Vol. 12, No. 4, 2022 | DOI: 10.26794/2304-022X | ISSN 2304-022X (Print) ISSN 2618-9941 (Online)

MANAGEMENT SCIENCES

Scientific and Practical Journal
Published since 2011

The edition is reregistered
in the Federal Service for Supervision
of Communications,
Informational Technologies and Media Control:
PI No. ФС77–82266
of 23, November, 2021

Publication frequency — 4 issues per year

**Founder: Financial University,
Moscow, Russia**

The Journal is oriented towards scientific discussion of present-day topics in the sphere of Theory and Practice of Management.
The Journal is included in the list of academic periodicals recommended by the Higher Attestation Commission for publishing the main findings of PhD and ScD dissertations, included into the sistem Russian Science Citation Index

All articles of journal Managemant Sciences in Russia are published with a digital object identifier (DOI)

The Journal is distributed by subscription.
Subscription index: 44108 in the consolidated catalogue “The Press of Russia”

EDITOR-IN-CHIEF

MEMBERS OF THE EDITORIAL BOARD

Management Sciences

Vol. 12, No. 4, 2022

Editor-in-Chief:
N.M. Abdikeev

Head of Scintific Journals Editorial Department:
V.A. Shadrin

Managing Editor:
A.M. Peresypkina

Design, make up:
S.M. Vetrov

Proofreader:
S.F. Mikhaylova

Translator:
V.I. Timonina

Reference Manager:
V.M. Alekseev

Editorial office address:
125993, GSP-3,
Moscow,
Leningradskiy prospekt, 53,
room 5.9

Tel.: 8 (499) 553-10-84 (internal 10-84).
E-mail: uprnauki@mail.ru

Subscription department:
tel.: **+7 (499) 553-10-71 (internal 10-80),**
e-mail: sfmihajlova@fa.ru
S.F. Mihaylova

Signed for press on 15.12.2022
Format 60 × 84 1/8
Length 17 p. s.
Order No. 1185

Printed in the Publishing House of the Financial University
(51, Leningradsky prospect, Moscow)

ORIGINAL PAPER

DOI: 10.26794/2304-022X-2022-12-4-6-19
UDC 338.23(045)
JEL O2

Further to the Opportunities to Elevate the Industrial Policy' Effectiveness in the Arctic Zone of the Russian Federation

E.L. Moreva, L.V. Obolenskaya
Financial University, Moscow, Russia

ABSTRACT

The actuality of the paper is due to the intensification of the strategic, geopolitical, economic, ecological and other challenges to the Russian Arctic' industrial development which requires the State to respond to them. Thus, the improvement of the Industrial policy (IP) realized in the region and the determination of the opportunities to boost its effects are among the arctic agenda' issues. The analysis and the assessment of the effectiveness of the course in practice form the objective of the present paper, with its tasks to define the opportunities to elevate the policy' effectiveness. To solve the above problems, the authors used the general scientific research methods: analysis, synthesis, logical, dialectical, comparative and others. Their application to study the IP in the Arctic Zone of the Russian Federation (AZRF) resulted in the identification of a number of shortcomings when the policy' development and implementation, i.e. the use of quantitative indicators of IP efficiency developed by the authors with the managerial factor accounted; the consideration of the continuity when changing the stages of strategic management; the compulsory use of the information support to the course as a special system that allows one to monitor constantly the effectiveness of IP and identify opportunities to improve it at the system level, as well as the recommendations to accomplish these possibilities.

Keywords: industrial policy; Arctic Zone of the RF; industrial development; effectiveness; development strategy; effectiveness parameters; effectiveness indicators; information and analytical support

***For citation*: Moreva E.L., Obolenskaya L.V. Further to the opportunities to elevate the industrial policy' effectiveness in the Arctic Zone of the Russian Federation. *Management sciences*. 2022;12(4):6-19. DOI: 10.26794/2304-022X-2022-12-4-6-19**

INTRODUCTION

The numerous strategic, geopolitical, economic, environmental, and other challenges facing the Russian Arctic today put on the agenda the question of an economic and political course that can respond effectively to them. Its relevance was emphasized by Russian President Vladimir Putin, who noted that Russia's future is largely connected with the Arctic: the state is systematically launching projects in various fields of industry and other spheres of the region's economy and intends to continue this policy in the future.[1] Assessing the effectiveness of such efforts, which are now being undertaken as part of IP in the Arctic zone, and identifying opportunities for increasing their industrial effectiveness, which are extremely important for the further development of the region and the country as a whole, is the subject of this study.

In the course of the work, the authors needed to

- to analyse the available theoretical approaches to IP;
- to identify the objectives, measures and basic conditions for evaluating the effectiveness of IP in the AZRF;
- taking them into account, to specify the main parameters of IP evaluation;
- to identify the conditions that ensure the effectiveness of IP in the changing stages of strategic management of industry in the Arctic;
- to find out the importance of information and analytical support for IP to improve its effectiveness;
- identify opportunities to improve the effectiveness of the course when analysing its practical implementation.

[1] The Investment Portal of Russia's Arctic Zone. Putin says Russia's future is largely tied to the Arctic. (online resource). 05.09.2022. URL: https://arctic-russia.ru/news/putin-zayavil-chto-budushchee-rossii-v-znachitelnoy-stepeni-svyazano-s-arktikoy/

LITERATURE REVIEW AND ANALYSIS

The issues of IP have been the subject of attention of scientists for several decades — they have analyzed the circumstances that trigger the need for such an economic and political course, its goals and means; they have formulated approaches to the definition of parameters and indicators for assessing IP.

The diversity of reasons for today's need to improve industrial policy is revealed in the works [1, 2], the authors of which showed that, in contrast to the last century, nowadays the need for IP is caused not only by problems of imperfect economic structure and its low innovation activity, but also by other reasons, including the need to ensure strategic independence of national economies; boosting their digital transformation; ensuring the balance of development levels of economic regions; and responding adequately to global financial crises, pandemics, environmental and other challenges.

Their growing diversity has given rise to an increasing number of new interpretations of IP, its directions, and approaches to its measurement. If previously industrial policy was reduced to a set of measures to regulate markets, create conditions for growth and improve competitiveness of the economy, nowadays its functionality also includes changing the industrial structure by strengthening the sectors with high added value, supporting new and modernizing traditional industries, mobilizing the potential of network forms of economic organization based on digital technology, etc. [3, 4].

The growing number of IP goals and objectives is accompanied by the clarification of other components of the public administration system that allow to realize the purpose of the course and ensure its effectiveness [5], which include basic (or "framework") conditions necessary for successful implementation

of the course, as well as measures to achieve the set goals.

The former relate to labour and capital markets, national legal institutions, and the main actors of IP [6, 7]. The latter concern fiscal and financial instruments (state subsidies, guarantees, etc.), as well as actions of organizational nature: targeted state support of science, stimulation of development of certain sectors and territories, increasing their investment activity, export, etc. [8, 9].

In addition to the mutual correspondence of objectives, basic conditions and measures for effective IP, the modern literature notes the importance of taking into account the following circumstances:

- a clear definition of the IP object — e.g., a highly productive sector, a certain type of business, specific industry(s), etc;
- consistency in the design and implementation of IP of a certain type (horizontal, targeted, combined; long- and/or short-term, etc.)
- the balance between the IP measures;
- changes in the situation not only of the direct recipients of IP (its object), but also of other entities of the space (region, sector, etc.) in which these recipients act
- influence of forces unrelated to the change of state/condition of the IP object;
- correlation of IP effects at different aggregate levels (macro-, meso- and microlevels)
- information support of IP, including from different sources: targeted (e.g., reports on the implementation of planned activities) and other (corporate reporting, legal databases, statistical directories, etc.) [10–13].

These aspects, which are sometimes combined by the term "management factor", significantly complement the range of traditional approaches to assessing the effectiveness of industrial policy.

Its qualitative parameters are usually reduced to changes in the economic structure (structural approach) or conditions (quality) of life and reproduction (comprehensive approach)[2] [14], while the quantitative ones are associated with sets of financial and economic indicators (indices of industrial production and/or its manufacturing sector, labor productivity, investment activity, the number of investment projects, jobs created, etc.) or add to them the indicators of stability, environmental friendliness, etc.

Despite the differences in the composition of the applied sets of metric indicators, the same methodologies are used for their calculation. The most common are fixing a set of indicators and their target values for comparison with the actual results; determining deviations of indicator values from the average and ranking them; approving special calculation methodologies, etc. [15, 16].

The list of the above-mentioned parameters and indicators of IP is considerably extended to take into account the management factor. On the one hand, this opens up new opportunities to improve course efficiency, but on the other hand, it makes it much more difficult to work with them due to the increased volume of information to be processed.

Opportunities to avoid such difficulties are now associated with the use of digital technologies capable of processing large amounts of data and simplifying calculations according to different methodologies. It can also make these processes cheaper and more accurate. However, experts recognise that there is no clear model for the implementation of such digital capabilities, either in theory or in practice [17].

In line with and expanding upon the issues raised, IPs are studied in relation to the Arctic, most commonly in the Arctic states and

[2] UNIDO. Industrial Development Report 2020. URL: https://www.unido.org/sites/default/files/files/2019–11/UNIDO_IDR 2020-MainReport_overview.pdf

the Arctic Council observer states.[3] In most of these, however, the focus has been on the research, infrastructure, environment, and cultural/civilizational aspects of the course [18]. Russia, on the other hand, has increasingly focused on the socioeconomic aspects of IPs [19, 20].

Given the enormous production potential of the AZRF, domestic researchers address various aspects of PP in the region to develop new types of industries and ecosystems; launch large-scale projects with state participation, including in the context of a changing external environment (sanctions, etc.); mobilize the capabilities of advanced technologies, including digital, to improve sustainability and economic efficiency [21, 22].

The theoretical background provided the basis for a study of industrial policy in the sector of the same name in order to identify opportunities to improve its effectiveness.

RESEARCH METHOD AND INFORMATION SOURCES

The study of the course was based on the integrated use of general scientific methods: analysis and synthesis, logical method, comparative, content analysis, etc.

Given the limited primary sources of data available on the implementation of the course, much attention was paid to secondary sources of information: scientific literature, media publications, as well as normative documents on the issues of socio-economic policy of the Russian Federation in the Arctic. The latter indicated the extensive development of the IP at the federal level, which made it possible to rely on them as a baseline for evaluating the course and identifying opportunities for improving its effectiveness.

[3] List of the Arctic Council Observer Countries. URL: https://www.arctic-council.org/ru/about/observers/

RESULTS AND DISCUSSION

1. Analysis of documents regulating socio-economic policy in the AZRF: Decree of the President of the Russian Federation from 05.03.2020 No. 164 "On the Fundamentals of State Policy of the Russian Federation in the Arctic for the period up to 2035" (hereinafter referred to as the Fundamentals of Arctic Policy); Decree of the President of the Russian Federation from 26.10.2020 No. 645 "On the Development Strategy of the Arctic Zone of the Russian Federation and ensuring national security for the period up to 2035" (hereinafter referred to as the Strategy of the Arctic Zone Development); Resolution of the Government of the Russian Federation from 30.03.2021 No. 484 "On Approving the State Program of the Russian Federation "Social and Economic Development of the Arctic Zone of the Russian Federation" (hereinafter referred to as the AZRF State Programme); the Russian Federation Government Regulation No. 996-r of 15.04.2021 on the "Single Action Plan for the Implementation of the Principles of State Policy of the Russian Federation in the Arctic until 2035 and the Arctic Zone Development Strategy of the Russian Federation and National Security until 2035" (hereinafter referred to as the Single Plan) — has allowed to determine the main goals, tasks and objectives,[4] conditions and measures of IP in the region, whose mutual correspondence provides the principal possibility to conduct an effective course.[5]

[4] As the terms aims and objectives often have similar contents in official documents, and given the relative nature of the differences between them, the authors have also used them synonymously in the following.

[5] Presidential Decree No. 164 of 05.03.2020 'On the Fundamentals of State Policy of the Russian Federation in the Arctic until 2035'. URL: http://www.kremlin.ru/acts/bank/45255, Decree of the President of the Russian Federation of 26.10.2020 No. 645 "On the Strategy for Development of the Arctic Zone of the Russian Federation and Ensuring National Security for the Period to 2035". URL: https://base.garant.ru/74810556/; Decree of the Government of the Russian Federation No. 484 of 30.03.2021 "On Approval of the State

Its main objectives included:

• Ensuring sustainable growth and development of industry, creating attractive conditions for entrepreneurship and increasing its investment, and strengthening state-business cooperation (while retaining state control over joint strategic projects);

• improving the integrated development of the sector, including through the improvement of its infrastructural and personnel support.

These general industry-wide development objectives were complemented by sector-specific objectives.

In the extractive industries related to hydrocarbon raw materials and solid minerals, it was envisaged to switch over to better development of deposits: to increase prospecting work, increase oil and gas extraction ratios, oil refining depth, etc.

In order to boost the sectors involved in the development of aquatic biological resources, tasks were set to create conditions to improve their efficiency and increase the production of high value-added products.

To improve the timber industry, it was planned to reorient them towards advanced processing of timber, improve the industry's infrastructure and intensify reforestation.

For the spatial development of the industry, it was planned to develop the Arctic shelf and intensify cooperation between the AZRF and other regions of Russia.

A number of tasks concerned infrastructure support for the sector: the development of transport communications, telecommunications, science and technology, environment, security, etc.

The opportunities to implement all of the above-mentioned strategies envisaged the basic conditions of the IP[6]:

• under the overall direction of the President of the Russian Federation, the activities of the federal executive authorities and the subjects of the Russian Federation in implementing and monitoring the regional course of IP were coordinated by the State Commission for Arctic Development;

• Institutionally, industrial development was provided by the legal sphere, the main parts of the management system; as well as information support, including statistical and analytical support;

• The financial sources of the IP were provided by the budgetary system of the Russian Federation, including the State Program of the AZRF, as well as by extra-budgetary sources.

The objectives and basic conditions of IP corresponded to its measures, embedded in the general set of instruments of the entire Arctic policy. Based on its analysis, measures for industrial development were highlighted. Grouped according to the main areas of use, they are presented in the *Table 1* below.

The data show that the envisaged industrial policy measures met its objectives and, in this respect, provided a fundamental opportunity for the effective implementation of the policy.

2. The identification of the main parameters and metrics of IP, taking into account the management factor, made it possible to significantly supplement and adjust the indicators of effectiveness of the Arctic policy from the official documents, to identify new opportu-

Programme of the Russian Federation for the Socio-Economic Development of the Arctic Zone of the Russian Federation". URL: https://base.garant.ru/400534977/; Decree of the Government of the Russian Federation No. 996-r of 15.04.2021 "Unified Action Plan for the Implementation of the Principles of State Policy of the Russian Federation in the Arctic until 2035 and the Strategy for Development of the Arctic Zone of the Russian Federation and National Security until 2035". URL: https://docs.cntd.ru/document/603336627.

[6] Presidential Decree No. 164 of 05.03.2020 'On the Fundamentals of State Policy of the Russian Federation in the Arctic until 2035'. URL: http://www.kremlin.ru/acts/bank/45255

Table 1

The main groups of measures to implement the tasks of the IP in the Arctic Zone of the Russian Federation

Directions	The main content of the measures
THE INDUSTRIAL SECTOR AS A WHOLE	
GROWTH AND DEVELOPMENT	Introduction of a special economic regime in the AZRF; adaptation of the region's sector and infrastructure to climate change; development of crisis management as part of a unified state system for disaster management; and ensuring mutually beneficial international cooperation in the region
INNOVATION AND SUSTAINABILITY OF ACTIVITIES	State support for the development and introduction of new functional and structural materials, technologies critical for Arctic development (including minimisation of emissions and/or discharges of pollutants); development of a unified state environmental monitoring system [based on modern information and communication technologies (ICT) and communication systems]; state support for the waste management industry in the AZRF; ensuring radiation safety of industrial facilities related to nuclear technologies; the use of the results of the Implementation Agreement on Strengthening Arctic International Scientific Cooperation for these purposes
RESOURCE SUPPORT	Providing investors with state support for their investments in industry and its infrastructure; simplifying the procedure for granting land plots to citizens for industrial production; encouraging the use of domestic industrial products in new projects; developing general principles for investment projects with foreign capital in the AZRF; attracting foreign investors to participate in industrial projects in the region
PRODUCTION AND TRANSPORTATION SUPPORT	Integration of transport and logistics services in the waters of the Northern Sea Route (NSR) based on a digital platform for multimodal transportation; development and implementation of engineering and technical solutions for sustainable infrastructure operation under climate change; construction and reconstruction of local roads; creation of a trans-Arctic underwater fiber-optic trunk line with access to major ports and settlements in the AZRF; deployment of a high-elliptic space system to provide high-resolution hydrometeorological data to the polar region
HUMAN RESOURCES AND SOCIAL INFRASTRUCTURE	Development of a network of professional educational organisations (including those based on WorldSkills standards)[a] together with large and medium-sized enterprises; bringing the system of basic professional educational programmes and admission to budgetary places of educational organisations of the AZRF in line with the forecast demand for qualified personnel; supporting development programmes for higher education organisations and their integration with industrial enterprises; developing and implementing, in collaboration with foreign organisations, professional educational programmes for the development and exploitation of the Arctic
	Definition of a system of social guarantees for citizens working in industry in the AZRF; establishment of a system of state support for the delivery of vital goods to remote settlements linked to industry; development of schemes for the optimal location of the social infrastructure of industry and its modernisation; state support for the cultural development of employees of industrial enterprises
CROSS-SECTORAL LINKAGES	Engaging industrial enterprises in the development of ports and port points on the NSR (Northern Sea Route) and other water areas for increased navigation in the AZRF, the development and construction (reconstruction) of airport complexes, border crossing points; the Russian research fleet; the capacity of Arctic complex emergency rescue centres and their logistical support and arrangements

Table 1 (continued)

Directions	The main content of the measures
INDIVIDUAL INDUSTRIAL SECTORS	
EXTRACTIVE INDUSTRIES RELATED TO HYDROCARBONS AND SOLID MINERALS	Development and implementation of a programme for geological exploration of the AZRF, state support for the creation and development of technologies for oil and gas field development, LNG and other fuel production; measures to prevent negative environmental impacts of industrial development of natural resources; development by the state of a unified system for prevention and response to emergencies, including oil and oil product spills in transport corridors; measures to expand the use of LNG for transport (sea and river) and for energy supply to populated areas
ENERGY, COMMUNICATIONS INDUSTRY	Development and implementation of a state support mechanism for projects to improve the efficiency of electricity generation based on LNG, renewable energy, and local fuels in isolated and hard-to-reach areas; provision of mobile energy sources and means of communication to small peoples in areas of their traditional economic activities and residence; ensuring rational use of associated oil gas to minimise its flaring and combustion; prevention of crime at fuel and energy enterprises
FOOD PROCESSING INDUSTRY	State support for the establishment/upgrading of fish processing complexes
TIMBER INDUSTRY	Developing a mechanism of state support for the development of deep processing of forest resources
SPATIAL DISTRIBUTION OF INDUSTRY	
CONTINENTAL SHELF DEVELOPMENT	Preparation of materials for the justification of the outer limit of the continental shelf; creation and development of a new model for the implementation of economic projects on the continental shelf with the participation of private investors
INTERREGIONAL COMMUNICATION	Construction of universal nuclear-powered icebreakers and other types of vessels for use in the Arctic, including the development and approval of a programme to build vessels for transport between sea and river ports in the AZRF; support for the construction of Arctic-class cruise ships in Russia; improvement of subsidy mechanisms for long-distance, inter-regional and local (intra-regional) air transport, including to and from the Arctic

Source: compiled by the authors based on the Development Strategy of the Arctic Zone of the Russian Federation. URL: https://www.garant.ru/products/ipo/prime/doc/74710556/

Note: [a] — WorldSkills — an international social movement with the mission of creating conditions for people striving for professional self-realization. URL: http://worldskillsrussia.org/worldskills/.

nities for improving the effectiveness of the course.

The identification of qualitative parameters of IP, which included the well-being and quality of life of those employed in industry; the competitiveness of the latter, its innovation, sustainable growth, integration into the national economy, infrastructure provision; spatial (including cross-border) development, was based on the analysis of the course objectives.

In determining quantitative parameters and indicators, the factors of effectiveness of socio-economic policy on the development of the AZRF, given in the Arctic Policy Framework[7] were taken into account. Grouped according to the main objects of IP, they are presented in the *Table 2* below.

