 56 and 50% *(Tab. 5)*. However, over the period under consideration, the share of four out of nine agglomerations in the total volume of the region's products shipment decreased, and the share of five agglomerations in the core agglomeration in this indicator decreased.

Table 5. Share of agglomerations in the regional volume of goods shipment and investment in fixed capital, number of organizations and individual entrepreneurs, %

Agglomeration	Indicator	Goods shipped*			Volume of investments in fixed capital**			Total number of organizations			Number of individual entrepreneurs		
		2010	2022	2022 to 2010, p.p.	2010	2022	2022 to 2010, p.p.	2019	2023	2023 to 2019, p.p.	2019	2023	2023 to 2019, p.p.
Arkhangelsk	Share of agglomeration***	48.3	65.7	17.4	57.1	66.4	9.3	68.1	67.4	-0.7	58.1	57.5	-0.6
	Core share****	64.4	40.5	-23.9	74.6	67.2	-7.4	75.0	74.8	-0.2	65.9	65.7	-0.2
Vologda	Share of agglomeration	13.2	16.1	2.9	38.6	30.0	-8.6	50.6	52.3	1.7	39.2	43.1	3.9
	Core share	82.5	73.6	-8.9	78.0	69.4	-8.5	88.9	89.2	0.3	74.7	76.7	2.0
Kaluga	Share of agglomeration	61.5	41.9	-19.6	69.3	39.2	-30.0	49.8	49.9	0.1	46.1	46.6	0.5
	Core share	93.5	74.7	-18.8	96.5	85.6	-10.9	87.2	86.9	-0.3	80.5	82.1	1.5
Norilsk	Share of agglomeration	38.3	34.4	-3.9	13.6	49.6	36.0	4.0	4.6	0.6	7.8	8.0	0.2
	Core share	98.6	88.2	-10.4	73.1	66.0	-7.1	79.8	78.7	-1.1	87.9	89.1	1.3
Surgut	Share of agglomeration	52.9	48.3	-4.6	58.4	45.6	-12.8	44.0	42.9	-1.1	43.5	46.2	2.7
	Core share	9.9	29.1	19.2	13.9	7.3	-6.6	69.8	68.7	-1.1	61.7	64.2	2.4
Tambov	Share of agglomeration	71.4	56.5	-14.9	50.5	49.6	-1.0	69.5	69.6	0.1	54.9	56.2	1.4
	Core share	78.6	57.3	-21.3	47.1	67.1	20.1	81.9	82.9	1.0	64.8	69.1	4.2
Khanty-Mansiysk	Share of agglomeration	7.9	10.5	2.6	11.1	21.1	10.0	8.8	9.8	1.0	7.1	7.1	0.0
	Core share	2.4	9.7	7.3	26.4	13.2	-13.2	91.0	91.3	0.2	86.6	89.2	2.6
Yuzhno-Sakhalinsk	Share of agglomeration	-	55.0	-	12.5	76.7	64.3	77.5	76.3	-1.2	67.3	69.8	2.5
	Core share	-	27.2	-	80.5	95.7	15.3	85.4	84.5	-0.9	79.9	80.8	0.9

* Indicator "Own-produced goods shipped, works and services performed by own forces (without small business entities)" (in 2010, it was shipments by types of economic activities in the sphere of industrial production); no calculation was made for the South Sakhalin agglomeration in 2010 due to the lack of information on the majority of municipalities in this region.
** Indicator "Volume of investments in fixed capital, carried out by organizations located in the territory of the municipality (without small businesses)".
*** Share of agglomeration in the value of the indicator for the RF constituent entity as a whole.
**** Share of the agglomeration core city in the value of the indicator for the agglomeration as a whole.
Source: own compilation based on information from the Municipal Indicators Database (https://rosstat.gov.ru/dbscripts/munst/) and information resource SPERK (https://spark-interfax.ru/statistics).

In addition, we noted an increase and maintenance of a high share of agglomerations in the total number of organizations (in 2019–2023, growth in 5 agglomerations out of 8) and the number of individual entrepreneurs (growth in 7 out of 8) of the corresponding constituent entities of the RF. In 2023, the municipalities of the Arkhangelsk agglomeration accounted for 67 and 58% of the total number of organizations and individual entrepreneurs of the region, respectively, in the Yuzhno-Sakhalinsk agglomeration – 76 and 70%, the Tambov agglomeration – 70 and 56%.

The share of agglomeration in the total volume of investment in fixed capital in 2010–2022 decreased in four agglomerations (Vologda, Kaluga, Surgut and Tambov agglomerations), the share of the core in agglomeration decreased in six agglomerations (except for the Tambov and Yuzhno-Sakhalinsk agglomerations). To a large extent, these trends can be attributed to the fact that all constituent entities of the RF have set and are currently facing strategic tasks to diversify the regional economy to prevent excessive concentration of production and investment in urban agglomerations. To a certain extent, these tasks can be solved. In addition, the reduction in the growth rates of shipments and investments in agglomerations in 2020–2022 could be caused by a stronger impact of the consequences of the introduction of restrictive measures due to the spread of the coronavirus pandemic in 2020–2021 and the economic difficulties associated with the introduction of large-scale sanctions against Russia by Western countries in 2022.

One of the key areas of agglomeration processes is the development of the road transport network, which leads to a reduction in the time costs of the population to move between settlements of the agglomeration and increased accessibility of various institutions and organizations. In 2010–2022, in most of the agglomerations under consideration (except for Arkhangelsk and Norilsk) the share of residents living in settlements not covered by transportation services decreased (from 0.4 to 5.2 p.p.); while the value of this indicator in agglomerations is noticeably lower than in the corresponding constituent entity of the Russian Federation as a whole. Northern agglomerations (Arkhangelsk, Khanty-Mansiysk and Norilsk) are characterized by a rather high share of the

Table 6. Share of population living in settlements with no regular bus/rail connections to the administrative center of a municipal district/okrug, urban okrug, % of the total population

Territory	2010	2015	2021	2022	2022 to 2010 (+/-), p.p.
Vologda Region	**5.7**	**12.6**	**6.5**	**4.7**	**-1.0**
Vologda agglomeration	3.6	2.9	2.1	1.4	-2.3
Arkhangelsk Region (without Nenets Autonomous Area)	**17.8**	**18.1**	**21.1**	**20.7**	**2.9**
Arkhangelsk agglomeration	17.3	17.0	17.2	20.8	3.5
Tambov Region	**3.4**	**0.7**	**0.8**	**0.7**	**-2.6**
Tambov agglomeration	0.5	0.1	0.1	0.1	-0.4
Kaluga Region	**8.4**	**6.4**	**5.1**	**4.8**	**-3.6**
Kaluga agglomeration	5.5	3.7	3.4	3.2	-2.3
Sakhalin Region	**1.5**	**0.2**	**0.3**	**0.3**	**-1.2**
Yuzhno-Sakhalinsk agglomeration	1.3	0.0	0.0	0.0	-1.3
Khanty-Mansi Autonomous Area – Yugra	**44.2**	**42.2**	**40.6**	**39.0**	**-5.1**
Khanty-Mansiysk agglomeration	31.9	32.7	31.0	26.7	-5.2
Surgut agglomeration	3.4	2.5	0.6	0.5	-2.9
Krasnoyarsk Territory	**10.3**	**9.3**	**9.2**	**9.2**	**-1.1**
Norilsk agglomeration	50.0	50.0	50.0	50.0	0.0

Source: own compilation based on information from the Municipal Indicators Database (https://rosstat.gov.ru/dbscripts/munst/).

population without transport services (21, 27 and 50%, respectively), which is due to the peculiarities of settlement and organization of transport services in the North and the Arctic *(Tab. 6)*.

The results of the analysis of the registers of inter-municipal bus routes for regular transportation of passengers and luggage (available on the official websites of public authorities of the respective constituent entities of the Russian Federation) for the end of 2023 – beginning of 2024 allow concluding that the network of inter-municipal routes is more developed than in the region as a whole within the boundaries of agglomerations (mainly along the line "city-core – large settlements of agglomeration"): the Arkhangelsk agglomeration (15.4% of the total number of all districts/okrugs of the region) accounts for 42.7% of all inter-municipal routes in the region; the Yuzhno-Sakhalinsk agglomeration (22.2% of districts/okrugs) – 40.0% of routes; the Tambov agglomeration (23.3% of districts/okrugs) – 35.7%; Kaluga (19.2% of districts/okrugs) – 33.3%; Vologda (14.3% of districts/okrugs) – 32.1%; Surgut (22.7% of districts/okrugs) – 19.7%; Khanty-Mansiysk (9.1% of districts/okrugs) – 12.5%; Norilsk (3.3% of districts/okrugs) – 1.4% of routes.

The study of dependencies between the values of socio-economic development indicators in the agglomeration core and satellite zone territories in 2010–2022 using correlation analysis allowed drawing the following conclusions:

– *high direct correlation in the population dynamics is observed only in a small number of "core – agglomeration municipality" pairs* (4 out of 25, as a rule, with the municipality close to the core: Vologda and Vologdsky District; Surgut and Surgutsky District; Arkhangelsk and Novodvinsk; Arkhangelsk and Severodvinsk; *Tab. 7*);

– *in terms of the dynamics of the natural population growth rate, a high direct relationship is observed in the vast majority of pairs of municipalities* (23 out of 25); this is due to the fact that the processes of natural population reproduction are sustainable in most municipalities of the region; at the same time, agglomerations attract young population, which causes similar reproductive demographic processes in these territories;

– *the dynamics of the coefficient of migration population growth* does not show a noticeable relationship between the municipalities of agglomerations, since migration processes are influenced by many different factors for different municipalities; in addition, this may indicate that the territory of the satellite zone, unlike the core, is not attractive for migration;

– *high close and direct connection of territories by the dynamics of product shipment per 1 inhabitant is observed in less than half of pairs of municipalities* (10 out of 25; all 3 pairs of the Vologda agglomeration, 1 out of 3 pairs of the Arkhangelsk agglomeration, 3 out of 6 pairs of the Tambov agglomeration, 2 out of 3 pairs of the Yuzhno-Sakhalinsk agglomeration, and the only pair of the Norilsk agglomeration), which indicates low production connectivity and the presence of spatial imbalances in the economic development of the agglomeration;

– *in terms of the dynamics of average per capita investment in fixed capital, a high direct relationship is observed only in four pairs of municipalities* (Vologda and Gryazovetsky District, Vologda and Sokolsky District, Khanty-Mansiysk and Khanty-Mansiysky District, Norilsk and Taimyrsky District), which, in our opinion, is due to the weak complementarity of their economies and conjugation of reproduction processes between the agglomeration municipalities;

– *in terms of local budget revenues per inhabitant, a high direct correlation is observed in the overwhelming majority of pairs* (19 out of 25), which is explained by the presence in the system of

Table 7. Correlation coefficients of indicators of socio-economic development of the core city and satellite municipalities for the period 2010–2022

Pairs of municipalities of urban agglomerations	RP	C_{ng}	C_{mg}	Shipment	IV	LB revenues	Salary
UO city of Vologda – Vologodsky MD	**0.872**	**0.750**	0.230	**0.931**	0.628	**0.892**	**0.992**
UO city of Vologda – Gryazovetsky MD	-0.487	**0.769**	-0.192	**0.930**	**0.843**	**0.862**	**0.988**
UO city of Vologda – Sokolsky MD	-0.300	**0.876**	-0.170	**0.938**	**0.901**	**0.896**	**0.998**
UO city of Arkhangelsk – UO city of Novodvinsk	**0.882**	**0.962**	-0.180	**0.894**	0.169	**0.906**	**0.998**
UO city of Arkhangelsk – UO city of Severodvinsk	**0.938**	**0.961**	-0.407	0.559	0.424	**0.912**	**0.983**
UO city of Arkhangelsk – Primorsky MD	-0.803	**0.987**	-0.123	0.556	0.353	**0.765**	**0.982**
UO city of Tambov – UO city of Kotovsk	-0.649	**0.959**	0.131	0.586	0.292	**0.742**	**0.990**
UO city of Tambov – UO city of Rasskazovo	-0.413	**0.933**	0.324	**0.798**	0.194	**0.763**	**0.995**
UO city of Tambov – Tambovsky MD	-0.309	**0.948**	0.636	**0.813**	0.002	0.429	**0.997**
UO city of Tambov – Rasskazovsky MD	-0.733	**0.836**	-0.107	0.605	-0.226	**0.891**	**0.994**
UO city of Tambov – Znamensky MD	-0.702	**0.768**	0.325	**0.797**	0.276	0.332	**0.995**
UO city of Tambov – Sampursky MD	-0.839	**0.782**	-0.450	-0.592	0.066	0.666	**0.974**
UO city of Tambov – Babynsky MD	-0.472	**0.769**	-0.584	0.584	0.587	**0.872**	**0.995**
UO city of Kaluga – Dzerzhinsky MD	-0.628	**0.798**	-0.297	0.486	0.340	**0.964**	**0.990**
UO city of Kaluga – PeremyshIsky MD	0.083	0.698	0.245	0.507	0.034	**0.959**	**0.966**
UO city of Kaluga – Ferzikovsky MD	0.549	**0.839**	-0.063	0.438	0.324	-0.100	**0.987**
UO city of Yuzhno-Sakhalinsk – UO Korsakovsky	-0.134	0.687	0.085	**0.759**	0.358	**0.964**	**0.980**
UO city of Yuzhno-Sakhalinsk – UO Anivsky	0.327	0.592	-0.051	**0.783**	0.402	**0.979**	**0.988**
UO city of Yuzhno-Sakhalinsk – UO Dolinsky	-0.146	0.540	-0.565	-0.650	0.275	**0.822**	**0.978**
UO city of Khanty-Mansiysk – Khanty-Mansiysky MD	-0.497	**0.934**	0.100	0.567	**0.734**	0.446	**0.984**
UO city of Surgut – UO city of Nefteyugansk	0.669	**0.952**	0.243	0.534	0.143	**0.709**	**0.984**
UO city of Surgut – UO city of Pyt-Yakh	-0.862	**0.945**	0.065	0.576	0.103	0.513	**0.980**
UO city of Surgut – Surgutsky MD	**0.950**	**0.958**	-0.212	0.442	0.646	**0.836**	**0.997**
UO city of Surgut – Nefteyugansky MD	0.656	**0.863**	0.284	0.503	0.510	**0.725**	**0.992**
UO city of Norilsk – Taimyrsky Dolgano-Nenetsky MD	-0.434	**0.802**	0.404	**0.861**	**0.980**	**0.827**	**0.997**

Designations: RP – resident population at the end of the year; C_{ng} – natural population growth rate; C_{mg} – migration growth rate; Shipment – shipped goods of own production, works and services performed by own forces (without small businesses); IV – investments volume in fixed capital (without small business entities) per 1 inhabitant; LB revenues – local budget revenues per 1 inhabitant; Salary – average monthly salary of employees of organizations (without small businesses).
Source: own compilation.

intergovernmental fiscal relations of the principle of equalization of fiscal capacity of municipalities in the region by transferring subsidies to municipalities from the budget of constituent entities of the RF; at the same time, the lack of correlation for this indicator in 6 pairs is due to the use of different approaches in the regions to the organization of intergovernmental fiscal relations and redistribution of powers between the region and municipalities.

– *in terms of the dynamics of average monthly wages, a high direct correlation is observed in all pairs of agglomeration municipalities,* which is due to the focus of the federal regional and intra-regional policy of the constituent entities of the Russian Federation primarily on reducing the differences between the territories in the level of wages of social (budgetary) sector employees and increasing the value of their wages.

Conclusions

We draw the following summarizing conclusions based on the results of the conducted work.

1. The studied agglomerations of the "second tier" are rather underdeveloped in terms of the presence of an established system of urban settlements in each of them; at the same time, the share of the core city in the total population is further increasing to an extremely high level. All this indicates the growth of centripetal tendencies and strengthening of the position of the central city at the expense of the satellite zone resources, which in the future may act as a factor limiting the development of such agglomerations as integrated socio-economic systems. At the same time, the rural settlement network of agglomerations, unlike the regions where they are based, does not degrade due to active intraregional migration.

2. Another key manifestation of agglomeration processes is the concentration of a significant share of regional production, investment and economic entities in the "second tier" agglomerations; however, these processes often become factors contributing to the growth of intra-agglomeration socio-economic differentiation. At the same time, in recent years, a significant part of the studied agglomerations (especially their cores) have somewhat lost their positions as centers of concentration of regional production and investment.

3. Within the agglomerations under consideration (except for a number of northern ones), a network of inter-municipal bus routes is currently being actively developed, which makes it possible to increase the transport accessibility of residents of satellite zone municipalities to the core city and is a positive factor for further activation of agglomeration processes.

4. Agglomeration processes from the core spread mainly only to the territory closest to it, which is manifested in the presence of a high commuting level only along this line, in the convergence and certain synchronization of their development in terms of key socio-economic indicators. The other municipalities either do not experience agglomeration processes due to weak integration with the core or have to put up with the negative effects associated with the "pumping out" of resources by the central city.

5. The shrinking differences between agglomeration municipalities in key social and a number of other indicators (average monthly wages, volume of local budget revenues per inhabitant) are primarily related to the equalizing priorities of federal and regional policy, rather than due to market integration and positive effects spreading to the periphery from the core.

6. Paradoxically, among the "second tier" agglomerations in Russia, it is a number of northern and arctic agglomerations (e.g. Surgut, Khanty-Mansiysk) that have greater potential for development due to the relatively high development of their satellite zone, the location of large industrial production facilities with effective specialization complementary to the economy of their core; at the same time, these agglomerations are embedded in national and global value chains.

Thus, we have proved the hypothesis that weak internal integration is one of the key problems in the development of Russian "second tier" urban agglomerations and limits the potential of their transformation into macro- and regional-level growth points.

In such a situation, we suppose that it is important to implement a set of the following priorities aimed at ensuring the internal integration of agglomerations space:

– development of unified documents on strategic socio-economic (strategy, program, master plan) and territorial planning, integrated zoning of the agglomeration territory, taking into account the interests of all participating municipalities, business structures and population;

– initiation and implementation of joint intra-agglomeration projects in the field of economy and infrastructure development (including in the format of public-private partnership), which helps to integrate all municipalities of the agglomeration into the system of its territorial division of labor;

– promoting the formation of territorial clusters, industrial parks for the emergence of innovative activities with significant positive effects not only for agglomeration stakeholders, but also for the entire region;

– promoting the formation of a single agglomeration market (labor, housing) by unifying legislation and eliminating administrative barriers.

The contribution of this study to the development of science is seen in the development of methodological approaches and tools for assessing agglomeration processes, identifying their specifics in Russian agglomerations of the "second tier"; the practical significance is that the results can be used in the practice of management at the regional and municipal levels in the process of agglomeration construction.

We see the prospects for the development of the study in the working out and testing of methodological tools for assessing agglomeration effects (at the meso- and micro-levels) on the materials of these agglomerations; their presence is a fact indicating that the current processes of concentration of human, industrial and other resources in a limited number of centers are really agglomeration, not enclavization (compression) of the developed space, and these centers have the potential to generate positive socio-economic effects for the entire region.

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An Approach to Modeling the Investment Attractiveness of the Industry in the Regional Aspect

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Abstract. At present, attracting investments in Russia's strategically important sectors remains a critical issue in the development of the domestic economy. Under the current sanctions pressure against the Russian Federation, the development of manufacturing industries is becoming the leading task in ensuring nationwide economic growth. The aim of the study is to develop a methodology for calculating the aggregated factor coefficient of investment attractiveness for a complex of manufacturing industries in the regions, based on econometric modeling. The investment attractiveness of a complex of manufacturing industries is understood as a set of significant factors that determine the inflow of investments into a complex of manufacturing industries. As a result of the study, we revealed that at the moment there is no unified generally accepted methodology for assessing the investment attractiveness of manufacturing industries; factors determining their investment attractiveness are not systematized; there are no studies devoted to identifying statistically significant factors for this type of economic activity. In this regard, a model was developed for selecting significant factors promoting investment attractiveness of a complex of

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manufacturing industries in Russia's regions. According to the methodology, the final aggregated factor coefficient is formed on the basis of private indicators that were combined into groups of factors, which allows us to identify the most important factors affecting the investment attractiveness of the manufacturing industry in a particular region and identify strategies to improve their investment attractiveness. The analysis of the aggregated factor coefficient will help potential investors to determine in which regions the complex of manufacturing industries is most promising for investment, as well as what measures need to be taken to improve the investment attractiveness of the complex of manufacturing industries in regions with a low coefficient value. The evaluation results showed that the most significant factors are production, labor, and innovation factors promoting investment attractiveness of the manufacturing industry. Our approach and the results we obtained can be used by public and private investors to make a decision on the expediency of investments in the industry and by authorities when forming investment policy, taking into account regional industry specifics.

Key words: investments, investment attractiveness, economic systems, region, industry in the region, industry enterprise in the region, factors, assessment.

Introduction

The issue concerning the investment attractiveness in strategically important industries in the regions to develop Russian production, renovate production assets, and switch to the production of innovative products is coming to the fore due to the rapidly changing global economic trends. A priority area of economic development of the Russian Federation is the manufacturing industry considering the sanctions pressure, withdrawal of the Russian economy from oil and gas dependence and due to the exhaustibility of natural resources (oil and gas). Speaking about the structural changes in the Russian economy, we note that according to 2022 state statistics data in the GDP structure (by economic sectors) manufacturing industry as a whole takes the first place with the value of 14.2%, the second place is occupied by mining (14.0%)[1]. The increase in the share of industry in GDP is due to the need to carry out import substitution of basic technologies, so it is the assessment of investment attractiveness (hereinafter – IA) on the example of manufacturing industry (hereinafter – IAtea(industries) – investment attractiveness of types of economic activities) is the main aim of our study.

Despite the presence of many theoretical approaches to the assessment of the IAtea (industries), their application is hampered in practice by the need to adapt to the specifics of the analyzed industry or type of economic activity. We should also note that it is necessary to assess industries in a particular region due to the heterogeneity of regional development in Russia. Continuing the discussion about the assessment of the IA of the types of economic activities, the idea of a hierarchical order of factors for each type of economic activity with distinctive features seems to be important. At the same time, it is worth noting that for a set of industries which form a particular type of economic activity type, the set of factors will be the same.

Let us highlight a number of problems of estimating the IA of the complex of manufacturing industries. The first one is the lack of a unified methodology for assessing the IAtea(industries). The second is the problem of choosing an approach to assess the IAtea(industries). Currently, there are two approaches: from the point of view of the region's attractiveness, which determines the IA of the industry; from the point of view of prioritizing the attractiveness of industries, which determine the IA of the region. In our opinion, when making

[1] Available at: https://rosstat.gov.ru/storage/mediabank/55_07-04-2023.html

a decision on investment, an investor, first of all invests in the industry, and then in the region, as the IA of the region reflects the territorial attractiveness for life. This is also evidenced by the results of the assessment of the region's IA obtained by Expert RA in 2023, which showed that the greatest weight among the blocks of the region's IA belongs to infrastructural factors (40%). We should note that the IAtea(industries) is studied as a set of factors. One of the problems of the IAtea(industries) assessment is the lack of systematization of factors, their statistical measurement, as well as determination of their significance. It is worth noting that in the studies devoted to the indicators of the IA evaluation of the complex of manufacturing industries, the authors emphasize a different set of indicators.

For instance, one of the main objectives of our study is the consideration of factors affecting the IA of the complex of manufacturing industries, based on the analysis of existing theoretical concepts. To increase the IA of the complex of manufacturing industries, it is necessary to identify the significant factors and determine the degree of their impact on the inflow of investment in the type of economic activity in the region. The aim of the research is to develop an aggregate factor coefficient of the IA of the industry in the region o*n the basis of econometric modeling.*

To achieve the aim of the research, we set the following tasks:

1) to analyze methods for estimating the IA of the complex of manufacturing industries;

2) to systematize the IA factors concerning the complex of manufacturing industries in the regions;

3) to development the econometric model of selection of the IA factors concerning the complex of manufacturing industries on the investments inflow in the TEA in the region;

4) to work out an algorithm for calculating our coefficient of investment attractiveness of the complex of manufacturing industries.

The scientific novelty of the research consists in the creation of a model for the selection of significant factors concerning the IA of the manufacturing industry and the development on their basis of the methodology for calculating the aggregate factor coefficient of the IAtea(industries), taking into account regional specifics.

The significance of the study lies in the development of a methodology for calculating the aggregate factor coefficient of the IAtea(industries), which makes it possible to reasonably rank the regions by the level of the IA of the complex of manufacturing industries, taking into account regional specifics. The methodological aspect of ranking consists in the substantiation of the approach and selection of the most significant factors of influence on the investment inflow in the type of economic activity "Manufacturing industries" taking into account regional specifics.

Literature review

In the previous few years, researchers have been focusing on studying the investment attractiveness of the objects of economic system levels. The direction of foreign research is the study of the countries' IA. For example, the European Commission has developed an index of the countries' IA, which ranks countries by the investment volume[2]. We should say that the Russian economy is a multilevel system consisting of interrelated elements, so the IA can be considered from the point of view of both the region and the industry, enterprise. We will focus on the IAtea(industries). To date, there are many techniques for assessing investment attractiveness. Despite the fact that the existing approaches to valuation of the IAtea(industries) reflect investment opportunities, however, they need to be improved, as they have shortcomings. The main problem of the IAtea(industries)

[2] European Commission. Available at: https://composite-indicators.jrc.ec.europa.eu/explorer/explorer/indices/iai/investment-attractiveness-index (accessed: November 8, 2023).

assessment is the choice of the object of assessment: the TEA (industries) in the country, the TEA (industries) in the region, a set of the TEA (industries) enterprises in the region. Also, some methodologies are exclusively descriptive in nature, there are problems of availability and selection of indicators (unreasonableness of indicators), taking into account insufficient or excessive amount of data. *Table 1* presents an analysis of the methodologies for the IA of manufacturing industry and the IA of industries related to this TEA.

Table 1. Analysis of methodologies for estimating the IA of manufacturing and the IA of industries related to the TEA

Author	Final indicator	Assessment object	Advantages	Disadvantages
(Safiullin, Gubaidullina, 2020)	Integral (localization and risk)	TEA in a region	Calculation by statistical methods, reduction to a single indicator, availability of statistical data, possibility of retrospective analysis	Consideration of qualitative indicators, insufficient number of factors (accounting only for shipment of goods), lack of comparison of regions
(Milovanova, Kuz'menko, 2007)	Integral (economic component and risk)	Industry in a region	Calculation by statistical methods, reduction to a single indicator, availability of statistical data, simplicity of calculation, possibility of retrospective analysis	Objective assessment of the risk component; taking into account only the economic factor
(Kovaleva, 2014)	Integral indicator (investment potential and risk)	All industries	Calculation by statistical methods, simplicity of calculation, possibility to apply the methodology for different industries	It is descriptive in nature, no specific indicators are presented, applicable only to the industry as a whole in the country
(Kalinina, Kalinina, 2016)	Integral indicator (sum of rating factors)	TEA in regions	The ready-made indicator, the possibility of applying the methodology to calculate different TEA, the visibility of the results obtained, helps to highlight the region's rating	Indicators for each TEA are the same, insufficient number of indicators is taken into account, unproven selection of factors
(Boslovyak, 2012)	Integral indicator (private indicators)	Industries in a country	Ready-made indicator, applicability for different industries, calculation in dynamics	Subjectivity, complexity of calculation, taking into account insufficient number of factors (financial)
(Varavin et al., 2023)	Index	Industry in a region	Ready-made indicator, easy to calculate, objective	Lack of statistical data to measure the environmental factor, taking into account insufficient number of indicators
(Fomina, 2015)	Analysis of indicators	TEA by country	Obtaining an objective evaluation result	Need for additional calculation of the model forming the aggregate indicator
(Klimova, Shapovalova, 2017)	Analysis of indicators	Industry in a region	Obtaining an objective evaluation result	Need for additional calculation of the model forming the aggregate indicator
(Avezova et al., 2022)	Analysis of indicators	Industry by country	Obtaining an objective evaluation result	Need for additional calculation of the model forming the aggregate indicator
(Abdikeev et al., 2019)	Investment potential through the analysis of indicators	TEA by country	Obtaining an objective evaluation result	Need for additional calculation of the model forming the aggregate indicator
(Vanyushkin, 2015)	Analysis of indicators	TEA and industries in a region	Obtaining an objective evaluation result	Need for additional calculation of the model forming the aggregate indicator
(Veretennikova, Rybina, 2011)	Investment volume	Industries by countries	Obtaining an objective evaluation result	Need to take into account additional factors, consideration of external funding from the U.S.

Source: own compilation.

In our previous studies, we determined that the best approach for assessing the industries' IA in the region would be the factor approach, taking into account the interrelation and interdependence of the activities of different levels of the economic system, which allows fully utilizing the approach to form the IA management system of industries (Elokhova, Plotnikov, 2023).

Continuing the conversation about the IAtea(industry) in the region, we note that today there are two approaches to its assessment: in terms of the region's attractiveness, which determines the IAtea(industry) (Burlin, 2023; Veretennikova, Rybina, 2011; Dyachkova, Zhevtun, 2023; Sviridova et al, 2023; Fomina, 2015; Binda et al., 2020); and in terms of prioritizing the attractiveness of the TEA (industry), which already determines the region's IA (Vanyushkin, 2015; Pakhtusova, 2011; Petrushina 2023; Rubtsova et al., 2023; Safiullin, Gubaidullina, 2020; Mustafakulov, 2017). The second approach has not yet worked out a single generally accepted methodology of evaluation based on econometric modeling.

In our study, we propose to consider the type of economic activity "Manufacturing industries", the main branches of which are machine building; oil refining; food industry; metallurgy; chemical industry; wood processing; manufacturing of materials for construction; pulp and paper industry. Let us emphasize the features of this type of economic activity:

– the largest investment share in fixed capital and stable investment growth (Zolotareva, Zolotarev, 2022);

– leading role in the global economy (the authors analyze exports and imports of leading countries by GDP) (Abdikeev et al., 2019);

– state support (Fomina, 2015);

– competitiveness growth under the condition of realizing innovative factors (Safiullin, Gubaidullina, 2020).

According to the analysis of methodologies designed to assess the IA of the complex of manufacturing industries in the regions, scientists' opinions on this issue are divided. The first group of authors (Bulgakova, 2004; Levchenko, 2023; Narolina, 2018, etc.) assesses investment attractiveness through an integral indicator formed by investment potential and investment risks. The second group (Abdikeev et al., 2019; Avezova et al., 2022; Klimova, Shapovalov 2017; Fomina, 2015) does it through the analysis and forecasting of indicators. The third group (Veretennikova, Rybina, 2011; Vorobyeva, Erokhina 2023; Rubtsova et al., 2023, etc.) assesses the IA through investments in fixed capital.

Let us dwell on the point of view of the second group of researchers and note that one of the problems of the IAtea(industry) assessment is the lack of systematization of factors and their statistical measurement. Table 2 presents the classification of factors concerning the IA of the complex of manufacturing industries, their statistical measurement, as well as the authors who highlight these factors.

We should say that the indicators characterizing the infrastructural and environmental factors are considered at the regional level. The political factor is considered at the country level; labor and financial factors – at the level of the TEA/industry in the region. A number of indicators of production and economic factors are represented by regional indicators due to the lack of statistical information at the level of the TEA/industry.

Based on the selected indicators, the study proposes a comprehensive approach to assessing the IA of the industry in the region. As a dependent variable we propose to use the indicator of investment activity in the region by type of economic activity – investment in fixed capital (Zolotarev Zolotareva, 2022; Korkin, 2023, etc.).

Table 2. Systematization of factors concerning investment attractiveness of the complex of manufacturing industries, their statistical measurement and use in further modeling

Factor, authors	Indicators	The factor is used in the model	The reason why a factor is not used in the model
Production (Abdikeev et al., 2019; Kalinina, Kalinina, 2016; Klimova, Shapovalov, 2019; Fomina et al., 2015 et al.)	Own-produced goods shipped, work and services performed by own forces (TEA/industry in the region)	+	
	Ratio of shipped products to manufactured products (TEA/industry in the region)		No data
	Labor productivity index (industry)		No data
	Index of production (TEA/industry in the region)	+	
	Fixed assets renewal ratio (regional)	+	
	Degree of depreciation of fixed assets (TEA/industry in the region)		No data
	Share of enterprise in the main production assets of the industry (TEA/industry in the region)		No data
	Goods output index (TEA/industry in the region)		No data
Economics (Abdikeev et al., 2019; Kalinina, Kalinina, 2016; Klimova, Shapovalova, 2019; Nguen, 2012; Fomina, 2015; Chistov, Gazukin, 2013; Silva et al., 2023 et al.)	Indices of physical volume of gross regional product in basic prices (regional)	+	
	Foreign trade turnover by industry (TEA/industry in the region)		No data
	Price index (TEA/industry in the region)	+	
	Investments in fixed capital (TEA/industry in the region)	+	
	Business confidence index (regional)		No data
	Share of products of this industry in the country's GDP (TEA/industry in the region)		No data
	Public investments volume in fixed capital of the industry (TEA/industry in the region)		No data
	Preferential loan volume to the industry (TEA/industry in the region)		No data
	Expenditures on technological innovation (TEA/industry in the region)	+	
	Share of innovative products in commodity turnover (TEA/industry in the region)		No data
	Industry development dynamics (TEA/industry in the region)		
	Market capacity (TEA/industry in the region)		No data
	Receipt of taxes and fees to the budgetary system of the Russian Federation by main types of economic activity (TEA/industry in the region)	+	
Labor (Abdikeev et al., 2019; Avezova et al., 2022; Gajfullina, Nizamova, 2019; Kalinina, Kalinina, 2016; Fomina, 2015; Dorożyński et al., 2016; Kuna-Marszałek, 2017; Snieška, Zykiene, 2015; Windhyastiti et al., 2021 et al.)	Share of employed in the industry in total employment in the country's economy (TEA/industry in the region)		No data
	Average number of employees in the industry (TEA/industry in the region)	+	
	Quality and availability of skilled labor; high-productivity industry jobs (TEA/industry in the region)	+	
	Index of average monthly nominal accrued wages (TEA/industry in the region)	+	
	Number of new jobs created (TEA/industry in the region)		No data
	Ratio of wage arrears to labor remuneration fund (TEA/industry in the region)		

End of Table 2

Factor, authors	Indicators	The factor is used in the model	The reason why a factor is not used in the model
Financial (Abdikeev et al., 2019; Avezova et al., 2022; Burlin, 2023; Gajfullina, Nizamova, 2019; Kalinina, Kalinina, 2016; Fomina, 2015; Mustafakulov, 2017 et al.)	Profit on sales (TEA/industry in the region)		A component of the financial result
	Financial result of profitable organizations of the industry (TEA/industry in the region)	+	
	Profitability of sold goods, works, services (TEA/industry in the region)	+	
	Return on assets (TEA/industry in the region)		It depends on the profitability of sales; it is necessary to take into account the return on sales
	Accounts receivable of organizations (TEA/industry in the region)	+	
	Accounts payable of organizations (TEA/industry in the region)	+	
	Rate on loans and deposits (regional)		No data
Infrastructural (Kalinina, Kalinina, 2016; Fomina, 2015; Chistov, Gazukin, 2013; Windhyastiti et al., 2020 et al.)	Share of public roads of local significance with hard surface in the total length of public roads of local significance (regional)	+	
	Provision of preschool children with places in organizations engaged in educational activities under preschool education programs, babysitting and child care (regional)	+	
	Number of teachers in organizations carrying out educational activities under educational programs of primary general, basic general, secondary general education (regional)	+	
	Number of students enrolled in higher education programs – bachelor's, specialist's, master's degree programs, per 10,000 population (regional)	+	
	Number of hospital beds, end of year (regional)	+	
	Investments volume in creation of new and/or development of existing engineering infrastructure facilities (regional)		-
Ecological (Varavin et al., 2023; Kondrat'eva, 2020; Silva et al., 2023 et al.)	Air pollutant emissions from stationary sources (regional)	+	
	Value of green capital investment (regional)		No data
Political (Nguen, 2012; Pahtusova, 2011; Chistov, Gazukin, 2013; Silva et al., 2023; Windhyastiti et al, 2020 et al.)	Stable political situation (country)		No data
Source: own compilation.			

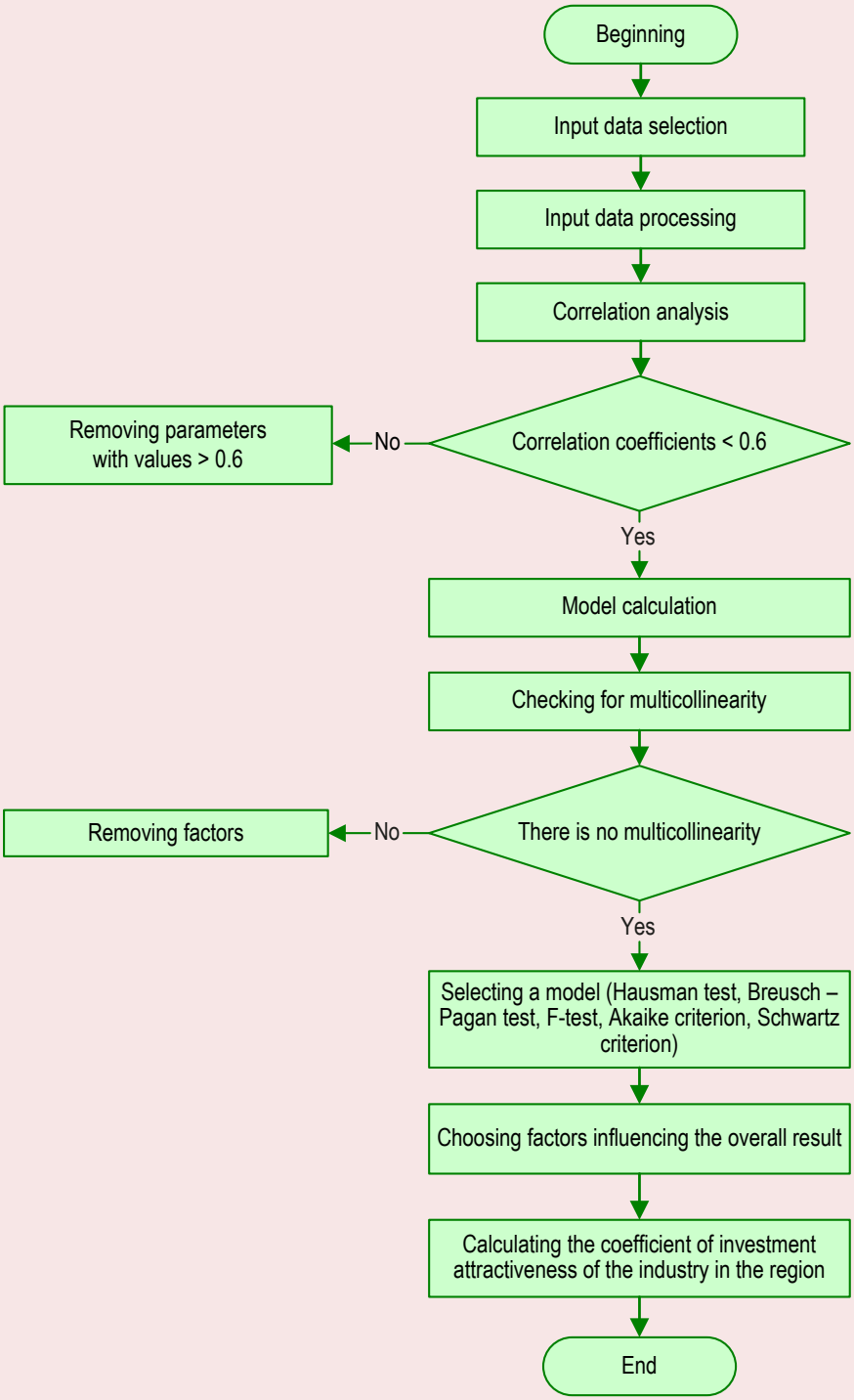
Research methods

The article proposes our methodology for calculating the aggregate coefficient of the industry IA in the region (hereinafter – coefficient). The task is to study the influence of factors on the investment inflow in the industry taking into account regional specifics and to identify significant parameters that will participate in the calculation of the coefficient. To achieve the set goal, we developed the model of selecting the factors concerning the industry IA in the region. To determine the dependence, we selected the indicator of investment inflow by type of economic activity "Manufacturing industries" in Russia's regions. For this purpose, we considered the actual data for the period 2010–2021. The methodology for calculating the coefficient includes

several stages, each of which allows assessing various aspects affecting the industry attractiveness for investors.

Figure shows the algorithm for calculating the coefficient of the industry investment attractiveness in the region.

Algorithm for calculating our aggregate coefficient of the industry IA in the region



Source: own compilation.

Let us focus on the detailed description of the sequence of steps to be performed to achieve the research goal.

Step 1: Selection and justification of indicators for the econometric model. The research carries out correlation analysis on the basis of the collected statistical data, previously taken into account when assessing the IA of the complex of manufacturing industries in the works of other authors. It is worth noting that the construction of the model is necessary to identify the most significant indicators of influence on the investment inflow in the manufacturing industry in the region, from which our index is subsequently calculated.

Step 2: Input data processing. The indicators expressed in percentages remain unchanged, the rest are recalculated to improve the objectivity of the calculations.

Step 3: Evaluation of indicators on the basis of correlation analysis. At this step, we constructed the correlation matrix, and assessed the dependence between all indicators, as well as between the indicators and the dependent variable. Then we selected the indicators for model building which satisfy all the conditions, namely, the value of the correlation coefficient should be < 0.6. The study made the estimation for two econometric models due to the fact that the indicators of profit and profitability, which initially correlate with each other, were chosen to measure the financial factor. Therefore, our aim is to choose the best model to measure the financial factor in addition to choosing the best model. Throughout the study two iterations of the model will be calculated and analyzed, subsequently one of them will be selected on the basis of the best model of the first and second iteration.

Step 4: Checking indicators for multicollinearity.

Step 5: Calculation of two econometric models to check for model validity (based on the Ramsey test).

Step 6: Exclusion of insignificant variables by their p-value (significance level).

Step 7: Testing the hypothesis about the impact of industry factors on the IA, building a new model (checking the correctness of the new model based on the Ramsey test).

Step 8: Selection of the best model of the first and second iteration based on tests (F-test, Durbin–Wu–Hausman test, Breusch–Pagan test). The choice is made between fixed effects model, random effects model, fixed effects model with the addition of dummy variables, random effects model with the addition of dummy variables on the basis of the F-test, Durbin–Wu–Hausman test, Breusch–Pagan test.

Step 9: Choosing between the first and second iteration of the model. Based on the Schwartz information criterion and Akaike information criterion, a decision is made to select the best model. The model in which the value of these criteria has the lowest value is recognized as the best model.

Step 10: Ranking of indicators through their significance level based on the selected model.

Step 11. Calculation of the aggregate IA coefficient of the industry in the region based on the selected model. We calculate the coefficient by finding the sum of the corresponding sub-indices with weights. The weight of the indicator is determined based on the level of significance of the indicator in the selected model.

The proposed methodology makes it possible to identify the significant factors regarding the IA of the complex of manufacturing industries in the regions, based on which an aggregated factor coefficient is obtained.

Research results

Based on the above, we developed a model for the selection of factors concerning the investment attractiveness of the complex of manufacturing industries.

The information basis included the information of the Federal State Statistics Service of the Russian Federation on 83 Russia's regions for the period 2010–2021 for the selection of statistical indicators. Due to incomplete information, the following six regions did not participate in the calculations: the Republic of Crimea, the city of federal significance Sevastopol, the Donetsk People's Republic, the Lugansk People's Republic, the Zaporozhye Region and the Kherson Region.

After selecting the parameters to measure the factors (see Tab. 2), it is worth checking them for collinearity. The most important task in correlation analysis is to identify the relationship between variables. For this purpose, we constructed a correlation matrix. As a result of correlation analysis for the model of the first and second iteration, *Table 3* presents the indicators we have chosen. The difference is that for the model of the second iteration the indicator X2 is excluded due to its correlation with X7.

Table 3. IA factors concerning the complex of manufacturing industries for model building

Factor	Designation	Description	Measure	Adjustment
Production	C	Fixed assets renewal ratio (by region)	%	-
	V	Shipped goods of own production, works and services performed by own forces (by types of economic activity) (TEA in the region)	Thousand rubles	Thousand rubles / number of industry enterprises in the region
Economics	I	Expenditures of organizations on technological innovations (TEA in the region)	Thousand rubles	Thousand rubles / number of industry enterprises in the region
Labor	W1	Number of high-productivity jobs (TEA in the region)	Places	People / number of industry enterprises in the region
	W2	Average monthly nominal gross wages per employee for the full range of organizations (TEA in the region)	Rubles	-
Financial	R	Level of profitability (unprofitability) of sold goods, products, works, services (TEA in the region)	%	-
	Pr	Financial result of profitable organizations (TEA in the region)	Thousand rubles	Thousand rubles / number of industry enterprises in the region
Infrastructure	T	Share of local public roads with hard surface in the total length of local public roads (by region)	%	-
	Ed	Provision of preschool children with places in organizations engaged in educational activities under educational programs of preschool education, supervision and care of children. Number of teachers in organizations carrying out educational activities under educational programs of primary general, basic general, secondary general education. Number of students enrolled in higher education programs – bachelor's, specialist's and master's degree programs, per 10,000 population (by region)	Places for 1,000 children People People	- Teachers per 10 thousand people
	H	Number of hospital beds, end of year (by region)	Units	Bed capacity per 10,000 people
Ecological	Eco	Air pollutants emitted from stationary sources (by region)	Thousand ton	Thousand ton per 10 thousand people
Source: own compilation.				

Next, we calculate multiple regression models and test the validity of the models based on the Ramsey test taking into account the selected indicators. The null hypothesis (H0) indicates that the model specification is correct (p-value > 0.05), the hypothesis (H1) indicates that the model specification is incorrect (p-value < 0.05). In our case, the model specification of the first and second iteration models is incorrect because p-values less than 0.05 indicate that the model is not a good fit. Due to the fact that it is important for us to show the influence of factors related to production activities, it was decided to exclude the infrastructure factor from the model.

Let us re-evaluate the models' correctness. It proves that the specification of the models of the first and second iteration is correct, since the test values are greater than 0.05. Thus, the model includes the following factors of the IA of the complex of manufacturing industries: production, innovation, labor, financial, environmental.

Further, we estimated 4 models in each iteration: with fixed effects, with fixed time effects, with random effects, with random and time effects. We used Durbin–Wu–Hausman, Breusch–Pagan, and F-test were used to select the best model of the first and second iteration.

Thus, e selected the best model of the first and second iteration. In the first and second iteration, the best model was the model with fixed effects. Let us elaborate on the selected models and evaluate them *(Tab. 4)*.

When choosing the best model, we pay attention to the Schwartz information criterion (SIC) and the Akaike information criterion (AIC). The Schwartz information criterion (SIC) is (2052.96) and the Akaike information criterion (AIC) is (1631.27) for the profitability model. For the financial outcome model, the Schwartz information criterion (SIC) is (2053.23), the Akaike information criterion (AIC) is (1632.20). We should note that these criteria allow choosing the best model, the best one will be the model with the lowest value of the criterion. In our case, the model with profitability has less values than the model with profit, which allows making a choice in favor of the model with profitability.

Table 4. Detailed evaluation of the best models of the first and second iteration

Name of variable		Fixed effects model	Fixed effects model
		First iteration	Second iteration
Factor	Const	-8.54***	-10.19***
Regional data			
Manufacturing	C	0.02**	0.02**
Ecological	Ln(Eco)	-0.09	-0.15
Industry data			
Manufacturing	Ln(V)	0.32***	-
Labor	Ln(W1)	0.27***	0.41***
	Ln(W2)	0.57***	0.93***
Innovative	Ln(I)	0.07**	0.07**
Financial	R	0.008*	-
	Ln(Pr)	-	0.03
Number of observations	N	941	941
Determination coefficient	R^2	0.82	0.82
F-Fest	p-calc.	p=0	p = 0
Breusch–Pagan test	p-calc.		
Durbin–Wu–Hausman test	p-calc.		
Schwarz information criterion	p-calc.	2052.96	2053.23
Akaike information criterion	p-calc.	1631.27	1632.20
Source: own compilation.			

Thus, we choose the best model (Formula 1).

$$\ln(y_{it}) = \alpha_i + \beta * C_{it} + \gamma * \ln Eco_{it} + \\ + \delta * \ln V_{it} + \varepsilon * \ln W1_{it} + \epsilon * \ln W2_{it} + \\ + \zeta * \ln I_{it} + \eta R_{it} * + u_{it}, \quad (1)$$

where $i = \overline{1.83}$ – number of region;

$t = \overline{2010.2021}$ – moments in time;

u_{it} – random error, all u_{it} are independent and identically distributed;

$u_{it} \sim iid(0; \sigma_\varepsilon^2)$;

α_i – fixed effect of region *i*;

y – investments in fixed capital by type of economic activity "Manufacturing industries".

Based on the obtained modeling results, we can conclude that when carrying out measures aimed at increasing the IA of the manufacturing industry in the regions, it is necessary to focus on fixed assets renewal ratio; air emissions of pollutants emitted from stationary sources; volume of shipped goods of own production, works and services performed by own forces by the industry; number of highly productive jobs by the industry; average monthly nominal accrued wages and salaries per worker; expenditures of industry organizations on technological innovations; profitability (unprofitability) rate of sold goods, products, works, services of industry enterprises.

We used the significant factors selected on the basis of the proposed model (Formula 1) to calculate the aggregate coefficient of industry investment attractiveness. We should note that the proposed coefficient is suitable for calculating the IA coefficient of industries belonging to the type of economic activity "Manufacturing industries".

Aggregated index of industry investment attractiveness in the region *(IAIir – index of investment attractiveness of the industry in the region)* is calculated by finding the sum of the corresponding sub-indices with weights (Formula 2):

$$IAIir = \sum_{i=1}^{n} \alpha_i x_i, \quad (2)$$

where x_i – *i*-indicator, $i = \overline{1,n}$;

n – total number of factors;

α_i – weight of *i*-factor, and $\sum_{i=1}^{n} \alpha_i = 1, \alpha_i \in [0,1]$.

The unfolded formula is as follows (Formula 3):

$$IAIir = 0.14 * C_i + 0.05 * Eco_i + \\ + 0.19 * V_i + 0.19 * W1_i + \\ + 0.19 * W2_i + 0.14 * I_i + 0.1 * R_i. \quad (3)$$

First of all, the indicators for calculating the index for each region are brought to one scale by normalization. As part of data normalization, asymmetry was assessed. It is important to note that we used the formula of inverse normalization for the environmental factor.

The weight of each indicator is determined depending on the weight of importance of each factor in the model *(Tab. 5)*.

Table 5. Determination of the weight of IA factors of the complex of manufacturing industries in the regions

Factor	Taxonomic unit	Indicator	Level of significance	Weight
Manufacturing	Region	x2	(3%)**	0.14
Ecological	Region	x9	-	0.05
Manufacturing	Industry	x10	(1%)***	0.19
Labor	Industry	x11	(1%)***	0.19
		x12	(1%)***	0.19
Innovative	Industry	x13	(3%)**	0.14
Financial	Enterprise	x14	(5%)*	0.10
-	-	Sum	-	1.00

The weight of the factors is determined based on the p-value (significance level) presented in Table 2.
Source: own compilation.

Table 6. Aggregated coefficients of investment attractiveness of the type of economic activity "Manufacturing industries" by constituent entities of the Russian Federation (first and last five positions in the rating), 2021

Rating	Region	IAlir index
1	Murmansk Region	0.80
2	Krasnoyarsk Territory	0.67
3	Omsk Region	0.65
4	Archangelsk Region	0.63
5	Perm Territory	0.61
…	…	…
79	Chechen Republic	0.24
80	Republic of Tyva	0.20
81	Republic of Kalmykia	0.19
82	Republic of Altai	0.18
83	Republic of Ingushetia	0.17
Source: own compilation.		

Thus, we present our approach to the calculation of the aggregate factor coefficient of IA of the complex of manufacturing industries in the regions.

Table 6 shows the indices of investment attractiveness of the "Manufacturing industries" sector calculated by the constituent entities of the Russian Federation for 2021.

Based on the calculations in 2021, the highest value of the IA coefficient for the TEA "Manufacturing production" is in the Murmansk Region, the Krasnoyarsk Territory, the Omsk Region, the lowest – in the regions of the North Caucasus. We should note that the aggregate coefficient of the IA is measured from 0 (min) to 1 (max). Consequently, we can say that the IA of the manufacturing industry in the Murmansk Region has a value close to 1, which indicates a high level of the IA of the manufacturing industry in this region. It means that the complex of manufacturing industries has a high level of manufacturing, labor, innovation, financial factors with a low environmental load and will be interesting for potential investors.

The proposed approach to assessing the IA of the complex of manufacturing industries can be used by investors, private or public, who, guided by these coefficients, will make informed decisions about the feasibility of investment in the manufacturing industries of a particular region. This assessment can also be an integral part of the system of information and analytical monitoring of economic development to ensure managerial decision-making at the level of the regional system as a whole.

Conclusion

In conclusion, we should note that the study of the IAtea(industries) is of particular interest for attracting investment in strategically important sectors of the Russian economy. Currently, there is a problem of the lack of a comprehensive unified approach to assessing the IAtea(industries), so the research proposed a methodology for calculating our coefficient of investment attractiveness of the complex of manufacturing industries. The calculations are based on the data on the type of economic activity "Manufacturing industries" in Russia's regions. For instance, the proposed methodology can be adapted to calculate the IA coefficient of industries related to this type of activity, which allows expanding its application. The developed IA coefficient of the manufacturing industry makes it possible to identify the most promising regions for investment in the manufacturing industry. The methodology will allow increasing the regulatory support of investment activity, to rank priorities in the selection of investment projects, to determine the

mechanisms of support for investment activity of the manufacturing industry in the region, to develop a more reasonable industrial passport of the region. When using the proposed methodology, the investor has the opportunity to narrow down the range of objects for investment, focusing on the most attractive regions of location of manufacturing industry enterprises.

It is important to note that the proposed coefficient is an intermediate research result and will be used in conjunction with the region's industrial profile to rank the IA of the industry in the region.

The direction of further research is the development of a software product for calculating the index of the investment attractiveness of the industry in the region with visualization. The assessment of the IA of industries is an important and urgent task of harmonious development of the national economy.