[7] Decree of the President of the Russian Federation of March 5, 2020 No. 164 "On the Fundamentals of the State Policy of the Russian Federation in the Arctic for the period up to 2035". URL: http://www.kremlin.ru/acts/bank/45255

Table 2

The key indicators of the effectiveness of the Arctic policy of the Russian Federation and the corresponding quantitative characteristics

The key performance indicators (KPI) of the Arctic policy of the RF	Indicators of quantitative parameters of the IP in AZRF highlighted on the basis of the KPIs
The regional economy as a whole	**The industry as a whole**
Share of the gross regional product of the AZRF in the total GRP of the constituent entities of the Russian Federation [a]	The share of shipped goods of own production, work performed, and services performed by the industrial enterprises of the region on their own in their total volume in all regions of the Russian Federation
The most important sectors of the Russian Arctic economy	**Industries and infrastructure**
Share of oil and natural gas produced in the region in their total national production [b]	The same as in the cell on the left
The volume of cargo transportation in the waters of the NSR — Northern Sea Route (point "o" of the KPI)[c]	Multiplication coefficients of cargo transportation in the NSR to the industrial production of the region and the increase in this production to the volume of goods transported along the NSR
Human resources	**Human resources**
The average salary of those employed in organizations of the Russian Arctic (point "e" of the KPI)[d]	The average salary in the industry of the Russian Arctic
Unemployment rate in the Russian Arctic (point "c" of the KPI)[e]	Unemployment rate in the industrial sector of the Russian Arctic
Socio-economic structure	**Industrial structure**
The share of value added of high-tech and knowledge-intensive industries of the Russian Arctic in the gross regional product (point "i" of the KPI)[f]	The same as in the cell on the left
The share of internal expenses of the Russian Arctic organizations on R&D and technological innovations in the national volumes of the corresponding expenses (point "l" of the KPI)[g]	Share of domestic expenditures of industrial enterprises on R&D and technological innovations in the national volumes of corresponding expenditures
The share of investments in fixed capital for the protection and rational use of natural resources in their national volumes (point "m" of the KPI)[h]	The share of investments in the fixed capital of industrial enterprises for the protection and rational use of natural resources in their national volumes
Share of households with broadband Internet access in their total number in the Russian Arctic (point "f" of the KPI)[i]	The share of industrial facilities of the Russian Arctic using broadband Internet access in their national number
Investments in the economy of the region	**Investments in industry**
The share of the region in terms of investments in fixed capital in the total capital investments of the country (point "j" of the KPI)[j]	The share of investments in the fixed capital of the Arctic industry in the total capital investments of the country's industry
Number of jobs at new enterprises of the Russian Arctic (point "d" of the KPI)[k]	Number of jobs in new industrial enterprises
Coefficient of migration growth of the population of the Russian Arctic (point "b" of the KPI)[l]	Coefficient of migration growth of workers of industrial enterprises of the Russian Arctic

Source: compiled by the authors based on "On the Fundamentals of the State policy of the Russian Federation in the Arctic for the period up to 2035" URL: http://www.kremlin.ru/acts/bank/45255.

Note: [a] — point "h". URL: http://www.kremlin.ru/acts/bank/45255

[b] — Ibid., paragraphs "n" and "o"; [c] — Ibid., paragraph "p"; [d] — Ibid., paragraph "e"; [e] — Ibid., paragraph "c"; [f] — Ibid., point "i"; g — Ibid., paragraph "l"; [h] — Ibid., paragraph "m"; [i] — Ibid., paragraph "f"; [j] — Ibid., paragraph "j"; k — Ibid., item "d"; [l] — point "b".

Analysis of the content of indicators in the right column of *Table* 2 showed that it does not reflect the quantitative aspects of many parameters of the quality of the IP in the Arctic zone — for example, the quality of life, competitiveness, sustainability, etc. Also, the content does not give an idea of the purpose of the IP to change its object and does not take into account the management factor. The elimination of these gaps requires replacing the selected indicators with the corresponding incremental indicators and supplementing them with others that allow a quantitative assessment of the qualitative characteristics and managerial aspects of the course (for example, the ratio of the influence of the state and other socio-economic entities and forces on the change in the objects of the IP; changes in the situation in the region of various industrial sectors in the process of implementing the IP, etc.).

Solving this problem requires large-scale research and development, including the use of digital technologies, as well as organizational efforts to introduce the newly created system into management processes. The possibility of such actions, however, was actually provided for in the documents on the IP: they noted the need to create a unified information-analytical and statistical system for managing the development of the Russian Arctic. Taking into account the approach proposed above in the formation and use of IP performance indicators allows you to control important aspects of the course that were not taken into account otherwise, identify its shortcomings in a timely manner and determine opportunities and ways to improve its effectiveness.

3. Opportunities to ensure and/or improve the effectiveness of IP open up when considering the conditions necessary for an effective change of its stages. The prospects for a successful course may remain unfulfilled even if the above remarks are observed, due to the fact that at certain stages of the strategic management of industry, it did not provide for the formation of qualities sufficient for an adequate (expected) response of enterprises to the impact of the measures of the next stage.

For example, the main objectives of the first of the three stages of the AZRF Development Strategy adopted for the implementation of the IP (2020–2024, 2025–2030 and 2031–2035) concerned the creation of the infrastructure foundations for future industrial development: its regulatory and legal support; improving transport, infrastructure, shipbuilding, and communication systems; modernization of social infrastructure, scientific and personnel support for the needs of industry, etc.

These important and necessary actions, however, did not mean that only thanks to them, the next step in the actions of industrialists would be the active introduction of new technology, innovation, development of opportunities for year-round navigation on the NSR, and increased competitiveness. Therefore, among the parameters and indicators of IP at its individual stages, it was necessary to provide for the readiness of its facilities for the transition to the next stage. For example, at the first stage of strategic development, the readiness of enterprises for the transition to the next one could be evidenced by the formation of their abilities and focus on technological renewal and innovation, activation and change in the way they work with the external environment, the transition to new business models, etc.

The available special management tools made it possible to specify the indicators of the emergence of new qualities in IP objects: maps of cause-and-effect relationships in the work of organizations (causal maps), schemes of decision-making mechanisms, etc.

4. Important prospects for improving the effectiveness of the IP in the Russian Arctic

Table 3

Some characteristics of the priority investment projects with the state participation

Specifications	December, 2021	April, 2022
Number of priority investment projects with state participation	338	460
Total investment	1,1 trillion rub.	1,3 trillion rub.
Share in the total number of projects scheduled for completion by 2030	More than 18%	More than 25%

Source: compiled by the authors based on Meeting on the problems of the Arctic Zone development. URL: http://www.kremlin.ru/events/president/news/68188; [8].

are opened by the presence of a system of its information and analytical support, in the absence of which (or without access to it), information about the course and the state of its object in open sources is not enough to assess the IP in a balanced way and identify opportunities at the system level in order to improve its efficiency.

On the one hand, the materials of meetings, forums and other thematic events indicate an increase in industrial activity in the Arctic, an increase in the number of commercial projects being implemented in it, including with the participation of the state (*Table 3*).

Presented in Table 3 the upward dynamics of investment activity in the Russian Arctic is accompanied by the creation of new jobs in the industrial sector (in the spring of 2022 there were about 30 thousand, and by 2030 this number may become 110 thousand or more), improving the structure of its financing, attracting private investors. The ratio of budgetary and private investments in projects is estimated at a ratio of 1:15, i.e., for every ruble of state resources, merchants invest 15 rubles of their own funds. At the same time, the payback period of budget investments is 4 years. As a result, by 2035, the increase in the gross domestic product of the Russian Arctic is expected to be more than 30 trillion rubles, while in tax revenues — 13 trillion rubles[8]. [8].

The strengthening of project activities is associated with special regimes for supporting entrepreneurship in the region, the most significant of which include the creation of the Arctic zone of the Russian Federation with federal, regional, and municipal tax benefits and administrative preferences for investors, territories of advanced socio-economic development, a special administrative region, the regime "Free port of Vladivostok". Today they are used by companies from almost all industrial sectors represented in the Arctic for the development of new deposits, the creation of processing enterprises and other facilities.

Entrepreneurship is also stimulated by such IP measures as various forums, fairs and other public events. Thus, at the recent XI International Forum "The Arctic: Present and Future", "Norilsk Nickel" and the management company of the Russian Arctic, JSC "Corporation for the Development of the Far East and the Arctic", signed an agreement on cooperation in the implementation of a number of invest-

[8] Materials of the Conference on the Development of the Arctic Zone. 13.04.2022. URL: http://www.kremlin.ru/events/president/news/68188

ment projects in the Krasnoyarsk Territory and the Murmansk Region.[9]

On the other hand, the given data is not enough to unequivocally recognize the effectiveness of the course.

Information on project activity requires additional information about the payback of commercial investments, their profitability, risks, etc., while the assessment of other types of industrial activity requires information about the commodity situation, the structure of markets and costs, the position of different types of business, their dynamics, etc. The absence of these data in in a systematic form does not allow comparing the developed IP with its influence on the actual development of the industry.

Similar problems arise when evaluating course funding. So, without a special analytical commentary, the reasons for the implementation of the AZRF Program at the level of 14.5% in the 1st quarter of 2022 and 1.4% in the 1st quarter of 2021 (according to the open part of the consolidated list with changes) and the program "Development of shipbuilding and equipment for the development of offshore fields", are not clear as they amounted to 5.8 and 39.5%, respectively.[10] And without additional explanations, it is impossible to judge such actions and look for ways to correct the situation.

However, the need for such steps and the need to select an appropriate information and analytical system are persistently indicated by the documents of ongoing meetings and other events on the issues of the Russian Arctic. For example, the materials of the April meeting in the Kremlin on Arctic issues indicate the incomplete use of existing financial instruments to stimulate entrepreneurial activity, insufficient involvement of small and medium-sized businesses in priority investment projects, and other shortcomings of the regional IP.[11] Overcoming them is associated with an appeal to already tested tools in the form of a "Project Finance Factory", granting benefits to companies in the region as residents of the Russian Arctic; financing of Arctic projects from the funds of the National Wealth Fund, compensation to small and medium-sized businesses up to half the interest rate on loans for the supply of goods, works and services in priority areas from the federal budget, etc.

The possibility of using other PP measures to improve its efficiency, such as improving the coordination of various areas of industrial development and the formation of intersectoral complexes on this basis, the targeted improvement of some conditions for the operation of the extractive industries and the industrial infrastructure of the region, is indicated in the materials of the meetings of the State Commission for the Development of the Arctic.[12]

Characteristically, in both cases, the problems associated with the insufficiency of the identified opportunities to achieve the goals set, the expediency of supplementing them with other tools or, on the contrary, reorientation to solve other course tasks, remain unresolved. The need to overcome them once again confirms the importance of an appropriate information and analytical system, which allows not only to develop a course, but also to control its implementation, to identify systemic opportunities to increase its effectiveness. Given the scale and complexity of such an object, it is advisable

[9] Materials of the XI International Forum "Arctic: present and future". URL: http://www.forumarctic.com/conf2021/about/

[10] Accounts Chamber of the Russian Federation. Operative report for the 1st quarter of 2022, p. 49, 53. URL: https://ach.gov.ru/audit/I-quarter-2022

[11] List of instructions following the results of the Meeting on the development of the Arctic zone of the Russian Federation. 22.05.2022. URL: http://www.kremlin.ru/acts/assignments/orders/68462

[12] State Commission for the Development of the Arctic. URL: https://arctic.gov.ru/documents/

to use digital technologies in its development and use. Taking into account the novelty of this process, it makes sense to make its organization the subject of special studies, allowing to more fully determine the possibilities for improving the efficiency of IP in the Russian Arctic..

CONCLUSIONS

The study that was conducted made it possible to fulfill the tasks and achieve the goal of the work.

An analysis of the scientific literature on the issues of IP showed the viability of searching for opportunities to improve the effectiveness of the course in the Russian Arctic on the basis of an analysis of the mutual correspondence of its main elements, taking into account the managerial factor.

The approach to industrial policy in the Arctic Zone as an organic component of the course for the socio-economic development of the region made it possible to use the documents supporting it to determine the main elements of the IP: its goals, measures and basic conditions for implementation; studying them for mutual correspondence showed that, in general, they are consistent with each other and, in principle, make it possible to achieve its goals.

The developed approach to determining the quantitative indicators of the course, taking into account the managerial factor, laid the foundation for clarifying the assessment of the effectiveness of the IP and detailing the directions for finding ways to improve it. An analysis of the individual stages of the IP provided for in the Development Strategy of the Russian Arctic showed that their results do not provide for an assessment of the conditions sufficient for a successful transition from one stage to the next. This is fraught with inefficiency of the entire course and requires consideration of these conditions. To facilitate the solution of this problem, they should be included in a special statistical and information-analytical system for managing the industrial development of the region, provided for in official documents on IP.

There is currently no access to its data. This does not allow us to evaluate it and use it to comprehensively identify opportunities to improve the effectiveness of the current IP. Meanwhile, the analysis of information about the AZRF IPs from sources that are not related to the system mentioned above indicates the presence of such opportunities. This confirms the importance of this system and the relevance of access to working with it to find ways to optimize the IP.

The authors have developed and applied original approaches to address the following issues:

- a way to determine the IP in the Russian Arctic as a system;
- theoretical substantiation of the fundamental possibility of effective implementation of the IP;
- development of quantitative indicators of the effectiveness of IP, taking into account the management factor;
- taking into account continuity when changing the stages of strategic management;
- the need for information support of the course in a system that allows you to constantly monitor the effectiveness of the IP and comprehensively identify opportunities to improve it.

Many of the conclusions and recommendations made during the study can be applied in practice. This concerns the formation of a system of qualitative and quantitative indicators for assessing the effectiveness of the IP in general and at individual stages of its implementation in the information and analytical management system, expanding access to its data to determine the possibilities for improving the effectiveness of the course and ways to implement them.

ACKNOWLEDGMENTS

The paper was prepared on the research results carried out at the expense of budget funds within the framework of the government research assignment to the Financial University.

REFERENCES

1. Criscuolo C., Gonne N., Kitazawa K., Lalanne G. An industrial policy framework for OECD countries: Old debates, new perspectives. OECD Science, Technology and Industry Policy Papers. 2022;(127). URL: https://www.oecd-ilibrary.org/docserver/0002217c-en.pdf?expires=1667729620&id=id&accname=guest&checksum=E 2D 8533F04AFA077275C1B0A2A0866D3
2. Choi J., Levchenko A.A. The long-term effects of industrial policy. NBER Working Paper. 2021;(29263). URL: https://www.nber.org/system/files/working_papers/w29263/w29263.pdf
3. Federico G., Foreman-Peck J. European industrial policy: Introduction. In: Foreman-Peck J., Federico G., eds. European industrial policy: The twentieth-century experience. New York: Oxford University Press; 1999:1–17.
4. Criscuolo C., Gonne N., Kitazawa K., Lalanne G. Are industrial policy instruments effective? A review of the evidence in OECD countries. OECD Science, Technology and Industry Policy Papers. 2022;(128). URL: https://www.oecd-ilibrary.org/docserver/57b3dae2-en.pdf?expires=1667730801&id=id&accname=guest&checksum=40887A7FF5646D 943C 25FA727F623DBE
5. Romanova O.A., Kuzmin E.A. Industrial policy strategy: A case of changing national priorities in Russia. *WSEAS Transactions on Business and Economics*. 2020;17:879–888. DOI: 10.37394/23207.2020.17.86
6. Aghion P., Bergeaud A., van Reenen J. The impact of regulation on innovation. NBER Working Paper. 2021;(28381). URL: https://www.nber.org/system/files/working_papers/w28381/w28381.pdf
7. Akcigit U., Stantcheva S. Taxation and innovation: What do we know? NBER Working Paper. 2020;(27109). URL: https://www.nber.org/system/files/working_papers/w27109/w27109.pdf
8. Calvino F., DeSantis S., Desnoyers-James I. et al. Closing the Italian digital gap: The role of skills, intangibles and policies. OECD Science, Technology and Industry Policy Papers. 2022;(126). URL: https://www.oecd-ilibrary.org/docserver/e33c281e-en.pdf?expires=1667732446&id=id&accname=guest&checksum=0930950C 12FF42AB 9C 4F71109C 3A51CE
9. Lane N. The new empirics of industrial policy. *Journal of Industry, Competition and Trade*. 2020;20(2):209–234. DOI: 10.1007/s10842–019–00323–2
10. Huang X., Ge P., Zhou B. Selective industrial policy and capital misallocation: Evidence from the 'Revitalization Plan for Ten Industries' in China. *Journal of the Asia Pacific Economy*. 2021. DOI: 10.1080/13547860.2021.2010378
11. Criscuolo C., Martin R., Overman H.G., van Reenen J. Some causal effects of an industrial policy. *American Economic Review*. 2019;109(1):48–85. DOI: 10.1257/aer.20160034
12. Rotemberg M. Equilibrium effects of firm subsidies. *American Economic Review*. 2019;109(10):3475–3513. DOI: 10.1257/aer.20171840
13. Sraer D., Thesmar D. A sufficient statistics approach for aggregating firm-level experiments. NBER Working Paper. 2018;(24208). URL: https://www.nber.org/system/files/working_papers/w24208/w24208.pdf
14. Smirnova O.P., Averina L.M., Ponomareva A.O. Transformation of industries in the conditions of new technological challenges. *Advances in Systems Science and Applications*. 2020;20(3):36–49. DOI: 10.25728/assa.2020.20.3.851
15. Toomsalu L., Tolmacheva S., Vlasov A., Chernova V. Determinants of innovations in small and medium enterprises: A European and international experience. *Terra Economicus*. 2019;17(2):112–123. DOI: 10.23683/2073–6606–2019–17–2–112–123

16. Smirnova O.P., Ponomareva A.O. The technological transformation of Russia's industrial sectors: Difficulties and prospects. *Natsional'nye interesy: prioritety i bezopasnost' = National Interests: Priorities and Security*. 2020;16(9):1674–1697. (In Russ.). DOI: 10.24891/ni.16.9.1674
17. Johnstone N., Agrawala S., Cornago E. et al. Using digital technologies to improve the design and enforcement of public policies. OECD Digital Economy Papers. 2019;(274). URL: https://www.oecd-ilibrary.org/docserver/99b9ba70-en.pdf?expires=1667736491&id=id&accname=guest&checksum=FC 98F4E 3953519F8BA8D 522B 0711732D
18. Schlosser P., Eicken H., Metcalf V., Pfirman S., Murray M.S., Edwards C. The Arctic highlights our failure to act in a rapidly changing world. *Sustainability.* 2022;14(3):1882. DOI: 10.3390/su14031882
19. Pilyasov A. Regional economic development in the Russian Arctic, North and Siberia. *Regional Science Policy & Practice*. 2022;14(1):3–6. DOI: 10.1111/rsp3.12513
20. Petrov I.V., Kharchilava Kh.P., Bashkov D. Yu. Industrial development potential of the Russian Arctic. *Samoupravlenie*. 2020;2(1):313–317. (In Russ.).
21. Merkulina I. Assessment of the cost effectiveness of environmental protection in the Arctic regions. *Ekonomicheskie nauki = Economic Sciences.* 2020;(192):286–290. (In Russ.). DOI: 10.14451/1.192.286
22. Andreeva E.N. The Arctic — natural resource management: A test on maturity. *Rossiiskii ekonomicheskii zhurnal = Russian Economic Journal*. 2022;(1):50–77. (In Russ.).

ABOUT THE AUTHORS

Eugenia L. Moreva — Cand. Sci. (Econ.), Associate Professor, Deputy Director of the Institute for Financial and Industrial Policy, Financial University, Moscow, Russia
https://orcid.org/0000-0001-6355-7808
ELMoreva@fa.ru

Ludmila V. Obolenskaya — Cand. Sci. (Tech.), Leader research associate of the Institute for Financial and Industrial Policy, Financial University, Moscow, Russia
https://orcid.org/0000-0002-1016-9171
LVObolenskaya@fa.ru

Conflicts of Interest Statement: The authors have no conflicts of interest to declare.

The article was submitted on 30.09.2022; revised on 17.10.2022 and accepted for publication on 03.11.2022.
The authors read and approved the final version of the manuscript.

ORIGINAL PAPER

DOI: 10.26794/2304-022X-2022-12-4-20-35
UDC 338.4;620.9(045)
JEL O32, M21, L71, Q35, Q42

Multi-Vector Diversification Concept for Russian Oil and Gas Company: Prerequisistes, Trends, Opportunities

K.V. Simonov[a], A.O. Buriachenko[b]
[a] Lomonosov Moscow State University, Moscow, Russia;
[b] "Gazprom Dobycha Yamburg" LLC, Novy Urengoy, Russia

ABSTRACT

The study's relevance is explained that nowadays, Russian oil and gas companies are under the pressure of some negative factors and circumstances that adversely affect both their activities and the national economy entirely. All this dictates the need for a thorough understanding and elaboration of the current situation for the subsequent adoption of effective measures and management decisions strategic. The purpose of the paper is to form a concept and show new promising areas for diversifying the activities of Russian oil and gas companies. The authors used theoretical tools that combine deduction methods, induction, analogy, generalization, and classification. Also, the authors applied such empirical approaches as comparison, observation, and description. As a result, the work summarized an experience and analyzed key aspects of diversification of high-tech Russian and foreign companies in an ecosystem approach to making a business. The authors planned conceptual principles and proposed a model for managing the activities of domestic oil and gas enterprises. There have been carried out the example of PJSC Gazprom, an analysis of the current organizational and economic activities of a Russian oil and gas enterprise, which gave a possibility to identify the main prerequisites and reasons for its diversification. With the help of the data obtained, new trends for the diversification of the business of domestic oil and gas companies from this sector are substantiated. That is an important strategic decision, since the economic results of these enterprises are of decisive importance for the economic stability of Russia.

Keywords: oil & gas company; diversification; energy security; ecosystem; hydrogen; gas hydrates; liquefied natural gas

For citation: **Simonov K.V., Buriachenko A.*O.* Multi-vector diversification concept for Russian oil & gas company: Prerequisites, trends, opportunities. *Management sciences.* 2022;12(4):20-35. DOI: 10.26794/2304-022X-2022-12-4-20-35**

RELEVANCE, AIMS AND OBJECTIVES OF THE STUDY

Russian oil and gas companies[1] are currently facing a number of problems and circumstances that are detrimental both to their current economic performance and to the economic prospects of this domestic industrial sector as a whole. In addition to restricted access of Russian enterprises to foreign markets, innovative technologies and borrowed funds, joint projects with foreign partners to develop new fields and transport hydrocarbons have been suspended. Imports of equipment and components have been hampered. Foreign assets have been frozen, foreign capital has withdrawn and investments have been refused. There is a negative impact on core revenues, due to both push-back by competitors and lower consumption of hydrocarbons as a result of climate change, the decarbonisation of the economy, stricter international environmental legislation and the development of alternative energy sources. Problems such as low profitability of developed fields and low geological exploration of new production areas, development of technologies for developing raw materials reserves on the Arctic shelf, dependence on imported equipment, high tax burden and worn-out fixed assets remain unresolved. [1].

Taking into account the economic and social importance of the national oil and gas sector to Russia and its fundamental role in ensuring the economic sustainability of the country, it is necessary to conduct a thorough reflection and elaboration of the problems identified, followed by the prompt implementation of necessary measures and the adoption of fundamentally new effective measures.

[1] Catalogue of upstream oil and gas companies (oil and gas production and exploration). URL: https://energybase.ru/upstream?ysclid=l72d0poqjm621778554 (accessed on: 15.11.2022).

Much attention to the topic of diversification of the oil and gas sector has been paid in a number of works of Russian [2–4] and foreign authors [5–7]. However, with each passing day, the problem of finding, justifying, and implementing new promising directions of diversification of domestic oil and gas companies is becoming more relevant and acute, requiring an urgent solution. This is what has determined the continuation of the development of this topic in the framework of the present analytical study. Its purpose is to propose a concept and identify strategic directions of development of enterprises of the domestic oil and gas sector.

In order to realise this objective, a number of objectives are considered:

- consideration of methodological aspects of diversification, taking into account the specifics of the oil and gas industry;
- summarising the experience of expanding the scope of activities of international and Russian high-tech companies, including oil and gas companies;
- formation of conceptual approaches and basic principles for diversification of domestic oil and gas enterprises;
- study of the current results of the economic activity of the Russian oil and gas enterprise as an object of diversification;
- to identify and characterize the factors of diversification of the Russian oil and gas industry;
- identification and justification of new prospective areas of diversification of Russian oil and gas companies.

The authors have posed three key research questions.

1. What are the conceptual principles of diversification in Russia?

2. What are the reasons and prerequisites for diversification of national oil and gas companies?

3. In what new directions should it be pursued in the domestic oil and gas industry?

AN OVERVIEW OF THE THEORETICAL FOUNDATIONS AND PRACTICAL ASPECTS OF DIVERSIFICATION

Diversification as a long-term strategy for modern business

Every large enterprise periodically needs to expand and then shift its strategic focus, which entails a reallocation of funds and assets to new areas of activity, taking into account developments in the overall economic situation, technological advances, market considerations, "shifts" in markets and changes in the business environment. The term "diversification" is commonly used to refer to such a transfer of activities into new areas and is understood as one of the possible strategies for business development, a turnaround of the enterprise towards the production of relevant, competitive, and market-demanded products [8].

Experience of diversifying high-tech Russian companies and the ecosystem approach

The successful diversification of Russian giant companies, including "Sberbank" and "Yandex", is largely due to the creation of ecosystems[2] [9]. "Sberbank's" ("Sber") ecosystem is an extensive network of more than 40 businesses that help clients to optimally address a wide variety of current issues and challenges. It includes services from almost all areas: medicine (SberZdorovye), food and food delivery (SberMarket and DeliveryClub), real estate transactions (DomClik), mobile telecommunications (SberMobile), job and employee search (Rabota.ru), creating a "smart" environment, cloud services and data storage (*VisionLabs*, MDG, *SberCloud*[3]) [10]. Sber is also developing several business areas: production of "smart" devices (*SberDevices*), logistics services (SberLogistics), FoodTech platform (*SberFood*), integrated solutions in the categories of "goods", "auto", "real estate", "work", "services", etc. (Classified).

"Yandex" is a pioneer in online solutions for customers' everyday tasks. In 2010, it already had about 50 specialised services in its portfolio, and today that number has surpassed 120. Last year Yandex launched several ecosystem projects. Among them are Yandex.Pro (Taxometer) — an application for self-employed people who can provide taxi driver or courier services in their vehicle; and Yandex Go — a service that helps to move around the city, implementing the functionality of taxi, carsharing, food delivery, courier service, ground transport schedule [11].

"Sberbank's" ecosystem was developed with funds derived from the company's core business — banking, while Yandex was financed from the funds generated by its flagship products — search engine and advertising [12]. Today, "Sberbank" and "Yandex" are high-tech multinational companies whose areas of interest include completely different business areas linked by an ecosystem approach.

Examples of diversification by foreign oil and gas companies

Diversification of foreign oil and gas companies is aimed at finding effective methods of risk management and reducing the impact of negative factors. Its basic directions are: *diversification of sales markets, procurement activities, logistics and business*. The latter is based on the development of new activities — both related and completely unrelated to the main profile and specialisation of companies. Major oil and gas players are moving in this direction.

[2] The business ecosystem — is a network of players in different markets that provide consumers with comprehensive value propositions based on modular solutions with flexible layout options. The ecosystem approach blurs the boundaries between businesses and industries.

[3] Were part of Sber's business ecosystem until May 2022.

Table 1

Activities of leading oil & gas companies on creating renewable energy sources (RES)

Company name (country affiliation)	Type of RES being promoted					Purchase of RES assets	Source
	Sun	Wind	Biofuel	Hydrogen	Geotremal		
Saudi Aramco (Saudi Arabia)	+	-	-	-	-	Yes	https://www.aramco.com
Exxon Mobil Corporation (USA)	-	-	+	+	-	Yes	https://corporate.exxonmobil.com
Shell (United Kingdom-Netherlands)	+	+	+	+	-	Yes	https://www.shell.com
TotalEnergies SE (France)	+	-	+	-	-	Yes	https://totalenergies.com
StatOil ASA (Norway)		+		-	-	Yes	http://www.norge.ru/staoil_geninfo
PetroChina (China)				-	+	No	http://www.petrochina.co.id/SitePages/Home.aspx
Qatar Petroleum (Qatar)	+	-	-	-	-	No	https://www.qatargas.com
Eni (Italy)	+	+	+	-	-	Yes	https://www.eni.com /en-IT/home.html

Source: compiled by the authors.

For example, they are expanding their presence in the renewable energy sources (RES) segment by setting up relevant subsidiaries and partially disposing of their oil and gas assets (*Table 1*) [13, 14]. Shell, for example, sold more than USD 4 billion worth of renewable energy assets in 2017. Today, 12% of investments made by oil and gas companies are in renewables, but companies are actively "shifting" towards other non-core projects.

For example, France's *TotalEnergies* (the world's fourth-largest producer) acquired *Lampiris*, Belgium's third-largest supplier of natural gas, for USD 224 million. *Lampiris* is also a producer of "green energy" and a provider of a range of services such as boiler maintenance, insulation, "smart" thermostat

supply, pellet heating supplies and more.[4] In addition, *TotalEnergies* has bought *Saft*, a global leader in high-tech batteries.[5]

Therefore, diversification is becoming a vital strategy for oil and gas companies' strategies and making informed choices of their directions is a top management challenge and a pressing issue for resource economies.

Gazprom's business and economic activities and strategic objectives as a diversification interest

"Gazprom" is a Russian energy company whose main activities include the geological exploration, production, transportation, storage, processing and sale of gas, gas condensate and oil, and the production and sale of heat and electricity, and employs around half a million people.

"Gazprom" accounts for about 11% of global gas production. The company supplies around 66% of the Russian market with its share in the total volume of oil and gas condensate refined in the country reaching 19%. "Gazprom" accounts for 13% of Russian electricity production, and 9% of heat production. The company has the exclusive right to export gas [15]. Including those under construction, it has about 180,000 km of gas pipelines.

"Gazprom" has a significant reserve base in terms of explored resources. The company's proven reserves will not be depleted before the following dates: natural gas in 35 years, oil in 15 years and gas condensate in 44 years. Gazprom's share of global natural gas reserves is 16% and 70% of Russian reserves [16].

[4] Total to buy Belgian clean energy supplier. Lampiris. De Standaard URL: https://neftegaz.ru/news/Acquisitions/219465-total-pokupaet-belgiyskuyu-lampiris-nesmotrya-na-trebovaniya-3-energopaketa-es/ (accessed on: 27.11.2022).

[5] Total to buy Saft to boost renewable energy business. The Wall Street journal (online). 09.05.2016. URL: https://www.wsj.com/articles/total-to-buy-saft-to-boost-renewable-energy-business-1462780542 (accessed on: 15.11.2022).

THE METHODOLOGICAL AND INFORMATIONAL BASIS OF THE STUDY

The analytical tools applied in the study are deduction, induction, analogy, generalisation and classification. A combination of methodological tools such as comparison, observation and description were used.

The informational and empirical foundation of the study was based on specific and scientific knowledge obtained in the course of:

- studying theoretical and practical aspects of diversification based on the materials of Russian and foreign companies and publications of domestic and foreign authors;
- getting acquainted with the experience of diversification by Russian high-tech giant companies "Sberbank" and "Yandex";
- searching for examples and systematization of the facts of diversification of transnational oil and gas companies;
- analysing the Russian oil and gas sector in order to identify specific challenges and problems and the prerequisites and reasons for adopting a diversification strategy;
- gathering and elaborating on technological advances in oil and gas related fields and high-tech sectors.

RESEARCH RESULTS

Management mix and sustainability model in the context of diversification

According to the best practices, the modern integrated approach to company management, which also achieves a favourable impact on the environment and society, is the combined principle *of environmental, social, and corporate governance — ESG* [17]. It is positioned as universal and comprehensive, and the international business community, including high-tech companies and transnational oil and gas corporations, seek to follow it whenever possible [18].

However, projecting the *ESG* complex onto the reality in which Russian companies find themselves today reveals a demand for its revision, overhauling, and fine-tuning. In this regard, based on exemplary foreign examples, guided by the experience of high-tech enterprises, and remaining in line with multi-vectorism, as well as based on the fundamental role of the raw materials sector in the domestic economy, in line with changes in the business environment of Russian companies operating in foreign markets and taking into account the inspired processes within the country, we have formulated a general principle of economic activity in modern conditions: *6ES+D*. It is based on creation of a business ecosystem (*EcoSystem*), implementation of an effective business strategy and diversification against the background of a common priority of *economic security, energy security and environmental safety*. It is envisaged that adherence to this integrated principle will lead each company and the country as a whole to economic wellbeing, prosperity and sustainability (*Economic Sustainability*) (*Fig. 1*).

The *6ES+D* management package is a set of management principles which, through a diversified and ecosystem-based approach, engage businesses in addressing economic, energy and environmental security issues. It takes into account the conditions, circumstances and constraints under which national oil and gas companies, the drivers of the national economy, operate today, and is designed to help them achieve their fundamental goals and strategic objectives.

The *6ES+D* package clarifies the basic priorities within which new directions for diversifying the oil and gas sector can be proposed and justified:

- Ecosystem principle and multi-vector business building by leveraging funds from core business activities;

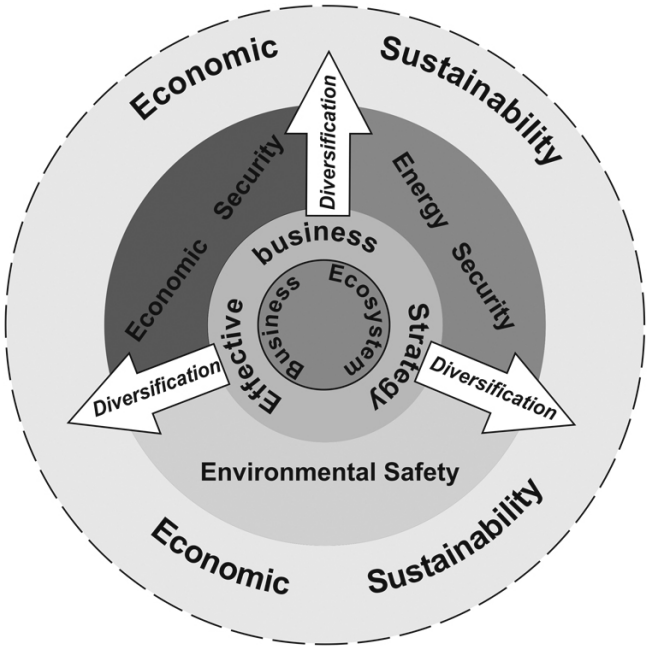


Fig. **Management mix *6ES+D***

Source: compiled by the authors.

- Creating new and promising ways to diversify based on innovative technologies and effective strategic planning;
- Ensuring energy security, achieving economic sustainability, and preserving the environment;
- dispersing revenues and respecting the long-term interests of shareholders and investors;
- Striving for economic prosperity both within each individual enterprise and throughout the national economy.

The above mentioned business vectors associated with innovative technologies and other resources are designed to ensure the long-term economic sustainability of oil and gas companies and therefore require strategic solutions.

Diversification factors for Russian oil and gas companies

An analysis of the successful business practices of Russia's leading high-tech

companies "Sberbank" and "Yandex" (and in particular their experience of implementing an ecosystem approach [19, 20]) has highlighted the following characteristics of their diversification, which, according to the deduction rule, also apply to other major players, including the domestic oil and gas sector and "Gazprom" (*Table 2*):

1. *Using a donor company* at whose expense financing and development of new business directions will be implemented until they themselves start generating sufficient economic and financial returns.

2. *The availability of a bank* to provide financial services for the diversification project, including credit and transactional transactions, payments to employees, settlements with counterparties, etc.

3. *Digital literacy* (knowledge of innovative technologies and possession of digital competences), which is based on experience in economic activities based on digital and "smart" production technologies.

4. *Obtaining state support* in the form of tax incentives, subsidies, grants, as well as information and human resource support and other forms of assistance.

5. *Attracting highly qualified managers* able to undertake the selection and implementation of promising new business lines, company strategy revision, business planning, human resources issues, investment management and project analysis, as well as other organisational functions.

Among the factors characterising the reasons for diversification by Russian oil and gas companies are sanctions pressure, lower revenues due to falling demand and volatile hydrocarbon prices, a growing share of alternative sources in energy production (due to stricter and tougher environmental regulations), increased complexity of hydrocarbon production and depletion of developed fields.

New directions for diversifying the domestic oil and gas sector

Industrial production of hydrogen from natural gas. The main consumers of hydrogen are the chemical, oil refining, glass, and food industries, as well as metallurgy and energy. Others include nuclear fuel fabrication facilities, electronic and electrical industries, transportation companies and pharmaceuticals. The global demand for hydrogen currently exceeds 73 million tonnes per year, and among the arguments for its growth are tougher pollution laws.

One of the prerequisites for hydrogen production, storage and transportation is the EU's declared goal of decarbonizing the economy, for which more than 1 trillion euros have already been committed, which is evidence of its high priority. However, for the foreseeable future, the EU's needs will not be covered by European hydrogen producers.

At the moment, several technological schemes for the production of hydrogen are known [21]. The most environmentally friendly and sufficiently economically feasible is low-carbon production by pyrolysis: decomposition of natural methane into hydrogen and solid carbon, which is used in industry and does not pollute the environment [22]. It has already been announced that the Norwegian energy company *Equinor ASA* is going to start implementing low-carbon production plans.[6] But so far, this method has not been implemented on an industrial scale anywhere in the world and very few organizations are engaged in its development: "Gazprom" and Tomsk Polytechnic University (Russia), *BASF, Wintershall Dea, Linde, Uniper* and Karlsruhe Institute of Technology (Germany), Technical University of Madrid (Spain) and several others. In

[6] URL: https://www.equinor.com/ — official website of a Norwegian energy company Equinor.

Table 2

Prerequisites for the diversification of Russian oil and gas company (on the example of PJSC Gazprom)

Prerequisites	Specification
Using a donor company	"Gazprom" is a large company with sufficient financial and material resources to invest in the development and implementation of new areas of diversification
The availability of a bank	"Gazprombank" is one of Russia's largest banks. In addition to the oil and gas sector, it provides banking services to enterprises in other sectors, including machine-building, defence, chemical and nuclear industries, etc. "Gazprombank" is "Gazprom's" trusted financial and technological company that can efficiently address financial issues in connection with diversification
Digital literacy	"Gazprom" employs a variety of professionals: engineers, programmers, analysts, lawyers, financiers, managers, project managers and other specialists whose work is directly related to the implementation of innovative technologies and digitalisation tasks
Obtaining state support	With the state controlling over 50% of "Gazprom's" shares, administrative resources and state support are guaranteed
Attracting highly qualified managers	"Gazprom's" human resources policy is based on attracting experienced, highly qualified professionals from various fields who are capable of competently setting and effectively solving strategic and tactical tasks. The Company has the necessary financial resources for these purposes

Source: compiled by the authors.

this context, "Gazprom", as the largest gas producer and having already some scientific and technological know-how, has a real opportunity to become a supplier of hydrogen to the Russian and international markets [23]. A three-stage scheme for the implementation of this direction is envisaged:

1. The extraction of hydrogen from natural gas by means of wind energy technology that eliminates carbon dioxide emissions.

2. Transporting it by repurposing existing pipelines in the company and those under construction.

3. Sales of hydrogen through affiliated trading organisations.

Gas extraction from gas hydrates. Gas hydrates are crystalline compounds of water and methane that exist at low temperature and high pressure (making them present in permafrost and deep-water areas) and have the potential to become a vast source of natural gas [24]. There are various estimates of the world's recoverable gas hydrates, but even the most modest ones are an order of magnitude greater than the conventional natural gas reserves. In Russia their accumulations have been confirmed at the bottom of the Black, Okhotsk and Caspian Seas and Lake Baikal, as well as in the Bovanenkovskoye, Yamburgskoye,

Urengoyskoye and Messoyakhskoye fields. Gas hydrates have been proven in Russia's Arctic shelf. According to VNIIGAZ estimates (Russian Research Institute for Natural Gases and Gas Technologies), our country has 1,100 trillion m³ of gas hydrate reserves.

At the moment industrial production of gas hydrates is not profiTable, (the development of natural gas deposits is much cheaper) and in addition associated with environmental risks [25]. Meanwhile the industrial production of methane from them has already been planned in Japan which has already made considerable progress in the study of this raw material. The most active in the study of gas hydrates (apart from Japan) are the USA and Canada; in Russia they are dealt with by Lomonosov Moscow State University, Gazprom Russian Research Institute for Natural Gases and Gas Technologies, Gubkin Oil and Gas University and "Skolkovo" Innovation Centre.

The following steps for the commercialisation of gas extraction technology from gas hydrates are outlined:

1. Improvement of existing methods. Carrying out geological exploration works to clarify the reserves and conditions of gas hydrates occurrence, identification of the most promising fields.

2. Pilot launch of gas hydrates production at gas condensate fields under development.

3. Scaling up and commercial production of gas hydrates with their subsequent sale, as well as re-profiling or conversion of the existing ones and the creation of new production facilities on their basis.

The last of the above-mentioned steps involves the development of innovative technologies, which makes this proposal a fundamentally new area of diversification.

The production of liquefied natural gas (LNG) is not an entirely new idea, but it is one of the priority areas for diversification. The fields of application for natural gas converted to liquefied natural gas are wide-ranging. First and foremost, it is used as a motor fuel, but also for the production of electricity and heat energy [26].