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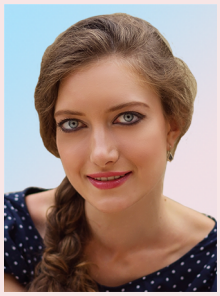
Realization of the Regions' Budget Capacity: A New Integrative Approach to the Research



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Abstract. The paper investigates theoretical aspects related to the implementation of budget capacity at the stages of its formation and use. Having studied the determinants of socio-economic development contained in various economic doctrines, and taking into consideration the modern context of the functioning of the Russian economy, we show that the realization of budget capacity is an important factor in socio-economic development. The systematization of diverse views on the essence, definition of a set of controversial issues regarding the content and problems of implementing the regions' budget capacity shows that the theoretical and methodological basis for its formation and use is limited. The paper considers the economic category "region's budget capacity" from the perspective of integrating resource, fiscal and institutional characteristics, representing a set of not only created, but also attracted gratuitous / non-gratuitous budget resources, as well as reserves that can be realized under the influence of external / internal constraints and incentives. This interpretation makes it possible to specify the concept of "maximum achieved budget capacity of the region" as a capacity that has been implemented, and "the maximum achievable budget capacity of the region" as a set of implemented, reserve and hidden capacities. The article substantiates basic provisions of the integrative approach. The materials can be used in educational activities in studying disciplines in the field of finance, economics and management; they can also be useful to researchers as a basis for further research, and to management bodies of different levels to substantiate management decisions.

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Key words: budget capacity, theory, methodology, approach, socio-economic development, region, budget policy.

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Introduction to the problem

The current socio-economic situation in Russia is largely determined by a number of external and internal factors, including previously introduced and current sanctions, effects of the coronavirus pandemic, unpredictability of fluctuations in the ruble and energy prices, unstable inflation, etc.

In this context, a decisive transformation of the commodity-based economy, largely dependent on the global market and the results of export-import activities, into an economy that promotes import substitution, scientific, technological and innovative development, as well as maintaining the necessary balance between internal self-sufficiency and global openness, should become national priority goals. Their achievement is possible only on the basis of socio-economic development of regions as geographically specialized subsystems within the national economy.

Budget regulation, the importance of which increases markedly during periods of instability, has impressive and diverse opportunities for socio-economic development of regions. Moreover, insufficient effectiveness of budgetary policy can become a significant barrier to the integrated development of the entire socio-economic system. We should note that in the presence of various kinds of restrictions, including financial, the need has increased many times not so much in quantitative increment of existing budget resources, which is typical of the traditional but outdated paradigm of socio-economic development, as in the fullest realization of the regions' budget capacity. The use of this category contributes to significant progress regarding the factors promoting the economic and social development of regions. Obviously, this is possible only when new methodological approaches to the formation and assessment of the use of the region's budget capacity are developed; this has become the aim of the work. The research was based on general scientific methods of cognition, as well as comparative, evolutionary, institutional and other relevant approaches.

Debatable issues of the methodology for studying the region's budget capacity

The scientific community and practical managers actively discuss the forms and methods of implementing the budget capacity, which, in turn, among other factors depend on the correctness and thoughtfulness of the use of the conceptual framework. In this regard, research into the theoretical foundations of the content of budget capacity seems to be an urgent and important scientific task.

At the same time, there is a noticeable concentration of research focus on tax capacity (as part of budget capacity) or on the financial or economic capacity of the region (including those studies that consider budget capacity as their component), which requires further development and substantiation of the theoretical and methodological content of the region's budget capacity.

The term "budget capacity" ("fiscal capacity" in English-language literature) and methods for determining its level became very widely used in

scientific and managerial circles with the arrival of the so-called progressive financial consolidation policy in the early 1990s (Martinez-Vazquez, Boex, 1997; Haffert, Mehrtens, 2013).

Taking into account the results of previous studies (Pechenskaya, 2018a), we will highlight a number of fundamental issues of the methodology of budget capacity research that have caused a lively scientific discussion, in particular:

- Are the terms "resources", "opportunities", "reserves", "capacity", "budget", "budget capacity" identical?
- How to take into account the time factor when researching budget capacity in a cyclical budget process?
- Why is it necessary to implement budget capacity?
- Which capacity should be analyzed: budget or tax?
- Which approach to the study of the essence of budget capacity best meets the task of promoting socio-economic development in the regions?

Further, the study will present a consistent scientific search and substantiation of answers to these questions.

First, when considering the interpretations of the essence of budget capacity, we found a fairly frequent substitution of the terms "resource", "reserves", "opportunities", "capacity", as well as "budget" and "budget capacity".

Resources, which are one of the most important economic categories, represent sources of covering needs. The sources of budget resources are budget revenues created as a result of economic activity and funds attracted to the budget on a reimbursable and gratuitous basis. In this study, budget resources will be understood as those that are already involved in economic turnover. According to their engagement, resources can be classified as those that are in use and those that are potentially possible. In the latter case, we are talking about reserves for the growth of budget resources. Doctor of Sciences (Economics) F.F. Hanafeev points out two different states of reserves: the state of unused opportunities or the state of development (Hanafeev, 2008). We will proceed from the position of allocating unrealized and non-obvious reserves. At the same time, unrealized reserves differ from non-obvious ones in that they are already known and can be realized at this stage of economic development due to the application of necessary incentives and (or) restrictions.

Thus, we will interpret budget capacity at the intermediate stage of the study as a set of budget resources (realized budget capacity) and reserves (unrealized budget capacity).

In our opinion, the categories "budget" and "budget capacity" are not equivalent. An interesting conclusion was made by RAS Academician A.I. Tatarkin, who considered that within the framework of capacity there are both possible resources and those already involved in economic activity (Tatarkin, 1997; Tatarkin, Novikova, 2015). Academician L.I. Abalkin interpreted capacity as a kind of collective, generalized characteristic of resources (Abalkin, 1987).

Linguistically, the definition of "budget capacity" assumes a probabilistic character, whereas the budget is a very real result of budget capacity implementation, that is, realized budget capacity, when budget revenues become the result of formation, and budget expenditures become the result of use.

Second, budget capacity is considered within the framework of individual stages of its implementation, most often at the stage of formation.

The fact that budget capacity is a dynamic category does not require proof; and over time, along with the development of society and economy, certain types of non-obvious reserves can move into the category of known but unrealized reserves, and unrealized reserves into budget resources.

Since budget capacity is associated with the time parameter, many researchers consider individual stages in the implementation of budget capacity. At the same time, scientific works often lack the interconnectedness of the stages of its formation and use. We agree with Doctor of Sciences (Economics) I.V. Sugarova, who points out that "budget capacity should not be considered only from the perspective of revenue generation; it is important to take into account the possibilities of rational allocation of revenues and their distribution in such a way as to meet the current needs of society, ensure the realization of strategic interests of the state, the growth of technological, capital and human potential for the future" (Sugarova, 2016).

In our opinion, it is advisable to study budget capacity as a category that is cyclical in the key stages of its implementation (the stage of formation and the stage of use). At the same time, increasing the efficiency of the formation and use of budget capacity leads to its growth. The cyclical nature of the stages does not mean zeroing, but involves the transformation of stimuli and constraints of the external and internal environment. Therefore, implementing budget capacity is not the end result of public administration. This leads to a third controversial issue.

Third, there is no common understanding among scientists concerning the final result of implementing budget capacity. In our opinion, it is not entirely accurate to talk about the realization of budget capacity as the final result, since one needs to know what resources and reserves are required for. Some studies, consider expenditure financing as such a result. In our opinion, the realization of the region's budget capacity contributes to improving the quality of public services, development of human capital, growth of investments in national production, promotion of innovation, increase in domestic consumer demand, and development of economic sectors, which leads to stimulating the region's socio-economic development. From this, we determine that the final result of implementing budget capacity should be to promote the region's socio-economic development in order to ensure a decent quality of life and standard of living for the population.

In turn, the realization of budget capacity is influenced by a whole range of factors, the study of which becomes a necessary methodological task. Having reviewed the relevant economic literature, we identified a number of opinions on the factors promoting the implementation of budget capacity. All the points of view studied in the economic literature reasonably indicate that the realization of budget capacity depends on the stimulating and restrictive effects of the external and internal environment. In our opinion, this corresponds to the probabilistic nature of the essence of budget capacity.

As a result of generalization of external and internal, main and secondary factors identified in domestic and foreign studies, it is possible to present a triad of conditions for the realization of budget capacity:

1) availability and development of the resource base (natural and climatic conditions, resource and raw material base, economic structure, demographic and historical features, etc.);

2) stability and flexibility under market conditions (inflation rate, exchange rate, etc.);

3) institutional effectiveness (regulatory framework, development institutions, etc.).

Fourth, scientific literature, as well as regulatory documents, often takes into account problems related only to tax capacity rather than budget capacity.

Agreeing with the importance of in-depth research on tax potential, we emphasize that, in our opinion, the category of budget capacity helps to expand the possibilities of state influence on the social and economic development of the country

and its regions. Doctor of Sciences (Economics), Professor L.N. Lykova convincingly proves the necessity to study not only the tax capacity of the regions of the Russian Federation due to the fact that not all financial resources become fully or partially taxable (Lykova, 2008). The Budget Code of the Russian Federation establishes the principles of completeness of revenues reflection and budget balance, which mean that expenditures correspond not only to tax revenues, but also to the total amount of revenues[1]. Thus, according to our position, budget capacity is the most comprehensive and adequate category from the point of view of solving the problem of promoting socio-economic development in the regions, whereas tax capacity is one of its components.

Fifth, so far there is no consensus on the essence of budget capacity.

The definition of "budget capacity" is often used in modern budget practice; however, Russian legislation does not disclose its essence and considers only the tax capacity index[2]. The lack of a legally fixed definition of this term has prompted many researchers to define its meaning in their own way and look at it from different positions (from the position of resources, opportunities, or the result of fiscal relations).

The variety of characteristics of the essence of budget capacity creates inaccuracies in understanding its nature and methods of its implementation, as well as limits the possibilities of conducting comparative studies.

Studying the evolution and modern interpretation of the term in question contributed to our critical understanding and systematization of existing approaches *(Tab. 1)*.

Table 1. Systematization of approaches to the definition of the term "budget capacity"

Approach	Researchers	Definition of budget capacity
Resource-based	M.V. Vladyka, S.V. Zenchenko, Zh.G. Golodova, A.N. Indutenko, O.S. Kirillova, Zh.A. Mingaleva, N.P. Pazdnikova, L.D. Sanginova, Yu.N. Severina, A.V. Sidorovich, Ph. Mehrtens, L. Haffert	The set of financial resources that are accumulated over a certain period in a particular budget to address the tasks of the state
Fiscal	V.A. Vorob'eva, Yu.A. Petrov, S. Barro, L. Jameson Boex, J. Martinez-Vazquez	The ability of the economic system itself, as well as government and self-government bodies, to increase budget revenues at various levels
Institutional	F.F. Khanafeev, N.I. Yashina, S.N. Yashin, E.V. Poyushcheva	A set of various conditions that contribute to the formation of an optimal size of budget revenues
Expenditure-based	O.A. Grishanova, I.N. Shvetsova, T.A. Naidenova	The amount of maximum budget expenditures
Imperative	N.A. Tolkacheva, L.V. Afanas'eva, T.Yu. Tkacheva	The result of budget and tax relations forming a complex system of economic indicators
Sources: own compilation based on own analysis; (Pechenskaya, 2018a).		

[1] Budget Code of the Russian Federation 145-FZ, dated July 31, 1998 (Article 32. The principle of completeness of the reflection of revenues, expenditures and sources of financing budget deficits; Article 33. The principle of budget balance).

[2] For example, in the RF Budget Code, in RF Government Resolution 670, dated November 22, 2004 "On the distribution of subsidies for equalizing the budget provision of constituent entities of the Russian Federation".

We believe that each of these approaches is possible, but each represents a narrow interpretation of the region's budget capacity. At the same time, research into the formation and use of budget capacity should be carried out from a position that mainly links it with the task of promoting the regions' socio-economic development and integrates its fiscal, institutional and resource features.

As a result of the study, we conclude that the region's budget capacity is a set of realized (created and attracted) budget resources and unrealized and non-obvious reserves that are formed, used and developing under the influence of external and internal constraints and incentives. The discussion issues that have been studied and our substantiated solutions are given in *Table 2*.

Thus, the analysis demonstrated the existence of flaws in the methodological research on the essence of budget capacity, which proves the need to create a fundamentally new theoretical and methodological approach – an integrative one, which differs from the existing ones by substantiating the structure and stages of realization of budget capacity. To do this, first of all, it is advisable to explore the issue of the evolution of conceptual views on the role of the region's budget capacity in socio-economic development.

Substantiation of the theoretical and methodological approach to the formation and use of the region's budget capacity

For an in-depth study of the essence of budget capacity, it is expedient to choose the most constructive research tools. Foreign and Russian scientists have convincingly proved that structural-functional and systems approaches are leading in the analysis of dynamism, non-linearity and structural complexity of economic processes.

Budget capacity, like financial capacity, is a complex category consisting of an ordered set of interrelated components. In this regard, the disclosure of the essence of budget capacity is possible when there is a detailed understanding of its structure.

Table 2. Substantiation of our position on the key discussion issues of the content of budget capacity

No.	Discussion issue	Substantiation of our position
1	Are the terms "resource", "opportunities", "reserves", "capacity", "budget" and "budget capacity" identical?	We consider budget capacity as a set of realized budget resources and reserves (potential opportunities). Budget capacity is a probabilistic category; budget is the actual result of budget capacity implementation.
2.	How the time factor can be taken into account when studying budget capacity in a cyclical budget process?	Budget capacity should be considered as a category that assumes the cyclical nature of the key stages of its implementation: the stage of formation and the stage of use. At the same time, increasing the efficiency of the formation and use of budget capacity leads to its growth.
3.	Why is it necessary to realize the region's budget capacity?	To stimulate the region's socio-economic development as a favorable condition for ensuring decent quality of life and standard of living, as well as personal development of an individual.
4.	What kind of the region's capacity should be analyzed: budget or tax?	Budget capacity is wider than tax capacity; this fact expands the possibilities for promoting socio-economic development in the regions.
5.	Which approach to the study of the essence of budget capacity best corresponds to the task of promoting the region's socio-economic development?	A comprehensive (integrative) approach to research is needed, which will link budget capacity with the task of stimulating the region's socio-economic development and take into account its resource-based, institutional and fiscal components.
Sources: own compilation based on own analysis; (Pechenskaya, 2018a).		

A review of economic literature allowed us to reveal the ambiguity of understanding the structure of the region's budget capacity. In some works it consisted of tax and non-tax revenues (for example, Naidenova, Shvetsova, 2013), other experts added gratuitous receipts (for example, Borovikova, 2008). Some studies included an institutional aspect in the structure of the regions' budget capacity. For example, P. Maior points out that when providing public services to the population, it is necessary to take into account the full potential of the territory, that is, distributed funds, equity and the regulatory system (Maior, 2009).

In our opinion, these provisions are not complete enough, because they exclude the budget capacity attracted on a reimbursable basis and take into account only gratuitous receipts involved in economic turnover, without considering their growth reserves. In our opinion, when conducting a comprehensive study of the structure of budget capacity, it is necessary to adhere to the structure of the budget system and arrange the types of budget capacity identified in numerous scientific sources into a single classification (Ilyin et al., 2018; Pechenskaya, 2015; Pechenskaya-Polishchuk, 2022; Tkacheva, 2014; Yutkina, 2011; Friederich et al., 2004; Garmann, 2015; Haffert, Mehrtens, 2013; Martinez-Vazquez, Boex, 1997; Slack, 2009).

We have identified nine key features of budget capacity indicated in the economic literature: 1) method of formation (own and redistributable budget capacities); 2) time feature (strategic, tactical, retrospective); 3) increment value (resource, achieved, incremented); 4) development stage (emerging, in use, reproductive); 5) degree of implementation (possible, real); 6) impact on the budget system (revenue, expenditure, regulatory, institutional); 7) degree of useful application (basic, hidden, excessive, idle); 8) territorial feature (regional, local); 9) dependence on reproductive capabilities (current, accumulated)[3].

At the same time, the systematization has shown that the existing types miss the maximum possible level of budget capacity achieved when taking into account all budget resources and reserves in order to ensure the region's socio-economic development. At the same time, the maximum achievable budget capacity will be understood as a combination of three components – implemented, reserve and hidden budget capacities. The implemented budget capacity consists of budget resources created as a result of economic activity and attracted on a gratuitous and reimbursable basis. Reserve budget capacity means unrealized reserves of budget capacity growth. Hidden budget capacity corresponds to the non-obvious reserves of budget capacity growth.

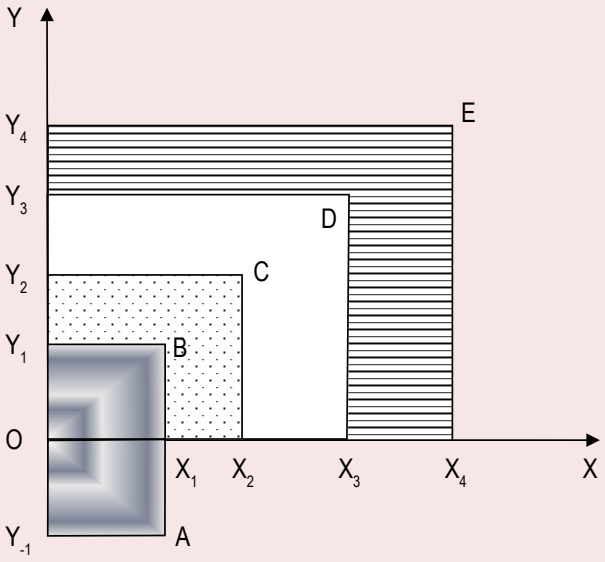
According to the classifications we can find in scientific literature, budget capacity is a providing type of socio-economic capacity and occupies a leading place in its structure (Balatsky et al., 2006; Vinogradova, Lomovtseva, 2013; Golodova, 2009; Golodova, 2010; Zenchenko, 2008; Kolomniets, Novikova, 2000; Lykova, 2008; Men'kova, 2008; Mingaleva, Pazdnikova, 2007; Repchenko, Fokina, 2007; Sabitova, 2003; Tkacheva, 2014; Shalmuev, 2006). Therefore, we believe that the basis for the formation of budget capacity is socio-economic capacity, and the superstructure is the subsequent fiscal regulation.

We substantiate our position regarding the consistent and multi-layered formation of the maximum achievable level of budget capacity with the help of graphical visualization *(Fig. 1)*.

It is possible to graphically represent, with some degree of conditionality, the formation of the region's budget capacity depending on the amount of resources (created and attracted) and reserves of the *i*-th region (Y axis) and a set of various external and internal capabilities (X axis) (Pechenskaya, 2018b).

[3] For more details, see (Pechenskaya, 2018b).

Figure 1. Sequence in which the subcomponents of the region's budget capacity are formed



Source: own elaboration.

The economic rationale for the graphical comparison is as follows: under the influence of external and internal constraints and incentives X of the *i*-th region, budgetary resources and reserves Y are formed.

The result of the region's economic activity and the reserves of its growth lead to the formation of tax capacity, which is the figure $Y_{-1}Y_1BA$. Taking into account the budget federalism model, the existence of fixed taxes remaining at the disposal of sub-federal government bodies, and regulatory taxes that are distributed at budget levels, we divide tax capacity into the tax capacity of the region OY_1BX_1 and the conditionally named tax capacity of the federation. The figure $Y_{-1}OX_1A$ characterizes the entire volume of the tax and non-tax capacity of the federation.

The composite figure $Y_{-1}Y_2CX_2X_1A$ represents the entire volume of economic (created) budget capacity (tax capacity and non-tax capacity), i.e. formed directly from the economic activity of the *i*-th region.

The figure OY_2CX_2 characterizes own budget capacity, including tax and non-tax capacity of the *i*-th region.

Taking into account the budget capacities attracted on a gratuitous and reimbursable basis in the figure OY_4EX_4 the level of budget capacity of the *i*-th region becomes the highest according to the proposed integrative approach (maximum achievable budget capacity).

Therefore, it is advisable to supplement the classification of types of budget capacity with three more features *(Tab. 3)*.

Feature 10 – according to the degree of implementation (realized, reserve, hidden budget capacity) – components of budget capacity.

Feature 11 – depending on the sphere of formation (tax sphere, non-tax sphere, and attraction sphere) – basic sub-components of budget capacity.

Feature 12 – according to the extent of aggregation of basic sub-components – own, attracted, maximum achievable, maximum achieved budget capacities.

Table 3. Own addition to the types of budget capacity

Type		Characteristics
Feature 10. According to the degree of implementation (components of budget capacity in the framework of the integrative approach we put forward)		
Realized budget capacity		Gratuitous and reimbursable budget resources created in the course of the region's economic activity and attracted to the region
Reserve budget capacity		The same as the unrealized reserves of budget capacity growth
Hidden budget capacity		Corresponds to the non-obvious reserves of budget capacity growth
Feature 11. Depending on the sphere of formation (basic sub-components of budget capacity in the framework of the integrative approach we put forward)		
Tax sphere	Tax capacity	The totality of the actual and possible results of the economic activities of the region's subjects of economic relations, expressed in the form of tax resources and reserves
	Tax capacity of the federation	The totality of the actual and possible results of the economic activities of the region's subjects of economic relations, expressed in the form of tax resources and reserves to be transferred the budget of a higher level, according to the current model of fiscal federalism
	Tax capacity of the region	The totality of the actual and possible results of the economic activities of the region's subjects of economic relations, expressed in the form of tax resources and reserves to be transferred to the budget of the current level; the difference between tax capacity and tax capacity of the federation
Non-tax sphere	Non-tax capacity	The totality of receipts and reserves for the growth of non-tax revenues obtained in the territory
	Non-tax capacity of the federation	The totality of receipts and reserves for the growth of non-tax revenues to be transferred to the budget of a higher level
	Non-tax capacity of the region	The totality of receipts and reserves for the growth of non-tax revenues to be transferred to the budget of the current level; the difference between non-tax capacity and non-tax capacity of the federation
Attraction sphere	Budget capacity attracted on a gratuitous basis	The amount of gratuitous receipts that has already been attracted and can be attracted from a higher-level budget
	Budget capacity attracted on a reimbursable basis	The amount of borrowed resources that are attracted and can be attracted on the principles of urgency, payment, repayment
Feature 12. According to the extent of aggregation of basic sub-components (aggregated sub-components of budget capacity in the framework of the integrative approach we put forward)		
Own budget capacity of the region		The totality of tax and non-tax capacities used
Attracted budget capacity of the region		The totality of budget capacities attracted on a gratuitous and reimbursable basis
Maximum achieved budget capacity of the region		The combination of realized own budget capacity and attracted budget capacity
Maximum achievable budget capacity of the region		The combination of reserve and hidden own budget capacity and attracted budget capacity
Source: own elaboration.		

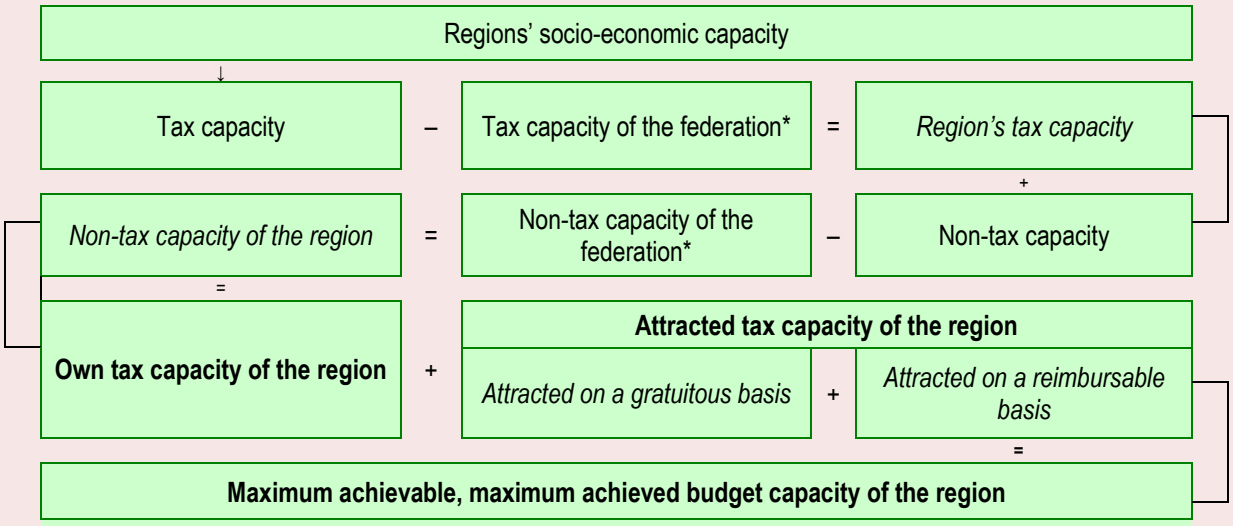
The features that supplemented the classification of types of budget capacity allowed us to reveal its structure in detail. At the same time, the sequence of formation of the region's maximum achievable budget capacity is reflected with the help of a conceptual model *(Fig. 2)*.

This model is valid for each component of the region's budget capacity (realized, reserve, hidden), since reserves can be found in any of the identified sub-components.

Thus, we have revealed that the achieved level of the region's budget capacity means the result that was obtained for a specific period of time and that consists in combining economic activities created in the region and budget resources attracted to the region, the realization of reserves (potential opportunities) taking into account the synergetic effect proceeding from the interaction of components and sub-components under the influence of incentives and constraints of the external and internal environment.

The above arguments form the basis of a fundamentally new integrative approach. Our own understanding of the implementation of the region's budget capacity, taking into account the stages of formation and use, according to the developed integrative approach, is presented in *Figure 3*.

Figure 2. Conceptual model for the formation of the region's maximum achievable, maximum achieved budget capacity (BC) from its sub-components

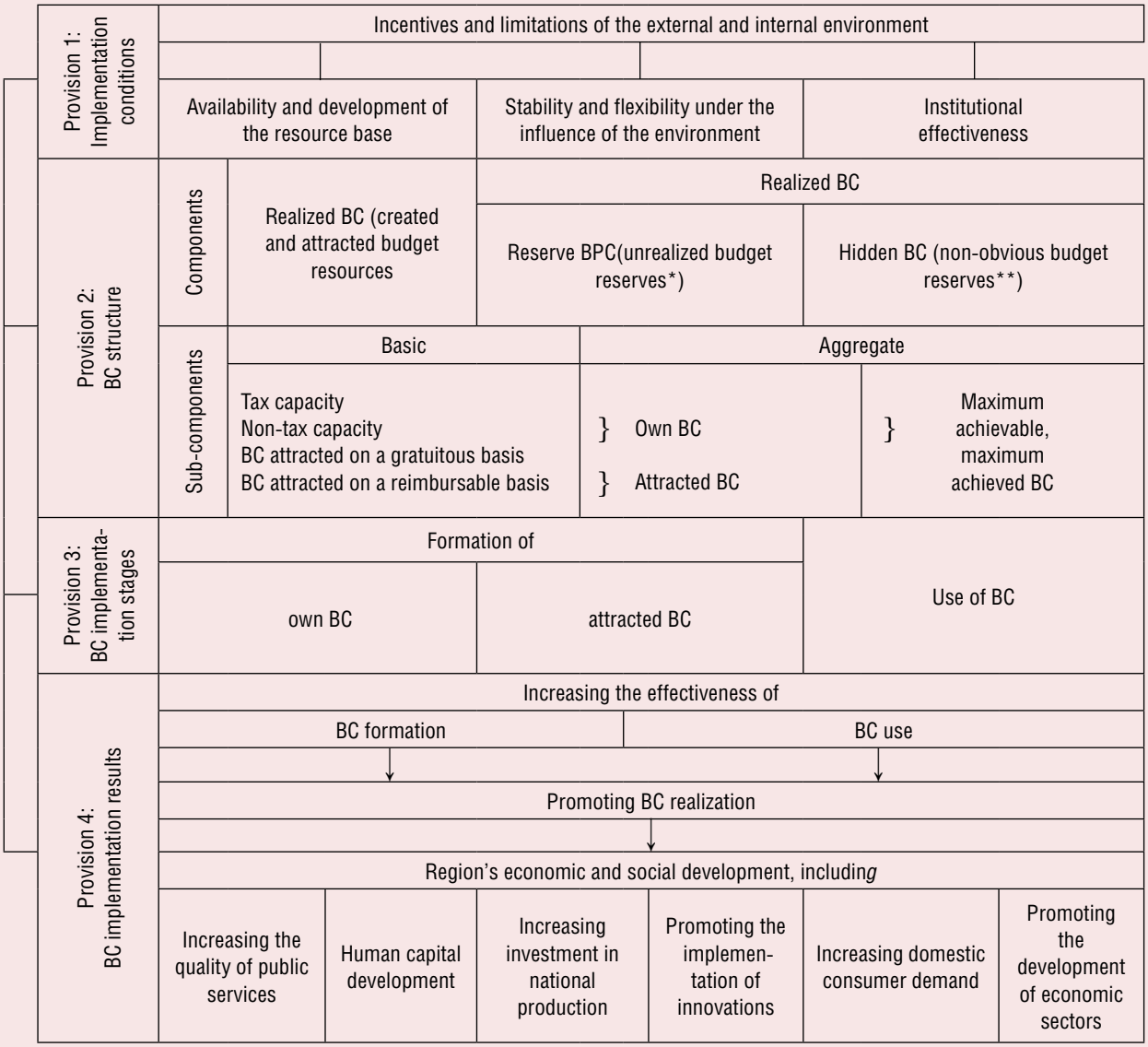


* The tax/non-tax capacity of the federation is the part of the tax/non-tax capacity that goes to the budget of a higher level, according to the current model of budget federalism.

Basic sub-components are highlighted in italics; aggregated sub-components are given in **bold.**

Source: own elaboration.

Figure 3. Conceptual provisions for the implementation of budget capacity according to the proposed integrative approach



* Unrealized budget reserves are already known and can be realized at this stage of economic development due to the application of necessary incentives and (or) restrictions.

** Non-obvious budget reserves are unknown or cannot be realized at this stage of economic development.

For this reason, the work will focus on realized budget capacity and on the implementation of reserve budget capacity.

Source: own elaboration.

The region's realized budget capacity is quite amenable to mathematical calculation, that is, it can be quantified. As for reserve budget capacity, it is possible to determine only its level, which requires an estimated methodological toolkit that takes into account the absolute and relative, quantitative and qualitative characteristics of the budget capacity structure, as well as the synergetic effect resulting from the interaction of components and sub-components.

A quantitative example of the consistent formation of the maximum achieved level of the region's budget capacity can be given in terms of budget resources involved in economic turnover *(Tab. 4)*.

The proposed approach we have designed does not contradict the existing theory and methodology, but develops them by increasing attention to the structure of budget capacity, conditions and stages of its implementation in the context of ensuring the region's socio-economic development.

Thus, based on the systematization of relevant foreign and Russian scientific works and our own research findings, we have substantiated four key conceptual provisions that reveal the proposed integrative approach to the formation and use of the region's budget capacity.

The first provision of the integrative approach is "Conditions for the realization of budget capacity". The triad of key development conditions is as

Table 4. The sequence of formation of the region's maximum achieved budget capacity in terms of created and attracted budget resources

Territory	Tax capacity	Region's tax capacity						Region's non-tax capacity	Region's own budget capacity	Gratuitously attracted budget capacity of the region	Region's budget capacity attracted on a reimbursable basis	Maximum achieved budget capacity of the region
		Sum	Share in tax capacity	including								
				for federal taxes	for regional taxes	for local taxes	for special tax regimes					
1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*13*
Data source / calculation formula	FTS	FT	Column 3 / col. 2	FTS				FT	Col. 3 + col. 9	FT	MF	Col. 10 + col. 11 + col. 12
Measurement unit	Billion rubles		%	% of col. 2				Billion rubles				
Russian Federation	20737.8	7180.1	34.6	90.4	5.3	1.3	3.0	742.2	7922.3	4102.7	2496.0	14521.0
NWFD	2492.9	884.8	35.5	90.5	5.5	0.9	3.1	68.8	953.6	363.9	282.9	1600.4
Vologda Region	77.2	45.6	59.1	76.2	16.3	2.6	5.0	4.9	50.5	36.3	15.7	102.5

Notes: FTS – according to the Federal Tax Service of the Russian Federation, FT – according to the Federal Treasury of the Russian Federation, MF – according to the Ministry of Finance of the Russian Federation.
Source: own calculations using the reports of the RF Federal Treasury, RF Ministry of Finance, RF Federal Tax Service for 2020.

follows: 1) availability and development of the resource base (natural and climatic conditions, resource and raw material base, economic structure, demographic characteristics, etc.); 2) stability and flexibility under market conditions (inflation rate, exchange rate, etc.); 3) institutions of implementation and development, whose activities are aimed at effective management of the natural resource and socio-economic base of the territory in a dynamic environment (regulatory framework, tools, mechanisms, etc.).

The second provision is "Structure of budget capacity":

– in order to take into account all budget resources and reserves in stimulating the regions' socio-economic development, the definition of "maximum achievable budget capacity" is introduced, which is a combination of realized, reserve and hidden budget capacities;

– realized budget capacity consists of budget resources created as a result of economic activity and attracted on a gratuitous and reimbursable basis; reserve budget capacity is identical to unrealized reserves of budget capacity growth; hidden budget capacity corresponds to non-obvious reserves of budget capacity;

– each component of budget capacity consists of basic sub-components: tax capacity, non-tax capacity, budget capacity attracted on a gratuitous basis, and budget capacity attracted on a reimbursable basis.

The third provision is "Stages of realization of budget capacity":

– realization of budget capacity is cyclical and dynamic; over time, as society and economy are developing, certain types of non-obvious reserves may move into the category of known but unrealized reserves, and unrealized reserves – into budget resources;

– the stage of budget capacity formation involves mobilization of budget resources and maximum realization of their reserves;

– the most complete category is "maximum achievable budget capacity"; realized budget capacity is defined by the term "maximum achieved budget capacity" as a combination of budget revenues, budget expenditures, and sources of financing budget deficit;

– the stage of use is characterized by the choice of priorities and the implementation of budget financing of socio-economic development; therefore, the use of reserve and hidden budget capacity is impossible; consequently, only realized budget capacity is used.

The fourth provision is "Result of the budget capacity realization":

– increasing the effectiveness of forming and using budget capacity leads to its fullest realization;

– realization of budget capacity contributes to stimulating regions' socio-economic development by improving the quality of public services and human capital development, increasing investments in national production, promoting innovation, enhancing domestic consumer demand, developing economic sectors and increasing profitability.

The substantiated provisions of the integrative approach to the formation and use of the region's budget capacity allowed us:

1) to point out the relevance of the role of budget capacity as an important factor in promoting the region's socio-economic development in modern conditions and in current economic realities;

2) to identify the components, basic and aggregated sub-components of the region's budget capacity;

3) to reveal the conditions for realizing the region's budget capacity;

4) to substantiate the interconnectedness and cyclical nature of the stages of formation and use of the region's budget capacity that can be realized to the fullest extent when the effectiveness of these stages is enhanced;

5) to expand the classification of the types of the region's budget capacity according to three criteria: degree of implementation; sphere of formation; extent of aggregation of basic sub-components;

6) to reflect the integration of various features describing the essence of the region's budget capacity:

– resource-based, as a set of created and attracted budget resources;

– fiscal as the ability to achieve the maximum level so as to promote socio-economic development in regions;

– institutional as a set of development conditions.

Conclusion

In the course of the research we obtained the following scientific results.

1. We showed the most important place and significant role of budget capacity in ensuring socio-economic development of regions in a dynamic external and internal environment.

2. We created a fundamentally new integrative theoretical and methodological approach to the formation and use (realization) of budget capacity, substantiating and revealing its structure, conditions and implementation stages. According to the integrative approach, budget capacity is a set of not only created, but also gratuitously / reimbursably attracted budget resources, as well as reserves that can be realized under the influence of external / internal constraints and incentives. Our own integrative approach most fully resolves the identified controversial issues of methodology for the formation and use of the region's budget capacity. Applying the proposed approach in the practice of public administration helps to take a new look at the possibilities and directions of implementing the state fiscal policy in the face of growing negative external influences and large-scale long-term national goals. Achieving this seems difficult without revising the system of state management of economic processes.

3. We introduced the terms "maximum achievable budget capacity" and "maximum achieved budget capacity" and substantiated a conceptual model for their formation.

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The Potential of Tax Impact on the Economic Inequality of Citizens in Russia

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Abstract. In Russia, the possibilities of smoothing inequality through taxes have not been implemented, despite the consistently high inequality, its acute perception by citizens and attention to the problem at the highest level of government. The aim of the study is to determine the possibilities for smoothing the economic inequality of citizens in Russia with the help of tax instruments. The hypothesis of the study is that the set of instruments of income, indirect and property taxation of citizens in Russia has a significant unrealized potential for smoothing economic inequality. To test the hypothesis, we use correlation and regression analysis and decomposition of tax instruments according to areas (income, property and indirect) and explore the dependence of inequality indicators on tax tools used for smoothing inequality. Based on the data from Rosstat, Federal Tax Service, World Bank, OECD, Credit Suisse and the World Inequality Database, a Data Set was formed which includes 2.6 thousand indicators. The calculations were performed using the Data Analysis Toolpak in MS Excel. The relevance of personal income tax deductions was assessed by using sociological survey dat. It was established that the current tax instruments do not help to smooth inequality in Russia, and sometimes, on the contrary, lead to its growth. It seems advisable to smooth inequality within the framework of income taxation by increasing the progression of personal income tax and introducing a tax-free minimum in conjunction with the minimum wage, increasing the share of social tax deductions. In the field of property taxes, it is advisable to increase the tax burden for owners of expensive or many objects of property, and provide the targeting of tax benefits. In terms of indirect taxes, it is expedient to reduce VAT on goods and services that make up the bulk of

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consumption expenses of the least well-off citizens, for example, housing and communal services, and to increase VAT on items that form the basis of consumption of the rich, for example, the return of the 20% rate on recreation, hotels, cafes and restaurants. The potential of tax administration in smoothing inequality is determined by the possibilities of ensuring the completeness of taxation of current income, capital and consumption of the most affluent citizens.

Key words: economic inequality, income inequality, wealth inequality, consumption inequality, smoothing, personal income tax, tax deductions, VAT, property taxes.

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Introduction

Overcoming inequality among citizens is one of the Sustainable Development Goals up to 2030, established by the UN General Assembly[1]. The World Economic Forum records that OECD countries are characterized by the highest inequality level in half a century[2].

In Russia, citizens' inequality has been at a consequently high level since the period of market reforms: since 1990s, the Gini coefficient has been between 0.36 and 0.42, as estimated by both Rosstat and the World Bank. According to Russian sociological studies, up to 70% of citizens suffer from income inequality, up to 50% – from inequality in access to medicine, up to 40% – from inequality in access to jobs, up to 36% – from inequality in housing conditions, and up to 26% – in children's development opportunities (Mareeva, 2018, p. 105; Mareeva, et al., 2022, p. 54). "Inequality is manifested in various spheres of life and goes far beyond financial well-being" (Ilyin, 2017, p. 20). At the same time, the inequality of citizens' income is determinant.

Sociological studies confirm that inequality in Russia is perceived rather acute, as well as the state's efforts to mitigate it are assessed: 68% of Russians are convinced that "the state should be the leading actor in the fight against inequality", while 48% of citizens believe that the state is failing in the task of reducing inequality (Belekhova, 2023, p. 175).

Despite the focused attention to the problem, there are still many debatable issues within it. If we talk about citizens' economic inequality, do we mean income inequality, inequality of accumulated capital, or inequality of consumption? Is the income inequality the inequality of current or lifelong, disposable or market, individual or household income? (Kapeliushnikov, 2017, p. 119). The most significant question is concerning the inequality measurement. "The economic inequality is not a physical object, which can be measured with a ruler, in length, width and height, and multiplied to get a volume value. No assessment of the inequality scales can be considered an 'objective fact'" (Kapeliushnikov, 2019, p. 95).

The main cause of citizens' inequality in Russia "lies not in the lack of resources, but in the mechanisms of their distribution and redistribution" (Shevyakov, 2011, p. 72). On empirical data on citizens' income inequality before and after taxation during the period of the flat personal income tax scale, it is proved that "the current system of distributive relations in Russia does not contribute to the reduction of socio-economic inequality,

[1] Sustainable Development Goals. UN. Available at: https://www.un.org/sustainabledevelopment/ru/sustainable-development-goals/ (accessed: December 11, 2023).

[2] The Global Risks Report 2020. World Economic Forum. Available at: https://www3.weforum.org/docs/WEF_Global_Risk_Report_2020.pdf (accessed: December 1, 2023).

but strengthens the existing disparities in society": the ratio of the average income of the richest 10% and the poorest 10% on income after taxation is higher by 0.4–1.3 (Kostyleva, 2011, p. 72). "Only such a tax system can be considered fair, in which after-tax reduction of inequality in the economic situation of taxpayers is achieved" (Panskov, 2020, p. 28). The fairness of tax policy should be assessed by its ability to reduce the inequality degree in the distribution of income and wealth (Shmelev, 2017, p. 120; Wilkinson, Hageman, 2023).

One of the debatable issues is also the definition of the perimeter of opportunities for the application of tax instruments to mitigate inequality. With its consistently high level and attention to the problem at the top level, Russia has not realized the possibilities of tax instruments. What is their potential?

Under the economic inequality of citizens, we understand the inequality of citizens' welfare in a broad sense, which depending on the tax instruments of influence is classified into inequality of current income, inequality of accumulated capital (wealth inequality or monetary inequality) and inequality of consumption. Accordingly, we will distinguish the instruments of income, property and indirect taxation (Pugachev, 2023, p. 23).

Income taxation is a key tool for smoothing income inequality of citizens. In Russia, "the existing socio-economic differentiation is due to the shortcomings of the system of personal income taxation" (Pinskaya, 2015, p. 90). PIT does not contribute to the smoothing of social inequality in Russia, while there are models of income taxation aimed at leveling the differentiation of income levels of various strata of the population while maximizing the fiscal effect of PIT (Goncharenko et al., 2019). "Tax reform has not brought with it a solution to the problem" of inequality, since the current design of personal income tax, among other things, "lacks a non-taxable minimum of personal income as an instrument of social protection of the population" (Gromov, 2021, pp. 3–4). The system of tax deductions leads to hidden regression of personal income tax, as property and social tax deductions are not available to persons with low incomes (Melnikova, Tikhonova, 2018, p. 1105). The key argument of supporters of reducing the progressivity of income taxation is tax evasion when rates are raised. However, using the example of the increase in the marginal income tax rate in the United States in 2013, it was found that the behavioral response of tax evasion of the wealthiest taxpayers is short-term: in 2015, the share of the highest incomes in the United States began growing again (Saez, 2017, p. 114).

The property taxation mechanisms in the area of inequality smoothing are also designed to help ensure control over the conformity of income and accumulated capital (control over the transfer of ownership of expensive property), as well as inheritance and donation. The control potential of property taxation to smooth inequality is significant in the current Russian context (Malis, 2023, p. 20). In Russia, "with regard to the richest citizens it is advisable to introduce increased property tax rates on expensive property, as it is done in OECD countries" (Vylkova, 2022, pp. 123–124). At the same time, for the European Union countries there is no significant impact of property taxes on the smoothing of inequality, as well as their negative impact on economic growth (Dianov et al., 2022, p. 16).

Indirect taxation, based on the differences in the consumption patterns of the rich and the poor, can be aimed at reducing inequality by differentiating tax rates. It is advisable to set lower rates for everyday goods and necessities (Giffen goods, which constitute a significant share in the consumer basket of low-income citizens) and higher rates for expensive goods (Veblen goods) (Maiburov, 2023, p. 112). Regarding the impact of indirect taxes on citizens' inequality, researchers have not formed an unambiguous position. For example, for Latin American countries between 1990 and 2010, it is substantiated that an increase in the share of direct

taxes compared to indirect taxes contributed to inequality reduction (Martorano et al., 2018). On the other hand, in OECD countries, indirect taxes had a significant impact on reducing inequality (between 1978 and 2012) (Ciminelli et al., 2017). The impact of indirect taxes on inequality remains debatable, as there are studies indicating that indirect taxation has an insignificant impact on inequality and that smoothing inequality cannot justify lower rates (Blasco et al., 2020).

The aim of the research is to determine the possibilities of smoothing citizens' economic inequality in Russia with the help of tax instruments.

The research hypothesis is the following: the set of instruments of income, indirect and property taxation of citizens in Russia has a significant unrealized potential for smoothing the economic inequality of citizens. The use of tax instruments along with other state mechanisms of inequality smoothing can provide an effective impact on Russians' economic inequality.

The scientific novelty of the study consists in substantiating the existence of unrealized potential and opportunities for smoothing the citizens' economic inequality in Russia through the complex impact of income, property and indirect taxation instruments on income, wealth and consumption inequality, respectively.

The theoretical significance is determined by the deepening of scientific understanding of the potential of the integrated application of income, property and indirect taxation instruments in smoothing citizens' inequality. The research results can serve as a starting point for specifying the parameters of promising tax instruments for smoothing Russians' inequality: differentiation of tax rates, establishment of tax deductions and exemptions, development of tax administration.

The practical significance of the study lies in the possibility of using the results to develop a set of tax measures to smooth citizens' economic inequality in Russia.

Methods and information base of the research

To test the hypothesis, we applied correlation and regression analysis of dependencies of indicators of citizens' inequality on the following indicators:

– average per capita money income, average monthly wages and social payments to estimate the modified curve of S. Kuznets (Kuznets, 1955) in identifying the inequality determinants in Russia – income taxation and social transfers;

– social tax deductions for personal income tax;

– share of VAT in GDP and tax revenues of the budget, share of goods taxed at 10% VAT rate in the total volume of VAT to assess the impact of indirect taxes on inequality;

– share of individual taxes in GDP across OECD countries (due to the availability of statistics since 1965) to assess the impact of the tax burden structure on inequality.

We also carried out the structural and dynamic analysis of the tax deductions volume on personal income tax to assess their demand by taxpayers, tax revenues of budgets on individuals' property taxes to assess their fiscal significance and potential in smoothing inequality.

We calculated the average effective VAT tax rate for the least and most affluent citizens, based on Rosstat data on the consumption structure of the first and tenth decile groups by expenditure items.

We made calculations using the Data Analysis package in MS Excel.

The information base of the research is the data on inequality from Rosstat, the World Bank, OECD, Credit Suisse and the World Inequality Database, tax data from OECD, the Federal Tax Service of the Russian Federation (reports 1-NM, 1-DDK, 5-NDFL, 5-TN, 5-MN) and data from a sociological survey. We conducted the survey in 2022 by a continuous questionnaire survey of 1,063 respondents from 45 constituent entities of the Russian Federation. The questionnaire was conducted indirectly using Google Forms. The respondents included 70% of

women and 30% of men, 89% of urban residents and 11% of rural residents, 19% with secondary and 81% with higher education.

The sample is representative of the research task to assess the demand for personal income tax deductions by respondents of different income groups, since the range of the average monthly personal income level, the sample of respondents is subject to normal distribution and corresponds to the Rosstat data on the distribution of personal income *(Fig. 1)*.

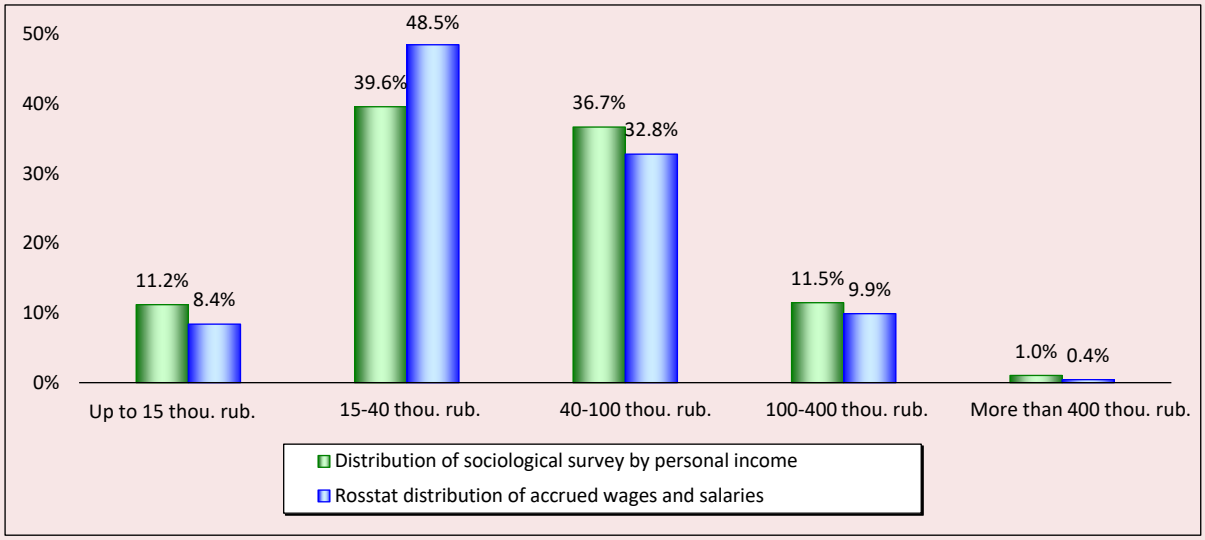
Eleven percent of respondents have incomes up to 15 thousand rubles, i.e. below the minimum wage and subsistence minimum in 2021, 40% – from 15 to 40 thousand rubles, i.e. below the level of average per capita cash income of the population (40.04 thousand rubles/month for 20213), 37% – from 40 to 100 thousand rubles, i.e. above average, 11% – from 100 to 400 thousand rubles, 1% of respondents (11 people) responded that they have incomes above 400 thousand rubles/month, the potential income of these citizens falls under the increased personal income tax rate of 15%.

Personal income tax and tax deductions in smoothing income inequality among citizens

In the framework of testing the modified curve of S. Kuznets for Russia on the data of Rosstat from 1998 to 2021 on inequality and income of citizens, we find that personal income tax does not have a significant impact on citizens' inequality; if there is its reduction, it is only due to state social transfers *(Tab. 1)*.

Unlike real money income, wages and salaries include personal income tax and exclude nontaxable income and social benefits. To exclude the inflation factor, we carried out the transition to real indicators using the consumer price index (CPI). We used the Gini coefficient of income as the resulting indicator – according to Rosstat data.

Figure 1. Respondents' distribution by level of average monthly personal income



Note. Rosstat provides data on accrued wages in the following ranges: up to 16.65 thousand rubles, from 16.65 to 45 thousand rubles, from 45 to 100 thousand rubles, from 100 to 400 thousand rubles and over 400 thousand rubles.

Source: own compilation based on the results of the sociological survey and Rosstat data (Inequality and poverty. Rosstat. Available at: https://rosstat.gov.ru/folder/13723 (accessed: February 11, 2024)).

[3] Average and modal level of money incomes. Rosstat. Available at: https://rosstat.gov.ru/storage/mediabank/tab_bed_1-2-6.html (accessed: February 9, 2024).

Table 1. Results of correlation and regression analysis of the dependence of the inequality level on the income indicators of Russian citizens in 1998–2021

Indicator	Correlation coefficient r	Determination coefficient R^2
Real average per capita cash income	0.846	0.716
Average monthly real accrued wages and salaries	0.774	0.599
Real average per capita cash income excluding social payments	0.881	0.776
Note: significance level α by Fisher's F-criterion 0.0001. Source: own compilation.		

The wage factor showed the least close relationship with the inequality level of the three income indicators studied; it means that the income inequality is determined not only by wages, including personal income tax, but also by other incomes. The dependence on the indicator of money income turned out to be closer, i.e. the income of the population as a whole after taxation determines inequality to a greater extent than only wages. When social payments were excluded from the population's money incomes, the relationship became the closest. R2 amounted to 0.776, which means that the change in real average per capita cash income excluding social payments by 77.6% explains the dispersion of the income inequality level (according to the Gini coefficient of Rosstat). Social transfers, in contrast to income taxation, determine the relationship between the income inequality level and the income itself, which occurs due to the emergence of additional cash income of the least well-off population segments.

The current dependence of inequality on citizens' income in Russia is on the ascending branch of the curve S. Kuznets, i.e. inequality increases with growing wealth.

Tax deductions are provided within the framework of personal income tax to mitigate citizens' inequality. Standard and social deductions on personal income tax are designed to help reduce citizens' inequality, but their share in the structure of deductions and absolute amounts are insignificant *(Tab. 2)*.

Table 2. Structure of personal income tax deductions in 2021

Deductions	Deductions provided		Number of taxpayers	
	billion rubles	share, %	thousand	share, %
Investment	218.8	3.8	459.9	1.7
Social, including	218.7	3.8	3 939.2	14.5
on training expenses	*42.5*	*0.7*	*956.1*	3.5
on medical expenses	*128.2*	*2.3*	*2 049.9*	7.6
Property, including	4 929.5	86.5	7 216.2	26.7
on sales revenue	*2 463.0*	*43.2*	*1 153.4*	4.3
on expenses, including	*2 466.5*	*43.3*	*6 062.8*	22.4
for purchase	*2 086.6*	*36.6*	*4 552.7*	16.8
on interest on loans and borrowings	*379.9*	*6.7*	*1 510.1*	5.6
Standard	329.9	5.8	15 461.3	57.1
Professional	2 857.6	-	178.9	-
Deductions in the amount of expenses (losses) related to income from securities transactions	36 070.8	-	5 723.2	-
Total amount, excluding professional and securities deductions	5 696.9	100	27 076.6	100
Total amount of deductions	44 625.3	-	32 978.7	-
Assumption: We calculated the data on the number of taxpayers by aggregating by individual types of deductions (ignoring the possibility of different types of deductions for the same taxpayer) to illustrate the demand for different deductions by taxpayers. Source: own compilation based on the data of 1-DDK and 5-PIT of the Federal Tax Service.				

In 2021, social deductions accounted for 3.8% and standard deductions for 5.8% of the total structure of PIT tax deductions, excluding deductions for securities transactions and professional deductions. At low volumes, social and standard deductions are available to taxpayers (e.g., standard deduction for children). For instance, standard deductions are used by more than 15 million taxpayers, i.e. almost every fourth taxpayer, and social deductions – about 4 million.

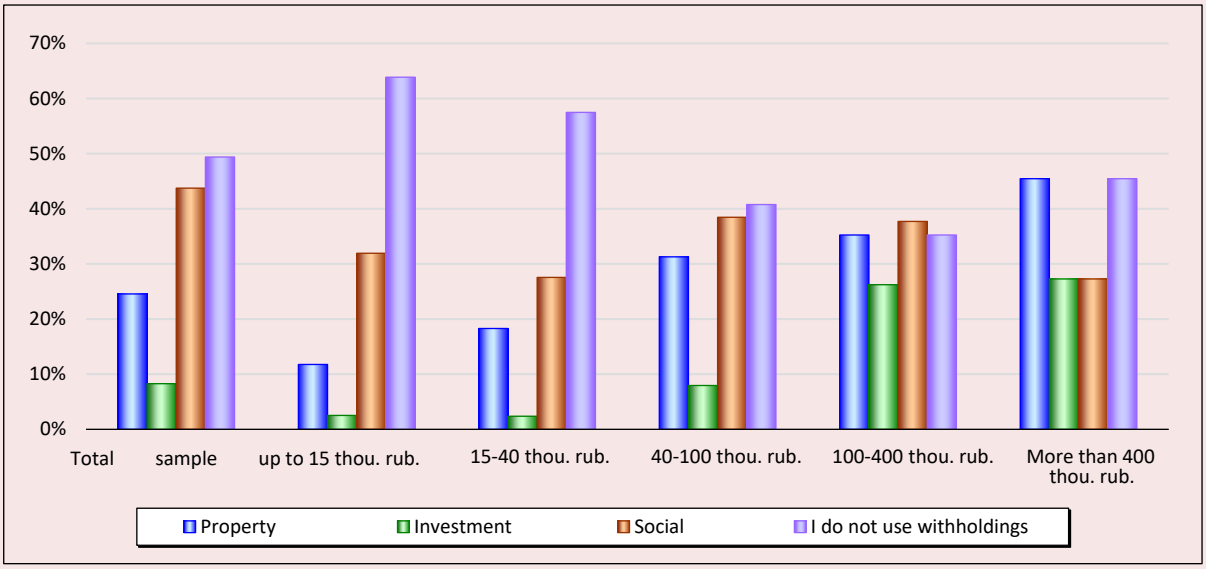
According to the results of correlation and regression analysis, we found that social deductions on personal income tax did not affect the citizens' welfare, but could contribute to the smoothing of inequality. For the period from 2009 to 2021, we investigated the relationships between the amount of social tax deductions and the level of inequality and welfare of citizens. The indicator-factor was the share of social tax deductions reimbursed to taxpayers from the budget in the volume of personal income tax revenues to the budget, and the resulting indicators were the Gini coefficient and quintile coefficient, reflecting the income inequality level, and welfare indicators – the share of the population with cash incomes below the subsistence minimum, the ratio of average per capita cash income of the population to the subsistence minimum, real disposable income. We increased an inverse relationship between inequality indicators and the share of social tax deductions: the citizens' inequality level decreases with the increase in the share of social deductions in the amount of personal income tax receipts. The coefficient of determination R^2 amounted to 0.562 and 0.702 for the Gini coefficient and quintile coefficient, respectively, at the significance level α by Fisher's criterion of 0.01. We found no statistically significant relationship with wealth indicators.

The main share of deductions (excluding professional and securities transactions) – 86.5% – is formed by property deductions. They are almost equally distributed between income from the sale of property and expenses for its purchase. At the same time, property deductions are hardly available for citizens of the lower income deciles, since they are not characterized by real estate transactions. Property deductions are mainly used by citizens with middle and high income, who have the means for real estate transactions and a real opportunity to improve their living conditions. This statement is confirmed by the fact that there are three times fewer taxpayers who claimed a deduction for interest expenses, i.e., using the loan to purchase a home, than taxpayers, claimed a deduction in the case of the real estate acquisition in general. It is important to remember that the interest deduction can be claimed during the entire term of the mortgage loan, i.e., up to 30 years, as well as taking into account the time lag due to the possibility of receiving an interest deduction after the home purchase deduction. Since trend is a multi-year steady one (2020 – 3.1 times, 2019 – 3.4 times, 2018 – 3.8 times), we can conclude that most taxpayers who claimed the deduction in recent years purchased a home with their own funds without taking out a loan. Otherwise, given the accumulated number of taxpayers who claimed the interest deduction in previous years and continue receiving it, their number should exceed the number of taxpayers who claimed the home purchase deduction.

Investment deductions are also inaccessible to low-wealth individuals due to the lack of funds for investment. Professional and securities deductions stand apart from inequality mitigation because they have a priori different objectives.

The use of the bulk of personal income tax deductions by citizens with medium and high incomes reduces the average effective rate for them, which may lead to a regressive nature of income taxation, when taxpayers with high incomes, taking into account deductions, pay personal income tax at a lower effective rate than taxpayers with low incomes.

Figure 2. Demand for personal income tax deductions by income groups of respondents



Source: own compilation according to the sociological survey results.

The thesis about the lack of demand for investment and property deductions for personal income tax by the least well-off citizens is also confirmed by the sociological survey results *(Fig. 2)*.

With growing respondents' income the demand for property and investment deductions for personal income tax increases, while social deductions are more evenly distributed across income groups of respondents.

In general, the current preponderance of property deductions on personal income tax to the detriment of social and standard deductions does not allow realizing their potential in reducing inequality and poverty.

The introduction of a progressive personal income tax scale in Russia from 2021 with a rate of 15% for incomes over 5 million rubles per year is generally not able to significantly affect the smoothing of inequality because it requires, first, a significantly higher rate of progression to "cut the spire of excess income", and second, a nontaxable minimum, linked to the level of the minimum wage, to increase the disposable income of the least well-off citizens, which is currently absent. I.A. Maiburov in 2015, long before the introduction of progression, suggested that "the income tax reform may not meet the expectations of the poor and the stratification of Russian society by income will not be reduced, as the use of too soft progression scale is proposed" (Maiburov, 2015, p. 174). Nevertheless, the introduction of a progressive scale becomes the first necessary but insufficient step toward ensuring the smoothing of Russians' inequality through personal income tax.

Income tax in other countries is a significant tool for smoothing the citizens' inequality. For example, in the United States, with a fixed increase in income inequality from 1980 to 2014, the share of disposable income after tax received by the richest 10% of citizens increased from 30 to 40%, while before taxation – from 35 to 47%, i.e. even more significantly (Piketty et al., 2018). We should note that when criticizing the research results of T. Piketty's team, specialists from the U.S.

Department of the Treasury and the Committee on Taxation of the U.S. Congress found that taxes in the United States further reduce the citizens' inequality level (Auten, Splinter, 2023). In OECD countries, income tax also has a smoothing effect on income inequality (Guillaud et al., 2017).

Possibilities of smoothing citizens' wealth inequality through property taxes

Rosstat does not estimate wealth inequality in Russia (Pugachev, 2023, p. 155), nevertheless we can judge it from the data of Credit Suisse and World Inequality Database, which indicate excessively high inequality in wealth distribution.

According to the World Inequality Database, the richest 1% of Russians have half of the wealth, their share from 1995 to 2021 increased 2.2 times, from 21.5 to 47.6%. In contrast, the share of wealth of the 50% of the least wealthy citizens decreased from 8.5 to 3.1%, i.e. 2.7-fold[4]. Credit Suisse estimates the concentration of wealth in Russia to be even higher: for the richest 1%, 5% and 10% of Russian citizens it reaches 58%, 77% and 83% respectively. The wealth Gini coefficient is 0.88 in 2021[5].

The instruments of property taxation are supposed to contribute to the smoothing of such high inequality in wealth distribution. However, in Russia there are few such specialized instruments implemented in the system of inequality smoothing:

– increasing coefficient of individuals' transportation tax for expensive cars (from 2022 – coefficient 3 for cars worth 10 million rubles or more);

– reduction of the tax base by the cadastral value of 20 m^2 for apartments and 50 m^2 for houses under personal property tax;

– tax benefits of a social nature.

An increasing coefficient of transportation tax[6] for expensive cars was introduced in 2014. From 2022, only coefficient 3 is applied for cars costing from 10 million rubles not older than 10 years and from 15 million rubles from 10 to 20 years. Currently, in Russia, it is the only one among property taxes that directly contributes to smoothing citizens' inequality. However, the number of such expensive cars is small – 12.78 thousand in 2022, which is 0.027% of the total number of cars subject to taxation *(Tab. 3)*. Tax revenues of the "luxury tax" in 2022 amounted to 1.26% of the total amount, or 2.13 billion rubles. In the case of insignificance, the very fact of such a tax and its dynamics is positive for the Russian

Table 3. Budget revenues from transportation tax of individuals with the application of an increasing coefficient for expensive cars

Indicator	2020	2022
Total cars subject to taxation thousand units, including	41 594.7	47 091.66
with application of increasing coefficient 3, thousand units	6.3	12.78
Share, %	0.015	0.027
Amount of citizens' transportation tax payable, billion rubles	158.37	167.24
with the application of increasing coefficient 3, billion rubles	0.95	2.13
Share, %	0.6	1.26
Source: own compilation based on the data of the FTS tax returns 5-TN.		

[4] Russian Federation. *World Inequality Database*. Available at: https://wid.world/country/russian-federation/ (accessed: January 8, 2024).

[5] Global Wealth Report 2022. *Credit Suisse*. Available at: https://www.credit-suisse.com/about-us/en/reports-research/global-wealth-report.html (accessed: January 8, 2024).

[6] It is the so-called "luxury tax".

practice – in relation to 2020, tax revenues and the number of cars subject to the increased coefficient more than doubled in 2022.

Reduction of the property tax base by the cadastral value of 20 m^2 for apartments and 50 m^2 for houses and tax exemptions for certain categories of taxpayers for property, transportation and land taxes can only conditionally be considered as contributing to the smoothing of inequality. For small properties, due to the exclusion of part of the area, the effective tax rate will be lower than for large properties. This measure indeed contributes to the smoothing of inequality. However, the cadastral value of real estate is not taken into account, which results in a higher amount of tax for inexpensive but spacious apartments compared to elite real estate.

Tax exemptions for certain categories of citizens are also intended to improve the welfare of low-income citizens, for instance, pensioners, but the lack of targeting of tax exemptions can lead to the opposite effect if, for example, the pensioner is rich. There is a situation when benefits are distributed evenly among taxpayers of different levels of wealth or shifted toward wealthier owners of property that the poor do not have. The abundance of tax benefits and their high prevalence are also noteworthy *(Tab. 4)*. In 2022, 38.5% of taxpayers used benefits, and the amount of tax not paid due to the application of benefits reached 76.5 billion rubles, or 22%. Thus, for land tax every second taxpayer receives a privilege, and for property tax the amount not paid in connection with the provision of privileges amounted to 36.6% of the tax amount.

To provide the smoothing of money inequality through property taxes, it is necessary, on the one hand, to ensure an increase in the tax burden for owners of expensive or multiple properties, on the other hand, to ensure the targeting of tax benefits, when not only the category of the taxpayer is taken into account, but also their actual ability to pay, similar to the way it is implemented today, for example, for social benefits for children from 3 to 7 years old with the introduction of neediness criteria that take into account not only the income (average income), but also the actual ability to pay.

It is interesting to mention the experience of other states. For example, in Belarus, until 2022, a double property tax rate was established for citizens owning more than one property. In the UK, USA, Germany, Austria, China, progressive rates of property taxes are applied, which contributes to the redistribution of the tax burden from the least wealthy to wealthier citizens.

Most developed countries have inheritance and gift taxes and capital taxes; they also contribute to reducing wealth inequality, especially since property received free of charge by inheritance or gift is nonlabor income. In Russia, inheritance and gift tax was in force until 2005. It was progressive: the rate depended on the value of the property and the

Table 4. Property tax relief for citizens in 2022

Indicator	Transportation tax	Land tax	Property tax	Amount
Number of taxpayers, thousand people	33 701.3	38 842.6	86 267.7	158 811.6
including those applying tax exemptions	9 540.7	19 010.1	32 548.7	61 099.5
Share of those applying benefits, %	28.31	48.94	37.73	38.47
Amount of tax payable, billion rubles	169.25	51.00	128.04	348.29
Amount not received by the budget due to application of benefits, billion rubles	16.72	12.86	46.90	76.48
Share of benefits, %	9.88	25.22	36.63	21.96
Source: own compilation based on the data of the FTS tax returns 5-TN, 5-MN.				

degree of kinship of the heirs. Currently, a separate element of this tax is included in personal income tax on the value of the donated immovable property (subparagraph 7, paragraph 2.2, article 210 of the Tax Code of the Russian Federation). However, its fiscal significance is minimal: in 2022, personal income tax on gifts amounted to 3.9 billion rubles[7], or 0.07% of the total taxable value, or 0.07% of the total amount of personal income tax. It seems appropriate to return inheritance and gift tax with progressive rates and a system of deductions for inexpensive and single property received from close relatives.

Property taxes in Russia have a serious potential for smoothing the monetary inequality of citizens, given that the tax burden on property taxes of individuals is lower relative to developed countries. For example, in Russia the share of property taxes of individuals in the total amount of tax revenues of the consolidated budget is about 1%, while in developed OECD countries it can reach 5–8% *(Tab. 5)*.

In Russia, with a low level of property taxes in the total tax revenues of the budget, the wealth inequality level is higher: in Russia, the Gini coefficient on accumulated capital amounted to 0.88 in 2021 (reaching 0.9), while in OECD countries it is 0.65–0.79.

Indirect taxes and consumption inequality among Russians

The consumption economy predetermines the most vivid manifestation of citizens' consumption inequality at the everyday level, which actualizes the need to activate the instruments of indirect taxation to influence the inequality. The possibility of smoothing consumption inequality using the VAT is conditioned by the difference in the consumption structure of the least and most affluent citizens. Rosstat records the volume and structure of citizens' consumption by decile groups, which is presented in *Table 6* as the example of 2022.

The main share of expenditures of the least well-off citizens is spent on household food and housing

Table 5. Fiscal importance of citizens' property taxes and inequality level in wealth distribution in different countries

Country	Share of property taxes of citizens in total tax revenues, %					Gini coefficient on wealth, 2022
	2010	2015	2019	2020	2021	
Canada	9.18	8.80	8.32	8.59	7.92	0.726
United Kingdom	5.55	5.53	5.75	6.26	5.91	0.706
Switzerland	4.63	4.88	5.24	5.56	5.49	0.772
France	5.75	6.13	5.42	5.31	5.07	0.702
Norway	1.62	1.56	1.70	1.83	1.46	0.769
Japan	0.94	1.20	1.31	1.31	1.47	0.649
Germany	0.98	1.03	0.95	1.13	1.11	0.788
Russia	1.14	1.28	1.15	1.32	1.00	0.88
Turkey	1.00	1.08	1.08	1.04	0.96	н/д
Poland	1.07	1.16	0.96	0.97	0.90	н/д
Latvia	0.06	0.42	0.54	0.54	0.53	н/д

Source: own compilation based on the data of OECD and Credit Suisse (Tax Revenue Buoyancy in OECD Countries. Revenue Statistics 2023. OECD.Stat. Available at: https://doi.org/10.1787/9d0453d5-en (accessed: January 10, 2024); Global Wealth Report 2022. Credit Suisse. Available at: https://www.credit-suisse.com/about-us/en/reports-research/global-wealth-report.html (accessed: January 8, 2024)).

[7] Calculated according to the data of Form 5-NDFL of the Federal Tax Service of the Russian Federation, assuming that the rate of 13% is applied for the citizens of the Russian Federation.

Table 6. Structure of final consumption expenditures of the first and tenth decile groups of the Russian population in 2022, %

Item of expenditure	First group	Tenth group	Ratio of the tenth group to the first, times
Household food	51.7	20.4	0.39
Clothes and shoes	7.5	6.3	0.83
Housing and utilities	13.0	9.6	0.74
Home appliances	0.3	1.0	3.08
Transport	5.7	26.9	4.76
Communication	5.3	3.0	0.57
Healthcare	2.8	3.8	1.34
Education	1.1	1.3	1.20
Vacation	1.9	6.8	3.60
Hotels, cafes, restaurants	0.7	4.4	6.62
Financial and insurance services	0.4	1.8	4.26
Source: own compilation according to Rosstat data (Inequality and poverty. Rosstat. Available at: https://rosstat.gov.ru/folder/13723 (accessed: January 12, 2024)).			

and utilities – 65%, while the most well-off spend 30% on these items. The most significant excess of the expenditure structure of the tenth decile group over the first decile group was formed for transportation, vacation, hotels, cafes, restaurants and financial and insurance services. Total expenditures for final consumption in 2022 amounted to 7,985 rubles for the first decile group and 63,400 rubles for the tenth decile group, the ratio is 7.94 times. The caloric content of the daily diet for the tenth group averaged 2,937 Kcal, and for the first group – 1,972 Kcal, i.e. 1.5 times less.

The ratio of the cost structure of the most and least well-off citizens can serve as an indicator of the application of differentiated VAT rates to smooth consumption inequality. Russia currently has a reduced VAT rate of 10% on food products, which helps to reduce the tax burden on the least well-off citizens. At the same time, as part of anti-crisis measures of tax support for business in 2022, the VAT rate was set at 0% for hotels, cafes, restaurants and tourism, which form a more significant share in the expenditures of the most affluent citizens with a low share in the expenditures of the poor. Accordingly, this lowers the tax burden for the richest.

To compare the average effective VAT rate for the first and tenth decile groups, we calculated as a weighted average of the share in the cost structure according to Table 6. We assume that the following VAT rates are applied to cost items in general: healthcare, vacation, hotels, cafes, restaurants, financial insurance services – 0%, home catering – 10%, all other items – 20%. As a result, the average effective rate for the first decile group was 13.21%, and for the tenth decile group –14.0% (0.79 p.p. higher).

To reduce the level of inequality, it seems reasonable to lower the VAT rate for housing and utilities to 10%, similar to food products, and to return the rate to 20% for vacation, hotels, cafes and restaurants. In this case, the average effective VAT rates for the first and tenth decile groups will be 12.45% (-0.76 p.p.) and 15.82% (+1.82 p.p.), and the difference in rates will increase from 0.79 to 3.37 p.p., i.e. 4.3 times.

Differentiation of VAT rates, in addition to ensuring the smoothing of consumption inequality, is logically built into the concept of controlling the comparability of expenditures and taxpayer's income level.

To assess the impact of indirect taxation on citizens' inequality in Russia, we choose the Gini coefficient and the decile coefficient on consumption expenditures as the resulting indicators within the framework of correlation and regression analysis, and the share of VAT in GDP and tax revenues of the consolidated budget, as well as the share of VAT paid at the rate of 10% in the total volume of VAT – as the indicator-factors. The analysis is based on the data of Rosstat and the Federal Tax Service of the Russian Federation for 1992–2021 *(Tab. 7)*.

The relationship between VAT and inequality indicators is inverse: the higher the share of VAT, the lower the inequality. The relationship between the Gini coefficient and the share of VAT in GDP and in total tax revenues is strong, while the relationship between the share of VAT at the rate of 10% in total VAT and inequality indicators is weak. Accordingly, the expansion of the study period becomes the reason for increasing the closeness of the relationship, as for the factors of the share of VAT in GDP and in the total amount of tax revenues of the budget includes the period of the 1990s, when Russia had a progressive income tax, and the share of VAT in tax revenues was lower than now. As a whole, this aspect indicates that VAT in Russia does not have a significant impact on inequality, and the higher R^2 in some years with lower inequality is a consequence of other factors.

Assessing the impact of the tax burden structure on citizen inequality

We carried out the assessment by means of correlation and regression analysis of the impact of the tax burden structure on individual taxes on citizens' inequality. As an indicator of inequality, we chose the Gini coefficient. We calculated their shares in GDP to decompose the tax burden structure by individual taxes. We carried out the estimates for OECD countries for 2000 and 2020 on the basis of OECD and World Bank data *(Tab. 8)*.

The closest of the analyzed correlation with the inequality level is characteristic of the share of all taxes in GDP, and since this indicator takes into account the severity of the tax burden rather than its structure, the level of tax burden, rather than its structure, has a decisive impact on inequality. In OECD countries, a 58-74% trend in the share of taxes in GDP explains the change in the inequality level. The share of income tax in GDP of OECD countries consistently has a marked relationship with the Gini coefficient, $R^2 = 0.33$. The impact on inequality of indirect taxes decreased in OECD countries in 2020 compared to 2000. This occurred against the background of a decrease in the share of indirect taxes in total tax revenues from 32.6 to 30.6%. The dynamics of the share of the tax in the tax burden structure coincides with the change in the impact of this tax on the inequality level.

Table 7. Results of correlation and regression analysis of the impact of indirect taxation on citizen inequality in Russia

Result	Factor – share of VAT	Period	Correlation coefficient r	Determination coefficient R^2
Gini coefficient	In total tax revenues of the consolidated budget	1992–2021	-0.855	0.731
	In GDP	1995–2021	-0.893	0.797
	Paid at the rate of 10% in the total volume of VAT	2010–2021	-0.613	0.3757
Decile coefficient by consumption expenditure		2012–2021	-0.1129	0.0011

Note: significance level α by Fisher's F-criterion 0.01.
Source: own compilation based on Rosstat data and tax reports1-NM of the Federal Tax Services.

Table 8. Results of correlation and regression analysis of the dependence of the inequality level (according to the Gini coefficient) on the tax burden structure in OECD countries

Share of taxes in GDP	Period	Correlation coefficient r	Determination coefficient R^2
Income	2000	-0.573	0.329
	2020	-0.569	0.324
Direct	2000	-0.595	0.354
Indirect	2000	-0.530	0.283
All taxes	2000	-0.862	0.743
	2020	-0.765	0.585

Note: significance level α by Fisher's F-criterion 0.01. We give the data only for significant and close relationships.
Source: own compilation based on the World Bank and OECD data. (Income share held by highest 10%. World Bank. Available at: https://data.worldbank.org/indicator/SI.DST.10TH.10?end=2021&start=2000&view=chart (accessed: January 14, 2024); Revenue Statistics. OECD.Stat. Available at: https://stats.oecd.org/viewhtml.aspx?datasetcode=Rev&lang=en (accessed: January 14, 2024)).

Inequality in OECD countries in 2020 relative to 2000 has been smoothened by an increase in the share of income taxes and a reduction in indirect taxes due to income tax progression and the fact that consumption taxation has a greater impact on poor citizens who spend most of their income on current consumption.

Development of tax administration to smooth citizens' inequalities

Tax administration has the potential to smooth inequality, primarily by ensuring the completeness of taxation of current income, capital and consumption of the wealthiest citizens. Currently, the directions of development of tax administration, contributing to the smoothing of citizens' inequality, can be promising directions of technology development in terms of:

– administration of digital assets and revenues from digital assets, transactions in digital assets, goods and services;

– the completeness of taxation of citizens' investment income;

– parsing real estate rental advertisement sites and developing information exchange between the Federal Tax Service and advertisement platforms;

– identification of unregistered properties using geospatial analytics services.

Discussion

The study confirms the hypothesis that the set of instruments of income, indirect and property taxation of citizens in Russia has a significant unrealized potential for smoothing the economic inequality of citizens. By means of decomposition of tax instruments by areas – income, property and indirect taxation – and application of correlation and regression analysis it is possible to prove that in each of the areas there are no effective measures for smoothing inequality; at the same time there is a potential for reducing inequality. In this respect, the results of the study correlate with the conclusions obtained earlier by other researchers about the possibility of overcoming inequality by improving distribution and redistributive instruments (Shevyakov, 2011, p. 72), that the current system of distributive relations in Russia does not contribute to the reduction of inequality and sometimes even increases the existing disparities (Kostyleva, 2011, p. 72), that the "soft" progression of personal income tax will not have a significant impact on inequality (Maiburov, 2015, p. 174).

The results obtained do not claim to be a complete assessment of all tax instruments that could contribute to the smoothing of economic inequality of citizens. The presented instruments

can be supplemented, especially concerning the transformation of inequality over time. It is of interest, for example, to study the impact of excise taxes on citizens' inequality, but today there are no statistics on the consumption of excisable goods by income groups.

The prospects for further research include the specification of the parameters of promising tax instruments to mitigate citizens' inequality in Russia: differentiation of tax rates of personal income tax, VAT, property taxes, the establishment of the tax minimum and tax deductions, as well as tax benefits for property taxes, the development of tax administration. The results obtained can become a starting point for assessing the impact of these instruments both on citizens' inequality level and on budget security.

Conclusion

The research results contribute to the deepening of scientific understanding of the potential of the integrated application of income, property and indirect taxation instruments to smooth citizens' inequality. For Russia today this potential is significant, it has not been realized.

PIT does not ensure the reduction of inequality. The introduction of a progressive personal income tax rate of 15% is a necessary but insufficient first step to reduce inequality. The progression should be strengthened and a non-taxable minimum should be introduced. The current preponderance of property tax deductions on personal income tax (86.5% of total deductions) to the detriment of social and standard deductions does not allow realizing their potential. Social deductions can contribute to the smoothing of inequalities: not only by increasing the limits, but also, for example, by diversifying the limits of deductions depending on taxpayer's income. The use of the bulk of tax deductions by citizens with middle and high incomes can lead to regressive nature of income taxation.

Property taxes have a significant potential for smoothing monetary inequality of Russians, given that their tax burden is 5–8 times lower than in developed countries. There are prospects for increasing the tax burden for the owners of expensive or multiple properties, luxury goods and ensuring the targeting of tax benefits, when not only the category of the taxpayer, but also their wealth is taken into account.

The possibility of smoothing consumption inequality with the help of VAT is conditioned by the difference in the consumption structure of the least and most affluent citizens. It is advisable to set lower VAT rates for goods and services that form the bulk of consumption expenditures of the least well-off citizens, for example, housing and utilities sector, and increase VAT rates for expenditures that form the basis of consumption of the most well-off citizens with a low share in the consumption structure of the poor, for example, return of the rate of 20% for vacations, hotels, cafes and restaurants. In this scenario, the average effective VAT rates for the first decile group decrease, while for the tenth decile group they increase.

The decisive influence on inequality is the tax burden level, but not its structure. The complex of instruments of income, indirect and property taxation of citizens has a significant unrealized potential for smoothing the Russians' economic inequality.

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Innovative Entrepreneurship Development in the Region: Challenges and Ways to Address Them

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Abstract. The entrepreneurship sector in a market economy is becoming a major driving force of innovative development. This is due to the fact that in a competitive environment, in order to maximize profit growth, an entrepreneur is forced to produce a more complex and innovative product. Thus, entrepreneurship is an "accelerator" of innovation activity. In this regard, special attention has recently been paid to the activities of innovative entrepreneurship. Research findings allowed us to conclude that at the moment there are a number of issues that hinder the development of innovative organizations. Accordingly, the presence of such challenges impedes innovative economic development. It is especially important to identify these problems at the present time, when innovation has become one of the main national priorities. The aim of the work is to identify problems in innovative entrepreneurship development at the regional level and find ways to solve them. The research methodology involves using various scientific

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techniques: from general scientific to narrow ones. Special attention is paid to economic sociology methods (expert survey). Scientific novelty of the research consists in the development of tools that help to identify problems in the development of innovative organizations at the regional level. Practical significance lies in the fact that on the basis of the challenges identified, we propose directions to address them, which can be adopted by representatives of regional authorities in order to improve the innovation policy pursued in the region.

Key words: region, innovative entrepreneurship, development issues, questionnaire, tools, monitoring.

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Introduction

Novelties and innovations are of particular importance for economic growth in country and its regions. Their use in administrative, industrial, and domestic processes significantly determines the level and quality of economic development.

In a market economy, the business sector becomes a major driving force of innovative development. According to Viktor Klavdienko, Doctor of Science (Economics) and leading MSU researcher, entrepreneurship is considered to be the foundation of an innovative economy. According to V.G. Zinov, N.G. Kurakova and A.V. Ozornin, the business sector covers 60–65% of the internal expenses for research and development in innovative leading countries, while the state spends half as much on it (Klavdienko, 2022).

Innovative entrepreneurship is primarily responsible for transforming ideas into technologically new goods, services, and processes in both developed and developing economies. As a result, this type of entrepreneurship has become popular in Russia.

However, the development of innovative entrepreneurship in the Russian Federation and its regions has recently declined. According to the Federal State Statistics Service, the share of innovative goods, works, and services in the total volume of shipped products was only 5.1% in 2022. This falls almost 20 percentage points below the minimum target outlined in the Strategy for Innovative Development of the Russian Federation for the period up to 2020[1].

Additionally, the targets outlined in Presidential Decree 204 "On national goals and strategic objectives for the development of the Russian Federation for the period up to 2024", dated May 7, 2018[2], have not been met.

This situation may have arisen due to the development issues of innovative entrepreneurship in Russian regions (Nikulina, 2013; Trefilova, 2017; Tyutyukina, 2017, etc.). Identifying and resolving these issues should increase the level of innovative development in both the country and regional socio-economic systems.

Identifying the problems and prospects for the development of innovative entrepreneurship in the Russian Federation is a relevant topic. Currently, there is no information available on the develop-

[1] Strategy for Innovative Development of the Russian Federation for the period up to 2020: RF Government Resolution 2227-r, dated October 8, 2011. Available at: https://docs.cntd.ru/document/902317973 (accessed: September 21, 2023).

[2] On national goals and strategic objectives for the development of the Russian Federation for the period up to 2024: Presidential Decree 204, dated May 7, 2018. Available at: https://base.garant.ru/71937200/ (accessed: August 15, 2023).

ment problems of innovative entrepreneurship in the regions, and there is no common approach to identifying them. Therefore, the issue of how to properly identify the development problems of innovative entrepreneurship at the regional level is debatable. *This study aims* to address this research problem.

The object of research is innovative entrepreneurship in the regions of the Russian Federation.

The subject of research is development issues of innovative entrepreneurship.

The aim of this work is to identify development issues of innovative entrepreneurship at the regional level and to propose solutions to resolve them.

Scientific novelty of the study consists in the designing of a range of tools for identifying the challenges faced by heads of innovative organizations in the region.

The distinctive feature of this approach is its consideration of the regional nature of innovative activity performed by enterprises (this includes evaluating the impact of regional support measures, identifying regional factors that hinder innovation and entrepreneurial activity etc.), and analyzing specifics of innovative entrepreneurship activity under sanctions and digitalization. This is especially relevant currently.

Practical significance lies in the fact that the study proposes solutions to the development problems of innovative entrepreneurship at the regional level, which can be of practical significance for representatives of regional authorities to improve the innovation policy in the region.

Materials

Companies have been operating under the excessive influence of other companies producing similar goods. Customers expect their products to have useful qualities. But these qualities are not yet characteristic of these products. As a result, enterprises are searching for ways to improve the existing products or to produce new ones and must constantly innovate (Blindenbach-Driessen et al., 2014; Bogers et al., 2011; Gerguri et al., 2010; Prange et al., 2016; Ravšelj et al., 2019). According to the researchers (Garcia et al., 2002), companies need to innovate in order to improve their competitiveness. For instance, through innovation, it is possible to produce the same product in greater quantities or at a lower cost.

To implement innovations, it is necessary to establish production within the country or region. Innovative entrepreneurship plays a crucial role in creating and initiating the innovation process in the market economy, and has become widespread. A review of studies (Brenner, 2020; Grudu, 2019; Guzman et al., 2020; Mayhew et al., 2012; Tang et al., 2004; Ualzahanova et al., 2020; Babkin et al., 2014; Getman et al., 2011; Kadakova, 2014; Menshov, 2005; Palkina et al., 2016; Starodubtseva et al., 2016) has found two groups of criteria for identifying innovative entrepreneurship: general criteria, which are common to innovative entrepreneurship, and specific criteria, which highlight its innovative nature. The first group includes the size, form of incorporation, legal status of the company engaged in innovative entrepreneurship, as well as the tax treatment corresponding to its activity. Entrepreneurial activities are characterized by their risky nature and the systematic pursuit of revenue through certain economic activities. The second group of specific criteria includes development of innovative solutions and the production of innovative products.

Innovative entrepreneurship enterprises are typically private, although there are cases of mixed ownership. These cases usually involve small innovative companies based on higher education institutions, research institutes, and centers, where the higher educational establishment acts as a co-founder. It is important to note that entre-

preneurship is not solely a legal status but also a function performed by natural or juridical persons with the primary goal of earning a profit. State-owned institutions and organizations are also considered business entities. These enterprises can be classified as small, medium-sized, or large businesses based on their size.

Therefore, innovative entrepreneurship is a comprehensive activity, coupled with a certain level of risk and carried out by economic entities officially registered in tax authorities (regardless incorporation and ownership forms and the size of the enterprise). This activity is aimed at earning profit through development of, manufacture and sale of innovative goods and provision of innovative works and services (Ivanov, 2021).

According to researchers (Cuervo-Cazurra et al., 2007; Gerguri et al., 2010; Janssen et al., 2022; Ravšelj et al., 2019; Ravšelj et al., 2020), companies engaged in innovative entrepreneurship and focused on R&D make a significant contribution to the development of the regional economy. This opens up opportunities to develop new markets, create high-tech jobs, increase employment, and produce quality products that meet consumer demand. The researchers (Bikmetov, 2018; Malinina, 2021; Sevryukova, 2020; Filippova et al., 2017) share this opinion. They also state that innovative entrepreneurship is the crucial factor in maintaining competitiveness of the regional economy.

However, the conditions for the development of innovative entrepreneurship within individual territories can vary significantly. Economic entities involved in innovative activities often face challenges that hinder their development (Trefilova, 2017; Tyutyukina, 2017).

Currently, academics conduct research to identify issues that may have a negative effect on innovative entrepreneurship. Similar studies have been conducted in developed countries, such as the USA and EU (Dunning et al., 1995; Koschatzky et al., 2000). In developing countries that have recently taken the path of innovative development, such as Brazil, similar research is just gaining popularity (Rocha et al., 2022).

Since the beginning of innovative development in the Russian Federation, priority has been given to innovative business organizations. Identifying problems and prospects of their activities has become the subject in many studies devoted to the innovative development. Most of these studies were conducted before 2010, possibly due to the government's recognition of the innovation importance in ensuring the competitiveness of the national economy during this period (Burkina, 2020; Gretchenko, 2011).

The study (Nikulina et al., 2013) identifies the primary problems that companies experience in the process of innovation development, proposes solutions to them, and emphasizes the need to develop new sources of financing for the implementation of innovative activities and to optimize the provision of state support for companies that bring innovative goods to the market.

The authors (Grebennikova et al., 2016; Trefilova, 2017) examine the issues of innovative development in companies under current market conditions. They note that Russia is significantly behind in forming innovative cluster compared to leading world powers. This situation results in Russian companies being dependent on imported technologies and goods. Among the issues hindering innovative development in the Russian Federation, the researchers note ineffectiveness of scientific research due to insufficient funding, immigration of the best scholars, unattractiveness of the scientific profession, the gap between education and science.

The solutions to the outlined problems (Grebennikova et al., 2016) lie in modernizing the funding system for applied and fundamental research and development, establishing a regulatory

framework and stimulating demand for scientific inventions, creating a system for monitoring and developing innovative activity.

The Federal State Statistics Service (Rosstat) surveys the issues of business' innovative activity. The assessment of these issues conducted as a part of the study (Tyutyukina et al., 2017) allowed the authors to identify the key problems of innovative development in the Russian Federation. They are lack of own funds, high cost of innovations, lack of funding support from the state, insufficient laws and regulations to control and stimulate innovative activity, lack of skilled personnel.

However, the problems identified by Rosstat represent the entire country, as the regional specifics was not taken into account. Moreover, The Federal State Statistics Service collects information on issues of innovative activity once every two years (Tyutyukina et al., 2017): the next year after an odd-numbered year, including data for the last two years (for example, in 2022 – for 2018–2020; in 2020 – for 2016–2018, etc.). Therefore, there is no opportunity to assess the current state of innovative companies.

Scientists are working on developing methods and mechanisms to rapidly search for information on problems that hinder the development of innovative businesses in the country and the regions. The article "Innovative Activity of Russian Companies: The Results of Empirical Research" can be taken as an example. It presents the results of a complex analysis method for evaluating the innovative activities of companies using the "Innovation Radar" methodology (Rebyazina et al., 2011). The study consisted of two stages: conducting 15 in-depth interviews at the qualitative stage and surveying 120 Russian innovative enterprises. Conclusions about the impact of certain characteristics of Russian companies' innovative activity on their efficiency were formulated based on the analysis results.

In 2021, the Russian Union of Industrialists and Entrepreneurs conducted a survey on the innovative activity of Russian enterprises[3]. The survey primarily included industrial companies (63.8% of the respondents). Two-thirds of respondents represented large businesses, 21.8% – small businesses, and 11.5% classified themselves as medium-sized businesses.

According to the respondents, the primary factors influencing innovative activity of their enterprises are financial and economic. The option "high costs of innovations implementation" received an average score of 7.2 out of 9, while "economic risks" received 7 points. Difficulties in obtaining borrowed funds for investment in innovation projects and excessive state regulation and standards requirements shared third place, both with a score of 5.4. Other factors have less impact on a company's innovative activity.

The companies also reported that political factors were the primary limitation to their exports, with a share of 35.9%. Export companies rated these factors even higher – 53.3%, and this difference is statistically significant.

Besides surveys, in-depth interviews are frequently used to identify the issues and opportunities related to innovative activity. On September 2, 2020, Leonid Gokhberg, director of HSE Institute for Statistical Studies and Economics of Knowledge, was interviewed by Rossiyskaya Gazeta newspaper. During the interview, they discussed the challenges of innovative development faced by Russian companies and the factors that influence them[4].

[3] Innovative activity of companies: the results of the RSPP survey. The Russian Union of Industrialists and Entrepreneurs. Available at: https://rspp.ru/activity/analytics/innovatsionnaya-deyatelnost-kompaniy-rezultaty-oprosa-rspp/ (accessed: August 25, 2023).

[4] Innovation performance in Russia does not meet expectations. *Rossiyskaya gazeta*. Available at: https://rg.ru/2020/11/30/rezultaty-innovacionnoj-deiatelnosti-v-rossii-okazalis-nizhe-ozhidaniia.html (accessed: August 25, 2023).

According to Gokhberg, the state has recently strongly focused on innovative development. Despite the presence of numerous strategies and support measures, and considerable costs, innovative policy has not produced significant results. Furthermore, there is a noticeable stagnation in the major indicators of the innovative sphere, particularly in the level of innovative activity.

Gokhberg suggests that improving the environment for innovation, stimulating competition and involving a wide range of small and medium-sized businesses into innovative activities can help to solve existing problems.

Specialists from HSE University (D. Medovnikov, T. Oganesyan, and S. Rozmirovich)[5] conducted a survey of 125 small and medium-sized Russian companies to collect objective data on the innovation market. In addition, 15 company executives were interviewed.

The survey involved companies from over 30 constituent entities of the Russian Federation, belonging to the following federal districts: Central, Volga, Northwestern, Siberian, Ural, North Caucasus, Far Eastern.

In the survey, companies were asked to identify the factors that limited their development in the previous three years. The most common response, with 50% of votes, was a lack of funds for R&D as well as for new product development. The second most common response, with 36% of votes, was difficulties in obtaining funds for the implementation of investment projects, either in the form of investments or investment loans. The third most common response, with 34% of the votes, was a skills shortage.

The survey asked the respondents about their enterprise's use of loans over the past three years. The results showed that approximately 40% of executives had experience with borrowed funds, but only half of them did so regularly. Around 60% of organizations did not use loans at all.

Approximately 30% of companies do not consider attracting investments as necessary at the moment. Similarly, 29% of the companies wish to attract investments but have been unsuccessful in doing so. Only slightly over 20% of companies have successfully attracted investments within the last three years.

According to the survey, federal grants were the most common form of government support. Over 70% of participating companies reported their use. 47% of nonfinancial support was provided through tradeshows and business missions, while 39% was provided through free educational programs.

More than 50% of respondents consider that state support has a positive impact on their enterprise's development.

In the interim result, it can be stated that many scientists have focused on researching innovative entrepreneurship in Russia. This topic has gained popularity in the last decade because the government has realized the importance of innovations as a crucial factor determining the social and economic development.

Various methods are used to identify problems in the development of innovative entrepreneurship, with sociological methods such as expert surveys and interviews etc. being the most common. Generally, these methods are preferred due to the limited statistical data for assessing the scale of problems related to the development of innovative entrepreneurship. Sociological methods are also important because they allow for both quantitative and qualitative assessments of the problems under consideration. These methods enable the assessment of both the scale and specifics. Moreover, they

[5] Use of state support by small and medium-sized businesses operating in the field of innovation and high technologies. HSE University. Available at: https://innopraktika.ru/napravleniya-deyatelnosti/proekty-razvitiya/issledovanie-msp/ (accessed: August 30, 2023).

allow making detailed recommendations from representatives of innovative entrepreneurship (experts, executive and leading specialists of innovative enterprises) for the solution of certain problems, which subsequently need to be taken into account by regional authorities in the process of making management decisions.

When conducting sociological surveys on innovative entrepreneurship, some scientists, for example from HSE University, only include small and medium-sized innovative companies in the sample. At the same time, there are also examples when the range of interviewed companies is not limited to innovative small and medium-sized businesses, as in the case of the survey conducted by the Russian Union of Industrialists and Entrepreneurs.

Excluding large innovative businesses from the analysis is appropriate, as their size largely determines the prerequisites of their innovative activity. According to the study (Terebova, 2019), small innovative firms can promptly respond to changes in the competitive environment and provide sufficient mobility in the field of commercialization of innovations due to their flexible management structure.

Furthermore, it is important to consider the qualitative differences between innovations produced by small, medium, and large enterprises. Goods and services created by small and medium-sized innovative companies tend to be more innovative than those produced by larger business; 4/5 of the output of innovative small and medium-sized businesses is related to production renewal, while technological innovations produced by industrial giants are primarily aimed at their own production processes. Small innovative enterprises produce 2.5 times more innovations per employed person than large companies (Terebova, 2019).

Research centers such as HSE University and public organizations like the Russian Union of Industrialists and Entrepreneurs conduct sociological studies to identify development issues of innovative entrepreneurship in the Russian Federation. Additionally, a number of authors have published their findings of sociological research (Rebyazina et al., 2011). The scientific and practical significance of these works is noteworthy. However, most of them are episodic, which limits the ability to assess relevant problems. Moreover, they do not consider the regional nature of innovative entrepreneurship (for example, evaluating the effectiveness of regional support measures or identifying regional conditions that hinder the development of innovative entrepreneurship).

Methods

The research methodology is based on various scientific methods, including document analysis, result analysis, comparative method, etc. Questionnaire survey, a method of economic sociology, was used to conduct an expert survey to identify development issues of innovative entrepreneurship in the regions.

It is important to note that several questions in the author's questionnaire correspond in terms of content and structure to questions presented in other sociological studies conducted by leading domestic scientific, research, and educational institutions (specifically, in research carried out by HSE University[6]). This was possible due to comparative analysis of the situation in the region and within the whole country, identification of regional specifics of development issues of innovative entrepreneurship.

[6] Use of state support by small and medium-sized businesses operating in the field of innovation and high technologies. HSE University. Available at: https://innopraktika.ru/napravleniya-deyatelnosti/proekty-razvitiya/issledovanie-msp/ (accessed: August 30, 2023).

Characteristics of the survey

The survey involved the executives of small and medium-sized innovative enterprises in the Vologda Region. The majority of these enterprises are engaged in manufacturing industries, professional, scientific, technological activities, and activities in the field of information and communication, as classified by OKVED (Russian Classification of Economic Activities). The survey involved 11 executives of small innovative enterprises (Alexandra Plus LLC, VBK LLC, Kronles LLC, Logasoft LLC, Mezon LLC, Modul-F LLC, Octava Plus LLC, Optimeh LLC, Rotor LLC, Sevzapdorproekt LLC). The questionnaires were sent to 35 small innovative enterprises[7] in total.

To be categorized as innovative, an enterprise should have innovative products that make up a significant portion of their total shipped products.

The questionnaire consists of 52 questions categorized into different theme groups, including general organizational characteristics, specifics of produced innovations, performance assessment of innovative entrepreneurship, factors hindering innovative activity, factors promoting innovative activity, and innovative entrepreneurship activity under sanctions.

The sociological survey was conducted from February 1 to April 1, 2023, at the respondents' workplace. The respondents were executives of innovative enterprises in the region, as well as heads and leading specialists of structural units responsible for innovation activities.

The survey database is registered with the Federal Service for Intellectual Property under state copyright certificate number 2023622390, dated July 13, 2023.

[7] Science and innovations in the Vologda Region during 2018–2022. Rosstat. Available at: https://35.rosstat.gov.ru/folder/55314/document/217517 (accessed: September 1, 2023).

Results and discussion

Current State of Innovative Entrepreneurship in the Region. Features and issues of regional support for innovative entrepreneurship. Our expert survey results reveal that the companies primarily aim to expand their product range (54.5%), enter new markets and gain a competitive advantage (45.5%), and reduce production costs while improving product quality (36.4%).

An important issue regarding the companies surveyed is their provision with innovative solutions that serves as the basis for producing innovative products. According to 45.5% of executives, the companies produce innovative solutions themselves. 45.5% of respondents reported purchasing innovative solutions from other Russian innovative companies. Approximately 18% of companies acquire innovative solutions from Russian higher educational establishments, research institutes and centers. Another 18.2% of respondents focus on foreign innovative companies (the territorial affiliation of these companies was not specified). It is important to note that the most common types of intellectual property available to these companies are patents for inventions, accounting for 45.5%. Utility models, computer software programs, and trademarks make up only 27.3% of the total, while registered designs and procedural knowledge account for just 9.1%.

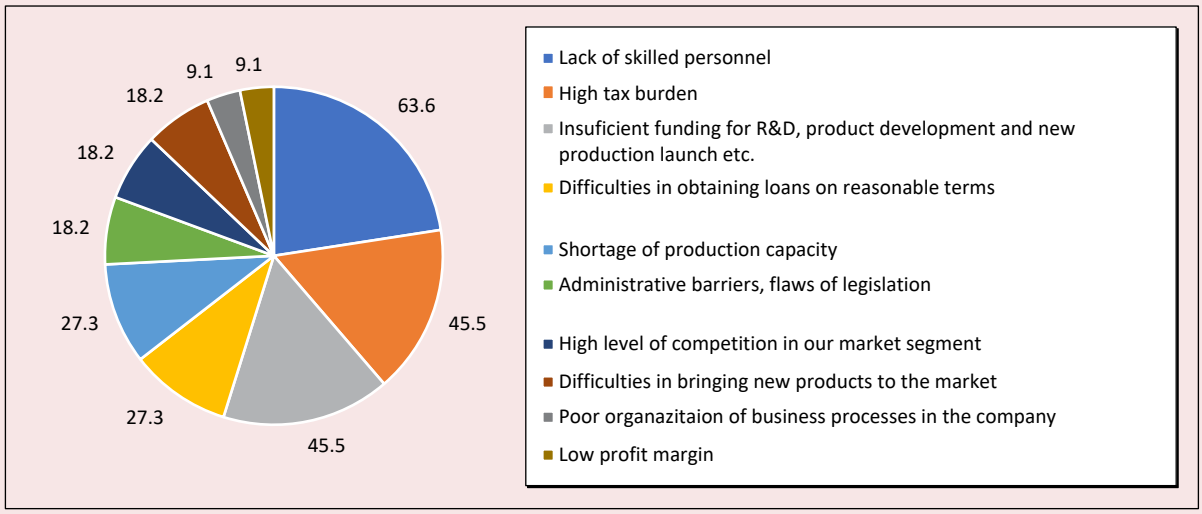
The survey revealed the factors that, in the opinion of respondents, hinder innovative enterprises in the Vologda Region *(Fig. 1)*.

The figure illustrates that primary factors limiting innovative entrepreneurship at the regional level are lack of skilled personnel, high tax burden, insufficient funding for R&D, product development, and new production launch. Additionally, entrepreneurs face challenges in obtaining loans on reasonable terms.

Assessment of the degree to which innovative small and medium-sized enterprises in the region are equipped with the necessary resources to produce new products and implement new technologies indicates that the majority of respondents point out the lack of skilled personnel *(Fig. 2)*.

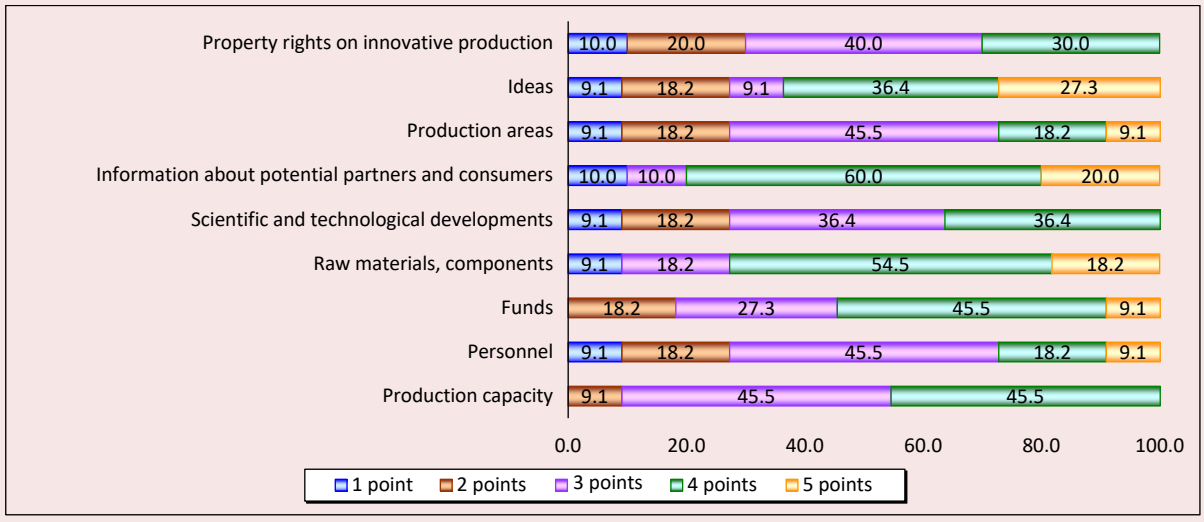
Meanwhile, small innovative entrepreneurship does not experience the shortage of raw materials, components, and information about potential partners and consumers. Additionally, enterprises in the region have ample ideas for innovation development.

Figure 1. Factors limiting innovative entrepreneurship in the region, %



Source: survey results.

Figure 2. Resource equipment for small and medium-sized businesses in the region to launch new production and implement new technologies, %



Source: survey results.

Credits and loans are important instruments for providing financial support to innovative small and medium-sized enterprises. According to the survey, only 18.2% of innovative enterprises in the Vologda Region use loans on a regular basis, while 36.4% use them from time to time.

Difficulties in obtaining loans include high interest rates (50%), banks considering innovative projects as risky (25%), and a significant credit burden (presence of other outstanding loans) according to a quarter of the respondents. However, 25% of respondents reported having no difficulties in obtaining loans.

The Fund for Resource Support of Small and Medium-Sized Entrepreneurship of the Vologda Region offers loans up to five million rubles for a period of 36 months[8]. The interest rate for the loan ranges from 1 to 16% per annum, depending on the loan category. This type of financial support enables borrowing money on more favorable terms. However, the loan amount limitation of five million rubles hinders the development of innovative production. According to the answers given by 50% of the surveyed executives of small and medium-sized innovative enterprises in the region, the ideal amount of borrowed funds should be between 20 and 50 million rubles.

In the region, only 22% of small and medium-sized innovative enterprises were able to attract and use investments over the last three years. It is worth noting that potential investors' awareness is low, with 73% of the respondents rating it no more than 3 out of 5 points.

State support implemented by the Department of Economic Development of the Vologda Region is widespread among small and medium-sized innovative enterprises in the region. Approximately 64% of the executives of innovative companies in the region use these forms of support on a regular basis due to their grant nature. However, the effectiveness of these measures is estimated to be relatively low *(Tab. 1)*.

The experts evaluated the financial support measures implemented at the regional level as less effective than similar measures implemented at the federal level. They gave a particularly low assessment of the effectiveness of regional grants. Approximately 45% of respondents expressed that the amount of regional grants provided is insufficient to support innovation activities at a high level. All of executives of small and medium-sized enterprises who participated to the survey believe that the minimum amount of a regional grant should be 5 million rubles. The grant offered by the Vologda Region for funding research, development

Table 1. Effectiveness of support for small and medium-sized entrepreneurship in the region, %*

Support measures	Points				
	1 point	*2 points*	*3 points*	*4 points*	*5 points*
1) Federal grants	14.3	–	–	14.3	71.4
2) Regional grants	28.6	28.6	14.3	–	28.6
3) Subsidies from the federal budget	57.1	–	–	28.6	14.3
4) Subsidies from the regional budget	57.1	–	14.3	–	28.6

Source: survey results.
*Note: the scoring is based on the use of a particular support measure by executives of innovative enterprises.

[8] Microcredit company of the Vologda Region "The Fund for Resource Support of Small and Medium-Sized Entrepreneurship". My business 35 (National support project for small and medium-sized businesses. Available at: https://mb35.ru/st/fond-resursnoy-podderzhki/ (accessed: 30 August, 2023).

and technological works of natural persons and organizations, excluding federal state institutions, amounts to only 500 thousand rubles[9].

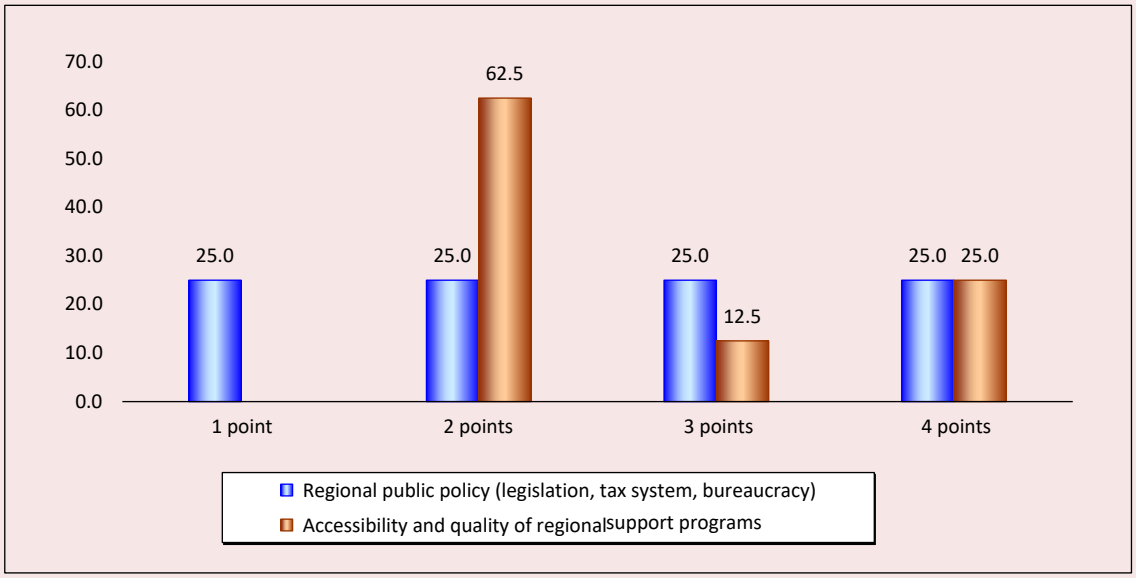
The monitoring survey results indicate that the current duration of regional grants is not appropriate for the development of innovative activity of enterprises. According to 45.5% of the entrepreneurs, grants should be provided for a period of 3 years or more. Approximately 82% of respondents noted that becoming a regional grant owner is a difficult task. The number of vacancies is small, and the criteria for selecting grantees, including by type of economic activity, are significantly limited.

The effectiveness of administrative support measures in addressing issues important for innovative companies remains at a low level *(Fig. 3)*.

The regional state programs' availability and quality, as well as the effectiveness of the regional state policy in developing innovative entrepreneurship, received a low score on a five-point scale.