The global LNG market has grown rapidly over the past few years. Cumulative LNG imports have reached 495 billion m³. The largest buyers are the UK, India and the Netherlands; the main exporters are Qatar, Indonesia, Malaysia, Australia and the US [27]. Russia's share is about 6%, with "Novatek" and "Gazprom" being the main domestic players in the LNG market. The latter sells 10 billion m³ of LNG annually. It has established a subsidiary, "Gazprom LNG Technologies",[7] which acts as the operator of the LNG projects. As part of one of them, the Sakhalin-2 project[8] — is the first domestic LNG plant that has been built. There are plans to launch two more plants in 2025: one on the Black Sea coast and one near Vladivostok.[9]

Due to the mobility of liquefied gas, its ease of transportation and the consequent good prospects of access to markets inaccessible to pipeline gas, LNG production should be characterised as a strategic direction for diversification. The technology used eliminates the need for laying and leasing pipelines, as well as the theft of energy through "taps" and other similar manipulations.

Creating a conglomerate of high-tech industries. The rapid development of innovation is not beyond the sight and sphere of interest of big business with its considerable administrative, financial and other resources, which makes it possible to acquire virtually any as-

[7] Gazprom LNG Technologies (official website). URL: https://www.gspgt.ru/ (accessed on: 15.11.2022).

[8] Russia's first liquefied natural gas plant. URL: https://www.gazprom.ru/projects/sakhalin2/?ysclid=lazd21nzoy443242827 (accessed on: 27.11.2022).

[9] Gazprom will build two new LNG plants. Vedomosti (online). 22.03.2021. URL: https://www.vedomosti.ru/business/articles/2021/03/22/862660-gazprom-spg-zavoda (accessed on: 20.08.2022).

set, technology, expertise, etc. And the oil and gas sector is no exception [28]. In this respect, the creation of a kind of conglomerate under the aegis of "Gazprom",[10] which will include the structures engaged in the promotion and adaptation of innovative technologies, seems promising. Specific activities are planned:

- searching for promising innovative business areas;
- selecting specific organisations working in these areas;
- analysing the opportunities and conditions for acquiring these companies;
- financing their leading innovations.

Joint projects with "Rosatom" State Corporation. In addition to ideas related to technology, diversification requires financial and other resources. While one of the current peculiarities of Russian oil and gas companies is the problem of attracting external financing due to the denial of access to foreign capital, as well as the withdrawal of Western companies from projects, increased caution on the part of Eastern partners, etc. In other words, in addition to their own resources, state support and loans from Russian banks, close cooperation with domestic giant companies from related or relatively related sectors seems absolutely logical. In particular, it seems reasonable to develop cooperation between oil and gas companies and the state nuclear energy corporation "Rosatom", which is a powerful diversified holding with serious assets and competences in such economic sectors as energy, engineering and construction.

Working contacts and consultations are taking place between the companies in search of areas of common ground. Moreover, Rosatom is already exploring the possibility of replacing "Gazprom's" gas turbines with electric drives, for which a nuclear power plant project is being considered for power supply. To fully electrify the gas infrastructure, some 40 GW of power-generating capacity would need to be built in different regions of the country.[11] The main point of this project is to reduce the so-called carbon footprint. The project fits in well with "Rosatom's" programme to build a small nuclear power plant.

"Rosatom Overseas" (part of the state corporation) and the French company *Air Liquide* have completed a feasibility study for the construction of a hydrogen production complex in Sakhalin.[12] An agreement has already been signed between "Rosatom Overseas" and "Gazprom Neft" on cooperation in the field of hydrogen energy, which coincides with the intentions of creating a corresponding new area of diversification [29], the implementation of which, as well as many others, will contribute to the energy and environmental security and economic sustainability of Russia in addition to the development of domestic oil and gas companies.

Challenges and opportunities for diversification of Russian oil and gas companies in the current political and economic realities

In the current difficult political and economic situation, it is advisable to analyze the real prospects for diversification of Russian oil and gas companies in a three-dimensional system of coordinates, the axes of which are: 1) access to markets; 2) financial security and investment attractiveness; 3) availability of technology and equipment. After all, it is along these lines that major shifts occur,

[10] A conglomerate is a form of association under a single financial control of a network of diverse companies operating in completely different fields.

[11] Atomic methanmorphosis. Kommersant (online). 07.02.2022. URL: https://www.kommersant.ru/doc/5204917?ysclid=lasbcqyc1g21496033 (accessed on: 15.11.2022).

[12] "Rosatom" Corporation (official website). URL: https://www.rosatom.ru/journalist/news/ao-rusatom-oversiz-i-air-liquide-zavershili-teo-proekta-sooruzheniya-zavoda-po-proizvodstvu-vodoroda/ (accessed on: 15.11.2022).

predetermining the range of further economic activities.

Access to markets and prospects for diversification. There is an attempt to redistribute global energy sales platforms, with the main beneficiaries being the US, Norway, and several other countries, which are making additional profits by substituting hydrocarbons from Russia on the back of unprecedented high oil and gas prices.

In addition to restricting hydrocarbon imports, there is a price cap on Russian energy and a ban on shipping insurance for domestic oil, making it difficult for us to supply Asia.

For several decades, "Gazprom" has been the largest supplier of gas to the European market [30]: about a third of the blue fuel consumed on the continent came from pipeline gas from Russia. In 2022, some European countries had given up on Russian gas, replacing it with Norwegian, American, etc., whose prices were several times higher than those of the previous year. The disruption of the Nord Stream 1 and 2 pipelines has finally cut off domestic suppliers from European consumers.

In this context, despite Gazprom's high revenues in 2022 (already surpassing those of last year due to record-high blue fuel prices), the company's revenues will decrease in the future [31]. Even with growing exports to Asia, the planned construction of new pipelines (including through Mongolia) and increased gasification of Russian regions, the company's financial performance and, consequently, its diversification potential will inevitably decline.

Diversification in the context of financial security and investment attractiveness. In 2022 domestic oil and gas companies were confronted with the freezing of foreign assets, termination of foreign investment, and suspension of international projects [32]. For example, the German company *Linde* abandoned the construction of a gas terminal in Ust-Luga in the Leningrad Oblast,[13] while *Shell* abandoned the "Sakhalin-2" project and ceased its participation in Gazprom Germania.[14]

The situation is partially mitigated by the fact that in some cases it is only a matter of suspending investments in new projects while maintaining a presence in existing ones. For example, France's *TotalEnergies* is not interrupting its cooperation with Novatek,[15] Germany's *Wintershell Dea* and *Trafigura* continue to manage their joint assets with "Gazprom" and "Rosneft" in Russia,[16] and Japan's *Mitsui* and *Mitsubishi* remain in the Sakhalin-2 project.[17]

Certainly, the withdrawal of foreign investors and the closure of access to foreign borrowing will be a significant (but not insurmounTable) problem in implementing such capital-intensive tasks as the diversification of the domestic oil and gas sector [33].

As for "Gazprom", this year, due to unprecedented external pressure, the company's capitalisation has declined sharply. It is necessary to point out two multidirectional factors related to its investment attractiveness as of the end of 2022:

[13] German company turns down megaproject with Gazprom. RBC NEWS AGENCY. 21.06.2022. URL: https://www.rbc.ru/spb_sz/21/06/2022/62b1ce0e9a7947c6794b7973?ysclid=lajmsskhmo961536520 (accessed on 15.11.2022)

[14] Shell notified Russia of its refusal to participate in the operator of Sakhalin-2. RBC NEWS AGENCY. 01.09.2022. URL: https://www.rbc.ru/business/01/09/2022/6310d45d9a794764759ebf63?ysclid=lajmxngt8j586954238 (accessed on: 15.11.2022).

[15] Source: Total will not sell its stake in NOVATEK. Kommersant (online). 22.03.2022. URL: https://www.kommersant.ru/doc/5270961?ysclid=lajn22b45y603902264 (accessed on: 15.11.2022).

[16] Wintershall Dea and Trafigura remain in Russia for now. Kommersant (online). 02.03.2022. URL: https://www.kommersant.ru/doc/5239498?ysclid=lajn9u7rmf809405098 (accessed on: 15.11.2022).

[17] Source: Mitsubishi and Mitsui decide to stay in Sakhalin-2. RBC NEWS AGENCY. 25.08.2022. URL: https://www.rbc.ru/business/25/08/2022/6306dc2c9a7947498a1eb14c?ysclid=lajnhk5grk701228451 (accessed on: 15.11.2022).

• the company's share price was adversely affected by an increase in the mineral extraction tax in Russia[18];

• the company made record payments per share of more than RUB 1.2 trillion in aggregate.[19] The company's financial stability and sTable dividend policy with respect to investors is evidence of this.

Overall, however, it must be recognised that the investment appeal (and hence the financial security of diversification) of Russian oil and gas enterprises can only improve dramatically if the international political context changes.

Availability of technology and equipment for diversification. Even if sufficient funding is found, bans on equipment imports and restrictions on access to technological know-how, which have become a way of putting pressure on the domestic economy, including its oil and gas sector, remain difficult to overcome [34, 35]. The difficult situation is further exacerbated by the fact that foreign partners, who are willing in principle to work together, are forced to refuse to cooperate with the Russian side due to the threat of sanctions against them.

As we can see, the current position of domestic hydrocarbon suppliers in the economic system of coordinates is fraught with very difficult, yet not fatal, problems and difficulties accompanying the diversification of the oil and gas engines of our economy.

CONCLUSIONS

In the current economic and geopolitical conditions, the production and financial activities of Russian oil and gas companies are more exposed than ever to a variety of negative factors and risks: economic, technological, political, natural. The authors have made an analytical study of the readiness of domestic oil and gas enterprises to choose multidirectional diversification as a long-term strategy to overcome them.

The paper elaborates on three key aspects:

1. Evidence and examples of successful diversification by a number of large companies (including oil and gas companies), which argues for its strategic feasibility.

2. Technological areas and R&D underway that prioritise the diversification of oil and gas companies and confirm the technological capabilities of the overall diversification effort.

3. Problems and prospects of diversification of domestic oil and gas companies in the context of sanctions pressure, embargo on Russian hydrocarbons supplies and other instruments of economic warfare with Russia.

The most important aspects of diversification of international oil and gas companies are analysed in the context of the ecosystem approach to business organisation, the experience of expanding the range of activities of high-tech Russian enterprises is comprehended. Based on the current realities, conceptual principles are formulated and a model for managing the economic activities of Russian oil and gas companies in the context of their diversification is proposed. The main prerequisites and reasons for the latter have been identified (on the example of "Gazprom"). Vectors for diversification of Russian oil and gas companies have been selected: industrial production of hydrogen from natural gas using renewable energy sources, extraction of natural gas from gas hydrates, production of liquefied natural gas. The creation of a conglomerate of high-tech production facilities under the

[18] State Duma passes law to raise MET (Mineral Extraction Tax). Vedomosti (online). 30.09.2020. URL: https://www.vedomosti.ru/economics/news/2020/09/30/841676-gosduma-prinyala-zakon-o-povishenii-v-35-raza-ndpi-na-dobichu-rud-i-udobrenii?ysclid=lajnmo9b94360839338 (accessed on: 15.11.2022).

[19] "Gazprom" decides to pay a record dividend: Should you buy the shares? Forbes (online). 30.09.2022. URL: https://www.forbes.ru/investicii/478547-gazprom-resil-zaplatit-rekordnye-dividendy-stoit-li-pokupat-bumagi?ysclid=lajnqoj84p639992240 (accessed on: 15.11.2022).

auspices of "Gazprom" is proposed. It is recommended to develop cooperation with large state corporations, which have serious resource potential, significant financial assets, and high working competences in various economic sectors. The implementation of these areas will fully contribute to solving the problems and challenges currently facing the Russian oil and gas sector and the economy as a whole.

Only a few of the most promising areas of diversification for Russian oil and gas companies have been considered, but in reality, there could be more. The study should continue in terms of identifying and justifying new technical and economic opportunities for diversification. In addition, a detailed analysis of the areas already proposed in terms of increasing the efficiency of the oil and gas industry and improving the economic performance of specific companies is required. Finally, there is a need to monitor and take account of developments in the political economy vector, which inevitably affects the nature, scale, and prospects of most major domestic companies, including oil and gas companies.

REFERENCES

1. Lipatnikov V.S., Kirsanova K.A. Assessment of the impact of the adverse economic geopolitical environment on the worth of Russian oil and gas companies. *Upravlencheskie nauki = Management Sciences in Russia*. 2018;8(2):30–43. (In Russ.). DOI: 10.26794/2404–022X-2018–8–2–30–43
2. Sheveleva A.V., Akieva L.B. Diversification of oil and gas companies' activities in the condition of oil prices reduction and economic sanctions. *Vestnik MGIMO-Universiteta = MGIMO Review of International Relations*. 2016;(6):144–151. (In Russ.).
3. Kirichenko O.S. et al. Diversification of Russian oil and gas upstream companies. *International Journal of Energy Economics and Policy*. 2020;10(3):112–118. DOI: 10.32479/ijeep.9194
4. Kas'yanenko A.A. The mechanism for implementing a business model for diversifying the activities of an oil company on the example of Gazprom Neft PJSC. *Nauchnyi aspekt*. 2019;5(2):621–626. (In Russ.).
5. Wicken O. Industrial diversification processes and strategies in an oil economy: Norway. In: Mahroum S., Al-Saleh Y., eds. Economic diversification policies in natural resource rich economies. Abingdon: Routledge; 2016:295–323.
6. Alkhathlan K.A. Determinants of diversification from oil sector in Saudi Arabia. *International Journal of Energy Economics and Policy*. 2020;10(5):384–391. DOI: 10.32479/ijeep.9709
7. Scholvin S. Obstacles to linkage-based diversification in the oil and gas sector. *The Extractive Industries and Society*. 2022;11:100996. DOI: 10.1016/j.exis.2021.100996
8. Kashirin S.V. Diversification of domestic corporations as a basis for economic growth. *Ekonomika: vchera, segodnya, zavtra = Economics: Yesterday, Today and Tomorrow*. 2022;12(1–1):279–284. (In Russ.). DOI: 10.34670/AR.2022.67.85.033
9. Rossit D.A. et al. Business ecosystem approach to Industry 4.0. In: Hussain C.M., Di Sia P., eds. Handbook of smart materials, technologies, and devices: Applications of Industry 4.0. Cham: Springer International Publishing; 2021:1–22. DOI: 10.1007/978–3–030–58675–1_65–1
10. Shageeva G.R. Diversification of the business of the company "Sber". *Russian Economic Bulletin*. 2022;5(2):217–220. (In Russ.).
11. Reznik I.V., Ermolovskaya O.Y.U., Ilina V.F. The main ecosystems of Russian Federation: Points and factors of growth. By examples of "Yandex", "Sber" and "VK". *Konkurentosposobnost' v global'nom mire: ekonomika, nauka, tekhnologii = Competitiveness in the Global World: Economics, Science, Technology*. 2022;(2):73–79. (In Russ.).

12. Ksenofontov A.A., Reznik I.V. The core segment as a basis of Russian ecosystems' development by example of "Yandex", "Sber", "VK", "TCS Group" and "MTS". *Innovacionnoe razvitie ekonomiki = Innovative Development of Economy*. 2022;(1–2):265–282. (In Russ.). DOI: 10.51832/2223798420221–2265
13. Hartmann J., Inkpen A.C., Ramaswamy K. Different shades of green: Global oil and gas companies and renewable energy. *Journal of International Business Studies*. 2021;52(5):879–903. DOI: 10.1057/s41267–020–00326-w
14. Arias-Loyola M. et al. Beyond the resource curse: The redistributive challenge of sustainable resource-led development in Australia, Chile and Zambia. *The Extractive Industries and Society*. 2022;11:101084. DOI: 10.1016/j.exis.2022.101084
15. Cherepanov V.V., Luygai D.V. Raw material base of gas production in Russia and Gazprom: The current state and future considerations for the 21st century. *Geologiya nefti i gaza = Oil and Gas Geology*. 2018;(4s):17–30. (In Russ.). DOI: 10.31087/0016–7894–2018–4s-17–30
16. Rybalchenko V.V., Ryzhov A. Ye., Skorobogatov V.A., Khabibullin D. Ya. Searching and prospecting of hydrocarbon fields and deposits by the enterprises of the Gazprom PJSC in Russia: Overall results, issues, outlooks. *Vesti gazovoi nauki = Gas Science Bulletin*. 2018;(3):46–57. (In Russ.).
17. Tulupov A.S., Titkov I.A. Sustainable development of PJSC "Gazprom": Practical application of ESG-model in production and export of liquefied gas. *Problemy rynochnoi ekonomiki = Market Economy Problems*. 2022;(1):98–126. (In Russ.). DOI: 10.33051/2500–2325–2022–1–98–126
18. Huang D.Z.X. Environmental, social and governance (ESG) activity and firm performance: A review and consolidation. *Accounting & Finance*. 2021;61(1):335–360. DOI: 10.1111/acfi.12569
19. Markova V.D., Kuznetsova S.A. Strategic management in ecosystems: Analysis of Russian experience. *Strategicheskie resheniya i risk-menedzhment = Strategic Decisions and Risk Management*. 2021;12(3):242–251. DOI: 10.17747/2618–947X-2021–3–242–251
20. Statsenko V.V., Bychkova I.I. Ecosystem approach in building modern business models. *Industrial'naya ekonomika = Industrial Economics*. 2021;(1):45–61. (In Russ.). DOI: 10.475776/2712–7559_2021_1_45
21. Petin S.N. et al. The development of hydrogen energy and promising developments for the production of hydrogen from natural gas. *Promyshlennaya energetika = Industrial Power Engineering*. 2021;(3):51–58. (In Russ.). DOI: 10.34831/EP.2021.48.41.008
22. Makarova E.D., Larionova O.A. Hydrogen business segment as a strategy for diversification of energy companies. *Ekonomika i upravlenie: problemy, resheniya = Economics and Management: Problems, Solutions*. 2022;1(4):36–47. (In Russ.). DOI: 10.36871/ek.up.p.r.2022.04.01.004
23. Aksyutin O., Ishkov A., Romanov K., Teterevlev R. The role of Russian natural gas in the development of hydrogen energy. *Energeticheskaya politika = The Energy Policy*. 2021;(3):6–19. (In Russ.). DOI: 10.46920/2409–5516_2021_3157_6
24. Kunsbaeva G.A., Chiglinceva A.S. The theory of producing gas from the hydrate in the free convection. *Vestnik Kazanskogo gosudarstvennogo tekhnicheskogo universiteta im. A.N. Tupoleva*. 2018;74(1):5–10. (In Russ.).
25. Gimaltdinov I.K., Stolpovskii M.V., Khasanov M.K. Recovery of methane from gas hydrates in a porous medium by injection of carbon dioxide. *Journal of Applied Mechanics and Technical Physics*. 2018;59(1):3–12. DOI: 10.15372/PMTF20180101 (In Russ.: *Prikladnaya mekhanika i tekhnicheskaya fizika*. 2018;59(1):3–12. DOI: 10.15372/PMTF20180101).
26. Shorov E., Gladilin A., Ryabukhin N. LNG (liquefied natural gas): Prospects for production and use in regional socio-economic systems. *Vestnik Severo-Kavkazskogo federal'nogo universiteta = Newsletter of North-Caucasus Federal University*. 2021;(2):132–140. (In Russ.). DOI: 10.37493/2307–907X.2021.2.18
27. A.O. Global competition in the Pacific Asia natural gas market. *EKO: vserossiiskii ekonomicheskii zhurnal = ECO Journal*. 2021;(9):21–37. (In Russ.). DOI: 10.30680/ECO0131–7652–2021–9–21–37

28. Aksyutin O.E. Gazprom innovations. *AvtoGazoZapravochnyi kompleks + Al'ternativnoe toplivo = Autogas Filling Complex+Alternative Fuel*. 2019;18(6):263–268. (In Russ.).
29. Ponomarev-Stepnoy N.N. et al. Nuclear power and process production complex with high-temperature gas-cooled reactors for largescale ecologically friendly hydrogen production from water and natural gas. *Gazovaya promyshlennost' = Gas Industry*. 2018;(11):94–102. (In Russ.).
30. Balashov A.M. Impact of sanctions on business development of oil and gas corporations in Russia. *Gornaya promyshlennost' = Russian Mining Industry*. 2022;(3):74–78. (In Russ.). DOI: 10.30686/1609–9192–2022–3–74–78
31. Saitova A.A., Ilyinsky A.A., Fadeev A.M. Scenarios for the development of oil and gas companies in Russia in the context of international economic sanctions and the decarbonization of the energy sector. *Sever i rynok: formirovanie ekonomicheskogo poryadka*. 2022;(3):134–143. (In Russ.). DOI: 10.37614/2220–802X.3.2022.77.009
32. Abdullaev D.A. Foreign investors and the Russian oil and gas industry in the context of American and European sanctions 2014–2022. *Rossiya i Aziya = Russia and Asia*. 2022;(6):22–29.
33. Shimko O.V. Priority measures to overcome the consequences of the introduction of new sanctions against the oil and gas sector of the Russian Federation. *Natsional'nye interesy: prioritety i bezopasnost' = National Interests: Priorities and Security*. 2022;18(8):1584–1604. (In Russ.). DOI: 10.24891/ni.18.8.1584
34. Shurygin V.A., Serov V.A., Kovshov I.V., Ustinov S.A. On the creation of Russian technologies and equipment for the operation of offshore oil and gas fields. *Neft'. Gaz. Novatsii*. 2022;(4):49–54. (In Russ.).
35. Abdulkadyrov A.S., Malsagova K.S. Modern issues of import substitution critical equipment in the Russian oil and gas industry. *Zhurnal Prikladnykh Issledovanii = Journal of Applied Research*. 2022;4(6):306–310. (In Russ.). DOI: 10.47576/2712–7516_2022_6_4_306

ABOUT THE AUTHORS

Kirill V. Simonov — Cand. Sci. (Econ.), MBA, Physical engineer, Associate Professor, Department of Marketing of the Faculty of Economics, Lomonosov Moscow State University, Moscow, Russia
https://orcid.org/0000-0002-8171-3787
kirill.simonov.msu@yandex.ru

Artem O. Buriachenko — Master of Geology, MBA, Engineer of the Polar Permafrost Laboratory, Engineering and Technical Center of "Gazprom Dobycha Yamburg" LLC, Novy Urengoy, Russia
https://orcid.org/0000-0003-0140-9492
buryachenko.artem@yandex.ru

Conflicts of Interest Statement: The authors have no conflicts of interest to declare.

The article was submitted on 23.08.2022; revised on 17.11.2022 and accepted for publication on 28.11.2022.
The authors read and approved the final version of the manuscript.

ORIGINAL PAPER

DOI: 10.26794/2304-022X-2022-12-4-36-47
UDC 338.24(045)
JEL O21

Interaction of Public Authorities in Strategic Planning

I.I. Belyaev, S.A. Pobyvaev, S.N. Silvestrov
Financial University, Moscow, Russia

ABSTRACT

The relevance of the paper is determined by the authors' intentions to solve the problems of national economic strategy to a greater extent than issues of purely academic interest, since the effectiveness of domestic strategic planning, despite the efforts actively made to organize this process, including in terms of legal regulation, is clearly insufficient. The principal method of research is the comparison of existing legislative provisions with each other, with elements of foreign experience and with the actual state of things, and their linking into a single logic. The authors analyzed system and tactical problems of the strategic planning and management, considering the involvement of public authorities in this process. System problems include the absence of both a hierarchy of documents and an analytical planning entity of high capacity, as well as a lack of performers' competencies. Tactical problems include the unsatisfactory state of affairs at the municipal level and the overload of the strategic planning system of inferior quality documents. The primary task of the study is to determine the fundamental ways to resolve systemic and tactical problems. Separately, the authors highlight an importance of introducing the public authority legal category that is going to synchronize strategies of all its levels in the future. Based on the analysis of the internal logic of the development of a strategic planning and management system, as well as the best practices of foreign experience, the authors conclude that the state system of strategic audit. According to the results of the study, this system is inadequate to the tasks of effective implementation of the state strategy. Also, the authors concluded the need for digitalization of strategic planning to reconstruct existing connections, methods of interaction and the use of new, informational analysis methods. The practical significance of the research is determined by the possibility of applying the authors' recommendations being in the normative regulation of the process of domestic strategic planning and management.

Keywords: strategic planning; public authorities; strategic planning documents; documents hierarchy; strategic audit; digitalization

***For citation*: Belyaev I.I., Pobyvaev S.A., Silvestrov S.N. Interaction of public authorities in strategic planning. *Management sciences*. 2022;12(4):36-47. DOI: 10.26794/2304-022X-2022-12-4-36-47**

INTRODUCTION

The concept of "public authority" was given legislative formulation after March 2020 in the process of updating certain provisions of the Constitution of the Russian Federation.[1]

According to the Russian Federation Law on Constitutional Amendment Act of 14.03.2020, No. 1-FCL (Federal Constitutional Law) "On Improving the Regulation of Certain Issues of the Organization and Functioning of Public Administration"[2] in order to ensure effective territorial administration in the interests of the population living in those territories, the *State authorities and local authorities have been merged into a single system of public authority in the Russian Federation*. The process of legislative development of the provisions of the Constitution of the Russian Federation in this direction was continued: the concept of "unified system of public authority" was expanded and an updated model of the organization and activities of its bodies in the territories of the subjects of the Russian Federation was defined.[3]

The concept of "public authority" is a new form of organization of power functions at the federal level. The constitutional reform makes adjustments to the current realities: a clear list of jurisdictions of the Federation is defined, the head of the unified system of interaction and coordination of public authorities is the President of the Russian Federation, the territories of the country get the opportunity to establish a special regime of public authority (examples of the implementation of this innovation are some territories of Mexico and Australia), etc. Such a unified system approach is designed to unite and centralize the vector of socio-economic development of the Russian Federation through more meaningful and coordinated interaction between the federal centre and local authorities, which gives the former an opportunity to participate in the formation of the executive power apparatus of the region.

The type of development chosen, the advantage of which is the creation of a structure without duplication of authority and initiatives at the district level, should be examined in more detail from the perspective of institutions, functions and organisation.

From the point of view of the institution of power, there has been a unification of federal and local government by level of subordination. Thus, there has been some restriction of freedoms "on the ground".

The above-mentioned possibility of the federal centre, namely its participation in the appointment and formation of local executive bodies, thus enables the development of the organisational form of their management.

In many ways, this is a continuation of the organisational logic of the power

---

[1] Constitution of the Russian Federation (Adopted by popular vote on 12.12.1993 with amendments approved by a nationwide vote on 01.07.2020). URL: https://www.consultant.ru/document/cons_doc_LAW_28399/

[2] Russian Federation Law on Constitutional Amendment Act of 14.03.2020, No. 1-FCL (Federal Constitutional Law) "On Improving the Regulation of Certain Issues of the Organization and Functioning of Public Administration", part 3, article 132. URL: https://www.consultant.ru/document/cons_doc_LAW_346019/

[3] Explanatory note to the draft federal law "On the general principles of the organisation of public authority in the constituent entities of the Russian Federation". URL: http://sozd.duma.gov.ru›bill/1256381–7 (accessed on: 31.08.2022). Federal Law of 08.12.2020 No. 394-FL "On the State Council of the Russian Federation" (latest version). URL: https://www.consultant.ru/document/cons_doc_LAW_370105/

vertical: once it has been established, it is time to put things in order locally and use the resource of local initiative. A similar system is working quite successfully in Canada. In spite of the fact that it exceeds Russia almost twice as much in GDP per capita, such parameters as large area, deficit of labour resources and wide range of national structure of population, make it quite close to our country by conditions of state management and national economy.

The main concern of the Canadian authorities is infrastructure development and the development of large territories i.e., land use planning and management, which implies a very high degree of decentralisation. For this reason, the distribution of public expenditure at the levels (federal, provincial, and municipal) is correlated as 35:45:20 [1]. In order to coordinate federal, regional and municipal strategies, Canada's federal ministries, totalling 29,[4] and in various pro-government organisations[5] there are specialised departments for territorial coordination.

SYSTEMIC PROBLEMS OF STRATEGIC PLANNING AND MANAGEMENT

Unification of the functions of all public authorities should, taking into account the innovations, be expressed in a unified vector of strategic management, planning and forecasting.

To date, during the improvement of the legal framework that ensures the processes of strategic planning, considerable experience has been accumulated in this area at all levels of territorial administration, and a significant amount of work on the organization of relations between its participants and methodological support for the formation of documents and their implementation, etc. has been done.[6]

However, there are many difficulties of both systemic and tactical nature, in the current strategic planning system.

One of the fundamental problems in ensuring the state's commitment to strategic development in terms of the three processes involved: planning, management and forecasting, is the "turbulence" in the area of changing laws and coordinating regulations and rules. As a consequence, there is a lack of a clear hierarchy of strategic development documents, a lack of a system for checking their quality, and a lack of the necessary formal criteria for their content. In addition, the formulated national objectives and priorities are rather general and do not form the basis for the construction of the tree of goals and objectives based on a systematic analysis, but are interpreted by sectoral and territorial authorities, including public authorities, to the extent of their understanding of the objectives set.

This is largely due to the fact that, in domestic practice, there is no state or governmental body of great power carrying out strategic planning, and it is implemented by separate disparate analytical groups.

The current paradigm of state strategic planning suggests serious contradictions both in the structure of public authorities and in the processes themselves. There is currently no understand-

[4] Government of Canada. URL: https://www.canada.ca/en/government/ministers.html (accessed on: 21.09.2022).

[5] Там же. URL: https://www.canada.ca/en/government/dept.html (accessed on: 21.09.2022).

[6] State automated information system "Governance". URL: http://gasu.gov/statplanning (accessed on: 26.07.2022).

ing of what kind and for what purpose individual initiatives are put forward, the tools of the planning process and the mechanisms for possible synchronization of interaction are not clear.

Since 2010, national programs have become the dominant mechanism for implementing the state's priority objectives, accumulating the main budgetary and administrative resources required for their implementation (around 78% of total budgetary allocations). But the cascading shortcomings in some of them demonstrate the need to revise not only the principles of their organization, but also to address the causes of the current administrative and coordination failures.

Despite the high rate of integration of public authorities [2] into budgeting and resource planning processes, state programs [3] suffered (and in many respects still suffer) from several inherited systemic "diseases", most of which are caused by issues of goal-setting and coordination. It is a violation of the fundamental principles of the management theory that formation, execution and monitoring of programs are carried out by the same body.

One of the serious problems of current public administration and strategic planning is the lack of necessary competencies of the top officials, who are used to operating within vertical bureaucratic systems, where the main professional skill is the ability to win political competition. Any interaction in the chain of command runs through a confusing apparatus of rules and regulations that does not allow for swift responses to sudden changes. For this reason, there has been a growth in state structures, although it would be logical to assume a decline not only in the state apparatus itself but also in the state apparatus as a whole [4–8].

The main task of the Russian economy is the transition to an innovative type of development, which implies the presence of an appropriate innovative management apparatus capable of absorbing and accommodating its cumulative complexity. The current system cannot solve such problems, and the main problem here is not so much in the area of improper structural design, as in the personnel policy and principles of its arrangement.

The outcome of any reform consists of two factors: the reform itself and those who implement it. As things now stand, the ideas that are implemented rarely represent a stumbling block. In many cases, the bottleneck is a pernicious human resources policy that suffers from over-politicization, since it is this policy that determines the positive outcome of the reforms implemented. The incumbent leadership does not have the necessary competences and cannot be trained for the reason that the transfer of necessary knowledge is only possible through special educational processes which are incredibly complex and take a long period of time.

The recent initiatives of the Russian Government Office to appoint Deputy Prime Ministers as supervisors of high-tech industries perfectly illustrate that the real mechanism of success is the access of top officials to political and administrative resources for the purpose of their distribution (depending on the need or as appropriate). Such decisions demonstrate the inability of the state apparatus to solve problems of a systemic nature. In fact, governance is reduced to linking a high administrative official

to a specific task which must be dealt with manually.

This in turn gives rise to the main problem of interaction between public authorities, with sluggish competition for resources at all levels of the state apparatus, not only within the structures themselves, but also between individual officials.

But that is not all — the constant expansion of the bureaucracy and the succession of conflicting reforms creates an unmanageable set of actions (without a clearly defined area of responsibility) in which it is not entirely clear which body or official is responsible for which initiatives, leading to a situation where it is much easier to create the appearance of work than to actually do it. This is why there is still a lack of understanding of how, in what form and through which instruments each public authority and individual official is involved in the achievement of national goals.

TACTICAL PROBLEMS OF STRATEGIC PLANNING AND MANAGEMENT

One of the main tactical problems in strategic planning sphere that needs to be solved is the lack of effective interaction between public authorities, especially at the municipal level.

There are currently over 20,000 municipalities in the Russian Federation. This fact leads to justification of a large number (about 50,000) of strategic planning documents at this level, which leads to the low quality of their development and implementation and complicates the methodological support and control of strategic planning processes by the federal and regional state bodies. It should be noted, however, that out of the five such documents at the municipal level, only three are mandatorily developed and implemented.

This situation can be explained by the fact that many Russian municipalities lack the necessary financial and human resources to organize and carry out the work on the integrated development of their territorial formations.

The improvement of *interaction between public authorities*, including in the field of strategic planning, should be facilitated by the adoption of the law "On General Principles of Organization of Local Self-Government in the Unified System of Public Power", the draft of which was adopted in the first reading on January 25, 2022 by the Federal Assembly of the Russian Federation.[7]

This document envisages a change in the legal subjectivity of the existing eight types of municipalities through their enlargement, in the fact that three types of municipalities will be considered as administrative-territorial units in the system of local government of the Russian Federation: municipal district, urban district and intracity territory (intracity municipal entity) of a city of federal significance. Their total number will be reduced from 20,000 to 4,000, which should increase the financial and personnel autonomy of municipalities and their ability to resolve issues of their functioning and development.

In this case, municipalities, having become full participants in the process of formation of strategic guidelines in the Russian Federation, will be able to fully participate in the development and implementation of strategic planning

[7] Draft Law No. 40361–8 "On the general principles of the organisation of local self-government in a unified system of public authority". URL: https://sozd.duma.gov.ru/bill/40361–8 (accessed on: 10.11.2022).

documents, the number of which (it is assumed) will be significantly reduced, along with an increase in the degree of their interrelation and universality at the federal, regional and municipal levels of development. This will facilitate the automation of the processes of their creation and adjustment.

Today in the Russian Federation in the context of strategic goal-setting, forecasting and planning at all levels (federal, regional and municipal) a significant number of documents is being created and approved, including those of paramount importance, such as the National Security Strategy; Economic Security Strategy until 2030; Strategy of Scientific and Technological Development until 2035; Spatial Development Strategy until 2025, etc.[8]

But, unfortunately, all of them differ significantly in terms of their duration, the goals set in them are largely unrelated to each other, and there is an overlap in their individual elements. This state of affairs is largely due to the lack of a theoretically deeply developed, comprehensively discussed in society, fundamental strategy for socio-economic development of the Russian Federation. Attempts to create one were made in 2017, 2019 and 2021, but were not brought to fruition.

Thus, the first priority is to develop just such a strategy for the development of the country, as well as of the constituent entities and municipalities of the Russian Federation.

This will make it possible to determine further logical continuity in the creation of documents of this orientation, their coherence and balance in terms of priorities, goals, objectives, indicators, financial and other resources.

Strategic planning and management at all levels should be based on the national development goals and priorities clearly formulated in the presidential decrees, but due to their rather general nature they should be specified in the national strategy for socio-economic development. In domestic realities, this is carried out by the subjects of strategic planning and executed by each of them to the extent of their understanding, often with the introduction of sectoral or regional egoism [9].

In this regard, the American experience is illustrative, especially since in both the U.S. and Russia about 80% of the federal budget is spent to finance various programs. The development agenda in the U.S. is called "National Security Strategy". But this document applies to all spheres of the country's life and the main directions of foreign policy and affairs.[9] Its provisions formulate the draft federal budget, sectoral strategies and some 1,500 federal programmes, and formulate cross-sec-

[8] Presidential Decree No. 400 of 02.07.2021 "On the National Security Strategy of the Russian Federation". URL: https://www.consultant.ru/document/cons_doc_LAW_389271/?ysclid=latikgt15u518807714; Presidential Decree No. 208 of 13.05.2017 "On the Economic Security Strategy of the Russian Federation for the period until 2030". URL: https://www.garant.ru/products/ipo/prime/doc/71572608/?ysclid=latim8gfa1518278639; Presidential Decree No. 642 of 01.12.2016 "On the Strategy for Scientific and Technological Development of the Russian Federation". URL: https://www.consultant.ru/document/cons_doc_LAW_207967/?ysclid=latinw1x2w8663046; Decree of the Government of the Russian Federation of 13.02.2019 No. 207-d (revised on 30.09.2022) "On Approval of the Spatial Development Strategy of the Russian Federation for the Period until 2025". URL: https://docs.cntd.ru/document/552378463?ysclid=latiqzlhzy411006545

[9] National Security Strategy 2022. URL: https://www.whitehouse.gov/wp-content/uploads/2022/10/Biden-Harris-Administrations-National-Security-Strategy-10.2022.pdf (accessed on: 21.09.2022).

toral priorities in accordance with the Public Administration Modernisation Act (GPRA Modernization act of 2010).[10] The coordination, common understanding and subsequent monitoring of the implementation of the programmes and activities under the Strategy is carried out by the largest unit of the presidential administration — Office of Management and Budget (OMB). The monitoring parameters include the efficiency of financial management, the adequacy of financial procedures, the applicability of information technology, etc., and the process itself is constantly being improved, as reflected in special circular memoranda.[11] The implementation of the US national strategy is subject to an equally rigorous strategic audit by the Chamber of Accounts — GAO (Government Accountability Office).[12]

Based on the US experience, it seems advisable to establish a similar Office of Management and Budget in Russia, possibly as part of the Russian Presidential Administration.

PRIORITIES FOR COOPERATION BETWEEN PUBLIC AUTHORITIES IN THE AREA OF STRATEGIC PLANNING

Obviously, the problems in the area of strategic planning and management are systemic in nature and their solution requires radical, if you will, political measures. At the same time, certain improvements and interaction of public authorities in this area can be achieved by strengthening the strategic audit and creating a unified digital platform.

Global experience in the implementation of national strategies shows that the effectiveness is directly proportional to the effectiveness of monitoring systems and strategic audit, which at the federal level is engaged by the Chamber of Accounts. Its authority to adjust the implementation of state programmes and national projects is rather limited and requires a lengthy procedure. At the same time, strategic audits are needed at all levels of national strategy implementation, and audit observations and suggestions need to be implemented very quickly.

The French Chamber of Accounts (Courdes Comptes), whose members have the status of judges, i.e., in accordance with the French Constitution they are fully independent of the executive branch of power[13] is very representative of the breadth of powers available to them. Judging from the effectiveness of this body, the granting of such powers, including the possibility of swift intervention in the management process, is totally justified [10].

The main task of the strategic audit is to ensure independent public control on behalf of the state and society over the performance of the authorities in managing the public resources entrusted to them, and it is not limited solely to the audit of the financial statements of public entities [11]. The world standards

[10] PUBLIC LAW 111–352—JAN. 4, 2011, GPRA MODERNIZATION ACT OF 2010. URL: https://www.gpo.gov/fdsys/pkg/PLAW-111publ352/pdf/PLAW-111publ352.pdf (accessed on: 21.09.2022).

[11] MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES. URL: https://www.whitehouse.gov/wp-content/uploads/2021/12/M-22–05-FY 22-FISMA-Guidance.pdf (accessed on: 21.09.2022).

[12] U.S. Government Accountability Office. Role as an Audit Institution. URL: https://www.gao.gov/about/what-gao-does/audit-role (accessed on: 21.09.2022).

[13] Constitution of the French Republic. URL: ttps://www.constituteproject.org/constitution/France_2008.pdf?lang=en (accessed on: 21.09.2022).

include seven variants of audit; in the Russian Federation the three of its varieties are the most important and applicable.

The Strategic Audit Standard was approved by the Russian Audit Chamber (Chamber of Accounts) at the end of 2020.[14] It should be noted that there are no international standards — there is performance auditing. But, as A. N. Vyvolokina, Y. A. Sazhina, and L. V. Gusarova rightly point out [12], these types of auditing should not be equated.

The difference is that the performance audit is one of the tools of strategic auditing, which evaluates the results achieved in the context of the need to adjust the strategic planning process in order to improve the achievable indicators at commensurate costs [12].

While it is important to develop domestic strategic audit practices, improving the monitoring of the implementation of strategic plans cannot be left aside. Since the latter are implemented both in Russia and the USA by implementing programmes, the American experience may again be of interest here.

Perhaps a well-developed monitoring system makes strategic auditing superfluous. This is indirectly evidenced by a study [13], the authors of which found that of the 20 countries they examined, strategic audit is fully practiced only in three, and in two others it is only partially represented. Among those countries that do not practise strategic audit — there are successful states such as Germany, Israel and Japan, which is curious to note.

But in any case, when carrying out these or those institutional adoptions, extreme caution should be exercised, because they often produce a negative effect due to the difference in initial conditions [14].

To improve the quality of strategic management in the country, as well as to improve the control of information flows and more effective use of information stored in information systems: state (GIS) and organizations with state participation (IS), it is necessary to create a unified digital information space with a guaranteed compatible IS of strategic planning participants and consistency of the data contained in them.