This study aims briefly to touch upon the foreign economic activity of innovative companies of the region under the economic recession. According to 40% of the executives of companies that export or used to export innovative products, export supplies to North America, the European Union etc. have significantly decreased in recent years. At the same time, approximately 20% of respondents have observed an increase in export opportunities to the friendly countries, such as Argentina, Belarus, Brazil, and Iran.

Figure 3. Effectiveness of administrative and legal support for small and medium-sized entrepreneurship in the region, %



Source: survey results.

[9] Regional scientific grants. Official website of the Government of the Vologda Region. Available at: https://vologda-oblast.ru/biznesu/nauka_i_innovacii/oblastnye_nauchnye_granty/ (accessed: September 17, 2023).

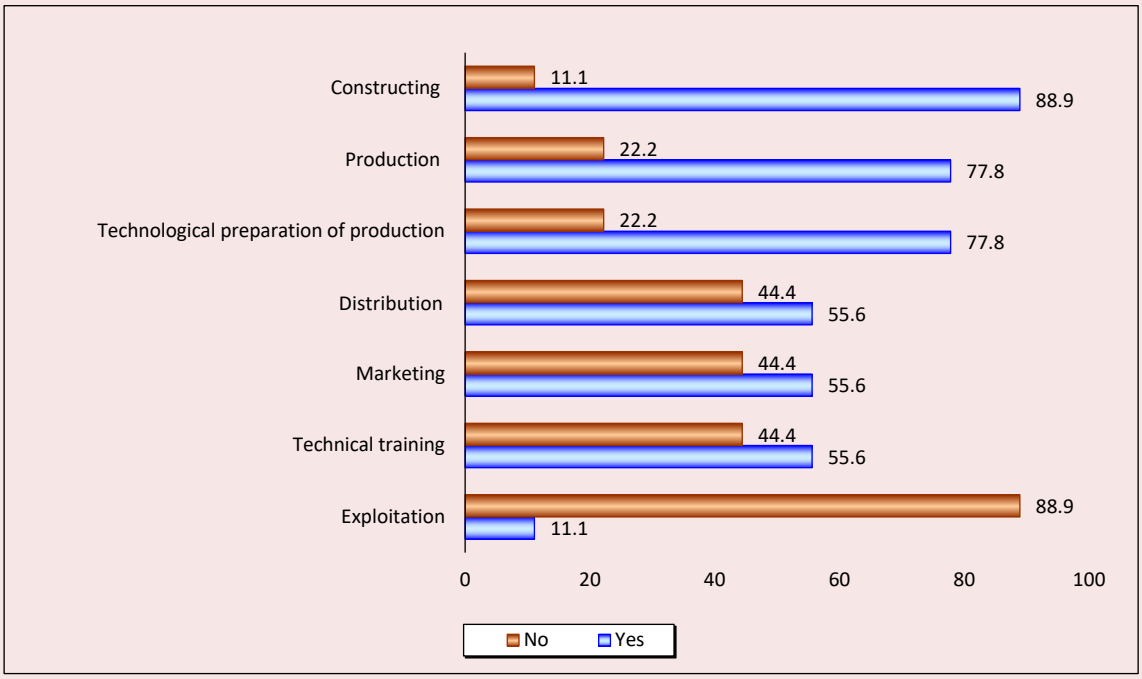
The activity of small and medium-sized innovative entrepreneurship under the conditions of the region's economy digitalization. In modern conditions, innovative activity is focused on creating and implementing digital technologies, products and services in the economy. The development of innovative activity in the digital economy becomes a driver of economic growth and a means of increasing enterprises' competitiveness nationally and globally (Yanchenko, 2023).

The survey revealed that a significant proportion of small and medium-sized innovative enterprises in the Vologda Region have a high level of digital maturity. 45.5% of executives of innovative enterprises in the region reported on successful implementation of several projects using digital technologies. Moreover, 36.4% of the region's small and medium-sized innovative companies are engaged in the development of such technologies.

Among the most widespread directions mastered by innovative entrepreneurship of the region are new production technologies; 45.5% of the regional innovative enterprises are engaged in their development.

It is important to note that digital technologies are widely used throughout the entire product life cycle *(Fig. 4)*.

Figure 4. Digital technologies usage throughout the product life cycle of an enterprise, %



Source: survey results.

Finally, the respondents were asked about the steps their companies are taking to increase the use of digital technologies. According to the respondents, companies provide regular training for relevant employees and learn best practices from other organizations (66.7%). Only a small percentage of the companies (22.2%) hire new employees with experience of implementing and using digital technologies.

Let us consider the measures of state support for innovative entrepreneurship in the context of digitalization being implemented within the territory of the Vologda Region.

In 2022, based on the proposals of the business community, tax rates for OKVED codes 62.01, 62.02, 62.02.1, 62.02.4, 62.03.13, 62.09 and 63.11.1 were reduced under the simplified tax system for the information and communication technology sector and set at[10]:

– for the object of taxation "income" – 1%,

– for the object of taxation "income minus expenses" – 5%.

The development institutions of the Vologda Region continue to offer various regional support measures for IT companies including consultations, training, promotion of goods and services, certification and production permits, subsidies, grants, soft loans and loan agreements, export promotion. As of July 1, 12 IT companies and sole proprietorships have received information and consulting support, including guidance on export and intellectual property issues[11].

Among them was TELEMEDHAB LLC, the company implementing a project for the remote patient monitoring. A special application automates the function of collecting data from medical and nonmedical devices that determine the current state of a person's health[12].

According to I.V. Prosviryakova, head of the Department of Digital Development of the Vologda Region, substantial support is provided for the IT industry. The provided benefits and support lines are very diverse. Useful information is posted on popular websites to make it easier IT companies to access it. The creation of thematic chat rooms enables IT companies to stay up-to-date with the latest news, share opinions, ask questions, and communicate with colleagues on relevant topics[13].

At the same time, according to the survey results, innovative IT companies rate regional support measures poorly. Specifically, they rated the effectiveness of administrative support measures at 3 out of 5 points. Moreover, 50% of innovative IT companies rated the effectiveness of regional financial support, specifically regional grants, as only 2 out of 5 points.

The study shows that despite the focus on developing innovative entrepreneurship in the Vologda Region (as stated in the region's Social and Economic Development Strategy) and in the country, innovative enterprises of the region are currently facing a large number of obstacles hindering their business activities. Furthermore, the effectiveness of the measures of state support provided by regional authorities, which are a crucial factor in overcoming these challenges, cannot be considered.

[10] IT companies in the Vologda Region can use the regional support measures. Available at: https://vologda-oblast.ru/novosti/vologodskie_it_kompanii_mogut_vospolzovatsya_regionalnymi_merami_podderzhki/ (accessed: September 28, 2023).

[11] Ibidem.

[12] Ibidem.

[13] The Department of Digital Development created digital media to inform IT companies about support measures for them. Available at: https://vologda-oblast.ru/novosti/departament_tsifrovogo_razvitiya_zapustil_elektronnye_resursy_s_merami_podderzhki_it_kompaniy/ (accessed: September 17, 2020).

The conclusion is supported by official statistics. Vologdastat shows a decline in innovative activity among organizations in the Vologda Region over the past three years, dropping from 12.2% in 2020 to 9.3% in 2022. The indicator values in the Vologda Region in 2022 were lower than in the Northwestern Federal District and within the Russian Federation (by 1.3 and 1.7 percentage points respectively). Furthermore, in the Vologda Region, the proportion of innovative goods, works and services (relative to the total volume of innovative products) has decreased significantly from 1.9% in 2020 to 0.7% in 2022. The value of 0.7% is one of the lowest on the territory of the Northwestern Federal District, second only to the Pskov Region with the value of 0.4%. On average, the proportion of innovative products within Northwestern Federal District was 5.7% and 5.1%. across the Russian Federation.

Conclusion

In summary, small and medium-sized innovative businesses of the Vologda Region face various challenges. These include a lack of skilled personnel to produce innovative products, insufficient funding for innovative entrepreneurship at the regional level, high tax burden, flaws in legislation regulating innovative entrepreneurship in the regions, and decline in foreign trade with regular counterparties.

The reasons for this situation lie not only in the shortcomings of state support (financial and economic, administrative and legal, informational and organizational) but also in the regional specifics of innovative activity development, caused, among other things, by the monostructural specialization of economic activity. This type of specialization requires a monopolistic or an oligopolistic reaction model of large innovative businesses to the innovations produced in the region. A number of experts, including Doctor of Science (Chemistry) B.D. Sviridov, a scientific consultant of Cherepovets State University and Doctor of Science (Economics) K.A. Zadumkin, executive director of the Russian Union of Industrialists and Entrepreneurs of the Vologda Region in the city Vologda, represent this stance (Ivanov, 2023).

Certain issues partially stem from the foreign economic climate. Before 2022, when a record number of various sanctions were imposed on the Russian Federation and its regions, the main foreign economic partners of the Vologda Region, along with the Republic of Belarus, were the countries of the European Union (especially Finland and Poland)[14]. The new geopolitical conditions have compelled enterprises to sever commercial ties with foreign partners. According to the several executives of innovative companies in the region, this caused in a decline in their innovative activity.

Simultaneously, there exist some systemic problems, including the low level of job skill training in the field of innovative activity.

Analyzing the nature of these issues allowed us to identify ways for their resolution *(Tab. 2)*.

The proposed measures can be addressed to the Department of Economic Development of the Vologda Region, the Department of Digital Development of the Vologda Region, the Education Department of the Vologda Region, to the managers of the Agency of Development of Business And Investments of the Vologda Region "My business", to the members of the Vologda Chamber of Commerce and Industry.

[14] Since the beginning of 2021, the volume of foreign trade between Vologda Region and the Republic of Belarus has increased by 40.5%. Available at: https://gryazovets.bezformata.com/listnews/vologodskoy-oblasti-s-respublikoy-belarus/100474512/ (accessed: October 17, 2023).

Table 2. Development issues of small and medium-sized innovative entrepreneurship and ways to address them

Issue	Solution
Lack of skilled personnel to produce innovative products	1.To provide required professional training guidelines on the basis of regional educational institutions*. 2. To attract innovative qualified personnel from abroad (country's biggest allies) and other regions*.
Insufficient funding for innovative entrepreneurship at the reginal level	1. The regional authorities should request an increase in the volume of federal funds for the development of innovation activities in the region**. 2. To allocate the existing financial resources among innovative businesses in a rational manner***. 3. To expand the list of state financial support tools. 4. To stimulate the development of venture capital funds and angel investment. 5. To create conditions that will attract investors to the region and increase its innovative and investment potential.
High tax burden	1. To expand the list of criteria for innovative businesses to benefit from tax incentives. For instance, in addition to new innovative companies that have been operating on the market for less than two years, tax incentives should be provided to companies experiencing financial difficulties. 2. To remove the dependence of an innovative company on a specific tax system.
Flaws in legislation regulating innovative entrepreneurship in the regions	1. To create a legal instrument regulating that regulates the activities of small and medium-sized innovative entrepreneurship at the regional level and takes into account its specifics. 2. To specify the mechanism for meeting the targets related to development of innovative entrepreneurship, outlined in the Strategy for Innovative Development of the Russian Federation for the period up to 2030. 3. To minimize the number of administrative barriers for regional innovative businesses.
Reduction in foreign trade with regular counterparties	To develop trade cooperation with counterparties from the friendly countries.

Notes:

* It is important to note that large innovative businesses can ensure the qualified staff inflow by creating their own education institutions and providing employer-sponsored education.

However, small innovative businesses typically do not have such opportunity. In this case, the state's role is crucial in assisting regional higher educational establishment and vocational high schools with profile orientation and in creating conditions for innovative staff who are prepared to work for regional innovative companies.

** To accomplish the task, it is necessary to increase the interest of the regional companies in participating in initiatives implemented by regional authorities to support innovative entrepreneurship. Although regional support measures are the most common, some of them, such as subsidies for small innovative enterprises to implement innovative projects, remain unclaimed. This, in turn, hinders the submission of requests for increasing the volume of funding to the federal authorities.

*** In this case, it is important to create a feedback mechanism between the representatives of regional authorities and innovative business. This will help to identify whether financial support is highly required or not, the amount of support needed and other relevant details. Additionally, it is important to pay special attention to the assessment of the viability of innovative projects, as well as the possibility of solving regional development problems on their basis.

The implementation of the proposals will allow solving the issues of innovative entrepreneurship development in the region. At the same time, it will require significant financial investments. Therefore, the regional authorities need to apply for an increase in the volume of funding the measures to support innovative entrepreneurship, taking into account the established thresholds characterizing their quantitative parameters (the regional scientific grants amount for innovative entrepreneurship should not be less than 5 million rubles).

When estimating the expenses from the regional budget for attracting innovative personnel to the region, it is important to take into consideration the average wage of similarly qualified staff in other regions, including those that are more economically developed.

However, some activities do not require significant financial investment, such as lawmaking (developing relevant regulatory legal acts or creating investment passports for some municipal formations). Interaction between the region's authorities and scientific organizations located on the territory of the region will play a special role. The staff of these organizations could provide consulting support.

The proposals are expected to have positive social and economic effects, including increased competitiveness of the region both in the Russian and international markets due to the innovative output growth, import phaseout capacity building, including software tools, and the solution of some social problems through the introduction of relevant innovations such as improving the urban environment and making the production process more environmental friendly.

The proposals are supposed to resolve the development issues of innovative entrepreneurship development at the regional level. This should positively impact the quantitative and qualitative indicators of innovative activity in the region.

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Demographic Development Resources: On the Unification of Concepts in Demographic Research

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Abstract. The article attempts to distinguish a variety of related and consonant fundamental demographic terms, including: demographic development, demographic policy, demographic development (policy) tools, demographic development (policy) mechanism, demographic potential, demographic resilience. We also focus on the synthesis of a new concept – demographic development resources. To this end, we make an overview of current demographic research by Russian and foreign authors, consider their definitions of the above terms, and identify common and contradictory features of the concepts. We make an attempt to critically comprehend and generalize disparate approaches in order to systematize and unify the terminological framework of demographic research. During the analysis, we discover an entity that is invisibly present in the terminological framework of demographic development and demographic policy, but is not clearly defined. In order to introduce the appropriate term, we compare

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the interpretations of the terms "source", "resource" and "potential". As a result, we choose "demographic development resource" as the most accurate term for this phenomenon. Having systematized disparate approaches and clarified the meaning of individual components, we propose a definition for the term "demographic development resource" – it is a set of available tangible and intangible assets that can be used to manage demographic and migration processes. The identified concept, its term and the definition we propose should form the basis for research in a new scientific direction. In the future, it is necessary to typologize demographic development resources, identify and calculate their amount in Russia, assess their sufficiency, find the tools to influence individual resources, investigate the necessary and sufficient amounts of resources, as well as design a mechanism for achieving and maintaining their required amount, using the example of Russia.

Key words: demographic theory, demographic terminology, demographic development, demographic policy, demographic development resource, demographic resources, demographic development tools, demographic policy tools, demographic development sources, demographic potential, demographic resilience.

Introduction

The basis for implementing research activities is the conceptual and terminological apparatus of any science. At the same time, it is in it that confusion is often observed. As L.L. Rybakovskii points out, even the interpretation of "concept" and "term" has different variants[1]. Turning to the scientific research methodology theory, let us focus on the logical sequence: phenomenon – concept – definition – term. First of all, we are talking about the essence, which is invisibly present and mentioned by demographic researchers, but is not articulated clearly, which the article will demonstrate later. It is necessary to assign a concept to this phenomenon because it exists objectively, and without proper conceptualization it cannot become an object of scientific research. Once an objective phenomenon has been conceptualized as a concept, it should be defined and assigned a term to be used by researchers in a unified manner and to achieve proper scientific rigor. This article considers "demographic development resources" as an instrumental (applied, scientific) concept and term.

Demographic processes epitomize life itself in a broad sense. In a philosophical sense, demographic development is not only and not so much a goal of state management as a matter of preserving life itself. Undoubtedly, the purpose of existence of any state is to increase the population and their well-being. In the modern world, demographic development of a country is usually identified with its development as a whole, as demographic processes reflect the nature of the totality of socio-ecological-economic processes of the state. In Russian management practice, there is a clear idea of demographic processes as managed or, at least, directed by the state. Attempts to manage demographic processes in Russia in accordance with the established management practice are expressed in the formation of a set of relevant normative legal acts.

The National Security Strategy of the Russian Federation, approved by Presidential Decree 400[2], dated July 2, 2021, named "saving the people of Russia and the human potential development"

[1] Rybakovskii L.L. (2023). *Population Migration: Textbook for Universities.* Moscow: Yurait. Available at: https://urait.ru/bcode/515628/p.1 (accessed: September 25, 2023).

[2] On the National Security Strategy of the Russian Federation: Presidential Decree 400, dated July 2, 2021. Available at: https://www.garant.ru/products/ipo/prime/doc/401325792/ (accessed: July 22, 2023).

as the priority national interest of the country (the first among the listed ones). Ensuring the country's stable demographic development is the subject of implementation not only of the National Security Strategy of the Russian Federation, but also of a number of strategic documents. Presidential Decree 642 "On the Strategy for Scientific and Technological Development of the Russian Federation", dated December 1, 2016 lists "demographic transition due to the increase in life expectancy, changes in population's lifestyle, and the associated aging of the population, which together leads to new social and medical problems"[3] among the most significant challenges in terms of scientific and technological development of the Russian Federation. The Concept of Demographic Policy of the Russian Federation for the period until 2025[4], the Concept of State Family Policy in the Russian Federation for the period until 2025[5], the national project "Demography"[6] and a number of other state initiatives emphasize the difficulty and complexity of the tasks to be solved in this area.

Research methodology

Our article is the first in a series of studies devoted to the definition and measurement of the demographic development resource, which, according to our vision, is the basis (source) of demographic development. Understanding, defining and measuring the resource of demographic development will initiate the study of the possibilities of its management and building up, which, ultimately, should lead to a situation of demographic development management.

However, trying to form a definition of the demographic development resource in the literature review, we encountered a significant difficulty, which became our research problem; it was the disparate definitions for the same concepts on the topic of demographic management.

The aim of the research is to critically examine and summarize the disparate approaches to systematize and unify the terminological apparatus in the field of demographic management. In accordance with the aim, we carried out a literature review to present the diversity of application of the terms of this category as well as to synthesize the most specific and noncontradictory definitions on their basis.

The sample includes concepts we considered essential (fundamental) from the point of view of demographic management research, which in a sense appeal to the issue of determinants (resources, sources, means) of demographic development, and therefore are synonymous and partially interchangeable.

As a basis for the review, we use all available literature sources, in which the concepts in question (demographic development, demographic policy, their tools, demographic resilience, demographic potential, demographic resource and demographic development sources) are mentioned in the text or in the definition of determinants (resources, sources, means) of demographic development.

We formed the base for the review proceeding from the aim of the study, but not due to our preferences. As a result, it is represented mainly by the works of the most famous researchers-demographers of modern Russia, since the subject under consideration is highly specialized and is rarely found in the works of non-specialists. In addition, the article presents a comparative analysis

[3] On the Strategy of the Scientific and Technological Development of the Russian Federation: Presidential Decree 642, dated December 1, 2016. Available at: http://www.kremlin.ru/acts/bank/41449 (accessed: July 22, 2023).

[4] On Approval of the Concept of Demographic Policy of the Russian Federation for the period until 2025: Presidential Decree 1351, dated October 9, 2007. Available at: https://base.garant.ru/191961/53f89421bbdaf741eb2d1ecc4ddb4c33/ (accessed: July 22, 2023).

[5] On Approval of the Concept of State Family Policy in the Russian Federation for the period until 2025: Government Resolution 1618-r, dated August 25, 2014. Available at: https://docs.cntd.ru/document/420217344 (accessed: July 22, 2023).

[6] Passport of the National Project "Demography". Available at: http://static.government.ru/media/files/Z4OMjDgCaeohKWaA0psu6lCekd3hwx2m.pdf (accessed: July 22, 2023).

of the definitions of the concepts "resource", "source" and "potential" from all modern dictionaries to which the authors had access and which contained definitions for these concepts.

The study included a search for the necessary definitions and interpretations of concepts relevant to the research topic, which led to the analysis of many sources that were not included in the research results as they did not meet the criteria we have set.

Demographic policy and its resources

The documents listed in the introduction together constitute the content of the state demographic policy. As any other public policy, it is a mechanism for achieving the set goals necessary for the development of the state and society. In this case, we are talking about the achievement of state goals in the field of demography as a branch of knowledge or population as an object of policy. The classical definition of "demographic policy" states that it is "a system of ideas and conceptually united means, generally accepted at the level of power structures, with the help of which, first of all, the state, as well as other public institutions, observing certain principles, assume the achievement of the set goals in the demographic development of the country (region)" (Demography for practical..., 2014).

The above definition emphasizes the components of demographic policy: "ideas" and "sources". Unfortunately, in the subsequent studies of the authors of the monograph the proposed components are not disclosed. It is obvious that to form a quality demographic policy it is necessary to realize not only its essence, but also the content of its individual components. The literature review showed that there is no answer to the question of what are the "sources" of demographic policy. In our opinion, instead of "conceptually united sources" we can also use a more succinct definition of "resource", which will be explained in detail later in the article and which is in many ways close to the definition of "sources".

The work "Practical Demography" edited by L.L. Rybakovskii states: "The set of measures of demographic policy is formed in three directions: increasing the birth rate and strengthening the institution of the family; improving health and increasing life expectancy; providing the necessary migration growth and improving the attraction and use of labor migrants" (Practical Demography..., 2005). It follows from the text that, according to the authors of the monograph, demographic development resources are also subdivided by directions. The first direction includes money allowances, maternity leave, tax benefits, loans for the purchase and subsidization of rental housing, and other measures (including draft deferment); resources for the second direction include measures to regulate alcohol consumption, reduce poverty, and improve the healthcare system; for the third direction, only normative legal acts regulating the quality and intensity of interstate migration flows.

O.L. Rybakovskii and O.A. Tayunova note: "The goals and systems of demographic policy measures are determined by the prevailing ideological concepts, features of the established social system, type of public administration, level of economic development and resource capabilities, quality of life, cultural and religious norms and traditions, stage of demographic transition, prehistory of trends, measures, as well as cataclysms in the territory under consideration" (Rybakovskii, Tayunova, 2019a). In this case, we draw attention to the phrase "resource capabilities" of demographic policy, which are also not further disclosed in the text. In the paper, the authors distinguish the components of demographic policy: population reproduction policy, migration policy, as well as elements of ideology, propaganda and legal administration. Accordingly, various studies in one way or another point to the need for "resources" or "sources" of demographic policy, but it is not defined what meaning is put into these definitions.

In the English-language literature, the phrase "demographic policy" is used less frequently, and more often "population policy" is used. Let us consider a few classic English-language definitions. According to Edwin Driver's definition, population policy is defined as a measure formulated by a number of social institutions, including government, that can influence the size, distribution, or composition of the human population (Driver, 1972). According to another definition, it is a deliberate attempt by a national government to influence demographic variables such as fertility, mortality, and migration (Organski, Organski, 1961). As defined by French demographer Jean Bourgeois-Pichat, population policy is a set of agreed laws aimed at achieving a specific demographic goal (Bourgeois-Pichat, 1973). Thus, in English-speaking practice, demographic policy is a tool for achieving the set management goals with the emphasized role of the actor (national government, etc.). The demographic policy resources are normative legal acts and management actions according to these definitions.

In our understanding, the goal of demographic policy in the broad sense is always the achievement of "demographic stability". By demographic stability we mean "the formation of such qualitative and quantitative characteristics of matrimonial, reproductive, self-preservation and migration parameters that lead to a steady state and development of demographic processes that ensure natural reproduction of the population at a level that meets the national interests of the country" (Rostovskaya, Zolotareva, 2022). The key demographic policy component at the national level is the availability of the resource base, which includes various demographic development resources.

Demographic stability is a priority of state policy, since population growth or at least preservation is a guarantee of the national security, preservation of territorial integrity and sovereignty, as well as increasing the statehood in the international arena. In economic terms, population growth for a developing economy is a resource for intensifying economic growth. Achieving demographic stability is a response to existing demographic threats, such as depopulation, population aging, demographic expansion and others. However, at the moment there are no clearly identified mechanisms for achieving demographic stability in Russia, as well as in the vast majority of developed countries.

Demographic development

In 2001, the Government of the Russian Federation approved the "Concept of Demographic Development of the Russian Federation for the period up to 2015" [7]; and in 2007, the Presidential Decree approved the "Concept of Demographic Policy of the Russian Federation for the period up to 2025"[8]. Thus, although the new document did not exclude the validity of its predecessor, in the normative legal vocabulary the concept of "demographic development" was replaced by "demographic policy", which is identical in many respects, since demographic development is always the goal of demographic policy.

There are other interpretations of such a change of concepts. For instance, L.L. Rybakovskii and N.I. Kozhevnikova point out that "development" refers to the concept of "strategy", and "policy" – to the definition of "concept", despite the fact that both of the above documents are called concepts. "Development is understood as either an increase in the complexity of objects, or an increase in their scale, or both at the same time". The goal of

[7] On the Concept of Demographic Development of the Russian Federation for the period up to 2015: Government Resolution of the Russian Federation 1270-r, dated September 24, 2001. Available at: https://docs.cntd.ru/document/901797442?section=text (accessed: July 22, 2023).

[8] On Approval of the Concept of Demographic Policy of the Russian Federation for the Period up to 2025: Presidential Decree 1351, dated October 9, 2007. Available at: https://base.garant.ru/191961/53f89421bbdaf741eb2d1ecc4ddb4c33/ (accessed: July 22, 2023).

demographic development (using the example of the USSR), according to the authors, is "to ensure sustainable upward demographic dynamics and to realize a steady increase in the share of Siberia and the Far East in the population of the country" (Rybakovskii, Kozhevnikova, 2020).

In another paper, L.L. Rybakovskii and G.R. Khasaev provide a detailed definition of the concept of "development", including the use of dictionary interpretations, distinguishing between the definitions of "demographic development" and "demographic policy", "demographic dynamics" and "demographic statistics" (Rybakovskii, Khasaev, 2015). The authors propose their own interpretation of demographic development, which "consists in ensuring, primarily due to the reproductive component, the upward population dynamics necessary for a sustainable increase in the level of the country's population, especially in its Asian part, the growth of labor, educational and military contingents that ensure a steady increase in the socio-economic and defense power of the state". An important detail in understanding "development" and "dynamics" is the definition of the direction of movement, which is understood differently by various researchers. We are in solidarity with the authors of the above-mentioned source, which says: "Dynamics can be characterized as ascending, when the scales of a phenomenon increase, or as descending, when they decrease, as well as static. Unlike dynamics, development has only a unidirectional vector, it is aimed in the direction of increasing the scale of the phenomenon" (Rybakovskii, Khasaev, 2015).

One of the most relevant works in the field of demographic development was published by S.V. Ryazantsev and L.L. Rybakovskii in the "Bulletin of the Russian Academy of Sciences" (Ryazantsev, Rybakovskii, 2021). The authors do not provide a definition of "demographic development", but it follows from the text of the publication that it is understood as the totality of ongoing demographic processes and trends in a certain territory and in a certain period of time. The authors of another monograph adhere to the same point of view: "Demographic development of Russia from the point of view of national security is a key area of public administration, which the President of the Russian Federation has defined as a priority" (Demographic Development..., 2022).

There are many other interpretations of demographic development. Let us cite some of them. For example, I.E. Kalabikhina writes that "demographic development is a process of evolutionary quantitative changes (population reproduction) and revolutionary qualitative changes (movement through the stages of demographic transitions)" (Kalabikhina, 2009). A.A. Kuklin, A.V. Cherepanova and V.A. Chereshnev understand effective socio-demographic development of the region as "such a development of socio-demographic system, in which the region ensures the optimality of population reproduction processes through the effective use of limited socio-economic resources" (Chereshnev et al., 2010). V.S. Steshenko believes that it is "the process of preserving the measure of population as an achieved result of historical progress" (Steshenko, 2013). The dissertation by Yu.A. Prokhorova under the guidance of V.A. Iontsev contains the following author's definition: "Demographic development is both positive and negative changes in the quantitative (numerical and sex-age composition of the population, the ratio of births and deaths and a number of other indicators) and qualitative (the degree of spread of bad habits, the level of socialization, attitude toward education and cultural values) characteristics of the population of a country"[9]. Summarizing the above, we

[9] Prokhorova Yu.A. (2015). International population migration in concepts of demographic transition: Candidate of Sciences (Economics) thesis. Moscow: Moscow State University. Available at: https://new-disser.ru/_avtoreferats/01007980715.pdf (accessed: October 4, 2023).

note: although the concept of "demographic development" has many interpretations, they agree that "development" is a process of change, movement, relating to changes in population size.

We do not find the concept of "demographic development" in English-language sources. The few sources that do exist, upon closer examination, turn out to be English-language publications of Russian-speaking authors (see, for example, Ryazantsev, Rybakovskii, 2021; Manshin, Moiseeva, 2022). Based on these Russian-language definitions, we conclude that the closest English-language terms to "demographic development" are "population change" or "population growth". "Population change" is the difference in population size between two points in time (Baker et al., 2017). According to another definition, "population growth" refers to how the population changes over time (Snider, Brimlow, 2013), i.e. the same as in the previous case. An even closer term is "population growth models", which is also identified with "demographic development" as it implies specification of determinants and actors of population growth (Barupal et al., 2019).

If we return to the definition of the demographic development by L.L. Rybakovskii and G.R. Khasaev (Rybakovskii, Khasaev, 2015), it is closest in meaning to the English-language definition of "population growth". The key difference lies in the role of the demographer. The Russian definition traces the subjectivity of the researcher, assumes the influence and management of demographic processes. In the English-language practice, we observe a certain detachment of the researcher, who states but does not manage demographic development (population growth). In addition, demographic development in Russian practice implies the study of not only quantitative but also qualitative changes in the population. We do not find this in the English-language practice.

Thus, we consider the demographic development as the process of population growth, normalization of its sex and age composition, reduction of territorial disproportions in the settlement of population, strengthening the institution of family and traditional family spiritual and moral values, compliance of demographic dynamics with the goals and objectives of the development of the state and society. To avoid further misinterpretations, we suggest that the scientific community use the term "demographic degradation" as a designation of the reverse situation, which has not yet been properly scientifically conceptualized, but is often found in research publications (see, for example, Bakanov, 2017).

Tools of demographic development and population policy

Since the goal of Russia's demographic policy in the broad sense is always demographic development, the article examines the resources, sources, tools and mechanisms of both demographic policy and demographic development. In the sources on the subject of "resources" of demographic development, including those mentioned earlier in the article, there is obviously some terminological rigidity. Some authors understand "tools" of demographic policy as "sources" and vice versa. Let us dwell on the tools in more detail to distinguish these concepts.

An exhaustive definition of tools in the context of public policy is given by O.N. Basov: "This is a sustainable deliberate action or a sequence of actions (tactics, strategies) of an actor directed at the external environment (whether it is a system or other actors) to change it in the way planned by this actor" (Basov, 2020). Based on this definition, as well as on what was stated earlier in the article, we conclude that demographic policy (development) achieves its goal (demographic stability) by applying the tools of demographic policy to the resources (means) of demographic policy. The application of tools to means is the mechanism of demographic policy implementation (the mechanism of

demographic development). Thus, the concept of "tools" and "sources" (resources) are largely synonymous, but a closer look reveals that tools use sources (resources).

The article by I.I. Matvienko (Matvienko, 2021) analyzes demographic policy tools in detail. The author identifies three main directions: tools to stimulate fertility; tools to stimulate the health of citizens, aimed at improving health and reducing mortality; tools to balance migration processes. The approach is similar to that described earlier in the article edited by L.L. Rybakovsii, in which the above was referred to not as "tools" but as a "set of measures". I.I. Matvienko further identifies five groups of demographic policy tools: 1) financial and economic, 2) organizational, 3) economic, 4) informational and motivational, 5) normative and legal. In our opinion, the author calls "groups of tools", which can also be conceptualized as "groups of demographic policy resources", which once again confirms the complexity of correlation and dialectic nature of the definitions in question. For example, a financial and economic tool can be a maternity allowance, and the financial and economic tool can be the federal budget funds allocated for the payment of this allowance.

The RANEPA team does not define the tools in the work on demographic policy and its tools (Khasanova et al., 2019), but it follows from the content of the publication that they are understood as measures of state support for certain categories of citizens (to improve the birth rate), improvement of the healthcare system (to reduce mortality) and tools to attract labor migrants. Once again, the continuity of L.L. Rybakovskii's theoretical and methodological approach can be traced. We should also note that in the paper the resource is interpreted quite broadly, which is understood not as a source of achieving the goals of demographic policy, but as its result: "quality human resource", "labor migration as a resource", "health care resources", "labor resources". Thus, the dialectic of demographic development resources is traced, which can be both a demographic policy resource and its result, i.e. a resource of the state in achieving the goals of its existence and development.

In the national demographic report "Demographic Well-Being of Russian Regions" edited by Doctor of Sciences (Sociology) T.K. Rostovskaya and Doctor of Sciences (Economics) A.A. Shabunova (Demographic Well-Being..., 2022), the first section is devoted to the tools for regulating demographic development. The work also does not define demographic development tools, but it follows from the content of the section that the authors interpret this concept quite broadly and that these tools can be characterized as any activities and efforts aimed at the demographic development of the country, including the development of demography as a science, methods of collecting and analyzing demographic information, improving the training of personnel in the field of demography, etc. We should say here that what has been mentioned above rather refers to the tools of demographic policy implementation or to the resources of demographic development; however, as we have already demonstrated in the article, these definitions are very close and their distinction can be very debatable.

It is also necessary to point out the dialectics of understanding the tools of demographic policy, since demographic policy (or demographic development) itself is interpreted by many authors as a tool. For example, A.D. Gatin calls demographic policy as "a tool for forming the labor potential of the region" (Gatin, 2019). The article by N.P. Neklyudova expresses and substantiates the thesis that demographic projection (as an element of demographic policy) is an instrument of socio-economic development of the region (Neklyudova, 2021). N.V. Mironova considers demographic policy as a tool to ensure Russia's economic security (Mironova, 2019).

Demographic potential

Another related fundamental demographic concept is the concept of "demographic potential". Earlier in the study, we have already given the definitions of potential. It was demonstrated that "potential" and "resource" are rather similar definitions, but potential implies a subject in relation to which it is measured, and also potential is possible means, not only available means. However, we cannot ignore the fact that there is a lot of research in the field of demographic potential, so it is necessary to understand this term in more detail.

It is believed that the concept of "demographic potential" was first introduced by the English demographer R. Fisher in the 1920s[10]. He considered the birth of a person as the receipt of life "on credit", and the subsequent birth of one's own children – as a "debt repayment". The beginning of the study of life potential is associated with the work of L. Hersh, migration potential – with the works of J. Stewart, J. Zipf, S. Stauffer and W. Izard.

O.L. Rybakovskii and O.A. Tayunova note that demographic potential is an artificial, instrumental concept needed for management and forecasting purposes. Their author's definition reads: "In the narrow sense, it is the potential of population reproduction, including only the potential of changes in fertility and mortality. In the broad sense, it is the potential of total population movement – the potential of population reproduction and migration potential" (Rybakovskii, Tayunova, 2019b). The paper also presents the evolution of the definition of "demographic potential" and lists the most famous authors and their interpretations, as well as related concepts: "human potential", "life potential", "migration potential" and others. The publication notes that the authors of many works define demographic potential based on the research objectives, somehow narrowing the general concept to the specific framework of the object of study.

In the most relevant publication by O.L. Rybakovskii for 2023, devoted to an in-depth analysis of the term "demographic potential", we find the following definitions: "Demographic potential is a generalizing term that includes resources and/or current and prospective opportunities and/or additional reserves for the development of demographic processes occurring in a particular territory, as well as (in the case of population migration) beyond its borders – in the regions related to migration. Demographic resources – the number and demographic structures of the territory's population. Demographic opportunities – levels of intensity of demographic processes in the territory and their demographic consequences, such as changes in demographic structures. Demographic reserves are prospective possible deviations of the intensity levels of the territory's demographic processes and their expected demographic consequences from the trends that are "prospective inertly" – under the influence of demographic policy measures, external and internal factors" (Rybakovskii, 2023).

A well-known Ural demographer A.I. Kuzmin in his work devoted to approaches to assessing the demographic potential of the territory, understands demographic potential as the latent opportunities inherent in the structure of the population by various demographic characteristics: "Demographic potential as a synthetic category is not just the number or mass of the population of a country or macroregion, but a certain system of assessment of the potentials of its viability, marriage, fertility, divorce, formation of sex-age and family-marital structure and territorial mobility of the population (including pendular migration)" (Kuzmin, 2016). In A.I. Kuzmin's work, we analyzed the works devoted

[10] Ediev D.M. (2008). Theory and applications of demographic potentials: Candidate of Sciences (Physics and Mathematics) thesis. Moscow: Vychisl. tsentr RAN. Available at: https://new-disser.ru/_avtoreferats/01004057691.pdf (accessed: October 12, 2023).

to the study of demographic potential, which helped to identify two methodological approaches: from the position of quantitative estimates and from the position of population quality potential. Among the researchers using quantitative assessments, nine groups of authors were identified, who adhere to the following concepts: population growth potential, descriptive demography, potential for optimization of family and marriage structure, population viability potential, population survivability potential, fertility potentials (total, marital and non-marital), hypothetical minimum natural fertility, population marriage potential, depopulation potential. Among researchers using qualitative ones there are six groups: the concept of demographic optimum, the concept of self-regulation of demographic processes (homeostasis), axiological approach, valeological approach (socio-pedagogical approach), gender approach, human capital (cultural capital).

The scientific literature presents many interpretations of the concept of "demographic potential", in many respects contradicting each other, but it is possible to identify the continuity of some approaches. For example, the team of authors at N. Laverov Federal Center for Integrated Arctic Research analyzed approaches to the definition of demographic potential and came to the same conclusions as A.I. Kuzmin. The work does not define demographic potential, but states that "when assessing the demographic potential of the territory, it is proposed to consider the following characteristics: quantitative – population size, sex and age structure, natural and mechanical population movement, life expectancy, qualitative – population health, education, marriage and divorce rates, ethno-cultural and religious composition of the population, demographic paradigms" (Smirennikova et al., 2018). On the contrary, O.I. Evseenko in her dissertation understands demographic potential as "the number of the part of the population characterized by high average life expectancy and potential ability to reproduce (children)"[11]. The team of authors at UrFU identifies the terms "human capital" and "demographic potential" and gives the following definition: "a set of knowledge, skills and motivations of a person that have economic value" (Bedretdinova, Semenenko, 2012). In the study by the team of Sholom-Aleichem Priamursky State University, the demographic potential of the region is understood as "the relationship between the dynamics of the population of the territory, both as a whole and in its individual constituent socio-demographic groups, and the level of reproduction (replacement) of generations" (Lutsenko et al., 2017).

The English-language literature does not use the term "demographic potential". The closest English-language term is "demographic dividend". This term was introduced into scientific use by Andrew Mason; his definition states that demographic dividend is the potential for economic growth, which can arise as a result of changes in the age structure, mainly when the share of working-age population (from 15 to 64 years) is greater than the share of working-age population (14 years and younger, 65 years and older) (Mason, 1997). This terminology is actively used by UNFPA (United Nations Population Fund)[12]. In further studies of the economic effect of changes in the population structure, the "second demographic dividend" was singled out, which implies an increase in savings in the country's economy (pension fund, etc.) associated with population aging and an increase in the share of social dependents (Acemoglu, 2013).

[11] Evseenko O.I. (2002). Methodological basis for assessing the demographic potential of the region: Candidate of Sciences (Economics) thesis 08.00.05. Saint Petersburg: S.-Peterb. gos. inzhener.-ekonom. un-t. Available at: http://www.dslib.net/economika-xoziajstva/metodologicheskie-osnovy-ocenki-demograficheskogo-potenciala-regiona.html (accessed: September 29, 2023).

[12] Demographic dividend. UNFPA, 2024. Available at: https://www.unfpa.org/demographic-dividend#0 (accessed: February 10, 2024).

E. Mason and R. Lee concluded that the second demographic dividend has a greater impact on the economy than the first one (Mason, Lee, 2004). Consequently, the domestic term "demographic potential" is most consistent with the term "first demographic dividend" in the English-language literature. The main difference is that in the Russian-speaking scientific environment, the concept of "demographic potential" includes the whole range of expected demographic effects, mainly social and economic, while in the English-speaking literature it is the economic effect of changes in the population structure that is usually considered.

Thus, the concept of "demographic potential" has so many interpretations that modern research on this topic is mostly devoted to reviews of approaches and attempts to systematize different definitions. Despite the extensive list of literature sources, demographic potential still requires fundamental understanding and description.

Demographic resilience

In foreign literature we do not find such terms as "demographic development" or "demographic resources". However, there is a similar concept of "demographic resilience", which is also reflected in the works of Russian researchers. This concept is promoted by the UN within the framework of sustainable development methodology and as one of its components – "sustainable demographic development" or simply "demographic resilience". The United Nations Population Fund (UNFPA) declared 2022–2032 the decade of demographic resilience. The initiative identifies key areas of medium-term relevance: demographic aging; rural revitalization; fertility support; gender equality and family policies; supporting the aspirations of young people; and financing social policies (Demographic Well-being..., 2022).

A UNFPA policy document articulates the following: "Demographic resilience is a goal that includes the ability to predict demographic shifts, understand their effects and develop evidence-based, rights-based policy interventions. It means moving away from narrow approaches focused on population size alone to integrated population and social policies that aim to ensure prosperity and well-being for all"[13]. It follows from the content of the program that demographic resilience is the goal of public population policy, the situation of population growth in countries facing depopulation. In this context, demographic resilience is not so much scientific and methodological in nature, but rather political and managerial.

The methodology of demographic resilience is found not only in program documents, in which it originated as a concept, but often in scientific publications. Here are some definitions of authors. In the publication by O.M. Roy, a similar in meaning, but more specific and scientifically formulated definition is presented: "Demographic resilience of the territory is a property of local places of settlement characterized by stable values of the dynamics of demographic indicators, reflecting the high adaptability of the population to the conditions of their residence" (Roy, 2018). According to N.N. Kiseleva, "demographic resilience is such a development of demographic processes and structures that allows territories to fulfill their internal and external functions most fully and effectively in specific spatial and temporal conditions" (Kiseleva, 2008).

Demographic resilience originated within the sustainable development concept, which is also referred to as sustainable socio-ecological-economic development. If we distinguish three components of sustainable development, then

[13] Demographic Resilience Program for Europe and Central Asia. *United Nations Population Fund (UNFPA)*. Istanbul. 2022. Available at: https://eeca.unfpa.org/sites/default/files/pub-pdf/104_demographic_resilience_brochure_russian_r2.pdf#:~:text=Демографическая%20устойчивость%20-%20это%20цель%2C,процветания%20и%20благополучия%20для%20всех (accessed: October 13, 2023).

demographic resilience will be attributed to sustainable social development as its most important, but not the only component (Lazareva et al., 2017). Some studies indicate that demographic resilience indicators include not only quantitative but also qualitative characteristics of the population, such as levels of education, employment, crime, etc. (see, for example, Gaifullin, 2016). Other researchers shift the focus toward health system indicators, such as disability, mortality from external causes, morbidity from socially significant diagnoses, infant mortality, etc. (see, for example, Rudneva, Sokolov, 2023).

In the English-language literature, where the term "demographic resilience" originated, it is also used extensively in research. An article by a team representing six of the world's leading universities in the field of demography provides the following definition: demographic resilience is the inherent ability of a population to resist and recover from shocks (Capdevila et al., 2020). Another international team notes that demographic resilience reflects the ability of a country (or region) to ensure the quantitative and qualitative reproduction of demographic structures under specific historical, socio-economic, legal and natural conditions (Nikolaiets et al., 2023). In addition, demographic resilience is seen as the ability to maintain a long-term trend of population growth (Colantoni et al., 2020).

Thus, despite the widespread use of the demographic resilience concept in scientific research, it does not have scientific rigor and uniform definition. Demographic resilience is a certain desired state of the socio-economic system, which is interpreted by different authors depending on the branch of knowledge, applied methods and the desired management result. Demographic resilience cannot be characterized as an established theoretical and methodological concept, as it originated and is used more as a socio-political term.

Review of interpretations of the definitions "resources", "sources" and "potential" in encyclopedic editions and dictionaries

No.	Definition			Source
	resource	source	potential	
1.	Sources available but accessed only when needed	1. Actual conditions, opportunities. 2. Individual spiritual or physical qualities necessary for something; abilities. 3. Money, capital.	Funds, capabilities, sources, stocks that can be used to solve a task, achieve a certain goal; capabilities of an individual, society, state in a certain area	*Modern Dictionary* (1997). Moscow: Bol'shaya sovetskaya entsiklopediya. P. 6110.
2.	1. A source to which one turns in a time of need. 2. Reserve or source of funds	1. Reception, method of action to achieve something. 2. An object, device (or set of them) necessary for realizing any activity.	A set of sources, conditions necessary for conducting, maintaining, preserving something	Ushakov D.N. (2014). *Large Explanatory Dictionary of the Russian Language. Modern Edition*. Moscow: Dom Slavyanskii knigi.
3.	1. Stocks, sources of something. 2. A source to which one turns in a necessary case (book)	1. Reception, method of action to achieve something. 2. A tool (an object, a set of devices) for carrying out some activity.	The degree of power in some respect, the totality of some means, capabilities	Ozhegov S.I., Shvedova N.Yu. (2000). *Explanatory Dictionary of the Russian Language. 4th Edition, Extracted*. Moscow: Azbukovnik.

End of Table

No.	Definition			Source
	resource	source	potential	
4.	An opportunity that can be resorted to when necessary	1. A technique, method of action for accomplishing, achieving something. 2. The thing which serves a purpose, is necessary for the accomplishment, realization of something.	Totality of all available opportunities, means in some field, sphere	Efremova T.F. (2005). *Modern Explanatory Dictionary of the Russian Language. Volume 2*. Moscow: AST.
5.	(From French – ressource – monetary means, values, reserves, capabilities, sources of funds, income (e.g., natural resources, economic resources).	–	Sources, opportunities, means, stocks that can be used to solve a task, achieve a certain goal, capabilities of an individual, society, state in a certain area	Prokhorov A.M. (Ed.). *Large Encyclopedic Dictionary*. Moscow: Sovetskaya entsiklopediya; Saint Petersburg: Fond "Leningr. Galereya".
6.	Cash, valuables, inventories, opportunities, sources of funds, income	1. A sum of money, credit, capital; instruments for carrying on an activity 2. A way of acting to accomplish something	A set of available means, capabilities in an area	Azrilian A.N. (Ed.). (2002 *Large Encyclopedic Dictionary. 5th Edition, Added and Extracted*. Moscow: Institut novoi ekonomiki.
7.	1. A means to turn to in a predicament, a way out, an opportunity 2. Stocks on hand, funds available for use as required	1. A technique, method of action to achieve something 2. The thing which serves a purpose, is necessary for the achievement, realization of something	The sum of all funds, stocks, sources that can be utilized when needed for a purpose	Evgenievna A.P. (Ed.). (1999). *Dictionary of the Russian Language: In 4 Volumes. 3th Edition*. Moscow: Poligrafresursy. Evgenievna A.P. (Ed.). (1999). *Dictionary of the Russian Language: In 4 Volumes. 4th Edition*. Moscow: Poligrafresursy.
8.	Totality of means and sources of their receipt, possible and available for use in solving certain and unforeseen tasks in the regime of ordinary, optimal and extreme conditions without regard to the time of use. Resources include stocks and reserves	–	–	Vorob'eva Yu.L. (2001). *Civil Protection. Glossary of Concepts and Terminology*. Moscow: Flaist, Informatsionno-izdatel'skii tsentr "Geopolitika". Available at: https://www.urickiy.ru/files/docs/komchs/8.pdf (accessed: September 29, 2023).
Source: own compilation.				

Having defined and distinguished the definitions of "resource", "demographic resource", "demographic potential", "demographic development", as well as the largely synonymous concepts of "sources", "tools" and "potential", let us move directly to the demographic development resources.

"Resource", "source" and "potential": content and distinction of concepts

A more detailed consideration of these concepts is required to use certain definitions more correctly. The term "resource" itself is found in various encyclopedic publications, is included in the conceptual apparatus of many fields of knowledge and is interpreted in different ways, and is quite synonymous with the term "source". In addition, both in demographic and other scientific literature the term "potential" is widely used. We are interested in the etymology and modern meaning of the definition of "resource", as it is the one we propose to use more widely. The *Table* outlines generally accepted and specialized approaches to the interpretation of the definitions of "resources", "sources" and "potential".

Summarizing the above, we can conclude that a resource (in a broad sense) is something that can be used to achieve a certain goal, to meet certain needs. In addition, the interpretations trace that a resource is always a stock of any natural, economic, etc. objects, means. Accordingly, when we talk about resources, we mean what is already available, rather than what can be created or borrowed. In the broadest philosophical sense, a resource is any entity or phenomenon that possesses certain capabilities (material, energy or other) and at the same time is available for purposeful use by a person. In a narrower, state-administrative sense, a resource comprises the internal material and spiritual reserves of all parties and components of the state, the main sources for creating socio-economic benefit and ensuring development.

Close, but not identical in meaning is the definition of "source" because the interpretation of "resource" in the vast majority of cases is carried out using the concept of "source", from which we conclude that it is used as a synonym. Based on the study of the above interpretations, we can generalize that a "resource" is always a "source", but one that is available (stock) and resorted to in case of necessity in achieving any goal. On this basis, we propose to use the definition of "resource" in relation to the demographic development, as they believe that contemporary Russia has the source for demographic development, and also because there is an objective need to achieve demographic stability (goal), which has not yet been achieved.

In addition, the term "potential", based on the presented definitions, is almost identical to the term "resource", but with a slight difference. Potential is a set of all means to achieve the goal, unlike a resource which represents what is only available, in stock. In addition, according to T.N. Batova and V.A. Krylova, the fundamental difference between the terms "resources" and "potential" is that resources exist independently of the subjects of activity, while potential is inseparable from them (Batova, Krylova, 2016). In other words, demographic potential cannot exist by itself, it should be tied to something: "demographic potential of Russia", "demographic potential of fertility", "demographic potential of young families", etc. Thus, "demographic development resource" as opposed to "demographic development potential" is, on the one hand, a broader term, since it is not tied to the subject of management, and on the other hand, a narrower term, since it implies only available means.

We should also note that we deliberately do not provide interpretations of the definition of "resource" that are not relevant to the research topic. In addition to the above definitions, a resource is understood as a person's vital energy ("an employee in a resource", "come to the end of one's resources", etc.), mainly in studies in the field of leadership and psychology. In addition, a resource

is often understood as a means of production ("material resources", "money resources", "production resources", etc.), this interpretation is characteristic of economic dictionaries and sources related to business and industry. Also, a resource in ecology is understood as both the planet's ability to absorb environmental damage ("Earth resources") and sources of energy and other benefits ("renewable resources", "water resources", etc.). In English terminology and related IT terminology, a resource is a source of data ("electronic resource", "Internet resource", etc.).

Demographic development resource

Existing approaches to defining "demographic development resource"

The scientific community has no consensus on what should be understood by the term "demographic development resources". For example, T.M. Smirnova and V.N. Krutko write about demographic development resources (Smirnova, Krutko, 2011), demonstrating the relationship between the economic share aimed at human-oriented goals and the improvement of the dynamics of demographic indicators. Thus, without providing a definition, the authors understand the resources for Russia's demographic development as economic resources that could be directed to improve the state systems of healthcare and education.

In the article (Shorkin, 2011), A.D. Shorkin proposed an innovative theoretical and philosophical approach to the definition of demographic development resources. In his opinion, the demographic development resources should be understood much more broadly, studying the human being as a part of the noosphere (according to V.I. Vernadsky: "the state of the biosphere", in which the transformative and cognitive activity led by the human mind is incorporated). The author believes that the demographic development resources include three components: material resources (organic and inorganic substances, their fields, as well as different types of energy), temporal resources (the amount of time spent on achieving the goal), symbolic resources (respect and trust, beauty and courage, honesty, affection, praise, love, etc.).

Another team of authors (Kalachikova et al., 2021) also does not provide a definition of demographic development resources, but obviously understands them as a set of demographic indicators that have an advanced development rate. In particular, the authors emphasize that the resource of demographic development in Belarus is the fact that the average life expectancy and healthy life expectancy in the republic is greater than in Russia. In addition, the authors include "improvement of public health, reduction of preventable mortality" in the demographic development resource.

In one of his works, S.V. Ryazantsev lists the demographic development resources, which, apparently, include measures of state regulation of demographic and migration processes, in particular, the creation of databases on families applying to the centers for social assistance to families and children; improving public health, increasing the duration of active and healthy life, reducing mortality, primarily from external causes; stimulating the mobility of labor resources, attracting migrants of the necessary categories, attracting educational institutions, attracting migrant workers of the necessary categories, attracting educational migrants (Ryazantsev, 2020).

The English-language literature usually considers the demographic resources as sources of population data (see, for example, Pomazkin, Filippov, 2022) due to differences in the interpretation of the word "resource" (in Russia – "electronic resource", etc.), but there are exceptions. Maurice Gesthuizen et al. believe that the degree of children's education is conditioned by the presence of three types of resources in their parents: socio-economic, cultural and socio-demographic. By the latter they mean the absence of socio-demographic deviations in the family: normal

contact and sufficient interaction between parents and children; more than one child in the family, but not too many; complete family (two parents); timely birth (not too young age of the mother) (Gesthuizen et al., 2005).

Familiarization with the English-language literature on the topic of "demographic development" made it clear that the issue of resources or sources and components of demographic development is not considered. There is a fundamental difference between the Russian-speaking research community's understanding of demographic processes as those that can be managed and those that can only be observed by the English-speaking research community. As a result, the question of the existence of demographic resources or demographic development resources is not raised.

Summarizing the few identified approaches to the definition of demographic development resources, we conclude that this concept is practically not found in the literature, it is mentioned in passing and in the context of research on non-demographic related areas. It is obvious that the authors who used this definition did not put a special meaning in it, did not reveal its content. We believe that this significant methodological omission should be filled.

Own approach to defining the definition of "demographic development resource"

We pursue a practice-oriented goal: to overcome terminological rigidity in highly specialized demographic definitions, to fill the terminological gap in the development of demographic management methodology in terms of defining and specifying the components of demographic development. Many researchers studying this issue assume the existence of some "resources" or "sources" of demographic development (policy), but do not disclose their content, which is demonstrated in this article. This leads to a situation in which different studies and different authors mean different content under the same terms. The literature review allows concluding that the very existence of "demographic development resources" is assumed by various authors, but their content remains unclear.