At the same time, some possible challenges to the implementation of digitalization should be taken into account. Considering it as a new paradigm for strategic planning, it should be understood that the main source of change lies in the redesign of existing relationships, modes of interaction and the application of new, information-intensive methods of analysis. Unfortunately, over the last decade there has been no fundamental change in the field of digitalization, indicating a real shift in the right direction: in fact, the situation is at the first stage — the digitization of paper documentation. But even here, successes are variable. The real efficiency of information management is due to two combined factors:

- reducing the number of people involved in management (which increases speed);

[14] External Public Audit (Control) Standard SPA 105 "Strategic Audit" (approved by the Resolution of the Board of the Accounts Chamber of the Russian Federation of 10.11.2020 No. 17RB). URL: https://www.garant.ru/products/ipo/prime/doc/400157141/ (accessed on: 21.09.2022).

• increasing the number of information links (both vertical and horizontal).

In practice, there has been no tangible change — instead there have been scattered developments, whose interconnectedness and interoperability were already lacking at the concept-generating level. Today, there are around 300 public information systems on the register, most of which have no purpose or technical necessity.

In theory, the new information reality should act as an integrating force capable of bringing decision makers and the agencies they manage closer together. In terms of potential development, it is necessary to create a common information policy that could integrate individual initiatives into a coherent service and information platform and involve in this process public authorities whose functions are not legally linked to strategic planning.

Briefly summarizing the main directions of improvement of interaction of public authorities in the sphere of strategic planning [15–17], it is necessary to highlight the following:

1. The formation of units to coordinate strategic plans.

2. The creation of an analytical-monitoring body (following the example of the American OMB — Office of Management and Budget) is possible in the structure of the Russian Presidential Administration in order to specify national development directions and national priorities, as well as to carry out effective monitoring of the implementation of strategic plans and state programs.

3. Developing the practice of strategic audit and its effectiveness, for which it is necessary to expand the powers of the Chamber of Accounts of the Russian Federation, up to enabling it with the right to cancel the execution of strategic plans and programs that are ineffective or do not correspond to national priorities or national development goals.

4. Building a unified digital information and analytical platform for strategic management.

ACKNOWLEDGEMENTS

The paper was prepared on the research results carried out at the expense of budgetary funds within the framework of the government research assignment to the Financial University.

REFERENCES

1. Elbanna S., Andrews R., Pollanen R. Strategic planning and implementation success in public service organizations: Evidence from Canada. *Public Management Review*. 2016;18(7):1017–1042. DOI: 10.1080/14719037.2015.1051576
2. Rogach O.V., Ryabova T.M. The possibility of using of project management in the modern activities of public authorities. *Novoe pokolenie*. 2018(1):106–110. (In Russ.).
3. Eremin V.V., Kuznetsov N.V., Chernysheva T.K. The impact of project management standardization on the implementation efficiency of national programmes. *Teoriya i praktika obshchestvennogo razvitiya = Theory and Practice of Social Development*. 2021;(7):59–67. (In Russ.). DOI: 10.24158/tipor.2021.7.8
4. Afanasiev M.P., Shash N.N. Assessment methodologies of the state-funded program efficiency. *Voprosy gosudarstvennogo i munitsipal'nogo upravleniya = Public Administration Issues*. 2013;(3):48–69. (In Russ.).
5. Dmitrieva N.E., Kalgin A.S., Klimenko A.V. et al. State administration: Theory, functions, mechanisms. Moscow: NRU HSE; 2022. 276 p. (In Russ.).
6. Sil'vestrov S.N., Molodtsov A.V., Skorikov E.S. Typology and comparative analysis of the activities of development institutions. *Voprosy ekonomiki i prava = Economic and Law Issues*. 2013;(64):45–53. URL: https://law-journal.ru/files/pdf/201310/201310_45.pdf (In Russ.).
7. Belyaev I., Bulavin A. Fundamentals of strategizing in the field of national security: A new approach to comparative analysis. Moscow: KnoRus; 2018. 620 p. (In Russ.).
8. Lepskii V.E. Evolution of ideas about management (methodological and philosophical analysis). Moscow: Cogito-Center; 2015. 170 p. (In Russ.).
9. Silvestrov S.N., ed. Economic security of Russia: Methodology, strategic management, system engineering. Moscow: RuScience; 2018. 350 p. (In Russ.).
10. Queyranne M., Moretti D. Public prominence and "muscle" — the role of the French court of accounts. IMF PFM Blog. Sep. 28, 2012. URL: https://blog-pfm.imf.org/en/pfmblog/2012/09/public-prominence-and-muscle-the-role-of-the-french-court-of-accounts (accessed on on 21.09.2022).
11. Eskindarov M.A., Silvestrov S.N., eds. Formation of institutions for regulating the risks of strategic development. Moscow: Cogito-Center; 2019. 454 p. (In Russ.).
12. Vyvolokina A.N., Sazhina Yu.A., Gusarova L.V. Strategic audit as a tool for the Russian economy's development in modern conditions. *Ekonomika i upravlenie: problemy, resheniya = Economics and Management: Problems, Solutions*. 2021;(1):116–123. (In Russ.). DOI: 10.36871/ek.up.p.r.2021.06.01.017
13. Klimanov V.V., Kazakova S.M., Mikhailova A.A. Functions of supreme audit institutions in Russia and foreign countries. *Finansovyi zhurnal = Financial Journal*. 2019;(4):60–74. (In Russ.). DOI: 10.31107/2075–1990–2019–4–60–74
14. Polterovich V.M. Transplantation of economic institutions. *Ekonomicheskaya nauka sovremennoi Rossii = Economics of Contemporary Russia*. 2001;(3):24–50. URL: http://www.cemi.rssi.ru/ecr/2001/3/docl.htm (accessed on on 21.09.2022). (In Russ.).

15. Dolganova Yu.S., Istomina N.A. The budget system of the Russian Federation. Yekaterinburg: Ural University Publ.; 2019. 356 p. (In Russ.).
16. Sizova A.A. Evolution and modern problems of strategic planning of municipalities. *Gumanitarnye nauchnye issledovaniya = Humanities Scientific Research.* 2021;(10):5. URL: https://human.snauka.ru/2021/10/47245 (accessed on on 03.10.2022). (In Russ.).
17. Babkin A.V., Bukhvald E.M. Problems of strategic planning in the regional and municipal management. Ekonomicheskii portal. 2022. URL: https://institutiones.com/strategies/2637-problemy-strategicheskogo-planirovaniya.html (accessed on on 09.21.2022). (In Russ.).

ABOUT THE AUTHORS

Ivan I. Belyaev — Dr. Sci. (Tech.), Head of the Research Laboratory of the Institute for Economic Policy and Economic Security Problems, Department of Economic Security and Risk Management, Faculty of Economics and Business, Financial University, Moscow, Russia
https://orcid.org/0000-0003-2843-9683
fm.fa@yandex.ru

Sergey A. Pobyvaev — Cand. Sci. (Econ.), Leader research associate of the Center for Strategic Forecasting and Planning, Institute for Economic Policy and Economic Security Problems, Department of Economic Security and Risk Management, Faculty of Economics and Business, Financial University, Moscow, Russia
http://orcid.org/0000-0002-7312-7059
fm.fa@yandex.ru

Sergey N. Silvestrov — Dr. Sci. (Econ.), Professor, Honored Economist of the Russian Federation, Director of the Economic Policy Institute and the problems of economic security of the Financial University; Moscow, Russia
http://orcid.org/0000-0002-7678-1283
fm.fa@yandex.ru

Authors' declared contribution:
Belyaev I. I. — generalization of the study's results, formation of the research's conclusions.
Pobyvaev S. N. — critical analysis of literature, collection and systematization of data.
Silvestrov S. N. — the issue statement, working out on the paper's concept.

Conflicts of Interest Statement: The authors have no conflicts of interest to declare.

The article was submitted on 31.08.2022; revised on 21.10.2022 and accepted for publication on 17.11.2022.
The authors read and approved the final version of the manuscript.

ORIGINAL PAPER

DOI: 10.26794/2304-022X-2022-12-4-48-62
UDC 334.78(045)
JEL M54

Modern Forms of Flexible Management Systems in Russia

B.B. Slavin
Financial University, Moscow, Russia

ABSTRACT

The paper considers modern forms of flexible organization's management systems in Russia. The aim of the research is to study the necessity and features of flexible management systems use for self-organization of employees' work, as well as the consequences of the transition from rigid hierarchies to flexible ones. The author solved the following tasks: he described the formation of a new employee and his political behavior; analyzed the new "shop" structures that have appeared in the Russian Federation and their struggle for social rights. The study described experiments of domestic companies with "turquoise" practices and revealed specific features of self-organization in Russia. Also, the author explored flexible methods used not just in management hierarchies but also to coordinate the implementation of projects, build information structures, as well as to organize the financing of innovations in organizations. The study used the method of comparative analysis of the existing practice of applying digitalization in the economy, as well as theoretical approaches to understanding its essence. As a result, it was shown that industrial enterprises caught in the digital transformation zone had to use flexible management practices for innovative development (at least in terms of their information systems development). Nevertheless, not all of them are universal and lead to increased efficiency. The paper reveals the role of a human factor as the most important component in the innovative company management, since self-organization and implementation of changes require special personality characteristics.

Keywords: self-organization; turquoise management; flexible management methods; human orientation; digital transformation

For citation: **Slavin B.B. Modern forms of flexible management systems in Russia. *Management sciences*. 2022;12(4):48-62. DOI: 10.26794/2304-022X-2022-12-4-48-62**

INTRODUCTION

Changes in the economy have always transformed society as a whole: industrialisation has "demanded" the destruction of serfdom and class restrictions; post-industrialisation has been a catalyst for democratic change in many countries. Similarly, digitalisation changes not only economic relations, but also social relations. The digital transformation of the economy is blurring the line between producer and consumer, at least as far as information services are concerned. Partnership seems to be becoming a major trend, not only between customers and producers, but also between shareholders and employees, companies and regulators. This phenomenon is often positioned as a paradigm shift in corporate goals from shareholders to stakeholders [1], when the goals of the latter, as well as the organization's partners (in the broad sense of the word — customers, employees, suppliers, regulators, etc.) are placed above those of the shareholders.

At the same time, stakeholders also include various non-profit and even religious organisations [2], suggesting that this is a way for businesses to be socially responsible. At the same time, the contrast between "shareholder" capitalism and "stakeholder" capitalism is somewhat of a fashion statement or the so-called bandwagoning — it is more correct to speak of broad partnership. The digital economy is built on total data sharing, which allows businesses to share their electronic resources and provide customers and partners with access to their information systems. Partnerships become a consequence of the digital communications created between economic actors.

Another characteristic of the digital age is that, as change and innovation accelerate, decision-making is declining: decision-making power is shifting from top managers to middle management. As a consequence, creative workers, who are growing rapidly, feel freer to work when it suits them, mixing their work and private time, rather than strictly during the allocated working hours. This also leads to the convergence of managers' information systems, i.e., their electronic calendars coexist with work schedules, meetings with relatives and friends, social activities [3].

If we look at the experience of the transformation of the media industry, we can see that today's professional journalists often become information personalities themselves, especially on social media, taking on the role of not only content creators but also opinion leaders [4]. Personalisation and leadership are features of the digital age that undoubtedly link business and society. It is these qualities, together with the growing need for innovation, that are nowadays responsible for the increasing number of non-profit organisations (NPOs) and start-ups, which, by further integrating citizens into the economy, can be said to form an "eco-environment" around classic businesses.

The old hierarchical management systems are no longer appropriate for today's requirements: the transformation requires more and more people to be involved in management and decision-making processes, and communication between them must be more direct. Self-organisation, flexible project and enterprise management systems, and the tangible involvement of personnel in the organisation's activities are becoming major trends in both the global and Russian economies. Ignoring these underlying economic processes will not allow the formation of behaviour that is adequate for the digital age.

THE SEARCH FOR NEW FORMS OF SELF-ORGANISATION BY RUSSIAN COMPANIES

In Russia, as in other countries, business is looking for new forms of management using self-organisation tools. The number

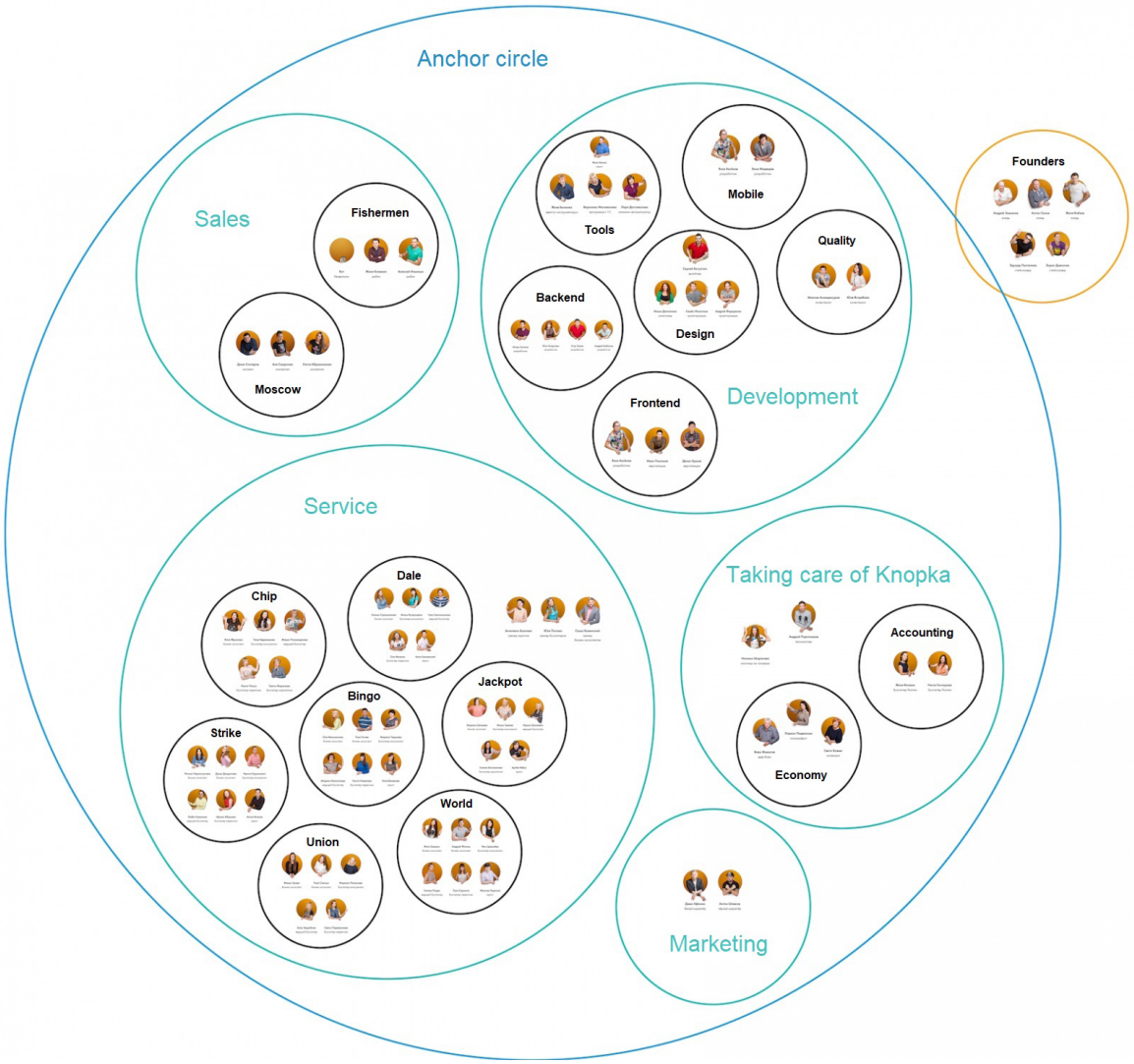


Fig. 1. **Holacratic management organization of the company Knopka**

Source: compiled by the authors based on URL: https://habr.com/ru/company/knopka/blog/242491.

of such companies is not very high, as Russian business is still quite young and for the most part does not "think" in long-term categories of supporting the business environment and fulfilling social missions. At the same time, our country's traditional adherence to communality contributes to the fact that the ideas of self-organization (including tools of organizational behavior) find fertile ground in domestic companies [5]. Moreover, unlike their Western colleagues, Russian businessmen, who have adopted the tools of self-organization, are critical of international experience, making significant adjustments to certain principles of turquoise management. The word "turquoise", according to the famous book by F. Laloux [6], is now used to name companies and practices that apply tools of employee self-organization or "flat" management systems, in contrast, for example, to "red" companies that practice rigid hierarchies.

There are still few case studies in the scientific literature of enterprises implementing self-organisation tools. However, there are many mentions and discussions of turquoise

practices on the internet. Among their adherents there are manufacturing companies ("Fabrika Okon" (Windows factory), "Askona", "Oil Energy"), trading companies ("Vkus-Vill") and IT companies ("Neti"). Especially often turquoise practices are used, strange as it may seem (we will explain them below), by organisations in the financial sector (the "Knopka" (Button) service, the "Tochka" bank, the QIWI payment system); even some branches of Sberbank are experimenting (although largely formal) with their use.[1] There have also been initiatives to introduce flexible approaches in public projects. For example, in April 2017, a subgroup on strategic development and priority projects was even created under the Presidium of the Presidential Council, but as it usually happens with such state initiatives, this work had no continuation.

One of the most elaborate instruments of self-organisation is the so-called Holocracy [7]. Probably among the first in Russia to implement the management system preached by the Holocracy constitution[2] were "Tochka" Bank and "Knopka" Company. These organisations are similar in many ways, in part they have common founders, both were established in Ekaterinburg and work in the field of finance. From the very beginning, "Knopka" Company adopted a holocratic approach to management, assuming as a primary element a group (in the terminology of holacracy — "circle") consisting of employees of different specialties (accountants, lawyers), but in fact working together (for example, with a common client or solving related issues). *Figure* 1 shows a diagram of such circles and the participation of employees in them.

In fact, holocratic structures resemble in many ways the matrix or grading structures that have long been used in technology companies. But unlike them, holacracy emphasises group and creative work, which is difficult to design immediately because it changes quickly. You have to give proper respect to Russian organisations, such as "Tochka" Bank and "Knopka" Service, that focus more on efficiency and employee comfort than on the rigid principles of holacracy, and they easily restructure their management system, despite the fact that this may not comply with holacracy guidelines.

Trust is the cornerstone of self-organising management systems. This is well demonstrated by another Russian turquoise company, Oil Energy, which develops and manufactures chemical reacting substances, drilling fluids, well cementing and fracturing chemicals and materials, multi-stage fracturing equipment and cementing tooling. Unlike Button, Oil Energy took a different path in the area of self-management — it did not implement Holacracy but opted for a more moderate version of the so-called "Sociocracy 3.0"[3] (latin "Board of comrades 3.0"). Its ideas, whose use in organisational management began in the mid-1990s, date back to Auguste Comte.[4] In particular, in the Netherlands, where companies that used the Sociocratic Circle Organization Method (SCM) — actually a precursor of turquoise management, which involved the organization of "circles" and the replacement of positions with roles — were allowed not to create trade unions. It can be said that holacracy practically used the ideas of sociocracy, enshrining them in the form of "constitutional" laws [8].

[1] Turquoise internal structural units: a useful experience for the whole of Sberbank. SberTV. 30.06.2016. URL: https://sbertv.ru/?video=1154 (accessed on: 19.03.2022)

[2] URL: https://www.holacracy.org/constitution (accessed on: 05.07.2022).

[3] The number 3.0 is added to show the modernity of this sociocratic methodology.

[4] Isidore Marie Auguste François Xavier Comte, French sociologist and philosopher, founder of sociology as a science in its own right.

Sociocracy 3.0 is already a modern technology that has become a kind of throwback, where employee interaction is not defined by rigid rules, but by general principles that can vary. Its latest (2021) version, released as an e-book under Creative commons culture licence (similar to free software), defined 10 principles: "Clarifying purpose", "Strategy development", "Value orientation", "Feeling and reacting", "Experimenting", "Ensuring autonomy", "Working together on dependencies", "Investing in learning", "Cultural development" and "Shared mental models". [9]. The authors of the new turquoise framework write: "Sociocracy 3.0 meets organisations where they are and leads them on a path of continuous improvement. There are no radical changes or reorganizations". [9, p. 20]. In addition to a softer approach in the allocation of responsibilities and roles, Sociocracy 3.0 suggests the possibility of gradual implementation in the organisation — one part of the management system remains hierarchical, while the other is flat.

Another example of applying the turquoise management style in Russia is the company "VkusVill", which specializes in retail sales of food products intended for healthy lifestyle followers (HLS). The enterprises of this retail chain also use sociocracy, i.e., a lighter version of turquoise management, the implementation of which is described in detail in the book of E. Schepin [10], one of the top managers of "VkusWill". According to company managers, modern management should abandon most of the rigid management methodologies and tools, such as budgeting and the use of key performance indicators (KPIs). At the same time, performance monitoring should become ubiquitous, but it should not be used to evaluate or control employees, but to improve performance. In a sense, this approach to self-organization coincides with the ideas of E. Deming [11], who believed that one should not look for those responsible for failures, but for ways to improve the system so that such failures are not repeated.