As we have already demonstrated in the table, "resources" and "sources" are synonymous concepts and are often used in interpreting each other. Both terms refer to some source, tangible or intangible, that can be used to create or develop something. The main difference between a resource and a source is that a resource is a means that is available, in stock and can be used when needed. Accordingly, a source is a slightly broader concept, as it includes both accumulated resources and potential sources and opportunities, i.e. everything that can be used to achieve a goal. In this article, we are talking about demographic development and, in particular, the development of Russia. We suggest that the scientific community should understand demographic development sources as a wider range of determinants of demographic development, including non-traditional, ethically controversial, futuristic, etc., i.e. all available resources, as well as virtual, theoretical, conceptual, etc.

Summarizing the list of the above definitions of the concepts of "resources", "sources", "demographic policy", "demographic development", "demographic development (policy) tools", "demographic resource" and "demographic development resource", it is worth noting that the categories under consideration are universal, multidimensional and interdisciplinary, which helps us to define a universal terminology and propose the following formulation of the concept of "demographic development resources" as an objective phenomenon: ***demographic development resources*** *are a set of tangible and intangible resources available to demographic policy actors that can be used to manage demographic and migration processes to achieve demographic stability*. Supplementing the universal concept to make it instrumental, we note that ***demographic development resources*** are

a component of demographic policy and together with demographic policy instruments form the mechanism of demographic development. Demographic development resources are classified in accordance with the determinants of demographic behavior. This definition, in our opinion, rather accurately corresponds to our idea of demographic development resources in the context of demographic stability as a priority of demographic policy of the Russian Federation and can be used in the practice of formation of state demographic policy, in the formation of strategic planning documents.

Let us summarize all the above to substantiate our vision and definition of "demographic development resources". First, we should say and emphasize that in modern demographic science researchers can adhere to one of two contradictory concepts. The first one consists in the belief that demographic processes are controlled processes. Adherents of this concept, albeit unconsciously, seek and identify the determinants of demographic behavior, as well as tools to influence these determinants to adjust the final demographic result. According to the second concept, demographic processes are the result of the totality of complex, sometimes incomprehensible determinants, so that demographic processes are not controllable. Adherents of this concept are convinced that a demographic researcher is not a manager, but rather a mathematical statistician who identifies mathematically correct patterns and draws conclusions and forecasts about the alternative demographic situation that is to come. At the same time, researchers rarely realize their adherence to the first or the second concept and indicate it in the text. The adherents of the first concept are, as a rule, traditionally thinking Russian demographic researchers based in the oldest and most authoritative Russian research institutions (the systems of RAS, Moscow State University, RANEPA, etc.). Adherents of the second one are researchers from foreign countries (WHO, World Bank, UN, etc.), as well as Western-oriented Russian research schools (Higher School of Economics, Skolkovo, etc.). We are adherents of the first concept, which in itself determines the possibility of the set research task – to determine the "demographic development resource".

The proposed definition of demographic development resources, in our opinion, has a general scientific and universal character. Accordingly, it has no territorial reference and can be used in relation to any country. However, based on the above, we have to note that the proposed definition, as well as the whole research approach, is more relevant to the Russian and post-Soviet reality. For Russian research practice, this definition fits into the generally accepted approaches, complements them, and brings the necessary scientific rigor. When using it in relation to other countries, it is necessary to translate the whole understanding of demographic processes as manageable, to apply concepts and tools that are not accepted abroad, and only then it will make sense.

Second, and it follows from the first, the issue of determining the determinants of demographic behavior is closely related and interdependent with the issue of forming demographic policy. A natural consequence of determining the determinants and instruments of influence is their application, which, in its totality, is demographic policy. As we have showed in this article, when interpreting demographic policy, most authors use in their definition, among other components, "sources" or "resources" that should be available so as the policy could be implemented. Currently, research on population policy has focused mainly on its tools, as well as statistically significant results. Accordingly, the study and discovery of demographic development resources is an important component of population policy research.

The goal of demographic policy, according to the terminology established in the Russian demographic literature, is always demographic development. As we have demonstrated, as well as in much more detail by L.L. Rybakovskii, "demographic development" and "demographic policy" are so close definitions that in some cases they substitute each other as synonymous. We do not aim to identify the most correct or appropriate one, but to state the established practice of using these definitions. In this case, when speaking about "demographic development resources", we assume that this definition will be synonymous or fully repeat the same for "demographic policy resources". Demographic development is also understood differently by the authors: according to the concepts presented above, the adherents of the first one, as a rule, understand it as purposeful actions to bring the demographic situation to the desired one, while the adherents of the second one imply changes in the demographic situation over time. Of course, within the framework of this article we talk about demographic development as a goal of demographic policy, the process of positive changes in the demographic situation.

Third, it is also important to define its other component – the tools of demographic development to understand the demographic development resources as one of the components of demographic development (policy). Since this topic is poorly represented in the works of demographic researchers, the literature review shows that there is practically no distinction between "tools" and "resources". In our opinion, the tools of demographic development are applied to the demographic development resources, which together represent the demographic development mechanism. Development tools are actions or a sequence of actions aimed at achieving the goal. "Resource" and "tool" can be difficult to distinguish. For example, is a normative legal act in the sphere of fertility stimulation a resource or a tool? In our opinion, it is a tool, and the money allocated for the implementation of measures to stimulate fertility is a resource. However, there can be a more complex example – people. Since the population of fertile age reproduces new population, it is a tool, but, as shown earlier in the article, the population itself, according to many authors, is a resource. In this case there is a dialectic of concepts.

Different authors interpret this definition in their own way. The interpretations are determined by the branch of knowledge, within the framework of which the research using this terminology is prepared. The most common groups of interpretations of demographic resource, which understand it as "human resource", "labor resource" and "migrants", are distinguished. In the first case, researchers mean the population itself as a resource for achieving certain socially important goals. The measure of demographic resource in this case is the total number of population. In the second case, since we are talking about achieving goals in the field of production or the economy as a whole, the demographic resource is understood as workers (working-age) for a particular object of study (enterprise, region, state). Demographic researchers and economists who adhere to the concept of irreversibility and unnecessary overcoming of the "second demographic transition", under the demographic resource understand migrants or only migrant workers as a source of population, labor resources and even solutions to the problem of natural decline. In our opinion, all of the above refers to the concept of "demographic resource", from the point of view of demographic science – these are its elements, from the point of view of achieving a certain goal defined by the researcher – it can be the population in any of its manifestations and sections.

Consequently, a demographic development resource is a resource for achieving a certain goal: in the broad sense – to achieve demographic

development (demographic stability). A demographic resource is one of the types of resources in some classification of resources to achieve a certain goal defined by the researcher. The difference between the definitions is manifested in the fact that "demographic development resource" is specific and can be defined uniformly in accordance with the designated goal – demographic development. "Demographic resource", in turn, can be interpreted in a multifaceted way, depending on the goals of the researcher, the branch of knowledge and the prevailing theoretical and methodological concepts. At first glance, "demographic resource" and "demographic development resource" are consonant, close definitions. However, a closer look shows that their content is different, they are not synonymous and cannot replace each other. If by demographic resources we understand the population in its various manifestations, then by demographic development resources we mean a set of tangible and intangible means of achieving demographic development, including the population, but not all of them and only as one of many components.

Conclusion

The article attempts to define and delimit the list of demographic terms related to the management of demographic processes. We present our definition of the concept of "demographic development resources" and give the corresponding substantiation. The answer to the question of what the demographic development resource is inevitably entails the following: what is included in the demographic development resource, what volume of the demographic development resource the Russian Federation has, how much it needs, whether it can be increased and whether it is necessary, how to use it competently and with the help of what tools, etc. These directions will form the basis for further research. The development of a methodology and specification of concepts for demographic policy components contribute to improving its quality and effectiveness. Concretization and institutionalization of the demographic policy mechanism predetermine the possibility of real management of demographic processes and overcoming demographic problems in contemporary Russia.

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The "Avoidant Individual" as a Social Personality Type in the Russian Trauma Society

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Abstract. In the context of socio-cultural traumatization of Russian society, specific social personality types are formed, which require the attention of researchers. The aim of the work is to analyze the "avoidant individual" as a social personality type. The methodological basis of the work includes the theories of trauma society (J. Alexander, P. Sztompka, Zh.T. Toshchenko) and the anthroposociocultural approach (anthroposociocultural evolutionism; N.I. Lapin). We used general scientific methods: analysis, synthesis, generalization, induction, formalization, idealization, typologization, generalization, analysis of scientific literature, secondary data analysis. The results obtained and the novelty of the study are as follows: we were the first to demonstrate the heuristic potential of using Zh.T. Toshchenko's theory of trauma society and N.I. Lapin's anthroposociocultural approach to develop a concept of the "avoiding individual" as a social personality type in a trauma society; we showed the possibility of using a crucial protective mechanism – avoidance of traumatic situations experienced by an individual – as a basis for identifying a specific social personality type "avoidant individual"; we defined its features that are formed under the influence of trauma society: high anxiety, lack of a clear image of the desired future, value orientations on material well-being, career, family, health, hedonism, a tendency toward antisocial behavior. It is the presence of post-traumatic motivation, which underlies the value orientations manifested by the respondent, that acts as a criterion for classifying a person as belonging to this social type. The findings of the research can be used for the development of sociological theories of personality,

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sociology of culture, sociology of management, sociology of social change. It is of practical importance to study the distribution of this type of personality in various social groups, strata and regions of the country. One of the important areas of future research is to analyze the influence of representatives of this type of personality on the social processes taking place in Russian society.

Key words: anthroposociocultural approach, theory of trauma society, Russia as a trauma society, social personality type, "avoiding individual", "self-fulfilling individual".

Introduction

The *relevance of the research* is determined by the importance of scientific comprehension of the impact of intense socio-cultural turbulence, occurring both in Russia and outside it, on people living in our country. The socio-cultural and psychological effects of the epidemic, special military operation and external economic sanctions are of a powerful traumatogenic nature. Russian sociology faces a whole set of tasks to study the effects of deep, sometimes catastrophic, social changes that Russia has experienced not only in the previous three and a half decades, but throughout the entire period of the 20th–21st centuries. Their results are diverse and by no means always have a positive impact on the value orientations and other internal phenomena underlying the social types of Russians' personality.

The social personality type, which is formed in a society, concentrates its main features, advantages and disadvantages, manifests social development trends, both positive and negative. Excluding their representation in various social groups, it is impossible to effectively implement public administration at all levels.

Actualization of these issues is also associated with the increasing public need for the human dimension of processes studied by sociology (Toshchenko, 2012, p. 25). "Russian society's traumatization, expressed in the split, bifurcation, contradictory conflict development, has acquired its particular importance among the new phenomena of public consciousness at the current development stage..." (Toshchenko, 2015, p. 37).

The new interpretation of contemporary Russia as a trauma society requires addressing the analysis of the effects of this state in the human aspect, from sociological positions – this is, in particular, a detailed analysis of the existing social personality types because not all of them have been studied in detail. At the same time, in our opinion, there are some "blind spots" in the study of personality types, which are conditioned by Russia's specifics, inherent in it as a trauma society. In the previous decade, the analysis of social personality types of contemporary Russian society, especially in the light of the trauma society concept, is very rare in the current sociological agenda.

In this article, by social personality types we mean such personality types that are immanent to the entire trauma society, regardless of the social affiliation of an individual (of course, their prevalence in different social strata and groups is different, but the study of this issue requires special empirical research and is beyond the scope of our article). Hence, the aim of our research is to analyze the features of the social personality type "avoiding individual" in the Russian trauma society.

The research problem is the following: the contradiction between the results of numerous studies, according to which people living in a trauma society have personal defense mechanisms that affect their value orientations and social behavior, on the one hand, and the lack of sociological interpretation of this information in the context of the formation of a specific social personality type.

The subject of the research is the features of the social personality type "avoiding individual" in the Russian trauma society. *The object of the research* is social personality types, formed in contemporary Russia in the context of its belonging to trauma societies.

Research methodology

The theories of trauma society (J. Alexander, P. Sztompka, Zh.T. Toshchenko) and anthroposociocultural approach (anthroposociocultural evolutionism; N.I. Lapin) serve as the methodological basis of the work.

In recent decades, the "trauma society" concept has become common among sociologists: "Trauma theories proper, applied to the analysis of societal and social realities, appeared in the late 20th – early 21st century, which their authors attributed to the non-linear development of society" (Kravchenko, 2020, p. 61). Among these scientists we should include J. Alexander and P. Sztompka, whose works (as well as a number of other foreign and Russian sociologists) are based on the macrosociological approach of Zh.T. Toshchenko, according to which the changes taking place in the world are becoming increasingly difficult to describe with the help of the categories of "evolution" and "revolution"; the author introduces the concept of "trauma society", describing its distinctive features in detail (Toshchenko, 2020). According to the innovative thesis, "the path on which modern Russia is moving should be called the path caused by social trauma in its development" (Toshchenko, 2020, p. 11).

In the context of the aim of our study, it is important to consider the position formulated by Zh.T. Toshchenko, according to which "the influence of egoistic and group interests is great in trauma societies" (Toshchenko, 2020, p. 55). His conclusion is logical: "Russia's trauma was inflicted by those groups, which by misunderstanding are called the elite" (Toshchenko, 2020, p. 60).

In this article, we rely on the anthroposociocultural approach (anthroposociocultural evolutionism) created by N.I. Lapin (Lapin, 2018). The scientist uses the concept of "trauma society" in relation to Russia, analyzing the factors that generate trauma both in the country's population as a whole and in the inhabitants of different regions (Lapin, 2021a).

We should note that unlike Zh.T. Toshchenko, N.I. Lapin considers the "process of traumatization" of Russian society in a wider time range, starting from the origins of Russian statehood. According to his judgment, the main source of trauma "...is the state. Consequently, we have a society traumatized by its state"[1].

In one of recent reports, N.I. Lapin notes: "The synthesizing nature of an individual's identification with the multitude of other members of a given society means his identification, or choice of strategy of interactions with the **society** in which he exists and with whose members he interacts. This is the **basic interaction** of individuals. We propose to characterize the meanings of these generalized interactions as a **civic-social culture** of mass interactions of the population with society as a whole, which affects various types of people's activities. There are different types of this culture, with its features in each civilization, society-country" (Lapin, 2021b, pp. 5–6).

Introducing the concept of "civic-social culture", N.I. Lapin further characterizes it as "... **routine, symbiosis-traumogenic**" (emphasis added by N.I. Lapin – V.N.), identifying it as a source of cultural traumas (Lapin, 2021b, p. 5).

The scholar concludes: "The results of such a culture were many socio-cultural traumas, society, and the state, which created and continue creating dangerous risks for Russia's existence and threats to its successful responses to new great challenges" (Lapin, 2021b, p. 6).

[1] Gorshkov M.K. (Ed.). (2020). Trauma society: Between evolution and revolution. In: *Proceedings of the Academic Notes. Issue 8.* Moscow: FNISTS RAN. P. 25.

Thus, the above works of prominent Russian scientists orient us to analyze contemporary Russian society as a "trauma society", which is characterized by serious conflicts and contradictions; one of their main sources is the "routine symbiosis-traumogenic" culture associated with the nature of people's identification, interaction between social groups and individuals.

Let us emphasize that the analysis of social personality types is impossible without resorting to an interdisciplinary approach. As S.A. Kravchenko rightly notes, at present "...a different type of interdisciplinarity is emerging, which implies the possibility of summarizing and using the results of separately taken monodisciplines; it can be called resultant interdisciplinarity" (Kravchenko, 2020b, p. 19). Accordingly, such a method as secondary analysis of sociological and psychological research data is widely used.

Literature review

One of the important directions of modern sociology is the development and study of various social typologies (including personality). For example, the monograph by well-known Russian authors (Typological Analysis..., 2023) considers this topic in detail. In the broadest sense, a social personality type can be called a stable set of features that characterize it as a representative of a certain social community in a particular era (Nemirovsky, Nevirko, 2008).

Many publications have been devoted to the study of social personality types, existing in contemporary Russia. However, there is a tendency to "repeat the past". For example, the sociological literature continues discussing the correlation among the population of the country of groups with orientations that were born in the Soviet era, on the one hand, and "market-democratic" personality traits, on the other hand, and their role in public life.

There are a variety of personality typologies, which have become classical, based on sociological, psychological, and social-anthropological theories (A. Adler, R. Darendorf, A. Kardiner, A. Maslow, R.K. Merton, J. Mead, E.D. Risman, E. Fromm, C. Horney, E. Spranger, C.G. Jung, etc.). Many of the personality typologies used in sociology are of a combined, interdisciplinary nature.

When considering the Russian tradition of research on this issue, one cannot but mention the famous work of G.L. Smirnov, which became a kind of normative reference point for authors who studied socialist reality in the 1970s–1980s (Smirnov, 1971). Subsequently, a significant contribution to the understanding of the essence of the social personality type formed in socialist society was made by Yu.A. Levada, whose research has been still relevant (Levada, 1995).

In contemporary Russian sociological literature, it is almost universally recognized that the social personality typology existing in society primarily reflects its social essence: "Social and characterological features of personality ... are conditioned by the system of social relations, features of culture, position of individuals in the social structure of society" [2].

At the same time, some scientific publications on this topic suffer from speculative nature. For example, G.I. Kolesnikova, relying on P. Sorokin's concept of civilizational personality types, logically identifies three social types: Eastern (contemplative), Western (rational), Russian (emotional), pointing out that "...in modern Russian society, two social personality subtypes coexist simultaneously: oriented toward traditional values and dominated by Western values" (Kolesnikova, 2018, p. 45). At the same time, this typology, in our opinion, does not take into account the complexity of the palette of social types of contemporary Russian society, ignoring the contradictory processes taking place in it, including its sociocultural "traumatization".

[2] Yadov V.A. (2014). *Sociological Dictionary*. Moscow. Pp. 454–455.

Another example is the well-known model, whose author, distinguishing seven social types of personality, believes that "...for simplicity, we can limit ourselves to four types: harmonious worker, ego-actor, servant and player". This synthetic typology also includes the criterion of "awareness": "The main social personality types are able to evolve depending on the awareness of their own activity and moral choice" (Smirnov, 2011, p. 117). Having a certain scientific logic, the author's constructs are poorly connected both with the reality in which we live and with the sociological research practice because their empirical interpretation is extremely difficult, if not impossible.

Relying on the trauma society theory developed by Zh.T. Toshchenko, Y.G. Volkov analyzes objective processes and events in the Russian society life that served as factors in the formation of sociocultural traumas. In his opinion, the most large-scale of them are often geopolitical in nature (Volkov, 2022). The author makes a fair thesis: "Social and cultural traumas also hinder the formation of a creative type of personality...", "... It is simply impossible to form such a personality under the pressure of traumatic perceptions and images, outside of healthy horizontal social ties, atmosphere of mutual trust, in a situation of acute social and property inequality" (Volkov, 2022, p. 21).

However, in the Russian sociological literature, there is a general lack of analysis of the specific features of the social personality type characteristic of the trauma society.

At the same time, Russian psychological science has published a number of studies devoted to the development of personality in a traumatic situation. For instance, the article by A.I. Krasilo analyzes the individual-social form of psychological trauma (Krasilo, 2021). Representatives of this science actively consider the influence of traumatic experience of the COVID-19 pandemic on the psychoemotional state and other psychological features of people (Isayeva, Sutayeva, 2021; Nestik, Zhuravlev, 2021, etc.). A number of publications are devoted to the personality traumatization in the process of military conflicts (Boiko, Novikova, 2019), their impact on the psychological state of society (Nestik, 2023). Although they do not talk about social personality types, the obtained data are reasonable to take into account when analyzing the socio-psychological mechanisms of formation of the personality type "avoiding individual".

At the same time, we cannot ignore the fact that there is a wide range of English-language publications analyzing the impact of various socio-cultural traumas (including historical and psychological traumas) from the perspective of sociology and related scientific disciplines on certain personal constructs.

In our opinion, the key to understanding the specificity of social personality types in trauma societies is the concept of "complex posttraumatic stress disorder (complex PTSD)"; according to the definition formulated by the authors of an article published in the authoritative scientific journal *The Lancet*, it is "a severe mental disorder that arises in response to traumatic life events. Complex posttraumatic stress disorder is characterized by three major clusters of posttraumatic symptoms, as well as chronic and pervasive disturbances in emotion regulation, identity, and relationships" (Maercker et al., 2022).

For example, based on a meta-analysis and data from 19 studies (5,971 individuals), the association of all temperament traits with PTSD symptoms was established regardless of individuals' gender, type of study, type of trauma, temperament score, and time since trauma (Cyniak-Cieciura, Zawadzki, 2021).

In recent years, interdisciplinary empirical studies have been published that analyze the changes that occur in personality under the influence of different types of socio-cultural trauma, such

as intergenerational cultural trauma related to the Armenian genocide (Mangassarian, 2016). Posttraumatic stress, willingness to forgive, and meaning in life "in residents of regions experiencing ongoing violence (Middle East), violence in the recent past (Africa), violence and disasters in the distant past (Caucasus), and recent natural disasters (the Caribbean) (Tummala-Narra, 2022) have also been studied, etc. Characteristically, some interdisciplinary studies see trauma as a collective disease and the root cause of protracted social conflict (see, for example, Rinker, Lawler, 2018, etc.). According to A.M. Subica and B.G. Link, "following cultural trauma, affected groups are socially disadvantaged and subject to pervasive stress, stigmatization, and resource limitation that perpetuate health inequalities. Accordingly, cultural trauma may represent an unexplored fundamental cause of social inequalities in health (Subica, Link, 2022).

Over the previous years, the focus of attention has often been placed on ways of overcoming the consequences of socio-cultural trauma for an individual. For example, T. Glebova, S. Knudson-Martin analyzed the problem of the impact of sociocultural trauma on human personality in the context of injustice associated with totalitarianism, war and related deprivations, considering in this context practical ways to overcome such traumas (Glebova, Knudson-Martin, 2023).

The results of socio-cultural traumas in modern Russia and some other post-Soviet countries are also considered. In particular, E.V. Miskova, based on autoethnographic methodology, studied the effects of historical and cultural traumas experienced over the previous century by several generations of families in Russia. The author refers to such events as "wars, repressions, and radical socio-economic and political changes that occurred over the last three decades after the collapse of the Soviet Union". The article shows ways of overcoming old traumas and internal conflicts in the context of current social problems caused by them, such as "low institutional and interpersonal trust, gender and generational inequality, and collective emotional processes of denial, loss, and guilt" (Miskova, 2023, p. 31).

Drawing on the results of surveys conducted "in October and November 2014, before the student protests and Euromaidan in Ukraine" (Długosz et al., 2020, p. 18) on representative samples in post-Soviet countries belonging to "trauma societies": Russia (N = 992), Belarus (N = 1034), Moldova (N = 970), and Ukraine (N = 1000), the Polish researcher found that people's adaptation to change in post-Soviet societies was facilitated by young age. The younger generation had higher levels of happiness, better assessments of their financial situation, their position in the social hierarchy and future prospects. The highest satisfaction rate with democracy was noted in Belarus and Russia. "Russians and Belarusians, and then Moldovans are located at high positions in the continuum of adaptation to social change, while Ukrainians managed to adapt to the system to the lowest degree" (Długosz et al., 2020, p. 9). Kyrgyzstan, included in recent decades in complex transition processes, is also a "trauma society", which "is reflected in the features of mass consciousness and personality" (Sorochaikina, 2020, p. 116).

In general, studies by various authors show that in the trauma society existing in different countries (and the Russian society is not an exception), significantly distorted personality types are formed.

Research results

This brings up the logic question about the specificity of social personality types formed in the trauma society. Traditionally, one of the main criteria of social personality typologization is its value orientations. We should agree with the opinion, according to which "the social personality type depends on what the society itself is like, and

especially what its priority values are" (Volkov, 2021, p. 18). At the same time, in sociology they are important indicators of the consequences of society's traumatization (of course, we can also talk about needs, various emotional phenomena, as well as about person's social behavior).

Sociological research usually defines the value that the respondent strives to realize. It seems that the idea that the motivation of social behavior can be based only on the desire to realize certain values is somewhat simplistic. It does not take into account the existence of a significant range of behavioral motivations that are not based on the desire to realize a social value, but are based on the avoidance of possible repetition of any negative traumatic events and their consequences. A series of socio-cultural traumas and catastrophes have generated intense socio-cultural turbulence in the country; they are: the war in Afghanistan, the collapse of the Soviet Union, hostilities in "hot spots" on the country's borders, two Chechen wars, the war in Georgia (2008), hostilities in Donbas, the COVID-19 pandemic, and the SMO. The states of anomie, exclusion, stress, frustration, deprivation and related *posttraumatic motivation* are widespread, in the most general form based on a person's desire to avoid repetition of the traumatic situation and its consequences.

Accordingly, we can distinguish two types of social motivation in the trauma society, which underlie the respective personality types: a) directed toward self-actualization and b) post-traumatic, stemming from the desire to avoid a repetition of the traumatic situation.

The first of them includes orientations to any values that are considered by a person as a way of self-realization. This can be, for example, creativity, professional activity, family, etc. It is logical to define this type as a *"self-fulfilling individual"*.

In this case, the trauma society massively generates a social personality type, the basis of whose behavior is the desire under the action of the psychological protection mechanism to *avoid* the repetition of various socio-cultural, psychological traumas, any negative life experience (and its consequences), received not only in the socialization period, but also in any subsequent period of human life[3]. Accordingly, this is an *"avoiding individual"*. For example, orientation to the values of "power", "security" or "freedom", "wealth", which to a greater or lesser extent reflect the deficit of the feeling of security experienced by a person, can testify to belonging to this person. For example, the orientation to wealth is often based on the desire to *avoid* repetition of negative experiences generated by poverty or poorness that have already been experienced (or seen). A person's desire for power in most cases is expressed in the realization of a traumatized sense of security. If in the socialization process (more often at early stages) a person lost control over their own life, later they try to gain maximum power over surrounding people by any means. Accordingly, its achievement acts as a means of avoiding negative experiences, which are manifested in such phenomena well registered by sociological methods as anxiety, various kinds of social fears and risks. Based on the data obtained in Russia as a whole and in several of its regions using the methodology developed under the guidance of N.I. Lapin, the comparative analysis shows that any social fears are a powerful factor of socio-cultural deformation of such important characteristics of the human life world as locus of control, the degree of pessimism/optimism and life satisfaction (Nemirovsky et al., 2018). One of the important indicators of traumatization of Russian society is the anxiety state, as evidenced by various

[3] There are also other psychological defense mechanisms, but it is avoidance, in our opinion, that can be the basis for distinguishing a specific social personality type in the trauma society. Other personality defense mechanisms (for example, sublimation, displacement, etc.) are much less significant for the formation of socially significant value orientations of a person, determining their behavior mainly at the interpersonal level. A detailed substantiation of this fact is beyond the scope of this article.

surveys of the country's residents[4]. This also applies to depressive states. A survey conducted by the Institute of Psychology of the Russian Academy of Sciences together with VCIOM in September 2023 showed that 32% of respondents have **clinical** (emphasis added – V.N.) level of symptomatology of depression based on self-reports, and 18% of respondents have anxiety[5]. At the same time, there is a social differentiation in the manifestation of these states, which, in our opinion, directly indicates the belonging of carriers of the social type *"avoiding individual"* to specific social groups: "In general, monitoring studies of the Institute of Psychology RAS in 2020–2023 ... show that in crisis conditions, the most susceptible to anxiety-depressive states are representatives of young people aged 18–24 years, women, respondents with low incomes, people with higher education and workers in the private sector"[6] (Citation). It is the presence of posttraumatic motivation (or its absence) underlying the value orientations manifested by the respondent that serves as a criterion for categorizing a person into one or another social type.

Discussion

Let us consider in detail the features of social personality types as *"avoiding individual" and "self-fulfilling individual"*. For this purpose, we should turn to the socio-psychological characteristics of value types, which were obtained with the help of a wide range of well-known techniques: the Life Orientation Test (LOT), the Self-Actualization Test (SAT), the Subjective Control Level Questionnaire (SCQ), the Self-Relationship Questionnaire (SRQ), the 16-factor Personality Questionnaire (16PF), the Minnesota Multidimensional Personality Inventory (MMPI), etc. (Yanitskiy, 2020). The author used various random and non-random samples; the total number of respondents was about 10,000 people.

With the help of cluster analysis, three psychological types were identified, which represent different systems of value orientations: "adapting" type (orientations: health, material security, "freedom from", entertainment) – 29% of respondents, "socializing" type (respectively, family, career, social recognition) – 46% and "individualizing" type (self-actualization, creativity, "freedom for", tolerance) – 25%. At the same time, the representatives of the "adapting" type are characterized by high anxiety and frustration tension; the "socializing" type is characterized by conformity, dependence and externality; the "individualizing" type has such features as high life meaningfulness, internality and positive self-concept (Yanitskiy, 2020, p. 197).

Judging by the above-mentioned psychological features forming value orientations, the social personality type *"avoiding individual"* is manifested through "adapting" and "socializing" types of value orientations, *"self-fulfilling individual"* – "individualizing". We should say that in our society there are not so many people who have avoided socio-cultural (psychological) traumatization both in the process of early socialization and in their subsequent life. Therefore, in empirical analysis the share of representatives of the *"avoiding individual"* type in most cases will always be greater than the share of carriers of the *"fulfilling individual"* type; it is not by chance that this social type is described by the characteristics of the two above-mentioned value clusters (together comprising 75% of respondents).

[4] As a result of weekly measurements of public opinion during the last year (December 2022 – December 2023) to the question "What mood, in your opinion, prevails today among your relatives, friends, colleagues, acquaintances – calm or anxious?", a significant proportion of respondents (from 39 to 47%) chose the answer option "anxious" (Factors of public opinion formation. Mood of people around us. Survey "FOMnibus" December 8–10. Available at: https://media.fom.ru/fom-bd/d49no2023.pdf (accessed: December 21, 2023)). Also, the majority of Russian residents (70%) experience anxiety in a sense according. (ForbesLife, dated March 16, 2022. Available at: https://www.forbes.ru/forbeslife/459195-70-rossian-ispytyvaut-trevogu-iz-za-slozivsejsa-social-no-ekonomiceskoj-situacii (accessed: December 21, 2023)).

[5] Nestik T. (2023). Psychological state of Russian society under the conditions of the SWO. *Sociodigger,* 4, 9(28). Available at: https://sociodigger.ru/articles/articles-page/psikhologicheskoe-sostojanie-rossiiskogo-obshchestva-v-uslovijakh-svo (accessed: December 21, 2023).

[6] Ibidem.

Based on the data presented in the cited work (as well as a number of previous publications by M.S. Yanitskiy and his colleagues), where the Zimbardo Time Perspective Inventory (ZTPI) and the Semantic Time Differential (STD) methodology are used, we can conclude that the carriers of the social type *"avoiding individual"* tend, often unconsciously, to reject their past and present, and often their future as well. On the contrary, the social type *"self-fulfilling individual"*, as a rule, highly evaluates their past. Meanwhile, the meaningfulness of "the past is the most important for the favorable experience of the consequences of the transferred stress..." (Yanitskiy, 2020), under the permanent influence of which is the "avoiding individual".

Based on empirical research, we revealed that the "adapting" type in the long term is oriented to high income, career and family creation; "socializing" – to high income, career and education; "individualizing" – to education, self-improvement and creativity (Yanitskiy, 2020).

Psychological features of regulation of social behavior of representatives of the adapting value type include motivation based on fear, following norms to avoid punishment. Antisocial behavior is not unacceptable and can be implemented if the risk of exposure is assessed as low. For representatives of the "socializing" type, the basic mechanism of social control is shame, following the norms accepted in the group to avoid condemnation from significant others. If the reference group is asocial or antisocial, there is a high probability of deviant and delinquent behavior. On the contrary, the "individualizing" type has internal regulation of behavior, internalization of social norms. The main mechanism of behavior regulation is guilt, adherence to accepted norms and rules (Yanitskiy, 2020, p. 199).

Important features of behavior in the economic sphere of the "adapting" type include the priority of material well-being. The feeling of lack of money is typical, illegal ways of enrichment are acceptable. Money and property are perceived as a source of well-being and pleasure. Representatives of the "socializing" type associate material well-being with high social status. Exposure to advertising is characteristic. Orientation to the acquisition of expensive and prestigious things is typical. In contrast to the previous two types, for the representatives of the "individualizing" type, material security is instrumental, acting primarily as a means of education and self-development. Money is associated with freedom and with the possibility of self-fulfillment (Yanitskiy, 2020).

According to the survey conducted by VCIOM in December 2022 on a sample representing the Russian population aged 14 to 35, two orientations dominate in the mass consciousness of young people by a large margin: "a high level of well-being" (58%) and "to live peacefully, working and taking care of the family" (54%)[7].

As we can see, based on their life orientations, the majority of representatives of modern Russian youth can be referred to the type of *"avoiding individual"*.

Orphans living in various state institutions belong to one of the social groups in a state of socio-cultural and psychological trauma, persistent frustration and exclusion. In fact, they are a kind of "micro-model" of the trauma society. It is logical to assume that the social type of personality *"avoiding individual"* prevails among them.

Psychological research conducted among this category of adolescents (using M. Rokeach's methods "Terminal and Instrumental Values", as well as the method of associations) showed that, in general, their highly significant values are "love, materially secure life, happy family life, having good and loyal friends, pleasure" (Yakovleva, 2021). Moreover, they assigned the highest rank to the terminal value "materially secure life" – 96%.

[7] Youth values. *VCIOM Novosti*, December 14, 2022. Available at: https://wciom.ru/analytical-reviews/analiticheskii-obzor/cennosti-molodezhi (accessed: December 21, 2023).

Only 12% of orphans have meaningful goals with a time perspective. Against the background of a low overall life meaningfulness index, this may mean that the goals are not supported by the readiness to bear responsibility for their realization; 36% of orphans have goals limited to the actual present, in other words, they live with the concerns of today (Yakovleva, 2021, p. 123).

These data clearly correspond with the results of a research conducted among the Russian population on a representative sample (n = 700), according to which half of "the population does not have an explicit goal and an embodied image of their own future" (Karacharovsky, Shkaratan, 2019, p. 8). Those who have formulated their life goals "are dominated by the issue of improving housing conditions, associated with the tasks of multiplying real estate" (Karacharovsky, Shkaratan, 2019, p. 9). Meanwhile, in psychological terms, the orientation to the value of "housing" is largely a manifestation of a person's inner anxiety and their unmet need for security.

Hence, it logically follows the conclusion that in the Russian trauma society the social type of personality "avoiding individual" prevails. One of its characteristics is a tendency to ward suffering, high anxiety. The study by A.A. Mironova and A.N. Tatarko used data from the Sixth Wave of the World Value Survey. Three groups of countries (15 in total) were selected based on the corruption perception index: with low, medium and high levels of corruption (Russia is among the latter). The analysis was conducted using structural equation modeling. It was revealed that the level of suffering measured through anxiety indicators (macro- and micro-anxiety) has a significant relationship with the acceptability of corruption (Mironova, Tatarko, 2021). Accordingly, one of the effects of the widespread prevalence of this social personality type in contemporary Russia is the ineffective fight against corruption.

To effectively analyze the social personality types existing in modern Russia, it is advisable to expand the range of theoretical and methodological bases used for this purpose. Thus, the analysis of the state of antinomianism of public consciousness in post-Soviet Russia, the coexistence in it in almost all directions of two mutually exclusive positions, which to the same extent (or approximately in the same proportion) claim to be true (Toshchenko, 2015, p. 17, 39), requires the use of suitable approaches. Yu.M. Pasovets showed the possibilities of using two-member politomyth as an effective methodological tool of sociological research (Pasovets, 2023). Unfortunately, she neglected the application of the Chinese principle of "yin-yang", which would be logical, since it expresses, among other things, the use of polytomy. This principle allows using alternative discourses for different interpretations of the meaning of social phenomena and processes[8].

Obviously, it would be logical to rely on the yin-yang methodological approach also because, according to D. Chimenson et al. it allows reflecting more adequately the deep complexities of Russian culture. Taking into account the materials of representative cross-cultural studies, the authors justifiably prove that the "existing studies of Russian culture using the dominant multidimensional cultural theory (e.g., Hofstede) are unable to capture the dynamics of cultural values manifested in Russian business and society" (Chimenson et al., 2022). These conclusions directly correspond to an important methodological thesis formulated by Zh.T. Toshchenko: "Russia is a traumatized society, which is characterized by contradictory, mutually exclusive orientations and attitudes" (Toshchenko, 2015, p. 50).

[8] In due time, we developed a methodological approach within the framework of postnonclassical sociology using the concept of "yin-yang", which has been repeatedly implemented in various studies (see, for example, Nemirovsky, 2006, pp. 13–14, etc.).

We should not overlook the fact that in contemporary foreign sociology and related disciplines there is an appeal to the study and use of Chinese scientific methodology, in particular, the yin-yang principle. For example, D.A. Palmer raises the issue of the almost complete absence of China in research as a source of materials for the construction of theoretical concepts and models in dominant sociology and anthropology (Palmer, 2022). As we know, there is Confucian sociology, which, according to L. Young-chan, can become a link between East Asian sociology based on Eastern ideas and the world sociology currently led by Western sociology (Young-chan, 2010).

There are a number of studies in the field of social and cultural values analysis that use this approach. For instance, T. Fang, "drawing on the traditional Chinese yin-yang philosophy, conceptualizes culture as having inherently paradoxical value orientations, which allows it to encompass the opposite features of any given cultural dimension" (Fang, 2012, p. 25). K. Kyong-Dong uses the classical East Asian yin-yang dialectic to interpret the meaning of the central theoretical principles of social change, modernization and development also; according to the author, it is one of the most influential lines of thought in both Confucianism and Taoism (Kyong-Dong, 2017). The thesis according to which the concept of yin-yang can be considered as a way of sociological explanation that allows combining Eastern and Western research approaches is quite popular (Redding, 2017).

Undoubtedly, the use of this model is not currently mainstream in modern Western sociology, but it is hardly advisable to reject its prospective application. Russia's geopolitical "turn to the East" requires a more attentive attitude toward the conceptual approaches of neighboring countries, implemented in sociological science. In general, we can state that the trauma society theory, as well as the concept of anthroposociocultural (anthropocietal) approach, has a deep, yet undiscovered heuristic potential (largely due to the possibility of interdisciplinary analysis), including in the field of studying the social personality types formed by it.

Conclusion

Promising research trends

Thus, based on the analysis we can put forward a theoretical position, according to which the social personality type expresses the basic strategy of interaction between a person and society, the concept of which was proposed by N.I. Lapin. Contemporary Russia as a trauma society is characterized by the dynamic coexistence of two basic personality types: *"avoiding individual"* and *"self-fulfilling individual"*. In our opinion, the various manifestations of the *"avoiding individual"* type include, in our opinion, the seven phantom personality types identified by Zh.T. Toshchenko on the basis of such indicators as "power, capital and fame, taking into account the socio-psychological features of personality", characteristic of the elite groups of the trauma society (Toshchenko, 2015, pp. 10–11). Judging by the data of empirical studies, the personality type "avoidant individual" quantitatively prevails among the population of the country.

It is logical to assume that representatives of this type, due to their desire for means of overcoming (displacing) negative experiences, will more often have a higher social and economic status compared to those individuals who belong to the *"self-fulfilling individual"* type.

It is worth noting that these types are not the only ones in the palette of personality types of modern Russian society, but supplement the existing typologies, which are distinguished on other grounds. The ratio of personality types "self-fulfilling individual" and "avoiding individual" can serve as one of the empirical indicators of the degree of traumatization of society. Accordingly, the *areas of application* of the present research results are in theoretical terms the development

of sociological theories of personality, sociology of culture, sociology of management, sociology of social change. The applied significance of our developments is expressed in the possibility of using this typology as a means of assessing the effects of traumatic changes in different periods of time both in one country and in different countries of the world. Further study of the distribution of such personality types in different social groups and classes in Russia is also of considerable practical interest.

It seems that the above scientific results can be used as a basis for the concept of "social personality typology in the trauma society".

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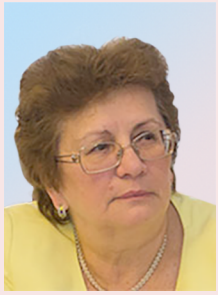
Sociological Assessment of the Success of Reintegration of Migrants Returning from Russia to Kyrgyzstan



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Abstract. The relevance of the research is due to the fact that the phenomenon of reintegration of migrants returning from Russia to Kyrgyzstan has not been sufficiently studied. Little research has been done on the problems migrants face when reintegrating into the society of their country of origin; such problems include, for example, economic and social situation, the socio-psychological well-being of migrants and the level of reintegration. The aim of the study is sociological assessment of the sustainability of reintegration of migrants returning from Russia to Kyrgyzstan. Scientific novelty consists in the concretization of the term "reintegration" as a multidimensional process that allows migrants to restore the economic, social and psychosocial relationships necessary to move forward in life; and the term "sustainable reintegration", as the returnees achieve a certain level of economic self-sufficiency, social stability and psychosocial well-being; in the development of empirical indicators of sustainable reintegration, such as the ability of a

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returned migrant to provide for themselves and their family, participate in economic activities, housing, build strong social relationships and be involved in the local community, psychological well-being, the ability to use basic services, and the absence of migration plans after return. We provide a sociological assessment of the sustainability of reintegration of migrants returning from Russia to Kyrgyzstan, based on the results of a questionnaire survey of 515 return migrants, and focus group interviews with 37 return migrants in Kyrgyzstan in October – November 2022. It has been revealed that the reintegration of return migrants from Russia to Kyrgyzstan is quite sustainable in all spheres: economic, social and socio-psychological. At the same time, the returnees have certain problems reflected in the insufficiently high level of justification of expectations from the return and in possible intentions to migrate again to Russia or other countries.

Key words: return migration, voluntary return, reintegration, sustainable reintegration, indicators.

Introduction

Return migration is becoming increasingly important for Kyrgyzstan, being a certain resource for the development of the state and society. Since the end of February 2022, there has been an outflow of labor migrants from Russia to Kyrgyzstan[1]. Voluntary return[2] and reintegration have many aspects that are important for the provision of effective assistance to migrants, implementation of voluntary return and reintegration programs. In this regard, the problem of migrants' reintegration returning to national labor markets has recently received more and more attention[3]. It has become evident that there are problems faced by returning migrants (Kazmierkiewicz, 2017; Susan, 2012). However, reliable information and knowledge on the reintegration of returnees is still rather limited, fragmented and sometimes contradictory. Within the framework of this article we will consider the processes of reintegration sustainability of migrants who have returned to Kyrgyzstan, as this country is one of the main suppliers of labor migrants to Russia.

In Kyrgyzstan, there is a growing awareness of the need to make reintegration sustainable and beneficial to returnees and their families, as well as to the country of origin as a whole[4]. Sustainable reintegration is achieved in the absence of re-emigration. In addition, understanding the multi-dimensional and multi-level nature of the reintegration process accompanying return migration is necessary for the development of programs and the provision of successful assistance to returnees.

Due to the impossibility of statistical study of reintegration of returnees to Kyrgyzstan, the lack of official data on the level of reintegration sustainability, many aspects of this topic remain understudied, which requires additional attention from researchers.

The aim of our work is to assess the sociological reintegration sustainability of migrants returning from Russia to Kyrgyzstan. Objectives of the study

[1] There is an outflow of labor migrants in Russia. *Vedomosti*, March 28, 2022. Available at: https://www.vedomosti.ru/society/articles/2022/03/28/915601-ottok-trudovih-migrantov (accessed: May 10, 2023).

[2] The concept of "voluntary return" is used in relation to those who return to their country of origin of their own free will and at their own expense.

[3] IOM Report. Mapping Kyrgyz diasporas, compatriots and migrants abroad (2022). Available at: https://kyrgyzstan.iom.int/sites/g/files/tmzbdl1321/files/documents/Mapping-of-Kyrgyz-Diaspora-RU_0.pdf

[4] Assessment of local authorities' attitudes toward return migration and their readiness to reintegrate returning migrants. (2021). UNDP in the Kyrgyz Republic, IOM in the Kyrgyz Republic. Available at: https://kyrgyzstan.iom.int/sites/g/files/tmzbdl1321/files/documents/IOM-UNDP%2520seed-funding_Ru_27_10_21_2%2520%25281%2529.pdf

are: to clarify the concepts of "reintegration" and "sustainable reintegration"; to develop empirical indicators of sustainable reintegration; to identify the features of reintegration of return migrants, sociological assessment of economic and social situation of return migrants and their socio-psychological well-being; to identify the problems that return migrants face during reintegration.

The research results can be used in creating political, institutional, economic and social conditions for the sustainable reintegration programs in the Republic of Kyrgyzstan, taking into account the dynamics of return migration and the propensity of the population to return home.

Theoretical aspects of the research

J.-P. Cassarino (Cassarino, 2004) is one of the first to attempt to scientifically explain the variety of factors that shape the reintegration patterns of migrants in the country of origin. Continuing the analysis of migrants' integration patterns in another work, the author argues that reintegration patterns are related to the following points: first, the attitude toward reintegration problems of returned citizens in the country of origin (reintegration environment); second, the duration and type of migration experience; conditions and reasons motivating return both in the country of origin and in the host country, i.e. "circumstances both before and after return" (Cassarino, 2008, p. 97). He also notes that readiness to return provides a response to different reintegration forms that depend on how resources, if at all, can be mobilized before and after return (Cassarino, 2008).

Earlier, R. King reasoned that the duration of the migration experience abroad should be optimal for migrants to be able to invest their human and financial capital acquired abroad when they return (King, 1986). Later, C. Dustmann also proposed to take into account factors or conditions (favorable or not) in host and origin countries that induce return, i.e. pre- and post-return conditions (Dustmann, 2001).

The issues concerning success or failure of reintegration of returned migrants began to be substantiated by F. Cerase (Cerase, 1974). The author proposed a typology of returnees, which can be seen as an attempt to show that situational or contextual factors in countries of origin should be taken into account as a precondition for determining whether reintegration is successful or unsuccessful. It means that he proposed to analyze the success or failure of reinsertion by comparing the "real" economy and society in the home country with returnee's expectations, showing how complex the links between these expectations and the social and economic context in the country of origin are.

There is no doubt that A. Cerase's conclusions are crucial for the formation of approaches to the analysis of reintegration problems in return migration in the future. A few years later, J. Gmelch (Gmelch, 1980) developed A. Cerase's typology, emphasizing the need to correlate migrants' intentions to return with the motives for return and the reintegration success.

We should mention another important factor influencing the reintegration process of return migrants. According to R. Rogers (Rogers, 1984), reintegration depends significantly on the motivation for return. This point of view was supported by a large number of researchers. Their research works concern the return motives of study migrants (Glaser, Habers, 1974), labor migrants (Kubat, 1984), highly skilled migrants (Lowell, 2001; Cervantes, Guellec, 2002); returnee entrepreneurs (Cassarino, 2000), as well as refugees and asylum seekers (Al-Ali et al., 2001; Ammassari, Black, 2001).

Reintegration issues were further developed in the work of K. Kuschminder (Kuschminder, 2017), in which reintegration strategies were linked to the following parameters: migrant's cultural orientation in relation to the host and home country; inclusion in social networks; self-identification and sense of belonging to the country of origin, as well as access

to rights, institutions and labor resources in the market in the country of origin. The paper shows that the reintegration process is multidimensional and intersectional, perceived differently by men and women, depends on the social and professional status of returnees, and is linked to the structural and cultural context of return.

Consequently, there are different approaches to the definition of this concept in the modern literature devoted to the problems of reintegration[5]. In the Russian and Kyrgyz scientific segment, the analysis of repatriation of return migrants has been analyzed only recently and, as a rule, at the empirical level. Such works include the studies of S.V. Ryazantsev (Ryazantsev, Gnevasheva, 2021), L.F. Delovarova (Delovarova, 2020), S.Y. Sivoplyasov, S.M. Voinov, E.E. Pis'mennaya (Sivoplyasova et al., 2022), G.I. Osadchaya (Osadchaya et al., 2023) and a number of other authors.

We assume that reintegration is "a multidimensional process that enables individuals to re-establish the economic, social and psychosocial relationships necessary to sustain life, livelihood and dignity and achieve inclusion in civilian life"[6]. Therefore, a comprehensive approach to analysis is needed, which encompasses three aspects of reintegration: 1) the economic dimension, which looks at reintegration as a way for returnees to return to economic life and sustainable livelihoods; 2) the social dimension, i.e. from the perspective of returnees' access to public services and infrastructure in countries of origin, including access to health, education, housing, justice and social protection systems; 3) the psychosocial dimension, which includes the reintegration of returnees into personal support networks (friends, relatives, neighbors) and civic organizations[7]. It is important to note that the International Organization for Migration (IOM) in its comprehensive approach to reintegration includes the needs of migrants not only at the individual level, but also at the level of local communities and within the general structures of states. In addition, there are no rigid boundaries between the aspects; they can overlap, as they are interconnected by nature. They can also influence each other, sometimes at different levels.

In addition, a comprehensive approach to reintegration should address important issues such as the promotion of migrants' rights, gender equality, partnerships and cooperation, and improve data collection, monitoring and evaluation of reintegration. Such an approach tends to be the responsibility of many different stakeholders: national and local authorities in host and origin countries, international non-governmental organizations (INGOs), nongovernmental organizations (NGOs), community-based organizations (CBOs) and other civil society organizations that play different roles in reintegration activities[8].

In the framework of the study, we focus only on the individual level of reintegration of migrants who returned from Russia to Kyrgyzstan, i.e. the extent to which reintegration enabled returned migrants to resume and revitalize economic, social and psychosocial relations necessary for life support, livelihood and integration into public life.

The concepts of "return" and "reintegration" are closely linked to the concept of "sustainability". While there is currently no unified approach to the category of "sustainable reintegration", as part of an integrated approach, IOM defines sustainable

[5] *Return Migration: International Approaches and Regional Peculiarities in Central Asia: Studies Aid (2020)*. International Organization for Migration (IOM) – UN Agency on Migration. Almaty. 242 p. P. 142; *Handbook on Migration Terminology. Russian-English. IOM* (2011). International Migration Law. Glossary on Migration. P. 82.

[6] IOM. International Migration Law 34 (2019). In: *Glossary on Migration*. Available at: https://publications.iom.int/books/international-migration-law-ndeg34-glossary-migration

[7] *Reintegration Handbook. Practical Guidance on the Design, Implementation and Monitoring of Reintegration Assistance*. (2019). International Organization for Migration (IOM).

[8] Ibidem.

reintegration as follows: "Reintegration can be considered sustainable when returnees have reached levels of economic self-sufficiency, social stability within their communities, and psychosocial well-being that allow them to cope with (re)migration drivers. Having achieved sustainable reintegration, returnees are able to make further migration decisions as a matter of choice, rather than necessity"[9]. It is worth noting that this approach does not establish a direct correlation between successful reintegration and further migration after return. A subsequent migration act can take place regardless of whether reintegration is successful, partially successful or unsuccessful. On the other hand, return migrants will be interested in reintegration if they believe that re-migration or reliance on a family member abroad would be the best option for their continued physical or socio-economic survival and well-being[10].

Thus, returned migrants should fully participate in economic and social life, and having a sense of psychosocial well-being upon return is crucial for their sustainable reintegration. Therefore, the sustainability of reintegration depends not only on the returnee, but also on the local community and the structural situation characterizing the return environment.

In our opinion, empirical indicators of sustainable reintegration can be the ability to provide for oneself and one's family; participation in economic activities with certain benefits; availability of housing; strong social relations and involvement in the local community; positive impact of return on the family and other actors; psychological well-being (sense of security, positive attitude to lifestyle); the ability to use basic services (education, healthcare, etc.); absence of migration plans.

Methodology and methods of the research

Sociological assessment of reintegration sustainability of migrants returning from Russia to Kyrgyzstan is based on the results of the research on "Return migration from Russia to Kyrgyzstan" conducted by the Institute for Demographic Research of the FCTAS RAS and the Kyrgyz Russian Slavic University (Kyrgyz Republic, Bishkek). The project leader was G.I. Osadchaya. The methodological strategy of the research included quantitative and qualitative surveys: 515 return migrants (questionnaire survey; targeted selection on one attribute: labor migrants who returned from Russia), 37 return migrants (focused interview; snowball method on one attribute: labor migrants who returned from Russia;) in Kyrgyzstan in October – November 2022.

The aim of the questionnaire survey was to identify the reintegration features of return migrants from Russia into Kyrgyz society, including assessment of their economic and social situation; socio-psychological well-being, as well as to identify the problems that return migrants face during reintegration. The purpose of the focused interviews was to concentrate on reintegration problems faced by respondents after their return to Kyrgyzstan.

We selected the respondents in Kyrgyzstan for the questionnaire survey by non-random sampling using the method of purposive selection on one attribute: labor migrants who returned from Russia; 515 returning labor migrants who worked in Russia were interviewed, including men – 59.2%, women – 40.8%, Kyrgyz citizens – 72.4%, Russian citizens – 26.6%. By age, they were the following: 14–25 years old – 44.1%, 26–45 years old – 50.1%. To select the respondents for the focused interview, we used the "snowball" method based on one attribute: labor migrants who returned from Russia. Interviews were conducted with 37 returning Kyrgyz labor migrants

[9] *IOM. Towards an Integrated Approach to Reintegration in the Context of Return* (2017). International Organization for Migration (IOM). Geneva. Available at: https://www.iom.int/sites/g/files/tmzbdl486/files/our_work/DMM/AVRR/Towards-an-Integrated-Approach-to-Reintegration.pdf

[10] *Reintegration Handbook. Practical Guidance on the Design, Implementation and Monitoring of Reintegration Assistance*. (2019). International Organization for Migration (IOM).

who worked in Russia: 22 men, 15 women, 36 Kyrgyz citizens, and 1 Russian citizen.

We analyzed the data obtained from the quantitative survey using mathematical and statistical methods (statistical package SPSS 22.0): frequency analysis, conjugation table analysis.

The survey results showed that migrants, returned to Kyrgyzstan, settled in Bishkek (78.6%), in Osh (11.3%) and other settlements (10.1%).

Main research results

Assessing the economic situation of migrants returning from Russia to Kyrgyzstan

The employment issue is the basic foundation for sustainable reintegration of returned migrants. The economic aspect of reintegration is the re-inclusion of migrants in the economic system of Kyrgyzstan, giving them the opportunity to earn a living for themselves and their families[11] and to participate in economic activities for their own benefit.

The quantitative study showed that 82.7% of returned migrants work in various sectors of the Kyrgyz economy, which is 8.1% less than they worked in Russia. We can assume that this figure combines those who have not yet managed to find a job and those who came to Kyrgyzstan as Russian citizens and students.

In terms of shares, the distribution of those working in Russia and Kyrgyzstan by economic sectors did not change significantly. However, among the returnees the share of those working in cab and service sectors was smaller *(Tab. 1)*.

More than half of the respondents (53.3%) noted that their work in Kyrgyzstan was "well" and "mostly well" paid. Such opinion was typical for 53.5% of men and 53.0% of women. At the same time, 64.2% of returned respondents answered that their work in Kyrgyzstan now corresponds to their knowledge, abilities and opportunities, but women were more pessimistic when answering this question (59.7% of women vs 67.4% of men).

Quite a high share of respondents, positively assessed the level of payment for their work and the relevance of work to their knowledge and abilities, was associated with a high assessment of the level of satisfaction with work in general after return: 62.4% of interviewed return migrants were "fully satisfied" or "mostly satisfied" with their jobs. Only every

Table 1. In which economic sector did you work in Russia and do you work now in Kyrgyzstan?, % of respondents

Economic sector	In Russia	In Kyrgyzstan	Difference
1. Industry	5.8	7.2	+1.4
2. Building	8.9	6.8	-2.1
3. Transport, taxi	11.3	6.8	-4.5
4. Agriculture	3.3	3.5	+0.2
5. Trade	19.6	19.8	+0.2
6. Education, science	4.1	7.4	+3.3
7. Healthcare	4.1	3.1	-1.0
8. Service sector	22.7	18.6	-4.1
9. Information technology sector (IT)	5.2	6.2	+1.0
10. Housing and utilities sector	1.7	0.6	-1.1
11. Delivery, courier service	4.1	2.7	-1.4
12. Do not work	8.0	16.1	+8.1
Other	1.2	1.2	0
According to: The results of the research on "Return migration from Russia to Kyrgyzstan" conducted by IDR FCTAS RAS and Kyrgyz Russian Slavic University (Kyrgyz Republic, Bishkek). We interviewed 515 respondents. The project leader was G.I. Osadchaya.			

[11] IOM. International migration law 25 (2011). In: *Glossary on Migration*. 2nd edition. Available at: https://documentation.lastradainternational.org/lsidocs/Iniernational%20migration%20law_25.pdf

tenth respondent among both men and women was completely dissatisfied with their job *(Tab. 2, 3)*.

In our opinion, high job satisfaction can also be explained by the fact that return migrants from Russia had no special difficulties in finding a job and employment. Characteristic answers of the majority of interviewees were: *"No, I have not experienced such difficulties"; "No, everything is great"*. Although the work did not always suit the respondents completely and was considered by some of them as temporary: *"No, I found a job quickly, so far everything suits me, but it is not my permanent favorite job – it is just an income"*. Only two respondents out of 37 said that they had problems with employment: *"Yes, as I said before it is very hard with work. There are few vacancies, the salary is low"; "Yes, I don't know where to work here. I don't want to go to the labor exchange. I sometimes drive a taxi"*.

The availability of work after returning to Kyrgyzstan and the level of its payment affected a fairly high assessment of material security: 47.6% of respondents assessed their material security, and 44.1% – the security of their family as good; 48.6 and 39.0% (respectively, their own and their family's) – as satisfactory. Only 5.8% of return migrants believe that they are materially well off. It is worth noting that there are three times more of those who assess the possibilities of providing for their families as low (bad). In our assessments, men are in solidarity with women *(Tab. 4)*.

Table 2. Do you think that your work in Kyrgyzstan now corresponds to your knowledge, abilities and opportunities?, % of respondents

Respond option	For all those interviewed	Male	Female
Yes	28.3	30.7	24.9
Mostly yes	35.9	36.7	34.8
Yes + mostly yes	64.2	67.4	59.7
No	14.2	14.3	13.9
Mostly no	21.6	18.3	26.4
No + mostly no	35.8	32.6	40.3
According to: research results on "Return migration from Russia to Kyrgyzstan".			

Table 3. Do you think that your work in Kyrgyzstan now generally satisfies you?, % of respondents

Respond option	For all those interviewed	Male	Female
Yes	25.7	28.4	21.7
Mostly yes	36.7	33.4	41.4
Yes + mostly yes	62.4	61.8	63.1
No	11.4	12.0	10.3
Mostly no	26.3	26.1	26.6
No + mostly no	37.7	38.1	36.9
According to: research results on "Return migration from Russia to Kyrgyzstan".			

Table 4. Material security of respondents (own and their family) after returning from Russia to Kyrgyzstan, % of the number of respondents

Question	Respond option	For all those reviewed	Male	Female
What opportunities do you have in Kyrgyzstan now to provide for your family?	Bad	5.8	6.6	4.8
	Satisfactory	46.6	45.2	48.6
	Good	47.6	48.2	46.7
At present, after your return to Kyrgyzstan, how are you financially secure?	Bad	16.9	16.7	17.1
	Satisfied	39.0	36.7	42.4
	Good	44.1	46.6	40.5
According to: research results on "Return migration from Russia to Kyrgyzstan".				

Assessing the social situation of migrants returning from Russia to Kyrgyzstan

The social aspect of integration, as we have noted above, concerns returning migrants' access to public services and infrastructure in Kyrgyzstan, including access to housing, healthcare, education, adequate food and clothing, vacation opportunities, physical education and sports, and social protection systems.

It is necessary to have a place of living to return. Returned migrants usually have no problems with housing conditions; 62.3% of respondents assess their housing conditions as good, 33.4% – as satisfied.

Usually, all respondents live with their family: *"We live in Bishkek. There are three of us living together: my husband, me and our son"; "I live with my wife and children in Bishkek, I have my own apartment near the center"*; some live with their parents: *"We live in the house of my husband's parents. We live with my husband's parents and my daughter"; "I live in Bishkek, I live with my parents and my wife"; "I live in Bishkek in Kyzyl-Asker, there are four of us in the family: mom, dad, sister and me"*. *Two respondents rented an apartment at the time of the survey: "I live in Bishkek. At the moment I live alone, but there is a brother and sister in the family"; "I live with a friend, we rent an apartment. We both work, the rhythm of life is fast, I work all the time, I only sleep at home"*.

The assessment of educational opportunities is somewhat lower. Only 44.7% consider them good, and 38.6% – satisfactory. Almost every fifth migrant who returned from Russia evaluates them as bad.

Taking into account rather high material security, returned migrants (both men and women) assess their food and clothing as good. Only 1.9% of respondents noted that they have poor nutrition and 3.7% – that they dress poorly.

In order for life to be full after returning to Kyrgyzstan, there should be possibilities for free time, vacations, physical training and sports. This opportunity should be facilitated by a good environmental situation. The lowest assessment was given to the environmental situation: only 37.9% of respondents assessed it as good, 22.9% – as bad. Every fifth gave a negative assessment of opportunities for vacation. More than a half of respondents positively assessed the opportunities for physical training and sports (55.1%), for spending free time (53.2%; *Tab. 5*).

The interviews show that returned migrants usually spend their free time with their families: *"In our free time we try to spend more time with our*

Table 5. Respondents' assessment of social conditions of their life in Kyrgyzstan after returning from Russia, % of respondents

Question	Respond option	%
What is your current environmental situation in Kyrgyzstan?	Bad	22.9
	Satisfactory	39.2
	Good	37.9
What opportunities do you have in Kyrgyzstan now to spend vacations, vacations?	Bad	19.2
	Satisfactory	37.1
	Good	43.7
What opportunities do you have in Kyrgyzstan now to spend your free time?	Bad	8.5
	Satisfactory	38.3
	Good	53.2
What opportunities do you have in Kyrgyzstan now for physical training and sports?	Bad	11.1
	Satisfactory	33.8
	Good	55.1
According to: research results on "Return migration from Russia to Kyrgyzstan".		

families"; "Family composition: sister and nephews. In our free time we walk around the city"; "We like to walk with our family, visit places, with children, go to playgrounds"; "We try to go to new places that have opened in Bishkek, because we were away for a long time".

Respondents without family, as a rule, spend their free time with friends: *"I spend my free time with friends"; "Everything is fine, in my free time I can do sports, meet friends".*

Assessing the socio-psychological well-being of migrants who returned from Russia

In addition to problems with work, migrants who have been abroad for a relatively long period of time face the loss of personal and professional networks, which leads to psychological discomfort. Therefore, the socio-psychological aspect of migrants' reintegration includes restoring or creating a circle of communication at work, with friends, relatives, neighbors, and sometimes in the family[12].

During their stay in Russia, family relations among returning migrants, both men and women, as a rule, did not deteriorate: 72.2% of respondents assess them as good. Women are a little more demanding *(Tab. 6)*.

The socio-psychological aspect of reintegration also includes the establishment of at least satisfactory and better good relations with colleagues and workmates: two out of three respondents managed to establish good relations. Only every second returnee managed to establish good relations with their immediate supervisor *(Tab. 7)*.

The psychological aspect of reintegration also includes the revival of values, traditions and way of life in the country of origin. As the results of the interviews showed, the majority of interviewees during their stay in Russia did not move away from the national traditions of their country: *"My culture is Kyrgyz, only the language has changed – it has become more literate"; "Since I lived with girls from Kyrgyzstan, lived and worked mainly at home, I retained my mentality"; "I follow the norms of Kyrgyz culture"; "I am Kyrgyz by nationality, and from childhood I was instilled with Kyrgyz mentality and culture".*

Table 6. What are your current family relations in Kyrgyzstan?, % of respondents

Respond option	For all those reviewed	Male	Female
Bad	3.5	4.3	2.4
Satisfactory	24.3	22.3	27.1
Good	72.2	73.4	70.5
According to: research results on "Return migration from Russia to Kyrgyzstan".			

Table 7. Assessment of relations of migrants who returned from Russia at work in Kyrgyzstan, % of respondents

Questions	Respond option	For all those reviewed	Male	Female
What is your relationship with your direct supervisors at work in Kyrgyzstan now?	Bad	7.7	8.2	7.0
	Satisfactory	38.5	37.2	40.3
	Good	53.8	54.6	52.7
What is your relationship with your colleagues, workmates at work in Kyrgyzstan now?	Bad	7.5	7.5	7.4
	Satisfactory	24.6	23.5	26.1
	Good	67.9	68.9	66.5
According to: research results on "Return migration from Russia to Kyrgyzstan".				

[12] IOM. International migration law 25 (2011). In: *Glossary on Migration*. 2nd edition. Available at: https://documentation.lastradainternational.org/lsidocs/Iniernational%20migration%20law_25.pdf

However, staying in Russia, especially for a long time, has brought elements of Russian culture into the lives of returned migrants. We should note that this interaction is not conflictual, but sometimes it is not fully accepted by those around them: *"Of course, I borrowed the norms and morals of Russian culture", "I definitely borrowed elements of Russian culture; we try to combine them, but some people do not understand"; "Because I lived in Russia for a long time, I borrowed their culture too and I combine them"*.

Integral assessment of reintegration sustainability

As we have noted above, the achievement of sustainable integration is determined by the fact that returned migrants will be able to make further migration decisions as a matter of choice rather than necessity. Every fifth man and every fourth woman are planning to return. The share of those who found it difficult to answer this question is 29.1% of all the interviewed respondents *(Tab. 8)*. In our opinion, this is primarily due to the stability of the socio-economic situation in Kyrgyzstan. The main motives that may influence the decision to migrate to Russia again in this case are the following: *"The need for labor activity in life, as it was not very active in Bishkek"; "Unstable situation in the state, unemployment in the country"; "If unemployment starts in the KR, then repeated migration"; "Unstable politics in the country, unemployment"; "If there is unemployment, one can migrate"*. Repeated migration to Russia is also conditioned by the motives of more profitable work: *"Good earnings and stable work", "If suddenly there is an invitation for a good job, with good earnings", "Bankruptcy and good working conditions in Russia, or some very good job offer", "If there is a job offer, of course, permanent or not, it makes no difference", "Good salary"*. Those who have dual citizenship and can be mobilized, say the following statements: *"The end of the war, it is scary to return, in case we are called up"; "If the situation in Russia improves, perhaps we will come back, we will return to earn money"; "Well, if there is some destabilization in Kyrgyzstan again, and Russia is calm, then it is quite possible"*.

A number of returnees think about possible repeated migration, but not to Russia, but to other countries: *"I would like to visit Tashkent or Europe, I would like to work in both of those places"; "Yes, I would like to visit European countries"; "Yes, if I move, then to Europe"; "I want to go to the USA, I filled out a green card"; "To Europe, I want to see something new"; "I would like to go to Germany"; "I am considering the possibility of migration to Korea, England, Japan"; "I would like to go to Germany to work as a doctor"; "I can see America"; "I would like to go to other countries, for example to Georgia"; "Maybe to Greece"; "I would like to go to Arab countries to earn money"*. These reflections do not show a clear attitude toward repeated migration.

A factor influencing repeated migration is also the fulfillment of expectations of returning to Kyrgyzstan from Russia. Only every fourth returnee fully met their expectations. Despite the fact that the share of those whose expectations were not fully met is small and amounts to only 8.0%, another 23.3% of respondents are pessimistic about their return to Kyrgyzstan. Fluctuations in assessments between men and women are insignificant. Every tenth interviewed man and every tenth woman found it difficult to give an answer regarding justified expectations from their return *(Tab. 9)*.

Table 8. Plans for repeated migration to Russia, % of respondents

Question	Respond option	For all those reviewed	Male	Female
Are you planning to migrate to Russia again in the next three months?	Yes	22.1	19.3	26.2
	No	48.7	50.5	46.2
	Hesitate to respond	29.1	30.2	27.6
According to: research results on "Return migration from Russia to Kyrgyzstan".				

Table 9. Justification of expectations from returning to Kyrgyzstan from Russia, % of respondents

Respond option	For all those reviewed	Male	Female
Yes	25.8	29.5	20.5
Rather yes, than no	32.2	29.5	36.2
Yes + rather yes, than no	58.0	59.0	56.7
Rather no than yes	23.3	22.3	24.8
No	8.0	7.9	8.1
No + rather no than yes	31.3	30.2	32.9
Hesitate to respond	10.7	10.8	10.5
According to: research results on "Return migration from Russia to Kyrgyzstan".			

Conclusion

Based on the research results, we suppose that the reintegration of return migrants from Russia to Kyrgyzstan is quite sustainable in all spheres: economic, social and socio-psychological. The vast majority of returnees are not planning to migrate again in the near future. At the same time, the returnees have certain problems, which affected the insufficiently high level of justification of their expectations from returning to Kyrgyzstan and possible intentions to migrate again to Russia or other countries.

We should say that in Kyrgyzstan in recent years the issues of reintegration of returning migrants have begun to be reflected in the strategic documents of the state. However, as soon as the decision points regarding the return of migrants and their reintegration are rather abstract and do not reflect specific measures, there are no targeted reintegration programs. This issue is also insufficiently recognized in other spheres of state policy, for example, in the general strategy of social protection of the population. In our opinion, a systematic monitoring is needed to assess the reintegration sustainability of returnees at institutional, local and individual levels. Data collected through a monitoring of assistance to return migrants, including their feedback, is an important source of information on the effectiveness, efficiency and sustainability of reintegration measures. An ongoing monitoring will help to assess the impact of different types of reintegration support on the individual migrant and the local community as a whole. This measure should be taken into account in the design and implementation of reintegration programs, where assistance should include economic, social and psychosocial aspects and be designed and delivered in cooperation with return migrants themselves.

It is important to remember that reintegration is not an isolated process but part of a broader migration management strategy in Kyrgyzstan. Strengthening support for reintegration at the national level can contribute to more effective migration management in general and to the achievement of other development and governance goals.

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Modeling and Forecasting Public Debt in South Africa

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Abstract. The principal interest of any developing country like South Africa is to preserve sustainable public debt. Recently, for developing economies there has been a growing concern regarding the importance of debt in setting the path for development and growth. The objective of this paper is to model and forecast total public debt in South Africa. Public debt in South Africa has grown substantially since the financial crisis in 2008 until now and it has not recovered. Debt is a crucial instrument for the small to medium economy such as South Africa and a vital source of fiscal policy. The study applied the ARIMA model to select the appropriate model to estimate and forecast public debt. As it is conventional for any time series modelling to assess the order of integration of the series used. The study employed the ADF unit root test to determine the order of integration and the results show that public debt variable is integrated of order one. The second step was to identify the best model to forecast public debt. In all the competing models the study identified that ARIMA13,1,1 was selected according to the coefficient significance and Akaike information criteria. The forecast shows that, there is an expected reduction in the stock of public debt in the future. It is therefore recommended by this study that fiscal policy makers should adopt a strong fiscal reform to keep the public debt to a minimum.

Key words: public debt, ARIMA, forecasting, South Africa.

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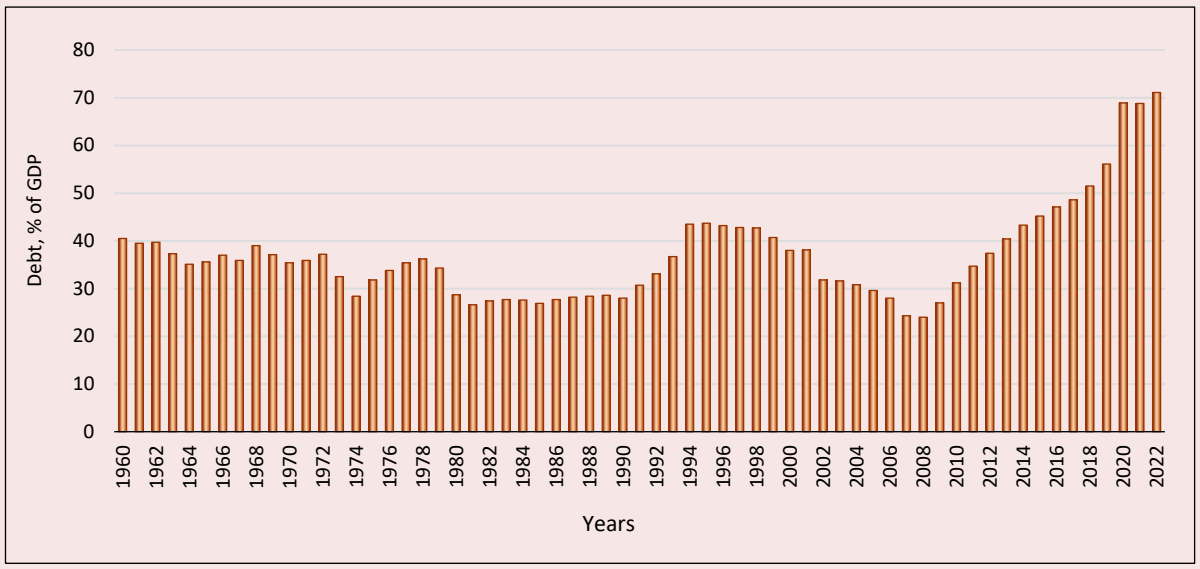
Introduction

Business success and government's investment policy as well as macroeconomic policy are influenced by the accuracy of public debt forecasts. Public debt is sometimes referred to as government debt, it represents the total outstanding debt of a country's central government. It is often expressed as a ratio of Gross Domestic Product (GDP). It is understood that public debt is a crucial source of resources for a government to finance public spending and close the gaps in the budget. Therefore, public debt as a percentage of GDP is usually used as an indicator of the ability of a government to meet its future obligations. According to (Burriel et al. 2020), debt is integral to the functioning of a market economy. The literature has indicated that there are certain cost and benefits of debt for any economy. On the note of benefits, they have indicated the following factors, firstly; public debt plays an important role for the functioning of the financial system and the transmission of monetary policy. Secondly, public debt can have direct effects on welfare as long as it offers a safe asset for insurance against cumulative risks. On the other hand, high debt burdens can ultimately impede long-term growth. (Checherita-Westphal et al., 2014) explained that this is evident in the case when debt is contracted to finance unproductive expenses or beyond optimal levels of public capital stock.

According to (Were, Mollel, 2020) the median level of public debt in sub-Saharan Africa (SSA) as of the end of 2017 exceeded 50% of GDP. The financial crisis that erupted in mid-2008 led to an explosion of public debt in many advanced and developing economies (Cecchetti et al., 2010). One of the reasons postulated in (Balassone et al, 2011) is that growing public debt in an economy is linked to the lack of accumulated saving and low investment levels. Furthermore, the work (Schularick, 2012) indicated that due to South African context the financial unsustainable public-owned institutions have exacerbated public debt. The deterioration in South African public debt it has been observed over the years now. *Figure 1* presents the ratio of total public debt to GDP in the period from 1960 to 2022.

Figure 1. Total public debt as a percentage of GDP for 1960–2022



Source: own compilation using data from SARB

Figure 1 illustrates that total public debt as a percentage of GDP from 1960 to 1978 was in a cyclical pattern, and its peak during the cycle was 40% and the lowest debt during the time was 28.4%. In the year 1980 to 1990 total debt was at average around 29.3 % of GDP, this seems to be the period in which debt was at its lowest. In the year 1998 total debt was 42.7% of GDP and was significantly reduced to 24.0% of GDP in 2008. According to (Mahadea, 1998) this achievement of reduction in public debt can be plausibly argued that this is the success of Growth, Employment and Redistribution (GEAR) policy. However, in 2008 public debt as a percentage of GDP grew exponentially from 24.0% to 71.1% in 2022. This growing sign of public debt is really a concern since government finances were already on a deteriorating trajectory.

The main purpose of this paper is to contribute to the debate about modeling and forecasting of public debt in South Africa through the lens of ARIMA models. In some instances, it can be argued in the literature that there are some factors that can be used to explain the behavior of public debt according to (Zhuravka et al., 2019; Munir, Mehmood, 2018). However, it should be mentioned that such approach may sometimes fall to a trap of selecting inappropriate and insignificant variables in modeling public debt. It is, therefore, the interest of the current study and more appropriate to adopt a more robust univariate time series technique such as ARIMA.

Public debt is one of the critical components of fiscal policy for the development of the economy and yet accumulating stock of debt remains a serious problem in South Africa. This is exacerbated by faster accumulation of debt compared to slower service of debt. For any economy, especially emerging country like South Africa, public debt forecasting is vital for proper debt management. It can be mentioned that an accurate and reliable modeling and forecasting of public debt in South Africa is certainly important to avoid putting the country into unsustainable debt situation. Therefore, the objectives of this paper are as follows: 1) to analyze public debt trends in South Africa over the study period; 2) to develop a reliable public debt forecasting model for South Africa based on the Box – Jenkins method; 3) to forecast public debt in South Africa for 2021–2023.

Literature review

Increasing public debt is one of the problematic macroeconomic variables that occupy a central place in public debt management of most economies. This is so because it is mostly used as one of the fiscal indicators in the country's public finances. According to (Mellet, 2014), one of the main instruments of fiscal policy is the budget which is the vehicle to change any of fiscal elements to ultimately change the spending behavior of the country inhabitants. Cecchetti, Mohanty and Zampolli (Cecchetti et al., 2010) explained further that when a country starts from an already high level of government debt, the probability that a given shock will trigger unstable debt dynamics is higher. This risk is amplified when public debt is already on a steep upward trajectory, as it is currently being observed in several countries. One of the arguments claimed by Minakir and Leonov (Minakir, Leonov, 2019) in Russia is that large of part of public debt it can be attributed by the fact that large proportion of debt is the implementation of social welfare against capital investment activities. The study (Dumitrescua, 2014) provided the framework for the analysis of the public debt-GDP ratio evolution in Romania in the period 2002–2012. The study found that Romania's position regarding government debt level is apparently comfortable, the projected level for the end of 2013 being of 37.85% of GDP. Nikoloski and Nedanovski (Nikoloski, Nedanovski, 2017) studied the dynamics of government debt for the Republic of Macedonia and the possibility of its projection in the near future. The found that in

considering the recent status and the impact of a range of political and socio-economic factors in the country, the estimate of the level of government debt in 2017 is approximately 40% of GDP.

Zaja, Krzic and Habek (Zaja et al., 2018) engaged in a study to forecast fiscal variables in selected European economies (Portugal, Ireland, Greece, Spain, and the Republic of Croatia) using least absolute deviation method. The study found that based on the conducted analysis of the fiscal variables among the countries, it can be said that balanced budgets have virtually disappeared, and public debt has prevailed. Zhuravka, Filatova, and Aiyedogbon (Zhuravka et al., 2019) explored the theoretical and practical aspects of forecasting public debt in Ukraine. Their paper concluded that ARIMA model (1, 1, 3) is the most accurate in describing the trend of public debt dynamics and provides the highest accuracy for further forecasting. The work (Were, Mollel, 2020) provides an analysis of public debt and debt sustainability in Tanzania, focusing on external debt. The paper provides an analysis of public debt and debt sustainability, and it was found that external debt accounts for over 70% of public debt in Tanzania. Rahman and Pujiati (Rahman, Pujiati, 2021) collaborated in research paper to forecast the value of Indonesian government foreign debt over the next five years from 2020 to 2024. The study concluded that the value of government foreign debt is predicted to keep increasing from 2020 to 2024.

In South African context the work of Calitz, Siebrits and Stuart (Calitz et al., 2016) studied the accuracy of fiscal projections. The paper strengthens the argument that the government should continue to strengthen its fiscal framework by adopting expenditure ceilings for the main budget and by expanding the availability of information on aspects of fiscal policy. It can be said that much of literature in South African context is between public debt and economic growth (see, for example: Baaziz et al., 2015; Mhlaba, Phiri, 2017).

What is absent in the preceded mentioned studies is an attempt to model total public debt in South Africa using ARIMA models. However, this leaves a knowledge gap of existing studies based on univariate ARIMA modeling. For knowledge contribution purpose, the study forecast public debt for South Africa using time series for time horizon of 1960–2022. The motivation to embark upon such a study is quite simple. Applying a time series (total public debt) forecast gives us the opportunity to extract information from the past. The assumption is that past trend will follow in future which gives us the evolution of future scenario based on the past information. In view of this, the objective of this study is to model total public debt in South Africa by making use of ARIMA model.

Data and research method

This paper makes use of the secondary data which is freely downloaded from a reliable source which is South African Reserve Bank (SARB). The variable in use is total loan debt of national government: total gross loan debt as percentage of GDP. The dataset was collected for the period 1960 to 2022. This time span is not motivated than just to explore the available data.

The Box – Jenkins method was proposed by George Box and Gwilym Jenkins in their seminal 1970 textbook Time Series Analysis. The method starts with the assumption that the process that generated the time series can be approximated using an autoregressive moving average (ARMA) model if it does not contain a unit root or an autoregressive integrated moving average (ARIMA) model if it is nonstationary. The paper applies the ARIMA model which uses values of government debt that are affected by the values of government debt in the past. The general expression of the Box – Jenkins model it is formed on the bases of two components which is the autoregressive (AR) and moving average (MA). Where the AR are models in which the value of a variable in one period is related to its values in previous periods, and MA models account for

the possibility of a relationship between a variable and the residuals from previous periods. Therefore, ARMA can be expressed as follows:

$$DBTP_t = a + \beta_1 DBTP_{t-1} + \beta_2 DBTP_{t-2} + \ldots + \\ + \beta_p DBTP_{t-p} + \varphi_1 e_{t-1} + \varphi_2 e_{t-2} + \ldots + \varphi_q e_{t-q}, \quad (1)$$

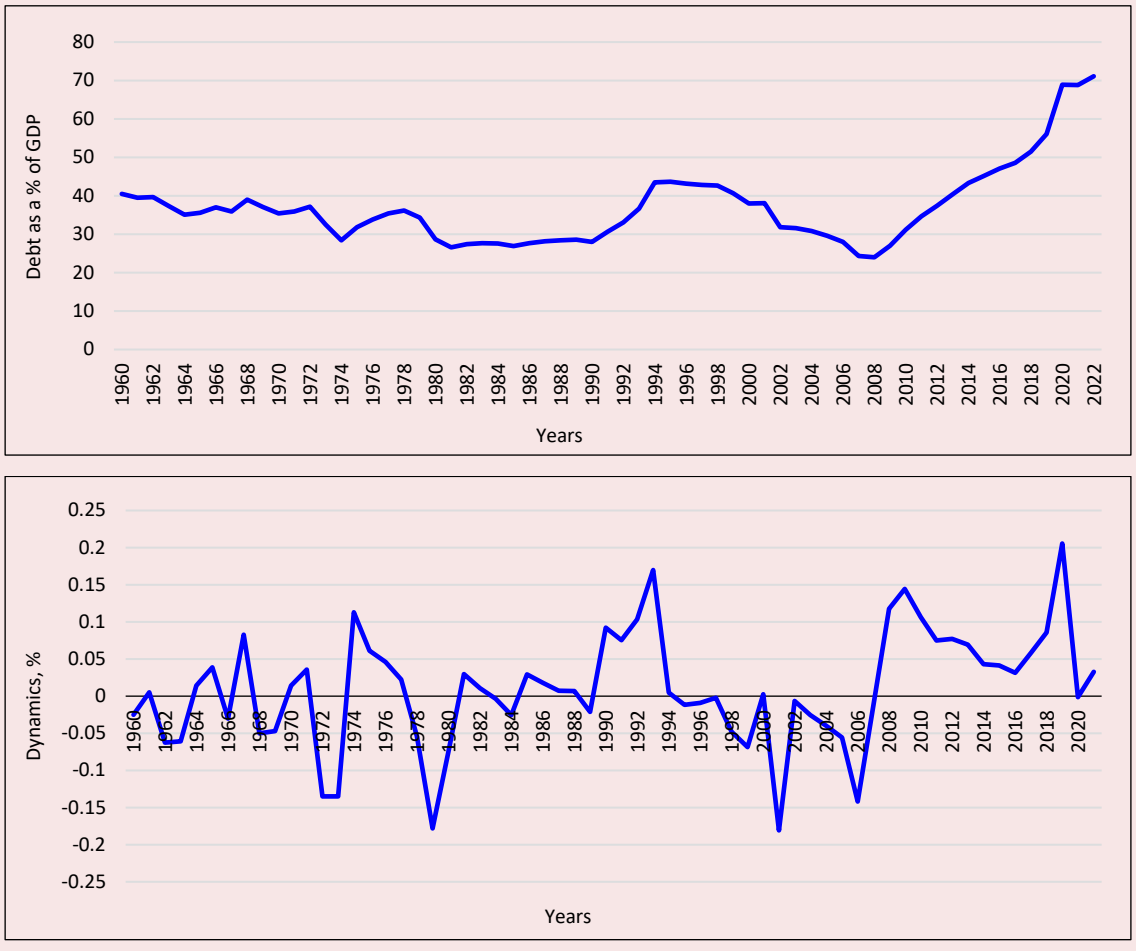
where $DBTP_t$ – public debt that depends only on its own lags. That is, $GBTP_t$ is a function of the "lags of $GBTP_{t-p}$". Likewise, a pure Moving Average (MA only) model is one where $DBTP_t$ depends only on the lagged forecast errors $\varphi_q e_{t-q}$. Where the error terms are the errors of the autoregressive models of the respective lags. The Box – Jenkins mode comprises four stages.

1) Model identification: this step involves selecting the most appropriate lags for the AR and MA parts, as well as determining if the GBTP requires first-differencing to induce stationarity. The autocorrelation (ACF) and partial autocorrelation function (PACF) are used to identify the best model to estimate GBTP. (Information criteria can also be used).

2) Model estimation: this step usually involves the use of a least squares' estimation process by estimating GBTP with its past values and its errors.

3) Diagnostic checking of the model: this step usually is the test for autocorrelation. Diagnostic testing of the model consists of normality test (Jarque – Bera) test, Inverse roots of AR and autocorrelation test. This involves post estimation tests to ascertain that the best GBTP model selected is appropriate for forecasting.

Figure 2. Public debt dynamics



4) Model forecasting: one of the main goals of the analysis on time series models is forecasting. The ARIMA models are particularly useful for forecasting due to the use of lagged variables. At this stage the paper will provide the forecasted values of GBTP and compare them with actual values to evaluate the forecasted values.

Empirical results

This section of the study provides the results on analysis of government debt in South Africa.

An annual time series of public debt for the period of 1960 to 2022 is presented in *Figure 2*.

It can be observed that the variable is non-stationary at levels since there are some trends showing upward trend especially from 2008 to 2022. However, the variable shows some stationarity after it has been first differenced where its mean, and its variance is reverting around zero.

Table 1 presents the descriptive results of the study. The mean value public debt as % of GDP is 36.95. The maximum is 71.10 and was observed in 2022. This could be explained by the high level of stagnant economic activities due to COVID-19 and also due to the fact that the government had to provide huge stimulus package to revive the economy. The minimum value is 24.00 and was experienced in 2008 and this could easily be attributed to the financial crisis of 2008. The following step is to check the stationarity of the variable under consideration. The Dickey – Fuller test (1979) and the Phillips – Perron test (1988) are used in this paper as these are the most common time-series tests for stationarity. *Table 2* shows the results of testing the series for stationarity using intercept only and trend & intercept.

The test was carried out first with an intercept only, then a trend and intercept. In each case the Ho: $p = 0$ was not rejected at the 5% significant levels given the ADF test value of -0.938 in levels. However, it can be observed that at first difference the ADF t-statistics of -4.931 is significant at 5% with a p-value of 0.000. The similar results can also be observed on the Phillips – Perron results, and it can be concluded that the variable is stationary after the first difference.

Model identification results

In estimating the ARMA the first step is to consider the graphs of the partial autocorrelation function and autocorrelation of a series of public debt for South Africa *(Fig. 3, 4)* to determine the general specification of the future ARIMA model and the number of lags for each component. The correlogram graphs are analyzed based on the key properties of the graphs of ACF and PACF functions for ARMA processes.

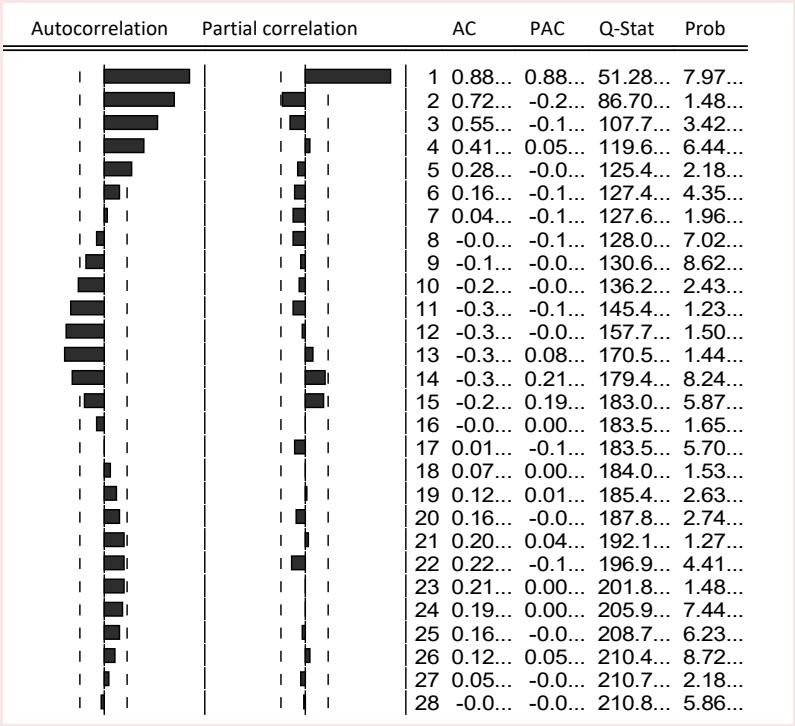
Table 1. Descriptive results of the study

Variable	DBTP
Obs.	63
Mean	36.95
Std. dev.	10.00
Min	24.00
Max	71.10

Table 2. Augmented Dickey – Fuller test and the Phillips – Perron test for DBTP variable

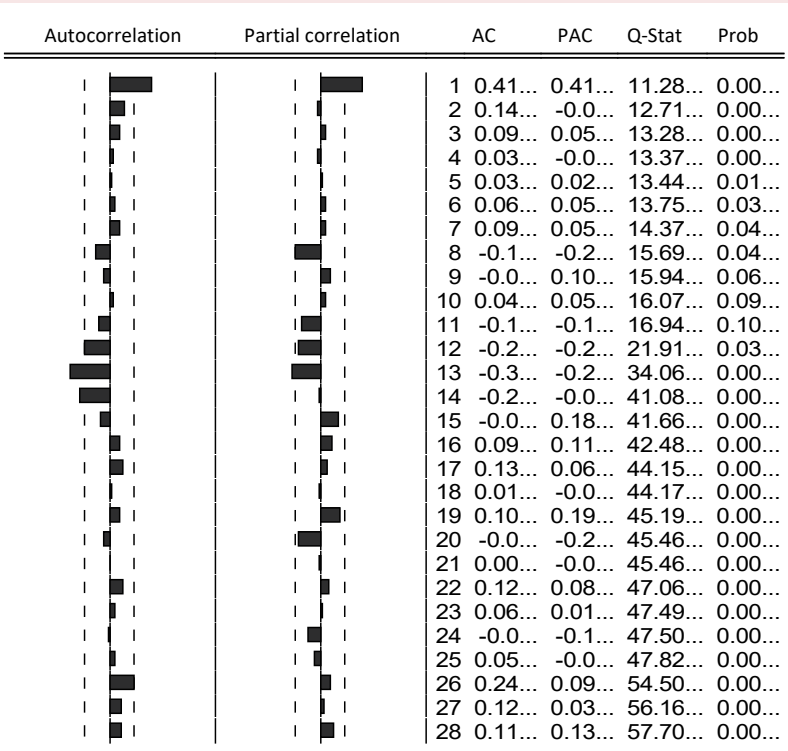
	Intercept only	
	ADF results	PP results
Levels	-0.938 (0.769)	-0.497 (0.884)
First difference	-4.931 (0.000)***	-4.931 (0.000)***
	Trend & intercept	
Levels	-1.375 (0.858)	-0.952 (0.942)
First difference	-5.217 (0.000)***	-5.247 (0.000)

Figure 3. Total public debt as a percentage of GDP at levels



Autocorrelation	Partial correlation		AC	PAC	Q-Stat	Prob
		1	0.88...	0.88...	51.28...	7.97...
		2	0.72...	-0.2...	86.70...	1.48...
		3	0.55...	-0.1...	107.7...	3.42...
		4	0.41...	0.05...	119.6...	6.44...
		5	0.28...	-0.0...	125.4...	2.18...
		6	0.16...	-0.1...	127.4...	4.35...
		7	0.04...	-0.1...	127.6...	1.96...
		8	-0.0...	-0.1...	128.0...	7.02...
		9	-0.1...	-0.0...	130.6...	8.62...
		10	-0.2...	-0.0...	136.2...	2.43...
		11	-0.3...	-0.1...	145.4...	1.23...
		12	-0.3...	-0.0...	157.7...	1.50...
		13	-0.3...	0.08...	170.5...	1.44...
		14	-0.3...	0.21...	179.4...	8.24...
		15	-0.2...	0.19...	183.0...	5.87...
		16	-0.0...	0.00...	183.5...	1.65...
		17	0.01...	-0.1...	183.5...	5.70...
		18	0.07...	0.00...	184.0...	1.53...
		19	0.12...	0.01...	185.4...	2.63...
		20	0.16...	-0.0...	187.8...	2.74...
		21	0.20...	0.04...	192.1...	1.27...
		22	0.22...	-0.1...	196.9...	4.41...
		23	0.21...	0.00...	201.8...	1.48...
		24	0.19...	0.00...	205.9...	7.44...
		25	0.16...	-0.0...	208.7...	6.23...
		26	0.12...	0.05...	210.4...	8.72...
		27	0.05...	-0.0...	210.7...	2.18...
		28	-0.0...	-0.0...	210.8...	5.86...

Figure 4. Total public debt as a percentage of GDP at first difference



Autocorrelation	Partial correlation		AC	PAC	Q-Stat	Prob
		1	0.41...	0.41...	11.28...	0.00...
		2	0.14...	-0.0...	12.71...	0.00...
		3	0.09...	0.05...	13.28...	0.00...
		4	0.03...	-0.0...	13.37...	0.00...
		5	0.03...	0.02...	13.44...	0.01...
		6	0.06...	0.05...	13.75...	0.03...
		7	0.09...	0.05...	14.37...	0.04...
		8	-0.1...	-0.2...	15.69...	0.04...
		9	-0.0...	0.10...	15.94...	0.06...
		10	0.04...	0.05...	16.07...	0.09...
		11	-0.1...	-0.1...	16.94...	0.10...
		12	-0.2...	-0.2...	21.91...	0.03...
		13	-0.3...	-0.2...	34.06...	0.00...
		14	-0.2...	-0.0...	41.08...	0.00...
		15	-0.0...	0.18...	41.66...	0.00...
		16	0.09...	0.11...	42.48...	0.00...
		17	0.13...	0.06...	44.15...	0.00...
		18	0.01...	-0.0...	44.17...	0.00...
		19	0.10...	0.19...	45.19...	0.00...
		20	-0.0...	-0.2...	45.46...	0.00...
		21	0.00...	-0.0...	45.46...	0.00...
		22	0.12...	0.08...	47.06...	0.00...
		23	0.06...	0.01...	47.49...	0.00...
		24	-0.0...	-0.1...	47.50...	0.00...
		25	0.05...	-0.0...	47.82...	0.00...
		26	0.24...	0.09...	54.50...	0.00...
		27	0.12...	0.03...	56.16...	0.00...
		28	0.11...	0.13...	57.70...	0.00...

The visual analysis of the ACF and PACF functions makes it possible to determine whether the selected data set is an ARMA process. The conclusion on the maximum number of lags can be made only in cases of pure processes. When considering the graphs of the ACF and PACF functions in Figure 3, it can be observed that the series is nonstationary since the lags of the ACF they gradually decay until the 17th lag, whereas the PACF quickly dampens after the 1st lag. Therefore, the series was transformed to first difference, then Figure 5 was produced. In Figure 5, the paper can determine ARIMA process, and it can be confirmed that the number of lags to be included are 1st lag, 8th lag, 12th lag, 13th lag and 14th lag. The process is ARIMA process, as evidenced by the visual analysis of the ACF and PACF graphs.

Model selection results

According to Box and Jenkins (1979) the next step is to estimate the ARIMA model by considering the coefficient significance, the adjusted R-squared and Akaike Info Criterion (AIC) and t-statistics by using the five ARIMA models. *Table 3* indicates ARIMA models that can be considered as the best model, namely ARIMA (1,1,1), ARIMA (8,1,1), ARIMA (13,1,1), ARIMA (1,1,12) and ARIMA (1,1,14). Based on adjusted R-squared and AIC, the ARIMA model (13,1,1) is the best among the other ARIMA models. Therefore, the ARIMA model (13,1,1) is used to forecast total public debt for the period 2021 to 2023.

Figures 5, 6 show the Ljung – Box Q test and inverse roots of the ARIMA (13, 1, 1) model. Figure 5 present the results that the study fails to reject the null hypothesis. That is, most of the p-values of the test are greater than 0.05, which implies that the residuals for our time series model are independent. For a diagnostic of ARMA structure, the roots must lie right inside the unit circle. Otherwise, the model may be regarded as unstable and hence not suitable for forecasting. Since the corresponding inverse roots of the characteristic polynomial lie in the unit circle, then this paper can conclude that the chosen ARIMA (13, 1, 1) model is stable and indeed suitable for forecasting total public debt for South Africa.

Since the ARIMA model (13, 1, 1) is fairly describing the trend of total public debt and suggests better accuracy for further forecasting, then the equation (2) reflects the model specification as follows:

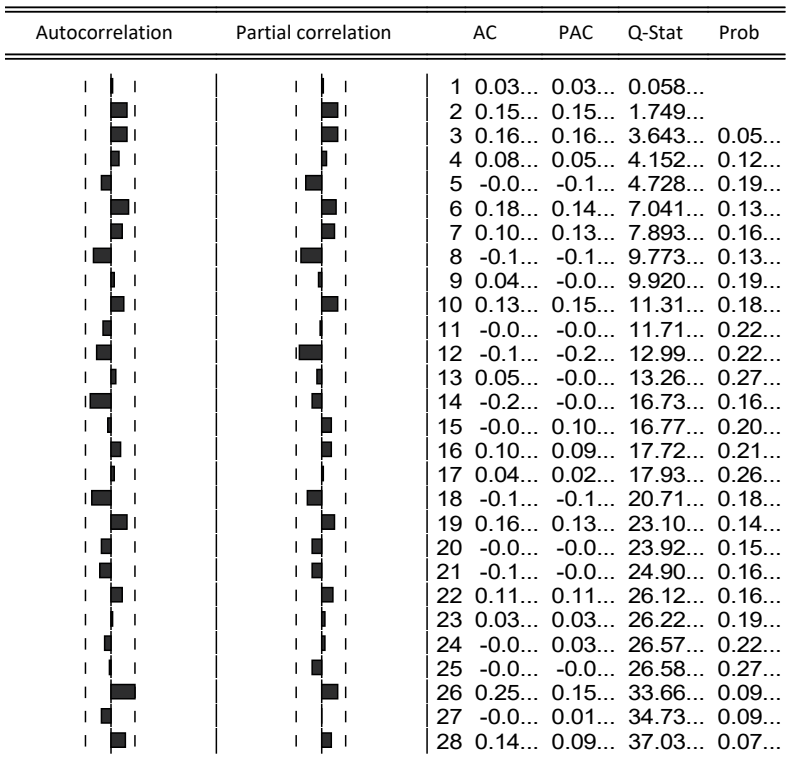
$$d(dbtp)_t = a + \beta_1 \Delta dbtp_{t-1} + \ldots + \\ + \beta_1 \Delta dbtp_{t-13} + \varphi_1 e_t + \varphi_2 e_{t-1} + \delta_t . \quad (2)$$

In this paper, the equation (2) was used to determine the model that allows obtaining the forecast values of total public debt in South Africa.

Table 3. Analysis of best model selection

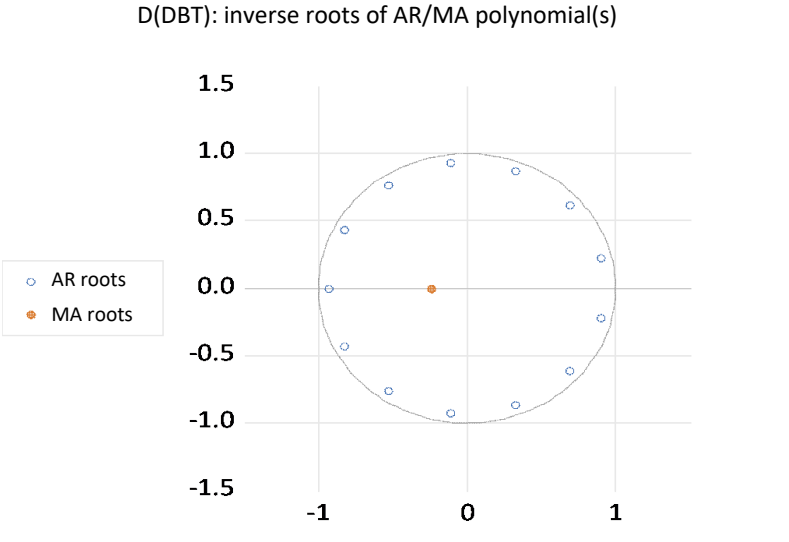
Model	Variables	Coefficients	t-statistics	AIC	Adjusted R-squared
ARIMA (1,1,1)	AR(1) MA(1) Sigmasq	0.657 -0.312 7.261	1.840** -0.708 7.746***	4.920	0.124
ARIMA (8,1,1)	AR(8) MA(1) Sigmasq	-0.166 0.355 7.484	-0.996 3.000*** 8.705***	4.953	0.097
ARIMA (13,1,1)	AR(13) MA(1) Sigmasq	-0.399 0.239 6.688	-1.837** 1.733** 6.662***	**4.872**	**0.193*** **
ARIMA (1,1,12)	AR(12) MA(8) Sigmasq	-0.311 -0.119 8.048	-1.270 -0.793 10.193***	5.041	0.029
ARIMA (1,1,14)	AR(1) MA(14) Sigmasq	0.356 -0.201 7.087	3.838 -0.797 8.593	4.904	0.145

Figure 5. Ljung – Box Q statistics test for the model ARIMA (13, 1, 1)



Autocorrelation	Partial correlation		AC	PAC	Q-Stat	Prob
		1	0.03...	0.03...	0.058...	
		2	0.15...	0.15...	1.749...	
		3	0.16...	0.16...	3.643...	0.05...
		4	0.08...	0.05...	4.152...	0.12...
		5	-0.0...	-0.1...	4.728...	0.19...
		6	0.18...	0.14...	7.041...	0.13...
		7	0.10...	0.13...	7.893...	0.16...
		8	-0.1...	-0.1...	9.773...	0.13...
		9	0.04...	-0.0...	9.920...	0.19...
		10	0.13...	0.15...	11.31...	0.18...
		11	-0.0...	-0.0...	11.71...	0.22...
		12	-0.1...	-0.2...	12.99...	0.22...
		13	0.05...	-0.0...	13.26...	0.27...
		14	-0.2...	-0.0...	16.73...	0.16...
		15	-0.0...	0.10...	16.77...	0.20...
		16	0.10...	0.09...	17.72...	0.21...
		17	0.04...	0.02...	17.93...	0.26...
		18	-0.1...	-0.1...	20.71...	0.18...
		19	0.16...	0.13...	23.10...	0.14...
		20	-0.0...	-0.0...	23.92...	0.15...
		21	-0.1...	-0.0...	24.90...	0.16...
		22	0.11...	0.11...	26.12...	0.16...
		23	0.03...	0.03...	26.22...	0.19...
		24	-0.0...	0.03...	26.57...	0.22...
		25	-0.0...	-0.0...	26.58...	0.27...
		26	0.25...	0.15...	33.66...	0.09...
		27	-0.0...	0.01...	34.73...	0.09...
		28	0.14...	0.09...	37.03...	0.07...

Figure 6. Residuals AR roots for the model ARIMA (13, 1, 1)



Forecasting results

Before we start to discuss the forecasted values, we should note that some of the forecasting evaluations were considered to gain the confidence in the forecast. Table 4 provides the evaluation criterions of forecasting ARIMA (13,1,1) model. The paper applied the most frequently used evaluation criteria's such as Root Mean Squared Error (RMSE), Mean Absolute Error (MAE) and Mean Absolute Percent Error (MAPE). The paper explored the forecasting techniques which is dynamic forecasting to have a better sense of the results. In observing the results of the technique, it can be concluded that it provides better forecasting results.

Figure 7 demonstrates the trend of public debt (DBT) which is actual and forecasted (DBTF) using dynamic forecasting. The forecast for in-sample covers the period from 1960 to 2022, whereas out-of-sample is for one period ahead, which is 2023. It can be observed from the figure that the forecasted values mimic the data well of the actuals *(Tab. 5)*.

Table 4. Evaluation criteria of forecasting ARIMA (13,1,1)

Evaluation criteria	Dynamic forecasting
RMSE	11.44
MAE	8.01
MAPE	19.58

Figure 7. Actual and forecasted values of public debt using ARIMA (13,1,1)

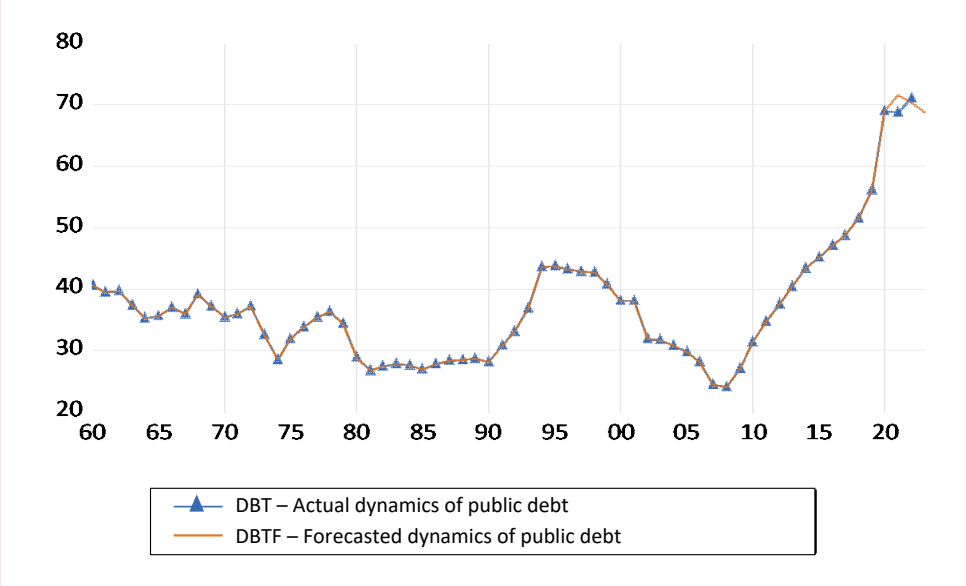


Table 5. Comparison of actual and forecasted public debt

Year	Actual values	Forecasted values
2021	68.8	71.53
2022	71.1	70.33
2023	–	68.66

Thus, the forecast for total public debt shows a decreasing trend from 2021 with 71.53%, 2022 with 70.33% and 2023 with 68.66%. The current study projections also suggest a possible decrease in the growth in public debt. It can be observed from the two forecasts that they do not drift too much from the actuals, especial for the year 2022.

Conclusion

This paper attempted to shed further light on modeling and forecasting public debt. The study proposed the implementation of univariate ARIMA model which allows us to model and forecast the values of government debt in the future. It should be remembered that such an achievement in forecasting the future public debt is critical for public debt management. The findings of this study demonstrate that ARIMA (13,1,1) model is the best fit and the model has passed all the necessary diagnostic tests. The study further forecasted the values of public debt using dynamic technique. The forecast shows that, there is an expected decrease in the growth of public debt in the future. It should be noted that such envisaged reduction of public debt has some economic aftereffects on South African economy. It is therefore recommended by this study that fiscal policy makers should adopt a strong fiscal reform to keep the public debt to a minimum. Therefore, such a decision my include raising tax revenue or curbing of public expenditure to stabilize public debt. Therefore, the practical contribution of this paper was the ability of the suggested model to mimic the actual values of public debts stock by using forecasting. The suggestion for further research is that future studies should consider regime shifts (episodes of low and high public debt overtime).

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Modeling Renewable Electricity Production in Azerbaijan

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Abstract. Azerbaijan is an oil-rich country in the South Caucasus with great potential for developing the renewable energy sector, which currently accounts for only a small share of total energy production. Increased electricity generation from renewables can bring various economic and environmental benefits, such as greater energy security, sustainability and resource conservation, decentralized power generation, technological innovation, and climate change mitigation. Although there are a growing number of studies on Azerbaijan's green energy or energy transition, the dynamics of its relatively longitudinal per capita renewable electricity generation have not been fully explored. Moreover, most studies ignore the role of technological change and profound institutional and policy variables in the energy transition. Our study fills this gap by applying dynamic ordinary least squares modeling (DOLS) on annual data to identify the key economic, institutional, and policy determinants in the period from 1990 to 2021. We reveal that economic variables such as oil prices, trade openness, CO_2 emissions, accession to the Kyoto Protocol, and crisis periods were positively and statistically significantly associated with renewable electricity production in Azerbaijan. However, institutional quality variables (e.g., government effectiveness), GDP per capita, and primary energy consumption were negatively and statistically significantly associated with renewable electricity. Our findings hold the potential to furnish essential insights into enhancing renewable energy production across both short- and long-term horizons. Consequently, policymakers, decision-makers, and scholars stand to gain valuable insights from the outcomes of our research.

Key words: Azerbaijan economy, electricity production, dynamic ordinary least squares, green economy, renewable energy.