The proponents of turquoise practice suggest replacing KPIs with the OKR tool, the so-called Objectives & Key Results, which is essentially a development of Management by Objectives (MBO). The MBO methodology dates back to the middle of the 20th century and at the turn of the century it gained popularity as a management tool for quality circles and self-managed work teams [12], which have recently been proposed for the innovative development of companies [13], whereas KPIs are more suiTable when goals and objectives remain unchanged over a long period of time.

Flexible employee organisation practices are certainly interesting: they avoid the pointless and boring work characteristic of large-scale hierarchical structures, enable quick reorganisation, allow for new trends, etc. But at the same time, turquoise techniques are not without drawbacks. Firstly, not all people are willing to take the initiative, and in the case of horizontal management this does not allow the enterprise to develop (usually in such cases, employees choose their own additional roles). Secondly, flexible practices require more active and agile participation, which means that the younger employees are at a disadvantage. In fact, turquoise management is calculated on the fact that the principles of self-organization will themselves dot all the i's in the distribution of responsibilities, which is not always effective if the company sets itself ambitious and breakthrough goals.

Trust from the management position is particularly difficult. The Russian HR experience is historically very bureaucratic, involving numerous approvals, signatures and recommendations; only young businessmen

can overcome such traditions. At the same time, leaders of agile practices have to act as preachers of new approaches not only within their organisations, but also outside them. It is no coincidence that many turquoise companies practice excursions to their offices (of those listed above, such visits are arranged by "Tochka" Bank and "Oil Energy") to demonstrate the effectiveness of new management tools. Many of them have blogs or devote pages to agile technologies on their website, publish books, give interviews, etc. If turquoise forms of management were unambiguously more effective than conventional ones, no propaganda would be needed — most enterprises would simply start using them.

THE EFFECTIVENESS OF FLEXIBLE MANAGEMENT SYSTEMS IN THE DIGITAL TRANSFORMATION

The author of the term "Digital Economy", D. Tapscott, in his famous book [14], has identified several stages of digitalisation of an organisation: The first (Personal Multimedia) automates employee workstations, the second (Workgroup Computing) automates the work of individual departments, the third (Enterprise Infostructure) forms the unified information system of the enterprise; the fourth (Interenterprise Computing) automates the company's relationships with partners and customers; and finally, the fifth stage of digitalisation is where the enterprise becomes fully networked ("The Net"), resulting in a change (transformation) of most business processes and the appearance of entirely new business.

It is the accelerated development of new services that is the main driver for the adoption of agile management technologies in companies, and one of the most transformative industries requiring such approaches today is the financial one.

We have already noted above that amongst turquoise quite a few are specifically financial organisations. But flexibility in management is achieved not only through the use of holacracy and sociocracy, but also through agile design systems, an agile approach to developing new information services and even agile budgeting. And, as far as digital transformation companies are concerned, they are almost certainly applying (or intend to do so), if not turquoise, then other tools of agile work organisation.

It should be noted that the relationship between agile management systems and digitalisation goes much deeper than the simple need to accelerate the creation of new services. For example, the conclusion that trust and transparency are interlinked is in fact precisely a consequence of the widespread penetration of information technology, which makes our lives and businesses more transparent and therefore creates an environment for trust. But it is necessary to learn how to exist in it: the informatisation of social life does not accidentally generate a huge number of fakes and negatives — society is not yet ready for the level of trust that technology allows, and it protects itself from both truth and excessive trust.

Flexible project management methods have emerged (and still dominate) in the field of software development. One of the first to develop this kind of approach was T. Gilb, who in 1981 published a short paper on the evolutionary processes of software development, introducing the concept of "incremental augmentation" [15]. The next contribution to the formation of ideas of agile design was made by B. Bem who dealt with the problems of metrics and economics of software development. In his works of the 80–90s of the previous century he described a spiral model [16] which formed the basis of the so-called extreme programming — XP.

Finally, the most famous event was the appearance in 2001 of the Agile Manifesto, which was signed by 17 developers in Utah. It articulates four principles: 'people and interaction are more important than processes and tools; a working product is more important than comprehensive documentation; collaboration with the customer is more important than contract negotiation; willingness to change is more important than following the original plan'. The first two actually proclaim a sociocratic approach, putting human communication above processes and instructions, while the last are the tenets of continuous improvement, well known in Japanese practices or derived from them (kaizen, kanban, scrum and lean).

Although Russia was not among the pioneers of agile project management techniques, domestic programmers, whose competencies are highly valued in the world, have been using them since the end of the last century (since the days of extreme programming). Nowadays, agile management practices are used by developers in those industries that are transforming most rapidly: IT, finance, telecommunications, and various online services. According to the Comnews survey, by 2020 in our country 91% of banks and 60% of retail companies are using Agile in developing solutions to some extent; even 25% of government organizations have declared its use, apparently implying agile technologies used by their contractors.[5]

Interestingly, in Russia the ideas of agile approach to project management have begun to be widely used not only in development but also in human resource management [17], education [18], marketing [19], enterprise management [20], etc. However, such implementations, as a rule, cannot be called systematic; they are episodic and have a huge number of amateurish, not always justified embellishments, most likely imitating flexibility in management. In September 2016, a commercial was published on the Internet in which the head of Sberbank, H. Gref, declared: "If Agile used to be a way of writing software code, today it is a way of existence for all organisations". Unfortunately, declarativeness is one of the characteristic features of Russian figures (who have the opportunity to influence decision-making at the state level), which is reflected in the initiatives in the field of implementation of agile management tools in various areas not related to software development.

Agile technologies and practices have not just emerged for the sake of fashion but have become a necessity due to the increasing speed of business change. This rapid transformation of the modern enterprise associated with the introduction of IT (called digital) can be described as permanent. In the pre-digital era, the development and promotion of new products also took place, but they followed a standard lifecycle: research — development — trial operation — commercial operation — decommissioning. In the digital age, new products and services are already being introduced in the development stages and are being refined and modified during the operational phase. Development and service support are becoming increasingly close to one another.

It is easy to understand that organising such a process in a hierarchical way is simply not possible: the units involved in creating new software (analysts, developers, testers, and support) must interact horizontally, without the involvement of managers. Such technology is called DevOps (from Development and Operations) and can be said to have its roots in historical practices of agile management: Lean [21] and the Deming PDCA cycle (from Plan-Do-Check-Act), which un-

[5] URL: https://www.comnews.ru/content/213496/2021–03–12/2021-w10/agile-nabiraet-populyarnost-rossii

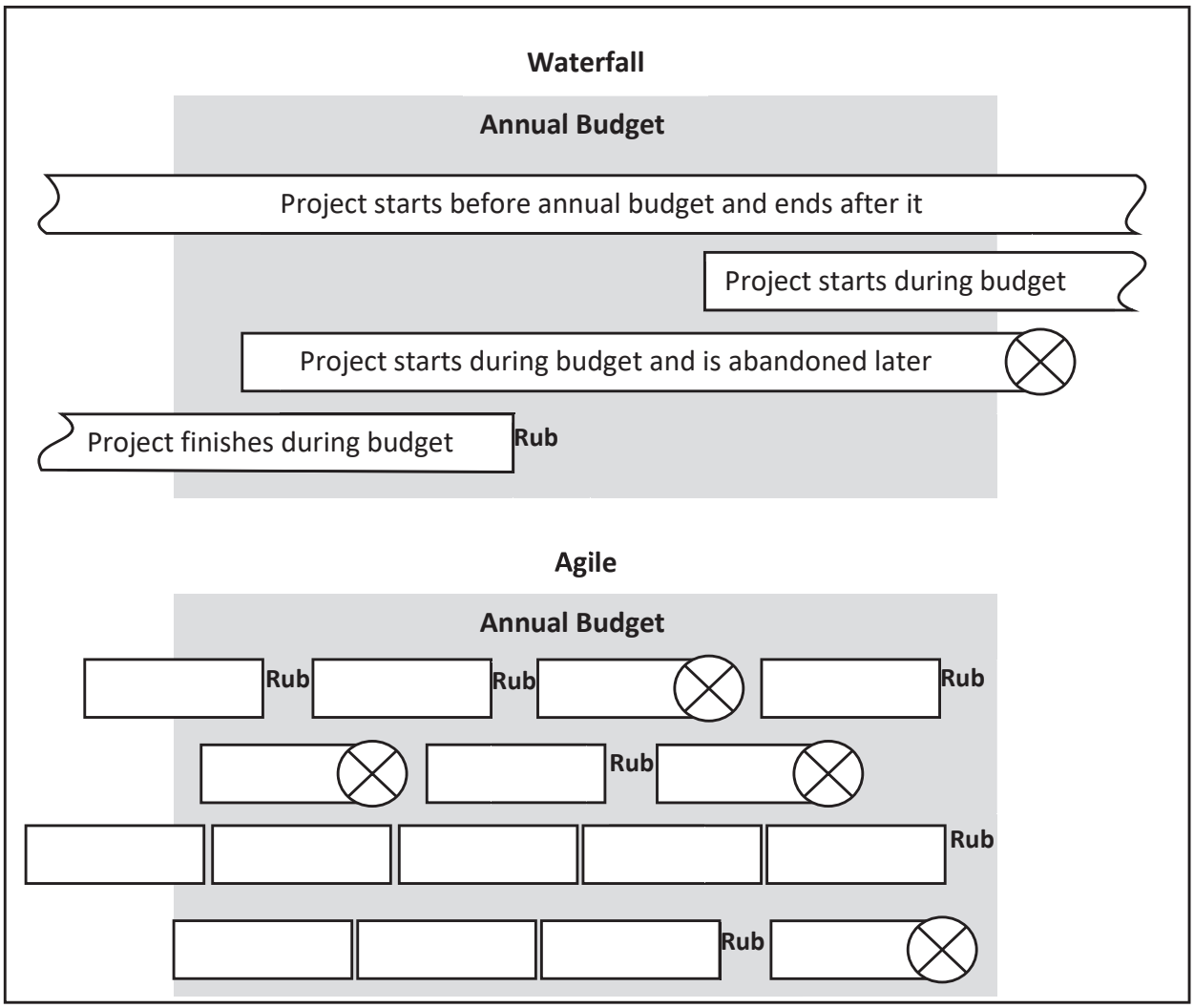


Fig. 2. **Comparison of waterfall and flexible budgeting**

Source: compiled by the authors based on [22].

derlies the ISO 9000 series of standards. The term "DevOps" was first used in 2009, when in Ghent, Belgium, consultant, and Agile expert P. Debois held a conference called "Devopsdays", which later became a regular event.[6] Today, Russian companies are actively using DevOps technology, not only in the financial (PJSC Sberbank, JSC Alfa Bank, etc.) and telecommunication (MTS, Beeline, etc.) sectors, but also in the petrochemical (Sibur, PJSC Gazprom Neft, etc.) and other industries.

At the end of 2020, a number of renowned global consultants, as well as leaders of organisations using agile management practices, published the BizOps manifesto, suggesting that the end-to-end process from development to support should start with the business.[7] In doing so, all departments and services should not just work together as one, but also share a common vision and purpose to make the flow of value creation as efficient as

[6] URL: https://devopsdays.org/ (accessed on: 04.04.2021).

[7] URL: https://www.bizopsmanifesto.org/ (accessed on: 01.03.2022).

possible. Actively incorporating business into information systems development actually creates an alternative path to turquoise's self-organisation. Whereas turquoise companies initially create a 'flat' self-management, in the case of BizOps the horizontal hierarchy is built around the digital transformation of the enterprise. It can be said that the digitalisation of the economy is forcing organisations to become more agile and, as a consequence, to use "flat" management systems to a greater extent.

The need for flexibility extends not only to development, innovation, and project management, but also to the information system (IS) itself. Today, a so-called microservice architecture is becoming popular, where an enterprise IS consists of small services (for example, a mobile application), which are developed by a small number of IT specialists (equal to one scrum team of 5–9 people). The development of a microservice does not have to be done in-house but can be outsourced to a partner organisation. Gartner Company calls this principle "composite architecture", which allows you to create a Lego-type IS and is fully consistent with a flexible approach to development and design, and allows you to work in small teams, creating optimal conditions for self-organization. It is no coincidence, as mentioned above, that Turquoise technology is being introduced primarily in IT companies and banks, where microservices architecture has become the standard.

Interestingly, not only the enterprise information system, its organizational structure, methods of project development and management become flexible, but also the system of financing and budgeting of organizational development. In the classical (in the project terminology — "waterfall") approach to information technology budgeting, a specific amount of money is allocated for the implementation of a project, which should be spent within a certain time frame and bring the declared value in advance. However, when it comes to innovation, the execution period and budget are usually unknown. It is not possible to plan exactly when to come up with a new idea and predict the amount of money required to do so. The way out of such a situation is flexible or venture budgeting (*Fig. 2*).

Venture capitalists face similar problems as they do in financing innovation when investing in start-ups, where the likelihood that the project will not materialise and the investment will not pay off is much higher, up to 90%. To manage such a process, venture managers combine investments in a way that generates positive returns on the portfolio as a whole. In an organisation, it is advisable to create a separate portfolio for projects that are linked to a single service or even a microservice. Then even an unsuccessful development will make sense — the money spent on it can be considered as payment for the knowledge gained that the given direction is wrong (i.e., it is not wasted money for which someone should be punished)

Flexible financing becomes an important prerequisite for the self-organisation of a company's operations, as it allows for experimentation. It can be said that the turquoise management style is implicitly penetrating Russian companies along with the process of digital transformation and flexible ways of organising operations.

THE HUMAN FACTOR AND THE SOCIO-POLITICAL IMPLICATIONS OF THE TRANSITION TO NEW FORMS OF SELF-ORGANISATION

The digital transformation of the economy is spreading like an epidemic. Technology is helping to automate manual work or

hand it over to the customer. The freed-up human resources can be used to develop new technological services, which, in turn, help to remove routine work from the day-to-day work of the organisation's employees and their partners. Thus, the proportion of intellectual activity in the company is increasing, and at an accelerated pace. This leads to both the need to implement the agile management systems described above and the transfer of decision-making responsibility to lower levels of management, as well as greater freedom for the employee from the employer.

The digital age destroys the necessary basis for the exploitation of labour when the employee is forced to accept the conditions of work offered, because without the means of production belonging to the employer, he or she cannot earn his or her own money. In the case of intellectual activity, the main means of production are the employee's competencies, owned by the employee even if they come from corporate training. The modern employer, in addition to the compensation package, is forced to provide his creative employees with comforTable working conditions, attracting them to his company. But today, especially after the massive take-up of distance technology during the pandemic, people can create their own environment for creativity through electronic communications, co-working spaces, equipment leasing and software on a time-share basis. And it's shaping a new employer-employee relationship.

Until recently, freelancing in the enterprise was only used for one-off tasks for which it was a pity to spend one's own resources. Today, the situation is changing dramatically: an employee hired on a temporary basis and located in another city is working on the same projects as full-time employees. Freelancing is becoming a significant element of the new economy, which is often referred to as the "gig economy" (Gig — an engagement for guest artists). And Russia is among the leaders here: while in 2014 the number of freelancers was only 3 million people,[8] then in 2020 (according to PwC[9]) there were 14 million (by comparison, in the U.S.— 56.7 million, in Canada — 2.9 million, in India — 15 million). At the same time, Russia is among the top ten countries where the growth rate of freelancing exceeds 25%. That is, there are good positions for the reform and self-organization of business. Unlike a regular employee, a freelancer easily switches from one task to another, is more independent, "requires" less overheads, etc.

At the end of the first decade of this century, one of the tools for finding additional ideas and resources in the world was the use of crowdsourcing, an alternative to freelancing. It involves involving either outsiders or company employees in generating ideas, implementing innovations, or executing any projects without any contractual relationship. Innovations achieved through outsourcing are called "open innovation" (a term coined by University of California professor Henry Chesbro [23]). The notion of "crowdsourcing" was first used by journalist D. Howe when describing Innocentive.com, a portal working on open innovation technology. In case when only employees of the organisation work on problems, special platforms are often used, the so-called "Idea Management" systems, which are also widespread in the world.

The need for rapid transformation using digital technologies implies not only the flexibility of management and adaptability of information systems, but also certain qualities of personality of employees directly involved in the change of the organization. Conversely, employees engaged in creative activities,

[8] URL: https://blog.kwork.ru/rynok-frilansa/frilans-2021-itogi-goda-i-prognoz-na-2022

[9] "Trust Technologies" website. URL: https://www.pwc.ru/ru/publications/freelance-platform/pwc_freelance_market_research_final.pdf (accessed on: 02.03.2022).

on whom the success of a company's digital transformation depends, require special treatment [24]. Such requirements constitute the so-called subject-oriented (or human-oriented) approach to the management of the organization and to the creation of its information environment [25], which implies the observance of certain principles [26].

One of them is that management is not built around the manager, as it was in the pre-digital era, but around the employee, on whom the success of innovation depends. It used to be that the main task of a company's information system was to generate the business process data needed for management decision-making. Today, in cutting-edge companies, the responsibility for implementing innovation lies with middle managers, and it is for them that the information environment is built: they are allowed to have personal email accounts and calendars, communicate with colleagues via social networks, use their own analysis tools, and so on. Moreover, it is the innovation employee who is now shaping the requirements for the company's information system and process development. Among the key trends for 2021 (part of the so-called Hype cycle[10]) "Gartner" company highlights such subject-oriented management technologies as WEM (Workforce engagement management) and VOE (Voice of the Employee) meaning they take into consideration the employees' opinions. [27].

Another principle of this approach is "free entry" and "free exit" of the employee, i.e., it is assumed that anyone who joins the company has the right to use his/her own information resources to improve its performance, but when leaving it, he/she can keep those resources that are not the exclusive property of the organisation he/she is leaving. This is one of the most difficult postulates to implement and needs to be enshrined as an ethical norm. Unfortunately, in Russia corporate culture tends to be very poorly protected by internal regulations and this principle is implemented de facto, often causing disputes and even litigation.

Creative employees, like freelancers, are far more free-spirited and independent than ordinary employees, which forces leaders of organizations (at least those in the digital transformation stage) to treat both of these categories of workers as partners rather than as employees for hire. This approach has long been accepted in consulting but is now increasingly used in digital companies and even banks. Partnership requires equality — this is what the above principles declare. In Russia, this kind of relationship with employees is almost completely absent in large companies, especially those with state participation.

One of the important personality traits required for successful organizational transformation activities is now becoming emotional intelligence [28], which is both a tool for improving teamwork efficiency and one of the important competencies of a managerial leader. The relationship between sales success and emotional intelligence has been demonstrated in [29] using the example of the Russian pharmaceutical industry, an indirect evidence of its importance is the increasing demand for professional development programs in this area. To some extent, emotional intelligence can be considered a turquoise version of leadership skills, and the interest in it is indicative of the attention to the challenges of self-organization in the economy.

Due to the fact that the number of decision-making and leadership professionals in organisations increases significantly, it

[10] The Hype cycle used by Gartner Company is a tool for visualising technology trends. URL: https://www.gartner.com/en/research/methodologies/gartner-hype-cycle (accessed on: 27.10.2022).

would seem that public involvement in self-governance should also become more active. So far, however, this is not happening. Interesting research is carried out at the regional level in the Vologda Scientific Center of the Russian Academy of Sciences — in particular, the authors of [30] studied the potential of civic participation in public self-governance in the territories of the Vologda and Pskov oblasts, as well as in the Republic of Karelia. It was shown that the level of involvement of the population is low, and, moreover, it is not related to the standard of living (as it was assumed before the study). The authors concluded that there is "a correlation between participation rates and the level of institutional trust" [30, p. 101], and it is reciprocal: not only the authorities should establish trust with the population, but they should form such a trusting environment by becoming partners of the authorities. It is the lack of trust that prevents the full potential of civic participation.

The quality of the trustful environment can be measured by the level of involvement in chariTable activities — this has been studied by the centre mentioned above in the same regions [31]. Russia is in the top ten outsider countries in terms of helping strangers, volunteering, and donations, with a cumulative involvement rate of 21%. The figures are even lower in countries such as: China, Greece, Lithuania, Bulgaria, etc. (by comparison, in the USA — 58%, in Canada — 55%, in Indonesia — 50%). According to Volgograd scientists [30], this level of chariTable activity is largely due to inherent paternalistic sentiments in our society and, again, mistrust in official organizations from this sphere and the authorities. Apparently, low activity in charity and little interest in participation in self-governance are similar to the passivity of the population in crowdsourcing projects.

However, despite the lack of activity noted in the research, there are changes due to the growing share of intellectual activity: the "creative class" is poorly involved in self-government, charity, and crowdsourcing, but is socialising quite well within various informal industry associations and organisations. According to Rosstat,[11] about 90,000 public organisations were registered in Russia at the end of 2019[12] — which is almost as many as non-profit organisations. Given that the number of their employees is roughly equal to their number, it can be concluded that they perform the role of organisers of public activities, with only managers or technical staff employed in them. At the same time, the number of citizens participating in various creative unions (trade unions are not included here) and communities of interest is 3.4 times more than those participating in religious organizations, and 3.3 times more than those employed in local self-government (through public organizations).