Introduction

The investigation into the fundamental determinants of renewable energy production yields manifold societal benefits. Primarily, these efforts can bolster energy security by mitigating the reliance on imported fossil fuels (Moriarty, Honnery, 2016). Subsequently, these sources exhibit negligible greenhouse gas emissions, positioning them as a pivotal component in the transition towards a low-carbon economy and the concomitant mitigation of emissions[1]. Furthermore, the pivot to renewable energy augments public health by mitigating air pollution, thus engendering enhanced community well-being (Singh et al., 2010; Wolch et al., 2014). This transition also harbors the potential to cultivate employment avenues, particularly within the domains of manufacturing, installation, and maintenance of renewable energy infrastructure[2]. Finally, in regions where traditional biomass predominates, the embracement of renewable sources has the capacity to alleviate the burdens on rural livelihoods by abating the temporal and labor-intensive obligations associated with fuelwood collection and concurrently expanding access to modern energy services[3].

Oil-rich nations are increasingly endeavoring to transition from conventional fossil-fuel-based energy production. This shift is propelled by several factors that imbue the production of renewable energy with considerable potential to bolster the long-term economic growth and development strategies of oil-rich countries (Østergaard et al., 2021). This transition offers benefits such as

[1] See: Meletiou A. (2017). The role of network regulation in the transition towards a low-carbon European power system. Doctoral dissertation. Politecnico di Torino.

[2] See: Guta D. (2015). Bio-based energy, rural livelihoods and energy security in Ethiopia. Doctoral dissertation. Universitäts-und Landesbibliothek Bonn. DOI: 10.3726/978-3-653-06173-4

[3] See: (Guta, 2015).

diversifying domestic energy production, which can also be exported, as well as reducing production costs, including the adverse environmental externalities, and generating additional employment opportunities—objectives highly sought by numerous oil-producing developing nations. These circumstances warrant an exploration of case studies that hold the promise of furnishing insightful and intriguing insights into domestic socioeconomic indicators and the renewable energy sector. Notably, Azerbaijan emerges as one such case study, situated within the South Caucasus region and bordering the Caspian Sea.

The Azerbaijani economy is endowed with significant reserves of oil and natural gas, which are harnessed for both domestic energy generation and the attainment of substantial export revenues (Bayulgen, 2003). In broader terms, Azerbaijan is estimated to possess approximately seven billion barrels of oil, with a production rate of 1,034.63 thousand barrels per day in 2010, marking the highest recorded value since 1991[4]. The mining sector, contributing 55.94% to value added in 2022, assumes a prominent role, and energy production constitutes the principal impetus propelling non-oil economic activities[5]. Mining and energy industries have conventionally been perceived as effective and pioneering avenues through which the Azerbaijani government engages in oil and gas extraction, yet certain non-oil manufacturing sectors and institutional advancements have been marginalized due to issues pertaining to transparency and rent-seeking[6]. Consequently, the rapid economic growth, developmental progress, poverty alleviation, and increased wealth witnessed in Azerbaijan are coupled with attendant occurrences such as Dutch disease and de-industrialization (Hasanov, 2013).

Azerbaijan's dependence on oil, fossil fuel-based energy production, and limited opportunities for job creation make it necessary to address current mainstream issues such as the green economy in order to create social and economic prospects. While there is a growing body of literature investigating the green economy and renewable energy production in Azerbaijan, a comprehensive approach to modeling the essential economic, institutional, and policy factors influencing renewable energy production remains limited. Furthermore, there has been no comprehensive study on long-run dynamics over an extended time period (1990 to 2021) pertaining to renewable energy production. To address this research gap, our study endeavors to construct linear models of the Azerbaijani economy in relation to per capita renewable electricity production, a pivotal factor influencing overall economic growth and development (Humbatova, 2020). The research question guiding this study is as follows: How have economic, institutional, and policy factors influenced per capita renewable electricity generation in Azerbaijan from 1990 to 2021? To explore this question, we employ a quantitative research design, specifically the dynamic ordinary least squares (DOLS) methodology, which effectively mitigates endogeneity and serial correlation concerns (Saikkonen, 1991; Stock, Watson, 1993). This approach enables us to capture the robust and dynamic relationships among the variables of interest, addressing common endogeneity issues prevalent in economic datasets (Isiaka, 2020). We thus follow the suggestions of Ahmet (Ahmet, 2021), who argues that DOLS allows us to obtain unbiased coefficients for small samples that correspond to our situation, regardless of their degree of integration. The distinctive contribution of this research lies in its comprehensive examination of the determinants of per capita renewable electricity in Azerbaijan, a small oil-rich nation where international oil prices significantly shape economic prosperity. This study draws upon a theoretical framework derived from

[4] The Global Economy (2023). Available at: https://www.theglobaleconomy.com/

[5] The Global Economy (2023). Available at: https://www.theglobaleconomy.com/

[6] See: Frayne T. (2012). Energy sector FDI in Azerbaijan: An example of good governance. E-international Relations. Available at: https://www.e-ir.info/2012/08/05/energy-sector-fdi-in-azerbaijan-an-example-of-good-governance/

the literature review, particularly that which pertains to the Azerbaijani economy. The main scientific hypotheses of the current paper are given below:

H_a1: Economic determinants (e.g., GDP per capita, trade openness) played a statistically significant role in per capita renewable electricity generation in Azerbaijan between 1990 and 2021;

H_a2: Institutional determinants (e.g., government effectiveness, regulatory quality) played a statistically significant role in per capita renewable electricity generation in Azerbaijan between 1996 and 2021;

H_a3: Policy determinants (e.g., research and development expenditures, joiining Kyoto Protocol) played a statistically significant role in per capita renewable electricity generation in Azerbaijan between 1996 and 2021.

Literature review and theoretical framework

Azerbaijan's potential for transitioning an energy transition from its predominant fossil fuel-based paradigm to a more ecologically sustainable production model has garnered substantial consideration. This is predicated on the country's endowed hydro, solar, and wind power capacities, positioning it favorably to enhance per capita renewable electricity output (Vidadili et al., 2017). A prevailing discourse posits that Azerbaijan's latent potential remains incompletely tapped, offering future prospects of notably elevated green energy generation (Mustafayev et al., 2022). Nonetheless, there exists the plausible avenue to augment electricity production in Azerbaijan by an estimated 5–7%, alongside a 10% increase in heat energy, facilitated by the adoption of alternative energy resources (Azizov, Mammadova, 2022). In response to these considerations, the state has devoted attention to these matters, particularly within the last decade, as underscored by the "State program on the use of alternative and renewable energy sources in the Republic of Azerbaijan" (Hasanov, 2023). Despite these strides, substantial challenges persist, including the legal framework, seamless grid integration, storage capacity limitations, and the harmonization of supply and demand dynamics, necessitating concerted efforts to surmount them in the foreseeable trajectory.

The corpus of econometric and empirical inquiries into Azerbaijan's renewable energy production is demonstrating an upward trajectory. Huseynli and Huseynli (Huseynli, Huseynli, 2022), for instance, have unveiled a causal nexus among variables encompassing renewable energy production, unemployment, and traditional energy output. Employing vector autoregression and correlation analyses, this study discerned a robust interrelationship among these variables. This signifies that overall energy generation and consumption exert an elevating influence on renewable energy production, thereby engendering fresh employment prospects. Parallelly, Mukhtarov (Mukhtarov, 2022) applied the Granger causality test to annual data spanning from 1992 to 2015, thereby substantiating a causal linkage between economic growth and renewable energy production in Azerbaijan. Additionally, Mukhtarov et al. (Mukhtarov et al., 2020) expounded that an increase of 0.16% and 0.60% in renewable energy consumption is concomitant with a 1% elevation in financial development, gauged through the metric of domestic credit relative to GDP between 1993 and 2015. This underlines the pivotal role of domestic financial development and economic growth in galvanizing renewable energy consumption in a statistically robust manner. Nevertheless, a subset of studies has proffered counterarguments, refuting the proposition of an enduring equilibrium between renewable energy production and pivotal economic variables within the Azerbaijani economy (Kalyoncu, 2013), whilst also casting doubt on their contribution to economic growth (Huseynli, 2022). Notwithstanding, the latest study by Hasanov et al. (Hasanov et al., 2023), employing machine learning algorithms, has demonstrated that both total factor productivity and renewable energy consumption engender a reduction in CO_2 emissions.

Azerbaijan is faced with a compelling imperative to expeditiously enhance its energy transition endeavors. The conventional fossil-fuel based energy production practices, apart from their palpable inadequacy in aligning with the sustainability agenda advocated by the United Nations, bear adverse ecological ramifications (Abbasov, 2015). The issue of environmental degradation in Azerbaijan has attracted sustained attention over the course of several years. This is attributed to the country's copious reserves of oil and gas, a situation that has been further exacerbated by the historic "Contract of the Century" signed in 1994. This also amplified concerns surrounding environmental preservation (Aliyev et al., 2006). Eminent scholars contend that state-initiated endeavors such as the "Clean City" and "White City" projects represent explicit responses to the persisting challenges associated with climate change and the alarming depletion of vital resources within Azerbaijan (Mehdialiyeva, Mazanova, 2013). The forays into Stand-Alone Photovoltaic (SAPV) technologies in the Karabakh region, notably in Zangilan city, serve as a vivid testament to policymakers' systematic commitment toward facilitating the socio-economic well-being of nascent communities by means of sustainable energy production strategies. It is, however, imperative to recognize that the scope of such initiatives should not be limited solely to the energy sector; rather, the agriculture and transportation domains should also be imbued with a vision to leverage the potential dividends of a sustainable green energy landscape (Mehdialiyeva, Mazanova, 2013).

Within the burgeoning discourse encompassing green energy production in Azerbaijan, a resonating perspective calls for collaborative engagement with foreign nations to harness their accrued expertise, technological innovations, and policy formulation acumen. Notably, Hajiyeva and Musayeva-Gurbanova underscore the prospects of fostering cooperation between Azerbaijan and select European counterparts, notably Switzerland and Sweden, renowned for their well-entrenched economic paradigms and policies germane to green energy integration (Musayeva-Gurbanova, Hajiyeva, 2022). This impetus is underscored by Azerbaijan's pivotal role in bolstering the energy security of European Union nations, thereby bestowing strategic significance upon the South Caucasus and the Caspian Sea region (Galandarova, 2023). Galandarova (Galandarova, 2023) further advances the notion that the ongoing collaborative endeavors between Azerbaijan and European Union member states are instrumental in laying a firm domestic legal and regulatory groundwork conducive to advancing the agenda of renewable energy production (Galandarova, 2023).

In essence, the prospective trajectories of renewable energy production in Azerbaijan are underpinned by both optimistic and cautious outlooks. Each stance is buttressed by distinct rationales grounded in prevailing political, socio-economic, and institutional contours. For instance, Azerbaijan has diligently formulated an array of legislative statutes, legal edicts, and state-driven initiatives consonant with European norms, indicative of the nation's commitment to orchestrating an energy transition that addresses environmental imperatives and resource conservation (Ahmadov, Khalilov, 2019). While Ibadoghlu (Ibadoghlu, 2022) presents a more nuanced assessment of renewable energy production, Hajizada (Hajizada, 2021) postulates that robust inter-ministerial synergy coupled with a resolute disposition within the Azerbaijani administration augments the feasibility of realizing stipulated objectives within the realm of green energy. Comparative analyses conducted by Cholewa et al. (Cholewa et al., 2022) and Guliyev (Guliyev, 2023) underscore Azerbaijan's aspiration to curtail greenhouse emissions by 30% via the renewable energy sector. Nevertheless, this ambition contends with challenges such as limited

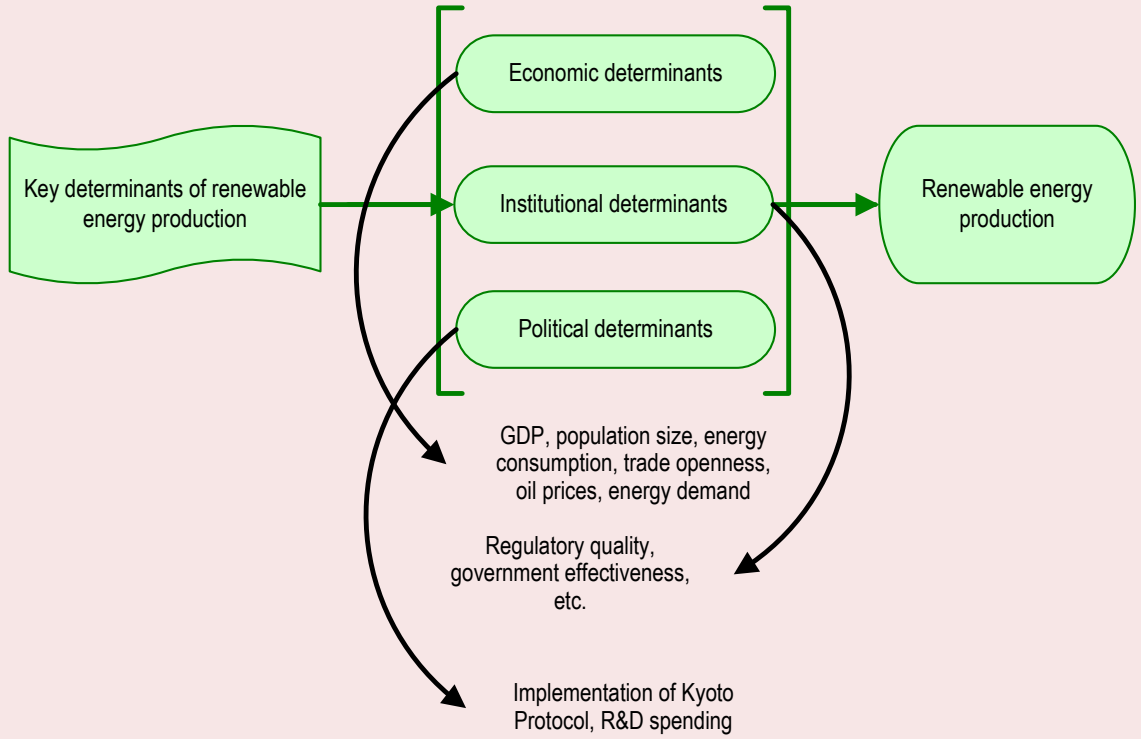
collaboration with neighboring nations and the pronounced monopolistic dominion of "Azerenergy OJSC", thereby impinging upon the efficacy of regulatory frameworks and normative mandates (Hamidova et al., 2022).

Nevertheless, an array of studies has directed conspicuous attention towards the spectrum of malpractices and formidable impediments impeding the progress of green energy development within the Azerbaijani context. Consequently, Azerbaijan finds itself confronted with the imperative to recalibrate its pricing and investment enticement stratagems in the realm of electricity generation. It emerges that, given the prevailing milieu, the pursuit of requisite investment thresholds necessary for the amplification of renewable energy production capacity stands insurmountably challenging (Gulaliyev et al., 2020). The existing technological and economic efficiencies attendant to renewable energy production manifest as conspicuously suboptimal, coupled with a dearth of incentives capable of fomenting the requisite impetus among prospective domestic stakeholders (Gulaliyev et al., 2020). Investigative endeavors of Nuriyev et al. (Nuriyev et al., 2021) further corroborate the veracity of these concerns, spotlighting energy policy contours, financial risk dimensions, and the exigency of grid access as veritable crucibles encompassing the landscape of renewable energy development. A distinct facet within this discourse is articulated by Bayramov (Bayramov, 2021), who accentuates the promulgation of state-led measures designed to incentivize and fortify fossil-fuel based energy production through the aegis of subsidies, while concurrently casting a seemingly inattentive gaze towards the stimulation of renewable energy endeavors. The hardships introduced by the global COVID-19 pandemic have also resonated within Azerbaijan's renewable energy terrain. As global demand and oil prices experienced a downward trajectory, Azerbaijan's fiscal leeway contracted, thereby constraining its capacitation to both invest in and augment the ongoing arc of renewable energy production (Bayramov, 2021).

Access to capital for renewable energy projects remains difficult due to low liquidity in the local banking system and high interest rates (Bayramov, 2021). Guliyev (Guliyev, 2023) argues that Azerbaijan's renewable energy sector depends on foreign direct investment from Gulf countries. Customer preference for renewable energy sources is also low and the Azerbaijani public remains poorly informed about the potential of moving away from fossil fuels (Bayramov, 2021). More public awareness is needed to expand the use of renewable energy (Bayramov, 2021).

We have formulated the theoretical framework that underpins the present study, delineated in Figure 1, drawing from seminal contributions by (Ahmad et al., 2022; Bourcet, 2020; Omri, Nguyen, 2014; Przychodzen, Przychodzen, 2020). *Figure 1*, in essence, elucidates our methodological approach regarding variable selection in the context of this study. To elaborate, we have classified variables into three distinct categories: economic, institutional, and policy determinants, which collectively constitute the principal conduits through which impacts on renewable energy production are channeled. This classification holds true not only within the Azerbaijani context but extends to a broader international framework. Within the realm of economic determinants, variables such as GDP per capita, energy demand, and trade openness have been regarded as pivotal influencers of renewable energy production. Similarly, the institutional determinants encompass regulatory quality, government effectiveness, and an aggregated measure of institutional quality, drawing from a composite of pertinent World Bank Governance indicators such as rule of law, voice and accountability, control of corruption, and political stability. Lastly, the investigation into policy dimensions of renewable energy production has been grounded in the comprehensive analysis

Figure 1. Theoretical framework of the study



Source: own elaboration based on the literature.

of the Kyoto Protocol's implementation and the allocation of resources to research and development expenditures.

Data and methodology

In this study, the DOLS methodology is employed, a preferred approach over the conventional OLS method. This choice is predicated upon its efficacy in mitigating challenges arising from serial correlation and endogeneity, as expounded earlier within this paper. The overarching functional representation of the empirical models is provided herewith:

$$Y_t = F(E_t, I_t, P_t), \quad (1)$$

In the context of this analysis, Y_t symbolizes the per capita renewable electricity generation at time t; E_t encompasses conceivable economic determinants at the same juncture (e.g., GDP per capita, oil prices, energy consumption); I_t pertains to institutional determinants encompassing aspects like regulatory quality, government effectiveness, and an average institutional quality involving additional components (e.g., control of corruption, rule of law, etc.); P_t represents policy variables which encapsulate factors like research and development expenditures, the application of the Kyoto Protocol, etc. This functional interrelation is estimated through diverse variables judiciously selected in alignment with the theoretical framework of the current investigation. Subsequently, DOLS models were estimated, adhering to the approach delineated by Stock and Watson (Stock, Watson, 1993). Thus, our DOLS specification is described below:

$$RenElec_t = C_0 + \beta_i X_{i,t} + \sum_{r=-k}^{r=k} \Phi_i \Delta X_{i,t+r} + \varepsilon_{i,t}, \quad (2)$$

where *RenElec* is the per capita renewable electricity generation at time t; C_0 signifies the vector of intercept coefficients; $X_{i,t}$ is the vector of integrated regressors in their level form succeeded by their differenced, lagged, and lead forms of $\Delta X_{i,t+r}$; Δ denotes the difference operator pertaining to the vector of explanatory variables comprised within X; k represents the number of lags and leads; Φ conveys the vector of coefficients derived from lagged and lead explanatory variables; β_i denotes the vector of long-run coefficients; ε_t is the random error terms at time t. The decision to set k at "1" is driven by the limitations imposed by the constrained sample size, which is founded on annual data.

We have closely examined the works (Murshed, Saadat, 2008; Loganathan, Subramaniam, 2010; Mahadea, Kaseeram, 2018; Ahmet, 2021), which have utilized DOLS models for the estimation of time series data. These investigations aimed to ascertain the judicious selection of variables within a singular model, given the constraints imposed by the sample size. Our scrutiny revealed a consistent trend, where typically two to three, and at most four explanatory variables, inclusive of the intercept parameter, have been deemed appropriate for the estimation of a DOLS model. In light of this observation, our endeavor focused on employing two to three explanatory variables in our estimations, thereby facilitating the acquisition of substantive and unbiased long-run coefficients.

For OLS estimations, the adjustment of degrees of freedom and the rescaling of OLS error terms are standard procedures in the econometrics software EViews. However, in the context of DOLS estimations, a reevaluation of this default approach becomes imperative due to the intricate nature of the model incorporating lags and leads of differenced explanatory variables, coupled with their corresponding level forms. As a corrective measure, we have engaged the DOLS method within the EViews econometrics software. It's noteworthy that the coefficient covariance matrix is predicated on the HAV technique, and the degrees of freedom adjustment option remains unchecked, as befits the DOLS framework. To enhance the robustness of our analysis, each model has undergone diagnostic tests, including the Jarque – Bera normality test of the residuals and the Wald test. Additionally, the R-squared values, in conjunction with the reported standard error of regression, serve to provide insights into the caliber of the linear estimations.

Table 1 provides a comprehensive overview of the variables under consideration, encompassing their abbreviations, conceptual definitions, and sources. Notably, the temporal coverage of the variables within the dataset exhibited divergence. For instance, indicators such as the proportion of primary energy stemming from renewable sources, prevailing oil prices, the pace of population growth, per capita CO2 emissions, and per capita primary energy consumption were tracked from the year 1990 through 2021. On the other hand, metrics encompassing per capita electricity generation via renewable sources, GDP per capita, and the extent of trade openness were examined within the timeframe spanning 1990 to 2021. Meanwhile, Research and Development (R&D) expenditure and institutional variables (e.g., regulatory quality, government effectiveness) unfolded within the scope of 1996 to 2021.

Three variables exhibited outlier values. Specifically, for the variable RegQ, the outlier value was confined to the year 2004, whereas for the variables TrOpp and PrEnCon, outlying values extended across multiple years *(Tab. 2)*. To address this, a strategy involving value constraints was implemented, whereby the outlier values of RegQ and TrOpp were substituted with the maximum or minimum values extracted from the respective time series untainted by outlier values. In contrast, the variable PrEnCon remained unaltered in terms of its outlier values, primarily due to the complexities entailing potential data loss. Preceding the DOLS estimations, all variables underwent standardization

Table 1. Details about the variables of interest used in dynamic ordinary least squares modeling

No.	Variable name	Abbreviation	Definition	Source
1.	Per capita electricity generation from renewables	RenElec	in kilowatt-hours; the sum of the electricity from the sources such as solar, wind, hydropower, geothermal, etc.	Our World in Data
2.	Per capita CO_2 emissions	CO2Emm	in tons; Carbon dioxide (CO_2) emissions from fossil fuels and industry, excluding land use	
3.	Primary energy consumption per capita	PrEnCon	in kilowatt-hours/person	
4.	Oil prices	OilP	in USD per barrel; monetary value of one barrel of oil	U.S. Energy Information Administration
5.	Trade Openness	TrOpp	in %; percentage share of trade (exports–imports) in GDP of the country.	The World Bank
6.	GDP per capita	GDPPerCap	in current USD; GDP per capita is the result of dividing the gross domestic product by the population at the midpoint of the year.	
7.	Research and Development (R&D) expenditure	R&DExp	in %; the percentage of GDP allocated to research and development expenditures	
8.	Government effectiveness	GovEff	in estimate value (–2.5 the lowest; +2.5 the highest); government effectiveness encompasses perceptions of public service quality, civil service performance, its independence from political influences, policy formulation and implementation quality, and the government's commitment credibility towards these policies.	
9.	Regulatory quality	RegQ	in estimate value (–2.5 the lowest; +2.5 the highest); regulatory quality refers to the perceived capability of the government in designing and executing effective policies and regulations that encourage and support private sector growth and development.	
10.	Institutional quality	InsQ	Average value of all available World Bank Governance indicators	
11.	Population growth rates	PopGr	in %; the annual growth of overall inhabitants of the country	
12.	Implementation of Kyoto Protocol	KyotoPr	A dummy variable for the period of 2000–2021=1	Author's construction based on the information of Ministry of Energy
13	Economic crises periods	Crises	A dummy variable for crises periods 1989–1994=2009–2010=2014–2015=2020=1	

Source: own compilation.

via the Z-scores approach, facilitating the achievement of coefficient comparability. Thus, Table 2 presents the descriptive statistics, information on the outlier points (their occurance years), and correlations based on Spearman's non-parametric Rho coefficient of each variable with the dependent variable, namely RenElec.

Following research endeavors of (Azizi et al., 2022; Nordin et al., 2014; Sharif et al., 2017), our study employs fundamental statistical procedures to ascertain the compatibility of our dataset with DOLS framework. To this end, we execute both the Augmented Dickey – Fuller (ADF) test for assessing unit root and the Johansen – Juselius co-integration analyses for investigating co-integration patterns. The existence of a co-integration relationship among the variables of interest is imperative for the subsequent application of DOLS. This foundational understanding of stationarity and co-integration substantiates the robustness of our subsequent linear modeling, aligning with established practices within the realm of economics, as evidenced by the seminal works (Lim et al., 2003; Zhong, Lei, 2008; Herve, Shen, 2011).

According to the ADF test *(Tab. 3)*, all variables are stationary at their first difference form based on Akaike Information Criterion. When variables are stationary on their first difference, it is often easier to estimate relationships between them using econometric techniques like regression or cointegration. Stationarity simplifies the modeling process and enhances the reliability of the results.

Table 2. Descriptive statistics of the variables of interest

Variable	Min.	Max.	Average	St. dev.	Outliers	Correlation
RenElec	118.62	369.16	222.42	62.50	—	—
CO2Emm	3.32	7.61	4.53	1.50	—	0.26*
PrEnCon	14,165.33	36,072.15	20,617.52	7,234.66	1991	0.04
OilP	14.42	99.67	44.31	27.83		–0.06
TrOpp	55.35	115.84	86.41	15.31	1992–93, 2004	0.54**
GDPPerCap	60.24	7,890.84	3,007.71	2,650.32	—	–0.22
R&DExp	0.17	0.42	0.25	0.07	—	0.06
GovEff	-0.71	0.81	0.07	0.53	—	–0.43*
RegQ	–0.88	–0.48	–0.67	0.10	2004	0.27
InsQ	–1.06	0.42	–0.19	0.52	—	–0.43*
PopGr	0.44	2.12	1.18	0.36	—	0.31*

Notes: Descriptive statistics was based on the dataset that did not contain any outliers.
* Correlation is significant at the 0.01 level (2-tailed);
** Correlation is significant at the 0.05 level (2-tailed).
Source: own calculations based on the collected dataset.

Table 3. Augmented Dickey – Fuller unit root test of the variables of interest

	RenElec	**CO_2Emm**	**PrEnCon**	**OilP**	**TrOpp**	**PopGR**
At level	–2.38	–1.52	–0.70	–2.37	-2.91	–1.98
1st diff.	–5.19***	–3.41*	–4.19**	–6.29***	–6.23***	–5.66***
	GDPPerCap	**R&DExp**	**GovEff**	**RegQ**	**InsQ**	
At level	–2.28	–2.75	–2.30	–2.26	–0.93	
1st diff.	–3.44*	–5.04***	–5.55***	–3.65**	–4.42***	

The numbers were rounded to the second decimal place for concision. The symbols *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively. "diff" denotes difference.
Source: own calculations based on the collected dataset.

Given the divergent nature of our sample sizes with respect to observation counts, and the relatively concise temporal span under scrutiny, our analytical strategy encompassed the implementation of three distinct Johansen – Juselius co-integration analyses. These investigations were underpinned by the amalgamation of varying subsets of variables of interest, with an absolute incorporation of the dependent variable, denominated as renewable electricity production (RenElec). The findings of these analyses are comprehensively presented in *Table 4*. Notably, the outcomes derived from all three analytical iterations consistently underscore the existence of at least one co-integration equation among the assessed variables. Such findings effectively substantiate the premise that the variables in question exhibit co-integration, thereby implying the presence of a sustained long-term equilibrium among them. In essence, this connotes the operation of a unifying mechanism that harmonizes the trajectories of the variables of interest. Consequently, these findings augur well for the pursuit of theoretically significant outcomes that bear substantial empirical pertinence.

Results

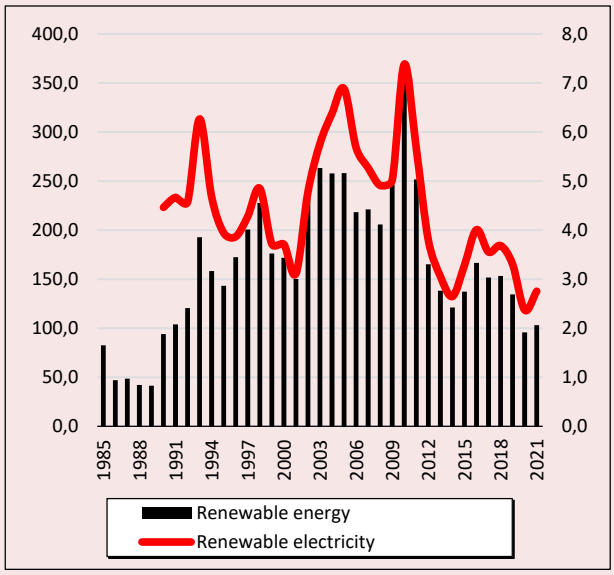
To begin our analysis, the trajectory of Azerbaijan's renewable energy production, expressed as a proportion of total energy output, exhibited an upward trajectory commencing from 1985, culminating via 7.4% in 2010 (see Fig. 2, panel a). However, a shift in trend has been evident since 2010, characterized by marginal upticks in 2016 and 2022. This departure in trend becomes pronounced when considering the percentages of 1.9% in 2020 and 2.1% in 2021, which fall short of harnessing the true potential and capacity inherent in the Azerbaijani economy for generating renewable energy. Similarly, when analyzing per capita renewable electricity production, a notable and positive correlation with renewable energy production is discerned. This correlation reached its zenith in 2010 at 369.2 kilowatt-hours, subsequently

Table 4. Unrestricted cointegration rank test (trace)

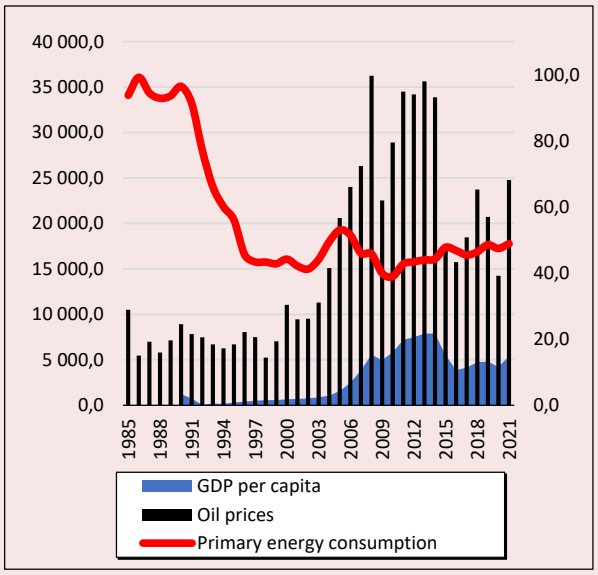
Included variables: RenElec, CO_2Emm, GDPPerCap, R&DExp, PopGr				
Hypothesized No. of CE(s)	Eigenvalue	Trace statistic	0.05 Critical value	Prob.**
None*	0.836459	103.3124	69.81889	0.0000
At most 1*	0.696716	59.85577	47.85613	0.0025
At most 2*	0.568655	31.22172	29.79707	0.0341
At most 3	0.289956	11.04140	15.49471	0.2090
At most 4	0.110975	2.823131	3.841466	0.0929
Included variables: RenElec, InsQ, PrEnCon, TrOpp, PopGR				
None*	0.813482	89.72712	69.81889	0.0006
At most 1*	0.676744	49.42562	47.85613	0.0353
At most 2	0.440283	22.32214	29.79707	0.2809
At most 3	0.201426	8.394374	15.49471	0.4242
At most 4	0.117360	2.996116	3.841466	0.0835
Included variables: RenElec, OilP,GovEff, RegQ, GDPPerCap				
None*	0.722904	77.72665	69.81889	0.0102
At most 1	0.559890	46.92528	47.85613	0.0610
At most 2	0.472954	27.22774	29.79707	0.0962
At most 3	0.347316	11.85654	15.49471	0.1639
At most 4	0.065142	1.616664	3.841466	0.2036

Notes: Included observations: 24 after adjustments; Lags interval (in first differences): 1 to 1; Trend assumption: Linear deterministic trend; Trace test indicates 3 cointegrating eqn(s) at the 0.05 level; * denotes rejection of the hypothesis at the 0.05 level; ** MacKinnon – Haug – Michelis (1999) p-values.
Source: own calculations based on the collected dataset.

Figure 2. Renewable energy sector and selected key variables in the Azerbaijani economy, 1985–2021



a. Percentage share of renewable energy in total energy production (right axis) and per capita renewable electricity production (in kilowatt-hours)



b. GDP per capita (in current USD), oil prices (in USD per barrel, right axis) and per person primary energy consumption (in kilowatt-hours) of the Azerbaijani economy

Sources: Our World in Data; World Bank.

demonstrating a downward trajectory until 2021. Remarkably, only the years 2016 and 2021 emerge as salient points within the recent temporal domain concerning per capita renewable electricity production.

Figure 2, panel b also depicts pivotal economic indicators related to the Azerbaijani economy. Notably, this panel elucidates the dynamics of GDP per capita, oil prices, and per capita primary energy consumption. The trajectory of oil prices has played a crucial role in influencing Azerbaijan's GDP and GDP per capita, particularly between the late 2000s and the years 2014 and 2015, a period marked by the collapse of oil prices within the international commodity markets. The advent of the commodity supercycle circa 2004 was characterized by its peak in 2015. This temporal span witnessed an average annual oil price of 78 USD between 2004 and 2015, which precipitously descended to 48 USD in 2015, thereby plunging into volatility and fluctuations. This erratic oscillation hindered the swift recuperation of Azerbaijan's GDP, thereby exerting a diminishing impact on GDP per capita. The ramifications of this volatility led to a dip in GDP per capita to 3,880.7 USD in 2016, aligning with levels reminiscent of 2007. Concurrently, the trajectory of per capita primary energy consumption within Azerbaijan underwent a decline from 34,094.6 in 1985 kilowatt-hours to 14,981.9 kilowatt-hours in the year 2022. While there emerged a rising trajectory in per person primary energy consumption since 2010, it remained subjugated below the benchmarks of the late 1980s and 1990s.

Table 5. Dynamic ordinary least squares results

Equation name:	M1	M2	M3	M4	M5	M6	M7	M8
Time period:	1990–2021	1996–2021	1996–2021	1996–2021	1990–2021	1990–2021	1996–2021	1990–2021
Constant	–0.46***	0.00	–0.53***	–0.44	0.40	–0.27	–0.02	–0.26
	(0.14)	(0.17)	(0.16)	(0.26)	(0.27)	(0.28)	(0.12)	(0.18)
	[–3.28]	[0.02]	[–3.39]	[–1.71]	[1.45]	[–0.97]	[–0.18]	[–1.46]
OilP	3.40***		0.45					
	(0.65)		(0.43)					
	[5.24]		[1.03]					
PopGr	0.34**							
	(0.15)							
	[2.30]							
GDPpercap	–3.38***			0.89**		–0.28	–0.24	–0.23
	(0.60)			(0.37)		(0.27)	(0.24)	(0.14)
	[–5.64]			[2.44]		[–1.04]	[–1.00]	[–1.60]
TrOpp		1.11***						
		(0.19)						
		[5.78]						
R&DExp		–0.05						
		(0.22)						
		[–0.23]						
InsQ			–0.51*					
			(0.27)					
			[–1.88]					
GovEff				–1.15***				
				(0.31)				
				[–3.72]				
CO2Emm					4.76***	0.68**		
					(1.47)	(0.32)		
					[3.25]	[2.16]		
PrEnCon					–4.24***			
					(1.41)			
					[–2.99]			
Kyoto						0.74*		
						(0.41)		
						[1.82]		
RegQ							0.16	
							(0.24)	
							[0.69]	
Crises								0.65*
								(0.36)
								[1.82]
Observations	29	23	23	23	31	29	23	29
R-squared	0.71	0.62	0.61	0.58	0.30	0.42	0.53	0.39
Adjusted R-squared	0.50	0.41	0.38	0.34	0.04	0.14	0.25	0.26
Standard error of regression	0.72	0.84	0.87	0.89	0.96	0.94	0.95	0.87
Jarque – Bera value:	1.06	2.23	1.03	1.53	1.17	0.01	1.22	0.12
Jarque – Bera probability:	0.59	0.33	0.60	0.46	0.57	0.99	0.54	0.93
Wald test1	12.59***	15.62***	16.88***	6.71***	4.07**	2.59*	0.39	12.08***
Wald test2	50.35***	46.87***	50.63***	20.14***	12.21***	10.38**	1.17	36.25***

Notes: "M" denotes model; Standard errors are given in the parentheses; T-statistics are given in square brackets; The symbols *, **, and *** indicate statistical significance at 10%, 5%, and 1% levels, respectively; All numbers were rounded to the second decimal point for compactness; "Wald test1" reports the F-statistic-based results of the Wald test, while "Wald test2" is Chi-square value.
Source: own calculations based on the collected dataset.

Table 5 presents the outcomes of DOLS analyses, focusing on the dependent variable RenElec. Among the eight models assessed, namely M1 through M8, two models, specifically M1 and M3, yielded statistically significant coefficients, both of which are negative. These models also sought to investigate the potential predictive capacity of OilP concerning RenElec. Remarkably, only in the context of M1 did oil prices demonstrate a positively significant association with RenElec. Further exploration revealed that PopGr and TrOpp exhibited positive and statistically significant relationships with RenElec, as evidenced in M1 and M2, albeit with varied statistical significance. On the other hand, GDPpercap predominantly displayed a negative correlation with RenElec. This negative correlation manifested as statistically significant within M1 but appeared statistically insignificant in M6, M7, and M8. Moreover, carbon emissions surfaced as positively and statistically significantly linked to RenElec in models M5 and M6. Conversely, PrEnCon exhibited a noteworthy negative and statistically significant relationship with RenElec. This comprehensive analysis concludes the examination of the economic determinants impacting RenElec within the Azerbaijani economic landscape during the period spanning 1990 to 2021.

In terms of determinants of institutional quality, RegQ is found to have no statistically significant relationship with RenElec, having a positive coefficient. In contrast, the GovEff and InsQ variables had a discernible negative and statistically significant impact on the RenElec variable.

Among the policy determinants of RenElec, R&DExp was not statistically significant, but dummy variables such as Crises and Kyoto were positively and statistically significantly associated with RenElec. Both dummy variables were designed to clarify whether or not periods of economic crisis and accession to the Kyoto Protocol in 2000 had an impact on per capita renewable electricity generation.

In an effort to evaluate the robustness of the estimated DOLS models, we have incorporated diverse quality assessment metrics including R-squared, the standard error of regression, the Jarque – Bera test for the normality of residuals, and the Wald test. Notably, the lowest R-squared and adjusted R-squared values were observed in Model M5 (0.30 and 0.04, respectively), with the converse witnessed in Model M1 (0.71 and 0.50, respectively). While R-squared values offer insights into the fit quality, the standard error of regression facilitates comprehension of the model's excellence by quantifying the average discrepancy between the observed values and the regression line. Generally, the standard error of regression varies across models, ranging from 0.71 in Model M1 (the lowest) to 0.96 in Model 5 (the highest). This indicates minimal deviations from the mean standard error of regression, approximately 0.88. Importantly, the Jarque – Bera test of normality of residuals showed no indications of heteroscedasticity across all models. Notably, Model M7 was the only instance where the Wald test did not meet the criteria. In summation, the outcomes of Models M5 and M7 should be interpreted cautiously, whereas the remaining models offer more reliable and consistent coefficient estimates.

Discussion

The objective of this study was to identify the main economic, institutional, and policy variables that typically influence renewable electricity generation in a given country. To this end, the following research question was developed to guide the study and quantitative data: How have economic, institutional, and policy factors influenced per capita renewable electricity generation in Azerbaijan from 1990 to 2021? Our empirical findings shed light on the long-run impact of economic, institutional, and policy factors in Azerbaijan that have not been analyzed in depth before. We had three hypotheses, and we accept all alternative hypotheses based on the statistically significant results, that there is at least one economic

indicator that plays a role among the three main channels of influence (i.e., economic, institutional, policy) on renewable electricity generation in Azerbaijan.

The results obtained through the DOLS estimation for Azerbaijan reveal several significant associations between key economic variables and per capita renewable electricity generation. Firstly, oil prices, population growth rates, and trade openness show positive and statistically significant relationships with per capita renewable electricity generation. This suggests that as oil prices rise, the population grows, and trade openness increases, there is a concurrent increase in the production of renewable electricity on a per capita basis in Azerbaijan. There could be several reasons why this empirical result is consistent with Azerbaijan's economic and policy preferences.

Undoubtedly, a comprehensive assessment of the economic realities intrinsic to the Azerbaijani context, characterized by its predominant role as an oil-producing and exporting nation, coupled with its status as a small, open economy, reveals a discernible linkage between escalating oil prices and amplified national prosperity. This augmented wealth then serves as the impetus to channel resources into advancing renewable electric technologies, often facilitated through avenues such as governmental subsidies or the transfer of technological expertise. Notably, a corollary inference could suggest that a decline in oil prices might be indicative of reduced per capita renewable electricity generation within Azerbaijan. However, it is crucial to exercise caution in this analysis. Upon a closer examination, it becomes evident that the influential variable of economic crises underscores that such a correlation might not be as pronounced. It is noteworthy, though, that the encompassing variable of economic crisis periods takes into account events like the recession in the early 1990s and the global financial crisis, which were motivated by factors beyond the dynamics of commodity markets.

Understanding primary energy consumption patterns is crucial for assessing the transition to renewable electricity. It reflects energy source dependency, informs policy alignment, and guides infrastructure investments. Changes in consumption patterns indicate shifts towards cleaner sources, impacting energy sustainability, environmental goals, and economic considerations. However, the relationship with primary energy consumption is negative and statistically significant in the example of Azerbaijan obtained via our study. This implies that as primary energy consumption increases, the per capita renewable electricity generation tends to decrease relative to consumption. This could indicate that higher energy consumption from non-renewable sources may have a dampening effect on the development of renewable energy sources in Azerbaijan.

One of the interesting and surprising findings was the negative and, in some cases, statistically significant relationship between GDP per capita of Azerbaijan and renewable electricity generation. Since GDP per capita is one of the most important economic variables that can tell a lot about the prosperity of a nation, it deserves special attention to interpret it in terms of some possible causes. For instance, with a higher GDP per capita, there might be an increased demand for energy, which could lead to a greater reliance on traditional, non-renewable energy sources that are often more readily available and established. Similarly, as the economy grows, there might be a focus on building up infrastructure quickly to support industrialization and urbanization. This could lead to the use of conventional energy sources that can provide a more immediate energy supply. However, a recent study by Mukhtarov and Mikayilov (Mukhtarov, Mikayilov, 2023) showed that economic growth favors renewable energy sector and helps reduce energy poverty if financing is secured. Moreover, economic growth can sometimes lead to policy decisions that prioritize economic development

over environmental concerns. In fact, Azerbaijan is a country rich in oil and natural gas, where energy production from fossil fuels has always been cheaper than renewable green energy production. This might result in reduced incentives for investing in renewable energy because rapid economic growth might result in quicker adoption of conventional energy technologies due to familiarity and established supply chains.

We also found that CO_2 emissions are negatively associated with renewable electricity production which might mean that overall energy production and also renewable energy production degrade environment. This finding is somehow is similar to Achuo and Ojon's finding for low and lower middle-income countries where the authors argue that renewable energy consumption increased pollution (Achuo, Ojon, 2023). Furthermore, since one of our findings indicated the statistically significant and negative association between renewable electricity generation and primary energy consumption might indicate that even though country increased its energy production and consumption, it did not lead to more renewable electricity generation. According to (Fang et al., 2022), urbanization levels, human capital and globalization should be considered in this regard.

Another surprising result that contradicted our expectations was the negative relationship between institutional quality and per capita renewable electricity generation. It was a much discussed topic in both academia and the media that green energy generation and consumption in Azerbaijan were not well regulated and promoted until 2022 and 2023, when the government invested significantly in sustainable energy sources. Our scientific findings coincide to some extent with certain concerns in society regarding the development of green energy in Azerbaijan.

The lack of a statistically significant relationship between regulatory quality and renewable electricity generation suggests that the specific aspects related to the formulation and implementation of regulations may not have a substantial impact on the level of renewable electricity production. Other factors, such as technological advancements, resource availability, and economic incentives, might have a more dominant influence on renewable energy adoption. In a similar manner, the negative relationship between government effectiveness and renewable electricity generation could indicate that with higher levels of government effectiveness, the government might have policies or regulations that unintentionally hinder the growth of renewable energy. It is important to investigate the reasons behind this negative relationship, such as potential bureaucratic hurdles, inconsistent policy implementation, or regulatory barriers that may discourage investments in renewable energy projects. Furthermore, the negative and statistically significant relationship between the more aggregated institutional quality variable in our study (including control of corruption, rule of law, etc.) and renewable electricity generation raises concerns about the overall business environment and investment climate in the context of renewable energy. This suggests weaker overall institutional quality also hinder the development and adoption of renewable energy technologies.

Two variables of interest, research and development expenditures and accession to the Kyoto Protocol, were used to measure policy activities related to renewable electricity generation. The lack of a statistically significant relationship between R&D expenditures and renewable electricity generation suggests that, in the context of Azerbaijan, investments in research and development activities related to renewable energy might not be driving a significant increase in renewable electricity production. The finding that accession to the Kyoto Protocol in 2000 led to an increase in renewable electricity generation could indicate that international agreements and commitments play a role in shaping a country's

renewable energy policies. The protocol's emphasis on reducing greenhouse gas emissions and promoting sustainable development might have encouraged Azerbaijan to adopt policies and initiatives that support renewable energy sources. This suggests that international agreements can influence a country's energy transition efforts.

Despite numerous contributions, our study also has some important limitations that should be kept in mind before drawing any conclusions from the empirical estimates. First, our modeling is limited only to per capita renewable electricity generation. Total renewable electricity could have different patterns and dynamics than renewable electricity. Second, modeling DOLS based on annual data is another limitation. DOLS requires careful consideration of data characteristics and appropriate model specifications, and results may be affected by the choice of endogenous and exogenous variables. In addition, sensitivity to the length of the lag may play a crucial role. Third, the variables on technological change and institutional quality should be more nuanced and fine-tuned. We aimed for a more compact yet holistic analysis, but such important things as rent-seeking behavior in the Azerbaijani energy sector also need to be accounted for in linear models. Finally, other quantitative methods such as fully modified ordinary least squares, canonical cointegration, or autoregressive distributed lag could provide productive empirical checks on our results.

Conclusion

Numerous studies show that Azerbaijan has environmentally friendly energy sources such as hydropower, wind power, and geothermal energy, which makes the country an ideal location for renewable energy production (Rzayeva et al., 2021). However, challenges to renewable energy development include fossil fuel subsidies, institutions, and governance issues. As a result, there are a growing number of reports in the English-language literature on energy transition in Azerbaijan, but more comprehensive reports are still sparse. Our objective was to provide a long-term empirical estimate of the key economic, institutional, and policy determinants of per capita renewable electricity generation between 1990 and 2021 using the DOLS approach.

Overall, our results suggest that Azerbaijan's per capita renewable electricity generation is positively influenced by factors like favorable oil prices, population growth, and increased trade openness. However, efforts might be needed to address the negative association with primary energy consumption to further enhance the growth of renewable energy sources in the country. The lack of adverse effects during economic crises periods is a positive sign for the stability and potential growth of the renewable energy sector in Azerbaijan but the study also indicates that certain institutional quality variables, such as government effectiveness and the aggregated institutional quality, are negatively related to renewable electricity generation.

The inclusion of the R&D expenditures and Kyoto Protocol accession variables as proxies for policy-related aspects of energy transition reflects the assumption that these factors capture elements of the country's renewable energy policy. While R&D expenditures did not show a significant effect, the positive effect of Kyoto Protocol accession suggests that policy commitments made at the international level can impact a country's approach to renewable energy development. At the same time, the positive and statistically significant association between renewable electricity generation and CO2 emissions could mean that green energy still cannot help achieve sustainable goals for a smooth energy transition.

Drawing upon our research findings, we suggest the following brief policy recommendations: 1) strategic emphasis should be placed on the alignment of national economic dynamics with a swift transition from conventional fuel-based energy

generation to a sustainable paradigm of green energy production; this transformation, reflective in broader economic indicators such as GDP and GDP per capita, underscores the imperative for cohesive policy frameworks; 2) with the continual expansion of the populace, heightened energy consumption looms, necessitating robust support mechanisms for technology transfer and domestic research and development initiatives; national policies centered on research and technological advancement should permeate not only the renewable energy sector but also the broader economic spectrum, thereby fostering the domestic production of renewable energy equipment and alleviating the fiscal burden posed by imports; 3) international accords and cooperative ventures merit vigorous endorsement, given our substantiated determination of their favorable and moderate influence on per capita renewable electricity generation; 4) the creation of a comprehensive institutional framework and tailored regulations for the renewable energy sector remains a necessity. In the absence of a sound legal foundation, judicious conceptualization, and enduring strategies, the advancement of renewable energy production within Azerbaijan's small and resource-rich context is imperiled; 5) an opportune juncture presents itself to harmonize environmental preservation policies and the pursuit of renewable energy production. Notably, the synergy between CO_2 emissions reduction strategies and the augmentation of the renewable energy sector warrants focused exploration to engender a dynamic and interconnected perspective on these vital themes.

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To the Memory of N.I. Lapin: Second Lapin Readings

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On December 12–13, 2023, the Institute of Philosophy of the Russian Academy of Sciences hosted the Second Lapin Readings – an all-Russian conference with international participation, organized by the Center for the Study of Sociocultural Change (CISI) of the Institute of Philosophy of RAS (IP RAS) and Vologda Research Center of RAS (VolRC RAS). For the previous 24 years, the theme of the conference has been a cross-cutting research topic of the participants of the Program "Problems of Socio-Cultural Evolution of Russia and its Regions" (Program). The participants of the Program have carried out research in more than twenty Russia's regions, united by the CISI IP RAS under the leadership of RAS Corresponding Member N.I. Lapin. In this regard, it was decided to hold annual Lapin Readings dedicated to the memory of Nikolai I. Lapin.

The conference addressed not only the eternal problems of sociology, but also the most urgent needs of the current moment: civilizational issues, various imbalances and contradictions in public consciousness, regional and national identity, migration attitudes and beliefs, socio-cultural and socio-economic dynamics, spirituality and values of youth. The reports and presentations of

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the conference participants were both of general theoretical and methodological nature and were based on the data of specific sociological studies conducted in Moscow and Saint Petersburg, the Vologda, Tyumen, Kursk, Ulyanovsk, Sverdlovsk, Tomsk, Samara, Vladimir, Novosibirsk regions, in the Republics of Chuvashia, Yakutia, Bashkortostan, the Perm Territory, and the Republic of Belarus. This is a distinctive feature of the Lapin Readings.

The first day of the conference was held in a mixed format at the Institute of Philosophy of RAS in Moscow.

The plenary session of the conference was opened by L.A. Belyaeva, Doctor of Sciences (Sociology), Acting Head of CIS IP RAS. She expressed her satisfaction with the fact that the important work on the study of socio-cultural processes in Russian regions, started by N.I. Lapin, had quite a few followers, including young people, and in the previous year in a number of the RF constituent entities, it was possible to conduct field sociological research based on the standard methodology developed at the CISI IP RAS. The speaker wished all the conference participants successful work.

L.A. Belyaeva also presented the first report "Civilizational heterogeneity of Russia. Property. Civilizational models of development in the perceptions of the population". She noted that the heterogeneous nature of Russian civilization is reflected in the social structure, and this structure acts as an indicator of civilizational development, as well as civilizational differentiation. The latter, in fact, manifests the civilizational breaks of society along three axes: the nature and content of labor of the country's residents; material differentiation of the population and, finally, the uneven development of regions. Analyzing the results of the all-Russian sociological survey of 2023 summer, L.A. Belyaeva concluded that the Russian mixed economy can be characterized as a civilizational mix, in which all types of property are represented, but large property associated with the state in various institutional configurations dominates. When choosing a civilizational model of the country's development, its inhabitants are more inclined to a distinctive path, while in the resource-rich group the path that can be built taking into account the best achievements of developed countries is also significant.

The report "Experience of studying the values and national traits of the Russian people", prepared by A.A. Shabunova, Doctor of Sciences (Economics), Associate Professor, Acting Director, and O.N. Kalachikova, Candidate of Sciences (Economics), Deputy Director (VolRC RAS), presented the results of a sociological study covering the regions of the Northwestern Federal District. The research showed that health, material security, and family remained inviolable values. At the same time, respondents more and more often declared the value of self-actualization.

V.A. Podolsky, Candidate of Sciences (Politics), Researcher of the IP RAS, in his speech, developed one of the leading directions of N.I. Lapin's scientific work. Having addressed the issue of the role of the social state as a means of forming social solidarity in N.I. Lapin's works, the author of the report emphasized the importance of achieving synergy between the state and civil society. The idea of achieving a welfare state should be replaced by the idea of a welfare society, in which social services become available through the activation of such positions as voluntary solidarity and activism.

Scientists from University of Tyumen presented a series of reports based on long-term research within the Program. V.A. Davydenko, Doctor of Sciences (Sociology), Professor, and E.V. Andrianova, Head of Department, Candidate of Sciences (Sociology), developed the concept of "lifeworld" as a continuation of N.I. Lapin's theoretical and empirical approaches. The authors showed in detail how the ideas of the classics of phenomenological sociology and the theory of communicative action were developed, objectified and operationalized into some structures of the lifeworld as opposed to the subjective nature of the category "lifeworld". An attempt to describe empirically such structures can

rely on the categories of understanding, meaning, meaningful action, intersubjectivity.

Then, G.F. Romashkina, Doctor of Sciences (Sociology), Professor of University of Tyumen, made her report "Paradoxicality of public opinion based on the materials of sociocultural monitoring in the Tyumen Region". She noted that during 17 years of observations (since 2006) the share of answers "I am glad to live here" increased from 31 to 63%. The share of those who would like to leave for another region or another country had remained practically unchanged over all the years of observation, amounting to 7% of the sample. The highest cognitive-affective estimates were given by those who were not born in the region, moved there less than 5 years ago and considered themselves well-off. Forced migrants and those who came temporarily gave a positive assessment less often than other respondents. The older people are, but at the same time the less time they live in a given place, the more positively they evaluate practically all aspects of their life. Such positive self-determination has a direct connection with the feeling of moving to the region for permanent residence. However, the paradox is that it is weakly connected with real assessments of all aspects of life. For example, these assessments are weakly elastic by type of settlement, education, level and employment status of the respondents. During the observation period the level of modernization of the system of value orientations of the region's residents has significantly decreased, the level of the previously marginal identity on the scale "friend – foe" with the residents of the former Soviet republics has increased to 36%, when the share of those who noted proximity exceeded the share of those who did not, for the first time during the entire observation period. The growth of settlement proximity and the decrease in intergenerational differences in the components of social optimism were revealed.

In the speech "Personal modernization in the world of social imbalances of modern civilizational development", V.P. Veryaskina, Candidate of Sciences (Philosophy), Senior Researcher, Associate Professor of the IP RAS, presented the development of N.I. Lapin's ideas on modernization processes. As the leading imbalances in the modern world, the author noted the following: social inequality, social imbalance in the labor sphere, long-term trend of population aging, paradigm shift of the social state in the new social reality, challenges in the spheres of education, health care, finally, imbalances in the ethno-cultural sphere and immigration. These imbalances raise questions about personal modernization, about the effectiveness of human potential and human potential in the context of transformation of social development institutions. The author of the report also drew attention to the vulnerability, recorded by sociologists in empirical and statistical data, to the formation of a picture of the value of life as a biological substrate of a man, as a foundation on which personal modernization is realized.

The speech "On the regional structure of the human lifeworld" of Yu.M. Reznik, Doctor of Sciences (Philosophy), Chief Researcher of the CISI IP RAS, Professor, was built on the basis of the concepts of "place-event", "topos", "locus of environment", "locality" and a number of others. Starting from the attitude toward the localization of the place of being, the speaker said that the human lifeworld was broken up into regions; accordingly, a person needs strength to establish a connection between the places of being. The regions themselves can be divided into external (such as anthroposphere, sociosphere) and internal (here the "self" comes to the fore). The center of personality in this case is the self-consciousness of a person.

The problem of ethnic factors related to human development in the republics of the Russian Federation was raised by R.M. Valiakhmetov, Candidate of Sciences (Sociology), Professor, Head of the scientific laboratory of the Ufa University of Science and Technology. He noted that without ethnicity there could be no life world. Accordingly, sociologists need to take into account and analyze ethnic factors. At the

same time, such territorial entities as republics require special attention. The speaker presented a comparative analysis of the problems of human development of the republics on the example of Bashkortostan, Dagestan and Tuva. The work was based on a large-scale field sociological study, as well as a series of expert interviews conducted with representatives of science, education, regional authorities and civil society institutions. Tuva experts emphasized the need to take into account the ethnic characteristics of economic activity, culture and traditions of indigenous people in the socio-economic development of the republic. In Dagestan, ethnic specialization of entrepreneurial activity was evident. In Bashkortostan, according to the research, interethnic differences in the standard of living were almost invisible, with the titular ethnic groups in the republic being represented mainly in education, culture and health care.

Section 1 "Sociocultural Development of Russian Regions" revealed the diversity of topics covered in the framework of sociological research by the Program participants. The section was moderated by V.P. Veryaskina, Senior Researcher of the IP RAS, Candidate of Sciences (Philosophy), Associate Professor. A.N. Tarasova (Yekaterinburg), Associate Professor of the Ural Federal University, Candidate of Sciences (Sociology), presented an interesting report on the transformation of the value system in instability conditions and features of volunteers' value structure. Relying on the methodology of value structure analysis developed by N.I. Lapin, the author revealed that the value base of young volunteers is more stable than for all young people aged 14–35 based on the data of a mass survey in the Sverdlovsk Region. A.N. Tarasova showed what value structures were formed in young people in the process of active participation in the volunteer movement. For example, for schoolchildren involvement in volunteering was most strongly correlated with the value of initiative and sacrifice. Students of colleges and technical schools are more often included in volunteering when the value of "independence" is actualized, students receiving higher education – when the value of order dominates, and working youth under 35 – "traditions" and "initiative".

Senior Researcher of the Institute of Sociology, FCTAS RAS, Candidate of Sciences (Economics) G.P. Bessokirnaya analyzed the socio-cultural development of the Russian regions and value orientations of the population of regional centers for 2003–2020. The speaker aimed to identify how the typology of modernization of Russian regions and values of everyday life were connected. The author concluded that the structure of values of everyday life was identical in large social groups of the population in the regional centers of seven regions, which belonged to different types of modernization. At the same time, the dynamics of the value structure showed a rapid increase in the value of labor for earning money and a decrease in the importance of the value of communication.

Head of Department of the Kursk State University, Doctor of Sciences (Philosophy), Professor E.A. Kogay together with student A.V. Lapshina presented the assessment of the quality of life and social well-being of the Kursk Region residents, based on the results of a field sociological study conducted in the fall of 2023 on the basis of the standard methodology "Sociocultural Portrait of Russian Regions". The authors of the report emphasized that in the assessment of social well-being by the region's residents the material component was not dominant, there was a trend toward an integrative understanding of the quality of life. Residents of the region express the greatest concern about the quality of medical care. The research results indicate that the image and the corresponding quality of life do not allow the residents of the Kursk Region in modern conditions to fully realize their human potential.

Associate Professor of the North-Western State Medical University named after I.I. Mechnikov, N.N. Khomutova (Saint Petersburg) revealed the problems and prospects of using digital assistive technologies. The study showed that the ethics

of safe use of digital technologies implied their application taking into account age and other individual characteristics, distribution on the principles of equality, openness, and awareness. M.N. Mukhanova (Moscow), Senior Researcher of the Institute of Sociology, FCRAS RAS, Candidate of Sciences (Sociology), made a presentation "Households of employed villagers: Socio-economic situation (regional aspect)". The author noted that the means of subsistence of rural residents were wages or pensions of all kinds, and inflationary processes devalue these incomes, they were mainly spent on essential goods, which strengthens migration sentiments in rural areas. Incomes in the socio-economic situation of rural households had no noticeable regional differences, these or those phenomena were typical, as the institutional pressure equally affected the socio-economic processes of the territories, labor behavior of rural residents. In rural areas, the problem of poverty remains topical, and in the long term, the risks of being below the poverty line or in the state preceding poverty are quite acute for working villagers.

E.V. Kargapolova, Doctor of Sciences (Sociology), Professor of Plekhanov Russian Economic University (Moscow), made a presentation "Spirituality in the perception of Russians (case study of residents of Moscow and the Moscow Region)", which provoked a heated discussion, which reflected the novelty and relevance of the author's approach. The speaker gave an example of analyzing non-linear distributions of self-reflection of spiritual state at different life stages by social, demographic and material structure. For example, the highest indicators of self-reflection are in the middle class, the indicators and assessments of spiritual state are relatively low during adolescence, and in older age people mostly give high forecasts of their spiritual state, and this already weakly depends on their real material situation.

Associate Professor of the Tomsk State University, Candidate of Sciences (History) O.Yu. Smolenchuk presented a situational analysis of medical check-ups as one of the regulators of the region's sustainable development on the example of the Kemerovo Region, based on the included observations, using extensive statistical material and expert interviews results. Such an analysis is rare in sociology, which determined the novelty and relevance of the work. At the end of the report, there was a proposal to expand the research methodological basis to create an objectivized picture of reality beyond the normative-statistical analysis.

K.V. Rakova, Candidate of Sciences (Sociology), Junior Researcher at the CISI IP RAS, made a presentation "Russian society through the years: Socio-demographic characteristics of Russians aspiring to power". The speaker relied on the empirical data of the 6th, 7th and 8th waves of the All-Russian monitoring, implemented by the CISI IP RAS, studying the level of support for the value judgment "a person should strive first of all to have power, the ability to influence others". This share decreased from 26 to 10% in 2023, presenting "power" as an anti-value in public opinion. The average age of the Russians seeking power has increased by 10 years; today this category includes people aged 35 to 44. The research results indicate that the poor, as well as the Russians, unsatisfied with their lives, are among the least power-seeking people. The discussion showed that the cause-and-effect relationships in this study need to be established additionally, since their direct interpretation may distort reality.

The report by A.F. Neshataev, assistant of the Ural Federal University (Yekaterinburg) was devoted to the role of Russian cinematography in the formation of migration unattractiveness of rural areas and small towns based on the results of content analysis. The author examined an array of 399 films and TV series that showed themes related to rural areas and small towns in 1991–2022. He concluded that the image of rural areas in modern cinematography is characterized as a territory with a dysfunctional environment that stimulates migration loss of population. The conference

participants suggested that this phenomenon may speak not so much about the formation of public opinion as about the reflection of the real state of affairs. However, these assertions require additional, deeper verification and are themselves the subject of sociological analysis.

On the second day of the conference, the discussion was held in the online format on the basis of VolRC RAS, Vologda. The moderator of the second session was O.N. Kalachikova, VolRC RAS Deputy Director, Candidate of Sciences (Economics).

Yu.S. Markova, Candidate of Sciences (Sociology), Associate Professor, and E.B. Plotnikova, Head of Department and Candidate of Sciences (History) (Perm State University) analyzed the dynamics of values of the residents of the Perm Territory under conditions of social instability. According to the research results for 2006–2023, the value system of the Kama region residents is generally characterized by stability. The "integrating core" of the Perm residents' values includes such basic values as human life, order, sociability, independence. In addition, the values of freedom, family, well-being, work, which are included in the "integrating reserve" of the Perm residents' values, are still of high importance. By 2023 there is an increase in the orientation toward the value of independence, which moved from the "integrating reserve" to the "integrating core", and tradition, which rose from the "opposing differential" to the "integrating reserve". The importance of the family value, which moved from the core to the reserve, and initiative, which moved from the "integrating reserve" to the "opposing differential" in comparison with 2006, has slightly decreased. These trends show that overcoming the risks of social instability is associated not only with the degree of expression of individualistic (modern) values, but also with the level of support for traditional values.

V.M. Tslaf, Candidate of Sciences (Engineering), Associate Professor, Scientific Director of the Interregional Group "System Consulting Agency 'STRATEG'" (Samara) made a presentation "Managed sociocultural modernization – an answer to civilizational challenges of modernity". The speaker showed how it is possible to study the processes of world complexity, its modernization differential through the data on life-supporting and power-regulating functions of the socio-economic system in terms of N.I. Lapin.

N.M. Lavrenyuk-Isaeva, Candidate of Sciences (Sociology), Deputy Director of the Institute of Humanities and Social Sciences of the Ufa University of Science and Technology, presented the report "Social maturity of management in the regions of Russia" based on the materials of the Sample observation of population participation in continuing education in 2020 (Rosstat), on the empirical data of the sociological survey implemented in the Republic of Bashkortostan in 2023. The main conclusion is that the social maturity of management in Russia's regions has different degrees, depends on a number of endogenous and exogenous factors in relation to the governed and the governed, on the level of social subjectivity, compensated by continuing education and self-education.

Yu.I. Zheusov, Candidate of Sciences (Sociology), Senior Researcher of the Institute for Biological Problems of Cryolithozone Siberian Branch of RAS (Yakutsk), devoted his report to the original topic "'Sober villages' of Yakutia as a form of socio-cultural innovation". The speaker paid special attention not only to the introduction of informal or formal prohibition of alcohol sales, but also to the creation of new social norms and practices that promote the population's choice of conscious sober healthy lifestyle, the formation of conditions for social activity, leisure, self-realization of people and the development of the village as a whole. The conducted sociological research and analysis of statistics, in the author's opinion, confirm the effectiveness of these socio-cultural innovations. The presentation provoked questions to the author and a heated discussion among the conference participants.

The Smolensk Interuniversity Campus as a driver of complex transformation of economy and culture of the Western borderland of Russia was investigated by A.I. Vinokurov, Candidate of Sciences (Psychology), Associate Professor of Smolensk State Institute of Arts. The speaker presented the research results of transitional epochs of the Russian-Belarusian borderland since 2005 on the example of the Smolensk Region. In particular, he announced the planned changes in the production and social processes of the region caused by the Smolensk Interuniversity Campus.

V.T. Tarasov, Candidate of Sciences (Economics), Associate Professor of the Cheboksary Branch of RANEPA, presented a report "On the issue of civilizational and modernization heterogeneity of Russia". The speaker relied on the system approach to the analysis of the civilization component developed by N.I. Lapin. The author pointed out the methodological problems arising in the implementation of this approach in practice, noted the possibilities of using a ramified set of tools, and formulated promising directions for the development of the methodology.

In the report "Youth participation in citizen science: Problems and opportunities of involvement", Candidate of Sciences (Sociology) M.V. Khudyakova and postgraduate student D.Yu. Agafonova (University of Tyumen) clearly showed on large-scale empirical data that the term "citizen science", which is widely known in the world scientific discourse, is nevertheless not recognized by Russian science and practice. Even less widespread was the development of the motivation of "scientific volunteering", the recognition of the legitimacy and relevance not only of the processes, but also of the results of scientific activity involving non-professionals by so-called professional science. Here the questions of epistemology, refusal of scientocentrism, subjectocentrism, creation of new forms of organization of scientific activity arise.

The following presentations revealed to a greater or lesser extent the socio-cultural aspects of life in Russia's regions at the present stage, the problem of regional identity. V.I. Mosin, Candidate of Sciences (Sociology), Associate Professor (Tula), spoke about examples of sustainable development and financial and economic performance of management companies, which, in the author's opinion, should influence their rating in the sphere of housing and communal services. Such practice-oriented examples allow improving the quality of social services and business climate in the region. A.R. Mazhitova, Associate Professor of the Bashkir Cooperative Institute (Ufa), spoke about the synergy of consumer cooperation development in the Republic of Bashkortostan. D.I. Petrosyan, Candidate of Philosophy, Associate Professor of the Vladimir branch of the Russian Academy of National Economy and Public Administration considered the features of regional identity. S.A. Chernyshov, Candidate of Sciences (History), Senior Researcher of TSU (Tomsk), through the prism of interdisciplinary modern approaches to identity showed the correlation of Russian and regional elements in the Siberian regional identity. Candidate of Sciences (History) V.G. Kharitonova (Cheboksary) analyzed the migration situation and migration attitudes of Chuvashia residents.

V.R. Shukhatovich, Candidate of Sciences (Sociology), Head of Department of the Institute of Sociology of the National Academy of Sciences of Belarus (Minsk) presented proactive motives in the structure of motivation for choosing a profession among the population of the Republic of Belarus. N.I. Yakovleva, researcher at the Institute of Sociology of the National Academy of Sciences of Belarus (Minsk), considered social media as a resource for the formation of value orientations of the population.

The vision of socio-cultural development by young researchers was reflected in the speeches of students and postgraduates from Moscow, Kursk, Vologda, Tyumen, and Minsk. For instance, V.A. Dzyuba, a student of the Kursk State University, together with Doctor of Sciences (Philosophy), Professor, Head of Department of Sociology of the Kursk State University, E.A. Kogay presented the

results of the conducted field sociological research in the report "Civil identity in the regional dimension (case study of the Kursk Region)". Relying on the important idea of N.I. Lapin that the interaction between a person and society manifests the active qualities of personality, among which an important place should be given to civic and public culture, the authors presented a wide range of identification assessments, circles of trust, opportunities and real practices of civic participation. D.P. Smirnova and P.I. Kostyleva, students of the Kutafin North-West Institute (Vologda Branch), recreated the features of population migration between Russia and CIS countries at the present stage. Yu.E. Khudyakova, postgraduate student of the Department of General and Economic Sociology of the University of Tyumen, told about the socio-economic development of agricultural organizations in the Tyumen Region. M.I. Gorbach (Minsk), junior researcher of the Department of Sociology of the Social Sphere, postgraduate student of the Institute of Sociology of the National Academy of Sciences of Belarus, considered the features of youth's self-education in the conditions of information society. Having defined self-education as a type of free activity of an individual or a social group, carried out on the basis of free choice and aimed at satisfying a wide range of needs, primarily spiritual, she consistently analyzed the aspects of self-educational activity peculiar to Belarusian youth. E.S. Vasilenko, E.A. Shaganova, M.A. Kiselev, A.A. Demidova and N.S. Belyaeva, students of the Plekhanov Russian University of Economics spoke about important issues of the development of the human spiritual world in their speeches; they touched upon the questions about favorite books in the structure of reading preferences of modern Russian students, about conscience in the perceptions of Moscow youth, and finally, about the image of women in Russian and American cinema.

These presentations showed that young people successfully participated in large-scale research, implemented independent research projects, demonstrated readiness for scientific search, which allowed being optimistic about the prospects for the development of the all-Russian program of research of socio-cultural processes in Russian regions. The section of young researchers was moderated by M.A. Gruzdeva, Deputy Head of Department of VolRCs RAS, Candidate of Sciences (Economics).

At the end of the conference, a meeting of the coordinating council of the program "Problems of Socio-Cultural Evolution of Russia and Its Regions" was held. All participants of the meeting noted the success of the scientific conference, as well as the importance of continuing field research based on the standard methodology "Socio-cultural Portrait of Russian Regions". These studies make it possible to create an extensive database on sociocultural processes occurring in the Russian space, to track the dynamics of processes, to implement comparative approaches in analyzing social problems. It was also decided to hold the next Lapin Readings in 2024 as part of the All-Russian Sociological Congress organized by the Russian Society of Sociologists.

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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. The monitoring is conducted by VolRC RAS in the Vologda Region[1].

The following tables and graphs show the dynamics of several parameters of social well-being and socio-political sentiment of the region's population according to the results of the latest round of the monitoring (February 2024) and for the period from February 2023 to February 2024 (the last seven surveys, that is, almost a year).

We compare the results of the surveys with the average annual data for 2000 (the first year of Vladimir Putin's first presidential term), 2007 (the last year of Vladimir 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 Vladimir Putin's third presidential term).

We also present the annual dynamics of the data for 2018 and for 2020–2023[2].

In December 2023 – February 2024, the level of approval of the RF President's work increased slightly (by 2 percentage points, from 62 to 64%). The share of negative assessments decreased from 23 to 21%[3].

Over the past 12 months (from February 2023 to February 2024), the share of positive assessments of the work of the head of state increased by 3 percentage points (from 61 to 64%)[4].

[1] The surveys are held six times a year in the cities of Vologda and Cherepovets, in Babayevsky, Velikoustyugsky, Vozhegodsky, Gryazovetsky, Tarnogsky Kirillovsky, Nikolsky municipal okrugs, and in Sheksninsky Municipal 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 Region's adult population. Sampling error does not exceed 3%.

More information on the results of VolRC RAS surveys is available at http://www.vscc.ac.ru/.

[2] In 2020, four rounds of the monitoring were conducted. Surveys in April and June 2020 were not conducted due to quarantine restrictions during the spread of COVID-19.

[3] Here and elsewhere, in all tables and in the text, positive changes are highlighted in green, negative changes are highlighted in red, and no changes – in blue. Due to the fact that the changes of +/- 3 p.p. fall within the limits of sampling error, they are considered insignificant and are marked in blue.

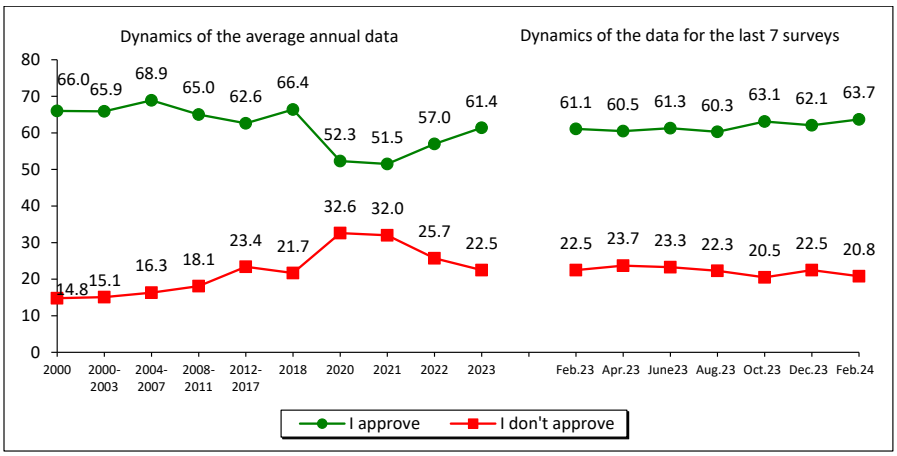
[4] Here and elsewhere in the text, the results of a comparative analysis of the data from the survey conducted in February 2024 and the results of the monitoring round conducted in February 2023 are given in the frame.

How would you assess the current work of…? (% of respondents)

Answer option	Dynamics of the average annual data									Dynamics of the data for the last 7 surveys							Dynamics (+/-), Feb. 2024 to	
	2000	2007	2011	2012	2018	2020	2021	2022	2023	Feb. 2023	Apr. 2023	June 2023	Aug. 2023	Oct. 2023	Dec. 2023	Feb. 2024	Feb. 2023	Dec. 2023
RF President																		
I approve	66.0	75.3	58.7	51.7	66.4	52.3	51.5	57.0	61.4	61.1	60.5	61.3	60.3	63.1	62.1	63.7	+3	+2
I don't approve	14.8	11.5	25.5	32.6	21.7	32.6	32.0	25.7	22.5	22.5	23.7	23.3	22.3	20.5	22.5	20.8	-2	-2
Chairman of the RF Government																		
I approve	-	-	59.3	49.6	48.0	38.7	39.9	45.4	50.1	49.3	48.3	49.2	50.8	51.3	51.9	52.7	+3	+1
I don't approve	-	-	24.7	33.3	31.6	40.4	37.6	32.0	27.6	27.9	28.1	27.1	26.1	28.6	27.9	26.2	-2	-2
Vologda Region Governor																		
I approve	56.1	55.8	45.7	41.9	38.4	35.0	36.7	40.9	48.1	47.1	48.3	48.7	48.1	47.5	49.1	50.8	+4	+2
I don't approve	19.3	22.2	30.5	33.3	37.6	42.5	40.5	35.8	30.9	33.0	32.3	30.7	29.7	29.7	29.9	27.5	-6	-2

Wording of the question: "How do you assess the current work of ...?"

How would you assess the current work of the RF President? (% of respondents, VolRC RAS data)*



Answer option	Dynamics (+/-), February 2024 to Feb. 2023	Dec. 2023
I approve	+3	+2
I don't approve	-2	-2

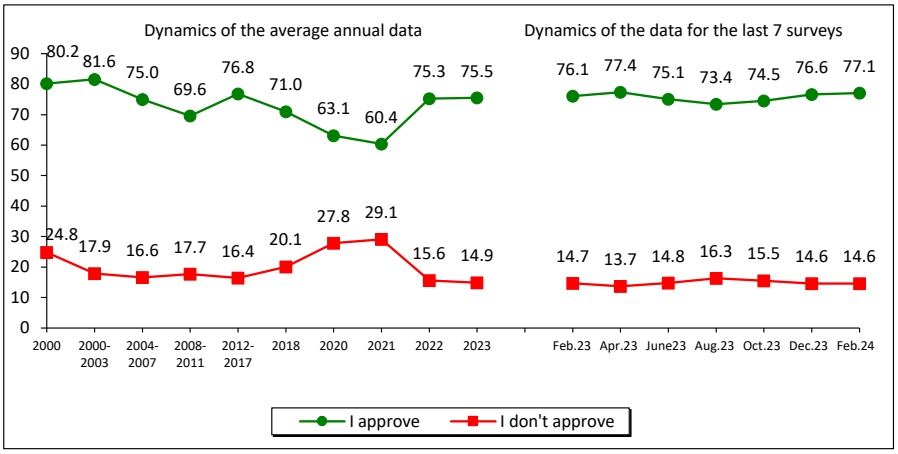
Here and elsewhere, all graphs show the average annual data for 2000, 2018, 2020, 2021, 2022, 2023, as well as the average annual data for the periods 2000–2003, 2004–2007, 2008–2011, 2012–2017 that correspond to presidential terms.

For reference:

According to VCIOM, the level of approval of the RF President's work for the period from December 2023 to February 2024 amounted to 77%. The proportion of negative judgments was 15%.

The estimates of the population as a whole correspond to the level of support for the work of the head of state in February 2023.

In general, do you approve or not approve of the work of the RF President?
(% of respondents; VCIOM data)



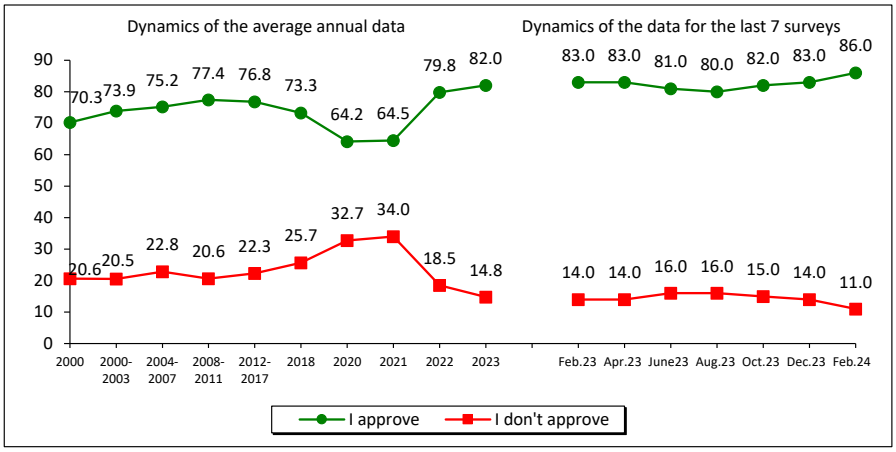
Dynamics (+/-), February 2024 to		
Answer option	Feb. 2023	Dec. 2023
I approve	+1	+1
I don't approve	0	0

Wording of the question: "In general, do you approve or not approve of the work of the President of the Russian Federation?"
Source: VCIOM. Available at: https://wciom.ru/

According to Levada-Center, the share of positive assessments of the RF President's activities continues to increase since August 2023. In December 2023 – January 2024, it increased by 3 percentage points (from 83 to 86%), and in general, for the period from August 2023 to January 2024 – by 6 percentage points (from 80 to 86%).*

Compared to February 2023, the level of approval of the RF President's work in January 2024 increased slightly (by 3 percentage points, from 83 to 86%).

In general, do you approve or not approve of the work of Vladimir Putin as President of Russia? (% of respondents; Levada-Center* data)



Dynamics (+/-), January 2024 to		
Answer option	Feb. 2023	Dec. 2023
I approve	+3	+3
I don't approve	-3	-3

Wording of the question: "In general, do you approve or not approve of the work of Vladimir Putin as President of Russia?"
Source: Levada-Center*. Available at: https://www.levada.ru

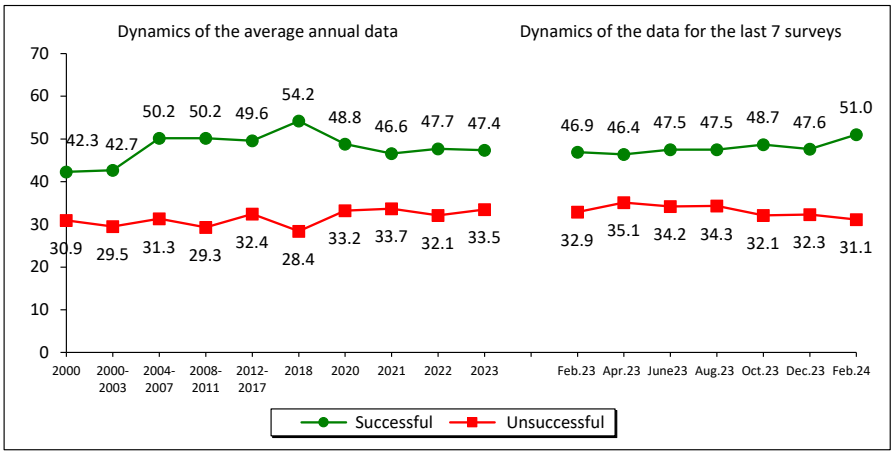
* Included in the register of foreign agents.

In your opinion, how successful is the RF President in coping with challenging issues? (% of respondents; VolRC RAS data)

In the past two months, we observe an increase in the share of the region's residents who consider the actions of the RF President to strengthen Russia's international positions to be successful (by 3 percentage points, from 48 to 51%). The share of those who hold the opposite point of view has not changed and amounts to 31–32%.

Over the past 12 months, the proportion of positive assessments increased by 4 percentage points (from 47 to 51%).

Strengthening Russia's international position

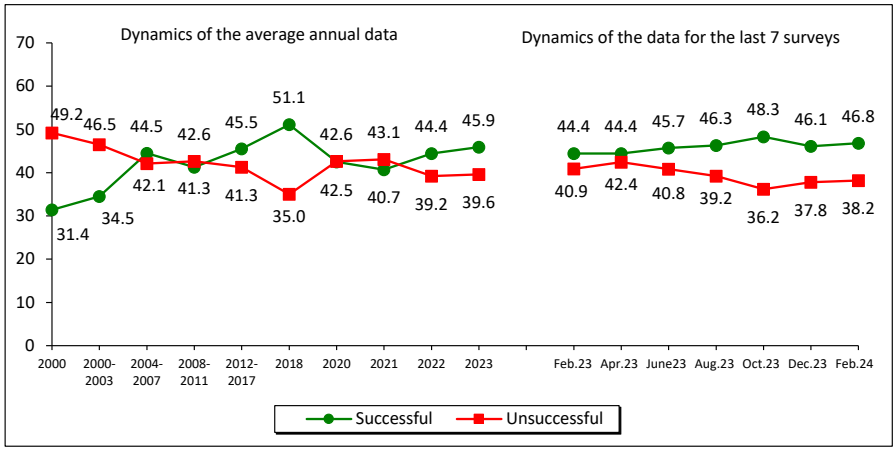


Dynamics (+/-), February 2024 to		
Answer option	Feb. 2023	Dec. 2023
Successful	+3	+3
Unsuccessful	-2	-1

Like in December 2023, the proportion of the region's residents who note that the RF President's actions to restore order in the country are successful amounted to 46%. The share of negative judgments is significantly lower and also remains stable (38%).

Some changes are observed in dynamics over the past 12 months: the proportion of positive characteristics increased by 3 percentage points (from 44 to 47%), negative – decreased from 41 to 38%.

Imposing order in the country

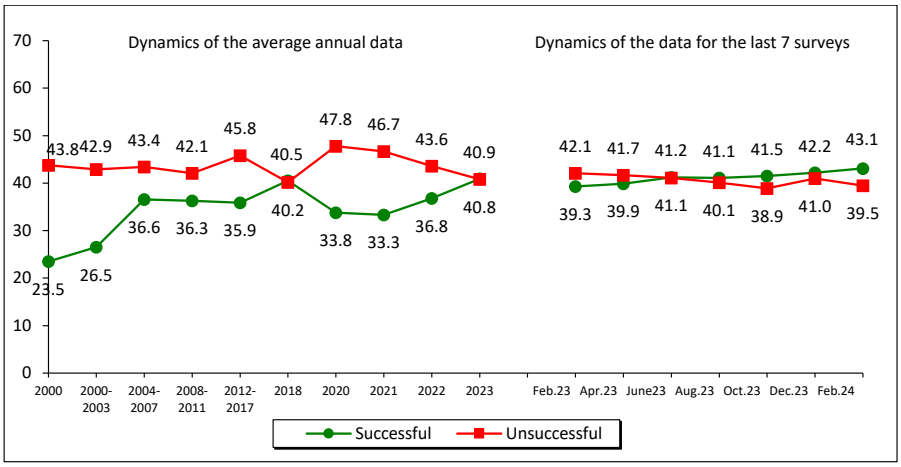


Dynamics (+/-), February 2024 to		
Answer option	Feb. 2023	Dec. 2023
Successful	+3	+1
Unsuccessful	-3	0

In December 2023 – February 2024, the share of the region's residents who positively assess the RF President's efforts to protect democracy and strengthen citizens' freedoms amounted to 42–43%; the proportion of negative opinions was 40–41%.

People's estimates are slightly better than in February 2023 (the share of positive characteristics increased by 3 percentage points, from 39 to 42%).

Protecting democracy and strengthening citizens' freedoms

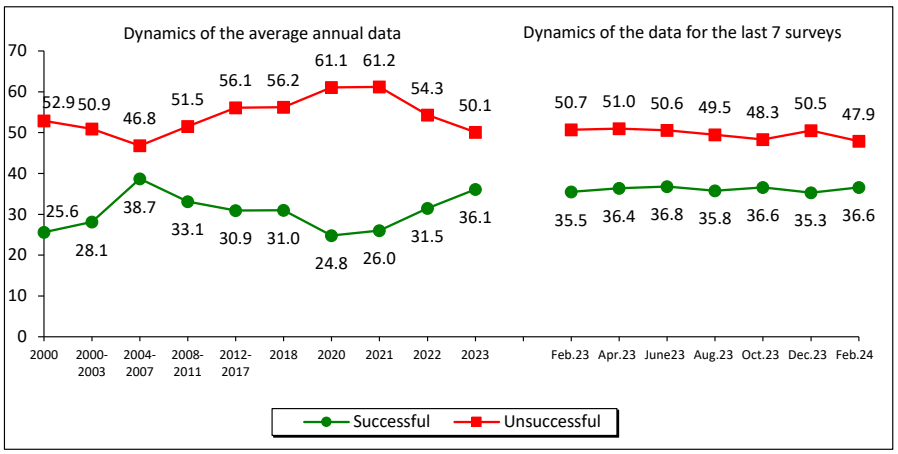


Dynamics (+/-), February 2024 to		
Answer option	Feb. 2023	Dec. 2023
Successful	+4	+1
Unsuccessful	-2	-2

The share of positive judgments about the President's work to boost the economy and increase the welfare of citizens over the past two months amounted to 35–37%, while the share of negative assessments decreased by 3 percentage points (from 51 to 48%).

Compared to February 2023, the share of positive judgments did not change (36–37%), the proportion of negative assessments decreased by 3 percentage points (from 51 to 48%).

Economic recovery, increase in citizens' welfare



Dynamics (+/-), February 2024 to		
Answer option	Feb. 2023	Dec. 2023
Successful	+1	+1
Unsuccessful	-3	-3

Over the past two months, the structure of political preferences of the region's residents did not see any significant changes. The share of those whose interests are expressed by the United Russia party was 43%, the Communist Party – 9–10%, LDPR – 7%, Just Russia – 4%, New People – 1–2%.

Compared to February 2023, the share of those whose interests are expressed by the United Russia party increased by 4 percentage points (from 39 to 43%).

Which party expresses your interests? (% of respondents; VolRC RAS data)

Party	Dynamics of the average annual data													Dynamics of the data for the last 7 surveys							Dynamics (+/-), Feb. 2024 to	
	2000	2007	2011	Election to the RF State Duma 2011, fact	2012	2016	Election to the RF State Duma 2016, fact	2018	2020	Election to the RF State Duma 2020, fact	2021	2022	2023	Feb. 2023	Apr. 2023	June 2023	Aug. 2023	Oct. 2023	Dec. 2023	Feb. 2024	Feb. 2023	Dec. 2023
United Russia	18.5	30.2	31.1	33.4	29.1	35.4	38.0	37.9	31.5	49.8	31.7	35.2	39.5	39.1	37.6	39.3	39.0	40.3	41.7	42.7	+4	+2
KPRF	11.5	7.0	10.3	16.8	10.6	8.3	14.2	9.2	8.4	18.9	9.3	10.1	9.6	9.5	9.3	9.5	9.8	9.8	9.8	9.0	-1	-1
LDPR	4.8	7.5	7.8	15.4	7.8	10.4	21.9	9.6	9.5	7.6	9.9	7.3	7.0	5.9	6.9	6.7	7.8	7.9	6.5	6.6	+1	0
Just Russia – Patriots for the Truth	-	7.8	5.6	27.2	6.6	4.2	10.8	2.9	4.7	7.5	4.7	4.9	4.4	4.6	4.7	4.7	4.5	4.5	3.5	3.6	+1	0
New People*	–	–	–	–	–	–	–	–	–	5.3	2.3	1.5	1.9	1.3	2.1	2.1	2.3	1.5	1.9	1.4	0	+1
Other	0.9	1.8	1.9	–	2.1	0.3	–	0.7	0.5	–	0.2	0.3	0.1	0.1	0.1	0.0	0.2	0.0	0.3	0.1	0	0
None	29.6	17.8	29.4	–	31.3	29.4	–	28.5	34.2	–	33.9	30.6	26.5	28.0	28.0	26.5	25.2	24.6	26.6	25.2	-3	-1
I find it difficult to answer	20.3	21.2	13.2	–	11.7	12.0	–	11.2	11.1	–	10.0	10.1	11.1	11.4	11.4	11.4	11.2	11.4	9.9	11.4	0	+2

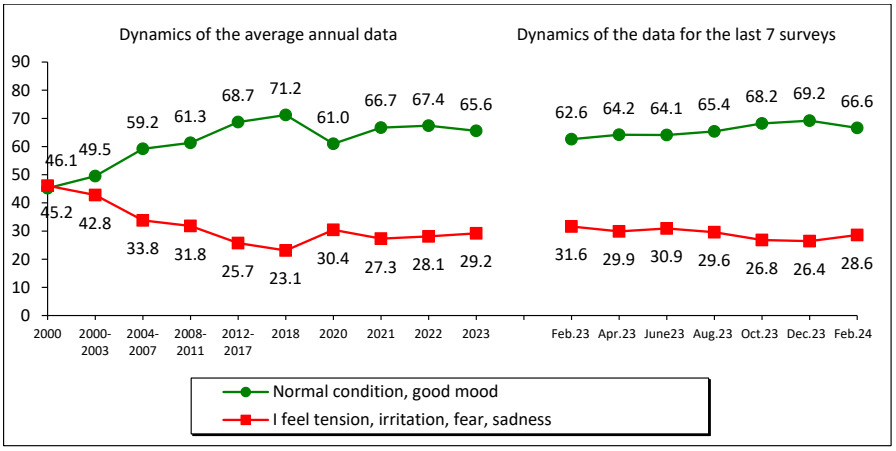
* The New People party was elected to the State Duma of the Russian Federation for the first time following the results of the election held on September 17–19, 2021.

Estimation of social condition (% of respondents; VolRC RAS data)

In December 2023 – February 2024, the share of the region's residents who characterize their mood as "normal, fine" decreased slightly (by 2 percentage points, from 69 to 67%). The proportion of negative judgments increased by 3 percentage points (from 26 to 29%).

Nevertheless, people's estimates are slightly better than in February 2023: the share of positive characteristics of social mood is higher by 4 percentage points (from 63 to 67%), negative – lower by 3 percentage points (from 32 to 29%).

Social mood

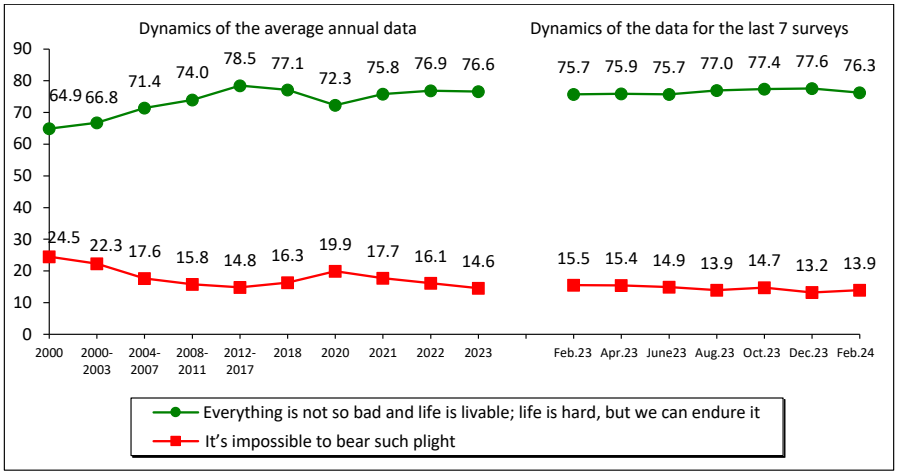


Answer option	Dynamics (+/-), February 2024 to Feb. 2023	Dec. 2023
Usual condition good mood	+4	-2
I feel tension, irritation, fear, sadness	-3	+2

We observe no significant changes in the estimates of the stock of patience over the past two months: the share of positive judgments is 76–77%, negative – 13–14%.

In February 2024, population estimates roughly correspond to the level of February 2023.

Stock of patience

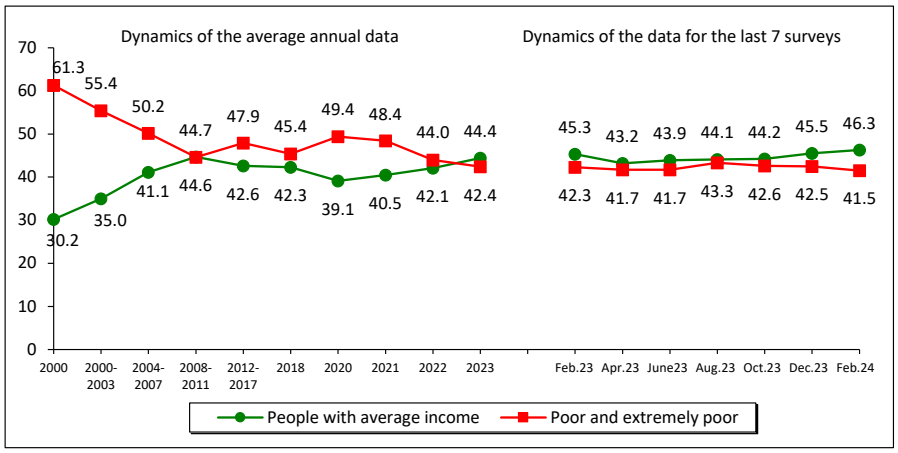


Answer option	Dynamics (+/-), February 2024 to Feb. 2023	Dec. 2023
Everything is not so bad and life is livable; life is hard, but we can endure it	+1	-1
It's impossible to bear such plight	-2	+1

Like in December 2023, in February 2024, the proportion of the region's residents subjectively classifying themselves as "middle-income" people was 46%. The share of those who classify themselves as "poor and extremely poor" did not change, as well (42–43%).

We do not observe any significant changes in the estimates of the population over the past 12 months either.

Social self-identification



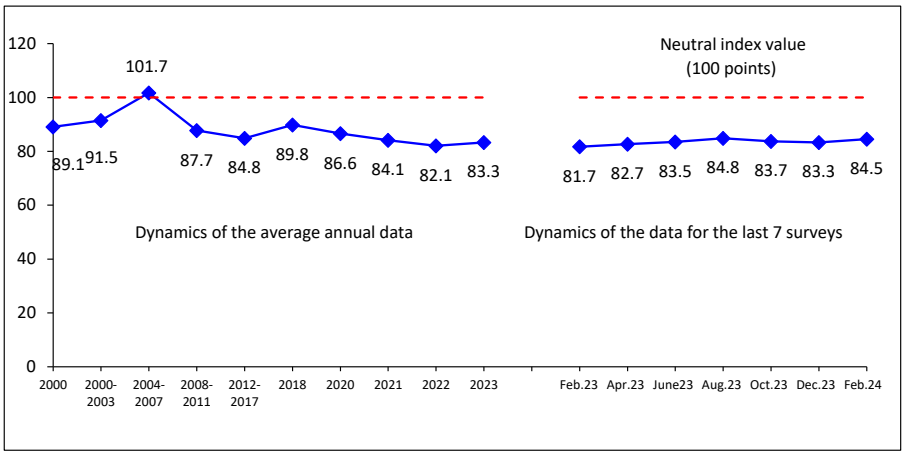
Dynamics (+/-), February 2024 to		
Answer option	Feb. 2023	Dec. 2023
People with average income	+1	+1
Poor and extremely poor	-1	-1

Wording of the question: "What category do you belong to, in your opinion?"

In the period from December 2023 to February 2024, the consumer Sentiment Index (CSI) increased by 2 points (from 83 to 85 points).

Compared with February 2023, the CSI increased by 3 percentage points (from 82 to 85 points).

Consumer Sentiment Index
(CSI, points; VolRC RAS data for the Vologda Region)



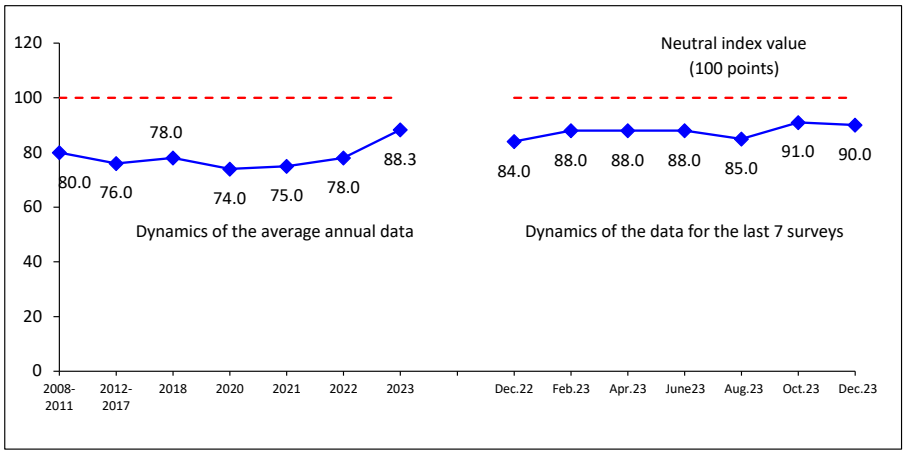
Dynamics (+/-), February 2024 to		
CSI	Feb. 2023	Dec. 2023
Index value, points	+3	+2

For reference:

According to the latest data from the all-Russian surveys conducted by Levada-Center (for the period from October to December 2023), the Consumer Sentiment Index amounted to 90–91 points.*

Tangible positive changes are observed over the past 12 months (the CSI increased by 6 points, from 84 to 90 points).

Consumer Sentiment Index
(CSI, points; Levada-Center* data for Russia)



Dynamics (+/-), December 2023 to		
CSI	Dec. 2022	Oct. 2023
Index value, points	+6	+1

* The index is calculated since 2008.

The latest data are as of December 2023.

Source: Levada-Center*. Available at: https://www.levada.ru/indikatory/sotsialno-ekonomicheskie-indikatory/

* Included in the register of foreign agents.

During the period from December 2023 to February 2024, a slight (by 2–3 percentage points) decrease in the proportion of those who experience predominantly positive emotions in everyday life was noted in all major socio-demographic groups. Among those who, according to subjective self-estimates of income, fall into the category of the middle 60%, the share of positive assessments of social mood decreased by 6 percentage points (from 73 to 67%).

However, over the past 12 months, changes in social mood in the context of the main socio-demographic groups were predominantly positive: we note positive trends in 8 out of 14 groups, in the rest of the groups, the estimates remain stable.

Social mood in different social groups (answer option: "Wonderful mood, normal, stable condition", % of respondents; VolRC RAS data)

Population group	Dynamics of the average annual data									Dynamics of the data for the last 7 surveys							Dynamics (+/-), Feb.2024 to	
	2000	2007	2011	2012	2018	2020	2021	2022	2023	Feb. 2023	Apr. 2023	June 202	Aug. 2023	Oct. 2023	Dec. 2023	Feb. 2024	Feb. 2023	Dec. 2023
Sex																		
Men	50.1	65.9	64.5	69.1	72.8	60.8	65.7	66.8	65.5	62.5	65.4	63.4	65.4	66.9	69.6	66.5	+4	-3
Women	43.3	61.7	62.0	65.8	69.8	61.2	67.4	67.9	65.7	62.7	63.4	64.7	65.3	69.4	68.9	66.5	+4	-2
Age																		
Under 30	59.1	71.3	70.0	72.3	80.0	67.6	73.5	77.6	75.0	70.6	72.9	72.9	76.2	79.4	78.0	75.1	+5	-3
30–55	44.2	64.8	62.5	67.9	72.6	61.8	69.5	69.4	68.8	63.9	67.7	68.6	69.2	71.1	72.3	69.9	+6	-2
Over 55	37.4	54.8	58.3	62.1	65.2	57.4	60.5	61.1	58.2	58.1	56.9	55.4	56.3	60.5	62.0	59.2	+1	-3
Education																		
Secondary and incomplete secondary	41.7	58.4	57.4	57.2	64.8	56.1	62.1	64.6	62.0	57.2	60.2	61.6	63.2	64.4	65.5	63.9	+7	-2
Secondary vocational	46.4	64.6	63.6	66.7	72.2	63.5	66.7	68.3	66.1	63.7	65.1	63.7	65.1	70.1	69.1	66.0	+2	-3
Higher and incomplete higher	53.3	68.6	68.3	77.0	76.8	63.3	71.5	69.5	68.8	67.3	67.3	68.2	67.4	70.0	72.8	69.4	+2	-3
Income group																		
Bottom 20%	28.4	51.6	45.3	51.5	57.3	43.4	54.6	57.0	50.1	46.2	47.8	50.4	49.6	52.5	54.2	52.2	+6	-2
Middle 60%	45.5	62.9	65.3	68.7	71.9	62.6	67.3	68.1	67.4	62.2	64.4	65.7	67.9	71.0	73.1	66.9	+5	-6
Top 20%	64.6	74.9	75.3	81.1	82.9	75.6	79.9	78.3	73.9	73.8	78.2	72.1	70.3	73.2	75.9	74.4	+1	-2
Territory																		
Vologda	49.2	63.1	67.1	73.6	71.0	60.9	60.3	59.8	59.6	54.5	56.0	57.8	60.8	63.8	64.8	62.5	+8	-2
Cherepovets	50.8	68.1	71.2	76.2	75.8	60.4	71.0	71.2	68.1	65.9	68.4	67.9	66.4	69.4	70.6	67.2	+1	-3
Districts	42.2	61.6	57.1	59.8	68.7	61.4	67.8	69.5	67.7	65.3	66.6	65.6	67.3	70.2	70.9	68.5	+3	-2
Region	46.2	63.6	63.1	67.3	71.2	61.0	66.6	67.4	65.6	62.6	64.3	64.1	65.3	68.3	69.2	66.5	+4	-2

RESUME

According to the results of the first round of the monitoring conducted in 2024, population estimates remain generally stable at the beginning of the year. There were no significant changes in most key indicators, compared to December 2023:

- ✓ **the level of approval of the President's work since October 2023 is 62–64%;**
- ✓ **the percentage of positive estimates of the success of the President's actions aimed at addressing key tasks also remain stable: strengthening Russia's international position – 48–51%; imposing order in the country – 46–47%; protecting democracy and strengthening citizens' freedoms – 42–43%; boosting the economy and increasing the welfare of the population – 35–36%.**
- ✓ **the share of those whose interests are expressed by the United Russia party is 42–43%;**
- ✓ **a slight decrease in the share of positive assessments of social mood over the past two months is within the margin of sampling error (+/- 2 percentage points) and has been 67–69% since October 2023;**
- ✓ **the proportion of the region's residents subjectively classifying themselves as "middle-income people" has been in the range of 44–46% since June 2023;**
- ✓ **the Consumer Sentiment Index has not change significantly since June 2023 and is 84–85 points, which, however, indicates the predominance of pessimistic forecasts of the population regarding the future of the country's economy and their personal financial situation.**

Among the most notable changes at the beginning of the year, we should note a slight decrease in the proportion of those who positively characterize their daily emotional state in all major socio-demographic groups. However, these changes are insignificant and have not yet become a trend. It is quite possible that the end of the New Year days off could affect people's mood; it could also be affected by the increase in prices[5] (which could affect the estimates of 60% of the middle-income groups); a more serious reason could consist in the growing tension in the international situation around Russia over a potential "open" conflict with NATO countries (at least this was publicly mentioned more than once at the beginning of the year by some representatives of the Western political establishment[6], as well as a number of Russian experts[7]).

Nevertheless, in February 2024, Russian President Vladimir Putin (addressing, among other things, the entire international community in an interview with American journalist T. Carlson) openly stated that "we have no interest in Poland, Latvia or anywhere else… it goes against common sense to get involved in

[5] According to the Vologdastat, the consumer price index in December 2023 amounted to 107.8% (compared to December 2022), and in general for 2023 – 106.1% (compared to 2022). While according to the latest data (as of November 2023), real wages in the region amounted to 103.7% (by October 2023). Source: Socio-economic situation of the Vologda Oblast in 2023: Report. Vologdastat. Vologda, 2024. Pp. 54, 76.

[6] See, for example:

1. NATO Secretary General J. Stoltenberg (Brussels, January 26, 2024): "*If Putin wins in Ukraine, there is a real risk that he will use force again*".

2 Head of the Norwegian Armed Forces E. Kristoffersen (interview to *Dagbladet* newspaper, January 21, 2024): "*When this war is over, no one knows what Putin's next move will be*".

3. German Defense Minister B. Pistorius (interview to *Der Tagesspiegel* newspaper, January 19, 2024): "*We hear threats from the Kremlin almost every day... Therefore, we must take into account that Vladimir Putin may one day attack a NATO country*".

[7] See, for example:

1. Katasonov V. A sure sign of preparation for a great war. Available at: https://zavtra.ru/blogs/v_mire_ozhidaetsya_novaya_volna_inflyatcii_vernij_priznak_podgotovki_k_bol_shoj_vojne

2. Shurygin V. The West is not going to leave Ukraine, everything is just beginning. Available at: https://izborsk-club.ru/25311

some kind of global war. And a global war will bring all of humanity to the brink of destruction"[8]. He repeated the same thing during his annual Address to the Federal Assembly of the Russian Federation: "The West has provoked conflicts in Ukraine, the Middle East, and other regions around the world while consistently propagating falsehoods. Now they have the audacity to say that Russia harbors intentions of attacking Europe. Can you believe it? We all know that their claims are utterly baseless"[9]. Russia's position on this issue has been announced quite openly and unambiguously, and only time will tell whether the Western political community will listen to it.

The stability of public opinion assessments, noted at the beginning of the year for most monitoring indicators, is also important in connection with the upcoming main domestic political event – the presidential election that will be held March 15–17, 2024.

On January 29, the RF Central Election Commission officially registered Vladimir Putin as a candidate for the post of head of state, and practically no expert has any doubts that following the results of the election, Vladimir Putin will retain his post as president. According to VCIOM data for February 2024, 76% of Russians plan to participate in the presidential election, while 75% of respondents are going to vote for Vladimir Putin[10].

However, many experts are convinced that "Vladimir Putin's Western opponents will not allow him to conduct a calm campaign; experts predict the possibility of "serious attempts to tamper with the process", the preparations for these attempts began "at least a year before the start of the SMO"[11]. In this situation, the task of further improving the effectiveness of social policy implementation remains extremely important for authorities at all levels in order to maintain the standard of living and quality of life of the general population in the continuing difficult situation in which Russia found itself after the start of the SMO.

Materials were prepared by M.V. Morev, I.M. Bakhvalova

[8] Vladimir Putin's interview to Tucker Carlson, February 9, 2024. Available at: http://www.kremlin.ru/events/president/news/73411

[9] Presidential Address to the Federal Assembly, February 29, 2024. Available at: http://www.kremlin.ru/events/president/news/73585

[10] Russian presidential election 2024: The first rating. VCIOM analytical review. February 10, 2024. Available at: https://wciom.ru/analytical-reviews/analiticheskii-obzor/vybory-2024-reitingi-kandidatov

[11] Mukhin A. External interference in the 2024 election in Russia and possible implications: Report. January 2024. 18 p.

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