The digital age, thanks to the rapid development of communications, is leading to the growth of associations based on professional interests. This is also facilitated by social networks that allow the implementation of different community formats. One of the most promising forms of association based on professional interest is becoming expert networks [32]. According to Gartner Company [33], by 2025 clients will pay a freelance expert to solve 75% of their problems, and organizations, accordingly, should strive to create a network uniting such professionals, paying attention to the legal implications of this process.

The work of modern expert networks with collaboration is based on the competence metric, where each specialist has their own

[11] Federal State Statistics Service. Russia in Figures. Moscow: Rosstat; 2020. 550 p.

[12] No new data has been published as of mid-2022.

unique competences and their participation in a particular project is driven by the need for them in implementing the task. In the future, such networks will not only be one of the important subjects of economic activity; they will also perform their functions for the public administration (from the municipal to the federal level), supporting the institutions of self-government. Here our country has a good chance to become a leader, since the creation of expert networks with collaboration, embedded in the economic activities of enterprises and organisations, is still only beginning to be implemented in developed countries.

And it is precisely Russia's characteristics — the predominance of freelancing over crowdsourcing, good experience with agile design and development systems, turquoise management, and the use of sociocratic tools — that can play a positive role in this.

CONCLUSIONS

This paper examines the specifics of Russian practices of flexible management systems in organisations. The author shows that domestic companies rarely implement turquoise practices in their rigid version, focusing rather on general ideas of employee sensitivity and flexible hierarchies. One could say that our country is in the global trend in terms of using turquoise and sociocratic methods based on partnership relations. Practices of flexible project management, development methods and investment mechanisms are also not badly mastered by Russian companies. A peculiarity is that freelancing as a form of outsourcing third-party resources is more developed than crowdsourcing. This is due to less public trust in business. This is why Russia is far from being a leader in involving citizens in chariTable activities and local government. However, this peculiarity has a positive feature — a stricter attitude to the use of external human resources gives our country a chance to become one of the first in using expert networks, which will become an important element of the economy and social policy in the future.

ACKNOWLEDGEMENTS

The paper has been prepared based on the results of research carried out at the expense of budgetary funds under the state assignment to the Financial University.

REFERENCES

1. Vargas-Hernandez J.G., Gonzalez D.C. The discussion on stakeholders in contrast with the shareholders theory: Reconciliation to a conscious capitalism. *SAMVAD: International Journal of Management*. 2017;14:55–57. DOI: 10.53739/samvad/2017/v14/117199
2. Murphy M.J., Smolarski J.M. Religion and CSR: An Islamic "political" model of corporate governance. *Business & Society*. 2020;59(5):823–854. DOI: 10.1177/0007650317749222
3. Slavin B. Convergence of architectures of social and corporate information environment of a person. *Biznes-informatika = Business Informatics*. 2012;(2):3–9. (In Russ.).
4. Malmelin N., Villi M. Media work in change: Understanding the role of media professionals in times of digital transformation and convergence. *Sociology Compass*. 2017;11(7): e12494. DOI: 10.1111/soc4.12494
5. Secchi D. Editorial: Within and around organizational behavior. *International Journal of Organization Theory & Behavior*. 2021;24(1):1–5. DOI: 10.1108/IJOTB-03–2021–152
6. Laloux F. Reinventing organizations: A guide to creating organizations inspired by the next stage of human consciousness. Millis, MA: Nelson Parker Publishing; 2014. 378 p. (Russ. ed.: Laloux F. Otkryvaya organizatsii budushchego. Moscow: Mann, Ivanov and Ferber; 2016. 432 p.).

7. Robertson B.J. Holacracy: The new management system for a rapidly changing world. New York: Henry Holt and Co., LLC; 2015. 238 p. (Russ. ed.: Robertson B.J. Kholakratiya. Revolyutsionnyi podkhod v menedzhmente. Moscow: Bombora; 2018. 256 p.).
8. Ershov A.N., Salatova A.A. Organizational management in the 21st century: From sociocracy to holacracy. *Kazanskii sotsial'no-gumanitarnyi vestnik = The Kazan Socially-Humanitarian Bulletin.* 2019;(6):18–23. (In Russ.) DOI: 10.24153/2079–5912–2019–10–6–18–23
9. Bockelbrink B., Priest J., David L. A practical guide for evolving Agile and resilient organizations with sociocracy 3.0. 2022. URL: https://sociocracy30.org/_res/practical-guide/S 3-practical-guide.pdf
10. Shchepin E. VkusVill: How to make a revolution in retail by doing everything wrong. Moscow: Alpina Publisher; 2019. 210 p. (In Russ.).
11. Deming W.E. The new economics: For industry, government, education. Cambridge, MA: The MIT Press; 2000. 266 p. (Russ. ed.: Deming E. Menedzhment novogo vremeni: prostye mekhanizmy, vedushchie k rostu, innovatsiyam i dominirovaniyu na rynke. Moscow: Alpina Publisher; 2019. 220 p.).
12. Gibson J.W., Tesone D.V. Management fads: Emergence, evolution, and implications for managers. *The Academy of Management Executive*. 2001;15(4):122–133. DOI: 10.5465/AME.2001.5898744
13. Bruccoleri M., Riccobono F. Management by objective enhances innovation behavior: An exploratory study in global management consulting. *Knowledge and Process Management: The Journal of Corporate Transformation*. 2018;25(3):180–192. DOI: 10.1002/kpm.1577
14. Tapscott D. The digital economy: Promise and peril in the age of networked intelligence. 20th ed. New York: McGraw-Hill Education; 2014. 414 p.
15. Gilb T. Evolutionary development. *ACM SIGSOFT Software Engineering Notes*. 1981;6(2). DOI: 10.1145/1010865.1010868
16. Boehm B., Lane J., Koolmanojwong S., Turner R. The incremental commitment spiral model: Principles and practices for successful systems and software. Upper Saddle River, NJ: Addison-Wesley Professional; 2014. 332 p.
17. Adamskaya L. Methods of flexible personnel management — Agile. *Samoupravlenie*. 2018(4):26–30. (In Russ.).
18. Danilenko L.V. Agile principles and modern education. *Sakhalinskoe obrazovanie XXI vek*. 2019;(1):8–13. (In Russ.).
19. Demchenko M.V. Agile marketing management. *Marketingovye kommunikatsii*. 2016;(6):326–334. (In Russ.).
20. Akimenko S.A., Barlit D.S., Pavlov A. Yu. Using Agile methods in enterprise management. *NovaInfo.Ru*. 2018;1(87):88–92. (In Russ.).
21. Parkes A. Lean management genesis. *Management.* 2015;19(2):106–121. DOI: 10.1515/manment-2015–0015
22. Anshina M., Slavin B., White T. Digital transformation of business. Moscow: KnoRus; 2021. 272 p. (In Russ.).
23. Chesbrough H.W. Open innovation: The new imperative for creating and profiting from technology. Boston, MA: Harvard Business School Press; 2003. 227 p.
24. Green P.I., Jr., Finkel E.J., Fitzsimons G.M., Gino F. The energizing nature of work engagement: Toward a new need-based theory of work motivation. *Research in Organizational Behavior*. 2017;37:1–18. DOI: 10.1016/j.riob.2017.10.007
25. Slavin B.B. From computing information systems to human-oriented ones. *Sovremennye informatsionnye tekhnologii i IT-obrazovanie = Modern Information Technologies and IT-Education*. 2017;13(3):176–184. (In Russ.). DOI: 10.25559/SITITO.2017.3.632
26. Slavin B. Principles of development of human-oriented information systems in enterprises. In: Proc. 12th Central & Eastern European so-ware engineering conference in Russia (CEE-SECR'16). (Moscow, October 28–29, 2016). New York: Association for Computing Machinery; 2016:4. DOI: 10.1145/3022211.3022215

27. Gupta A. 5 Key trends from 2021's hype cycle for customer service and support technologies. Gartner. Sept. 28, 2021. URL: https://www.gartner.com/en/articles/5-key-trends-from-2021-s-hype-cycle-for-customer-service-and-support-technologies (accessed on on 05.10.2021).
28. Goleman D. Working with emotional intelligence. New York: Bantam Books; 2011. 400 p. (Russ. ed.: Goleman D. Emotsional'nyi intellekt v biznese. Moscow: Mann, Ivanov and Ferber; 2013. 512 p.).
29. Khlebnikova L.N., Rommel A.M. Emotional intelligence as an effective resource for increasing profitability of business in Russia. *Gumanitarnye, sotsial'no-ekonomicheskie i obshchestvennye nauki = Humanities, Social-Economic and Social Sciences*. 2019;(6):181–184. (In Russ.). DOI: 10.23672/SAE.2019.6.32963
30. Ukhanova Yu.V. Collective practices and potential for civic participation of local community (sociological research in Russian regions). *Problemy razvitiya territorii = Problems of Territory's Development*. 2021;25(1):88–107. (In Russ.). DOI: 10.15838/ptd.2021.1.111.5
31. Ukhanova Yu.V., Leon D., Schelwald R.S. Charity work of local community: Results of the sociological research in the Russian region. *Economic and Social Changes: Facts, Trends, Forecast*. 2021;14(1):169–185. DOI: 10.15838/esc.2021.1.73.12 (In Russ.: *Ekonomicheskie i sotsial'nye peremeny: fakty, tendentsii, prognoz*. 2021;14(1):169–185. DOI: 10.15838/esc.2021.1.73.12)
32. Slavin B. Modern expert networks. *Otkrytye sistemy. SUBD= The Open Systems Journal. DBMS*. 2014;(7):30–33. (In Russ.).
33. Panetta K. Gartner top 10 strategic predictions for 2021 and beyond. Gartner. Oct. 21, 2020. URL: https://www.gartner.com/smarterwithgartner/gartner-top-10-strategic-predictions-for-2021-and-beyond (accessed on on 05.10.2021).

ABOUT THE AUTHOR

Boris B. Slavin — Dr. Sci. (Econ.), Professor of the Department of Business Informatics, Financial University, Moscow, Russia
bbslavin@gmail.com
https://orcid.org/0000-0003-3465-0311

Conflicts of Interest Statement: The author has no conflicts of interest to declare.

The article was submitted on 05.07.2022; revised on 02.10.2022 and accepted for publication on 31.10.2022.
The author read and approved the final version of the manuscript.

ORIGINAL PAPER

DOI: 10.26794/2304-022X-2022-12-4-63-75
UDC 362.2(045)
JEL O15, H12

Financial and Economic Risks Management in Russian Health Care System

B.I. Trifonov
Plekhanov Russian University of Economics, Moscow, Russia

ABSTRACT

Nowadays, the society faces with financial and economic risks which play a special role in the diversity of risks. In the most general form, they affect the amount of available financial resources that can meet the current needs of the population and spread new living standards. The purpose of the study is to analyze the affection of financial and economic risks on social growth and to develop recommendations for creating a mechanism for managing them in the Russian health care system. For this goal achievement, the author has identified several tasks clarifying the approach to determining financial and economic risks in this paradigm, as well as identifying measures to change financing Russian health care. The methodological base: systemic; comparative analysis; synthesis; socio-economic and statistical methods of data analysis. The theoretical and practical significance of the study lies in an integrated system growth for managing financial and economic risks, which unites different economic entities, as well as in determining measures to change the financing mechanisms of the Russian health care system. The specialists can use the results obtained in subsequent work on the problems of risk management at the level of corporate organizations, state agencies, and society.

Keywords: society growth; risk management; financial crisis; economic crisis; health care system; state regulation; risk minimization; state and society; complex society risks

***For citation*: Trifonov B.I. Financial and economic risks management in Russian health care system. *Management sciences*. 2022;12(4):63-75. DOI: 10.26794/2304-022X-2022-12-4-63-75**

INTRODUCTION

Social development is an extremely complex phenomenon, the interest in the study of which in connection with the recent transformations in society is only increasing [1–3]. In its most general form, it is a consequence of the constant human desire to improve the conditions of existence through the formation of new knowledge, development of technology, availability of necessary resources and competition.

Modern society is organised in such a way that many of its processes are associated with instability and a constant accumulation of conflict-generating factors. Under these conditions, its development has a probabilistic nature: one or another achieved result concerning the change in people's living conditions may differ from what was planned (desired) earlier. There is therefore a need to develop new governance models that take into account the changes taking place in the world, focusing on the criteria of the well-being of society (rather than traditional macroeconomic) indicators [4].

Currently, most publications are devoted to risk management in business and public activities [5, 6], while the study of the problems related to the impact of various risks on social development, access to material benefits for different population groups under uncertainty is in its initial stage.

This paper pays special attention to the management of financial and economic risks in healthcare as one of the most important systems that ensure the population's resilience and its ability to sustainable development.

FINANCIAL AND ECONOMIC RISKS FROM THE PERSPECTIVE OF SOCIAL DEVELOPMENT

According to modern concepts, the improvement of forms and methods of creating material goods is considered to be the main component of social development [7]. It is economic progress that stimulates the transition from one state to another, more perfect, and thus triggers transformations in various spheres of human activity. The modern economy does not just create material conditions for people's life activity; it claims a decisive role in society [8, 9]. In this regard, with all the variety of risks, financial and economic risks occupy a special place.

The main reason for their emergence is the presence of uncertainty in economic relations (due to the openness of the economic system), the constant need to choose between alternative development options, the consequences of which cannot always be accurately determined. Some scientists also emphasize that the risks in the modern economy are comprehensive, many of them are unpredicTable in principle [10] and the reasons for their emergence can also be events not related to economic processes (for example, the COVID-19 pandemic) [11].

Financial and economic risks pose a threat to economic growth, affect large groups of the population, and thus have a significant impact on social development, i.e., they are Level 1 events,[1] in contrast to others which also play a prominent role, but are Level 2 events. Consequently, the practical importance of financial and economic risk analysis cannot be overemphasised and its management becomes a key skill [12].

Until recently, only economic aspects were considered as criteria for the degree of well-being of a society, but in recent decades it has become obvious that other factors reflecting the level of social development should also be taken into account [13]. With this in mind, let us define the latter as the continuous spread of new standards of material and human living conditions among the population. The former refers to the actual quantity and quality of goods and

[1] Here, first-level events are defined as those processes and phenomena that have the greatest impact on social development.

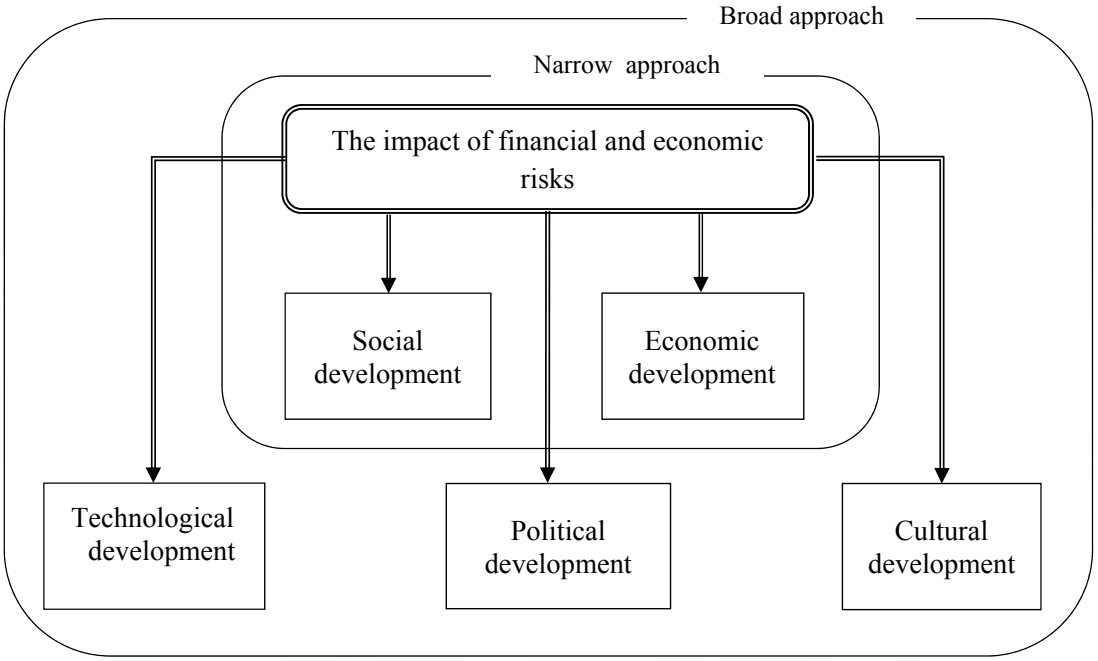


Fig. 1. **Approaches to the definition of financial and economic risks in terms of society development**

Source: developed by the author.

services available at a certain point in time, while the latter determines non-economic values shared by society: goals, beliefs, and behavioral attitudes, etc.

Two caveats need to be made here:

The first. Social development has to be seen in terms of both economics and the humanities. At the moment, there is no single universally accepted model to describe it. This is due to the specificity of the topic and the complexity of choosing approaches to the study of processes occurring in people's lives;

The second. It has been proved (including by Nobel Prize laureates) that the population does not always act rationally. Behavioral errors associated with a systematic discrepancy between a person's opinion about a certain task and the correct solution to it have a negative impact on many economic processes [14]. This leads to a population change itself, based on the personal priorities of each individual group rather than the overall objectives of society. The absence of "external" governance would lead to destabilization and inhibition of development. Today, the main subject of governance is the state. It protects the interests of different categories of the population, and it largely determines the speed of social development, part of which is a set of processes occurring in each of the spheres of human life and leading to their change.

Financial and economic risks actively influence these processes by predetermining objective conditions on which the "content" of these changes largely depends, and represent possible events associated with a change in the state of the economy towards its deterioration (the onset of crisis).

As a result, there is no balance between the number of financial resources actually allocated to meet people's needs and those people who are needed to do so.

A disruption of this equilibrium does not promote new standards of material and human living conditions among the population, nor does it ensure stability in the interrelationships

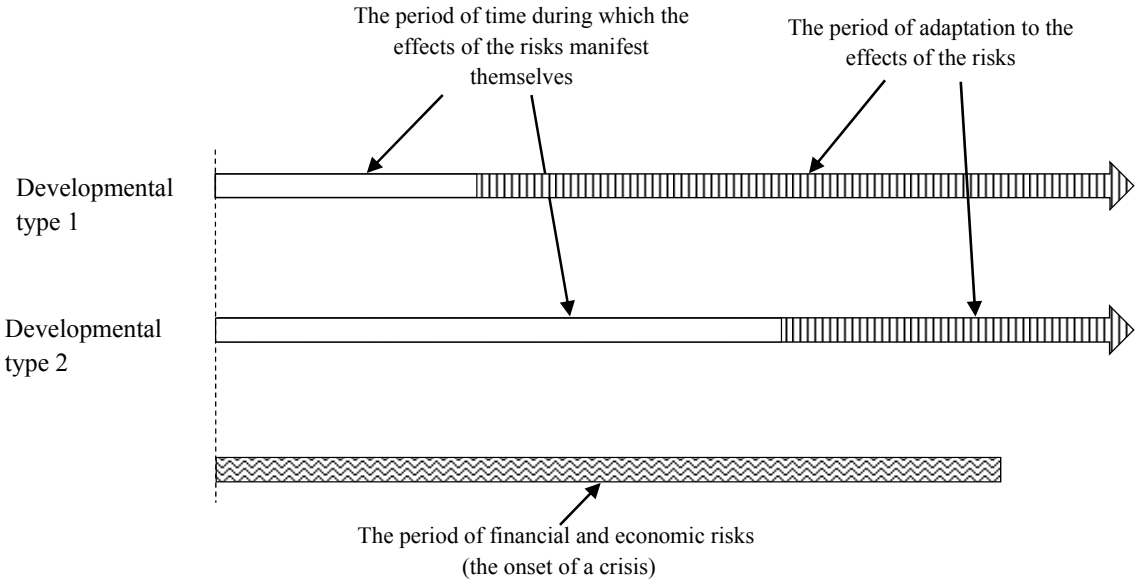


Fig. 2. **The impact of financial and economic risks on different types of society development**

Source: developed by the author.

between members of society. This is true of the health system from start to finish: the reduction in funding levels due to the realisation of risks results in health facilities not being able to fully meet the needs of the population for their services, which has a negative impact on people's health. Furthermore, one of the regularities of crises is their negative impact on the condition of those who are exposed to stress during this period [15].

We distinguish two approaches to defining financial and economic risks — narrow and broad (*Fig. 1*). In the first, the main focus is on studying the impact of risks only on changes in the standards of material living conditions, while in the second, the material humanitarian.

The narrow approach examines the relationship between these risks and economic and social development, taking into account their impact on economic processes, including the fulfilment by government and business of its obligations to the population. At the same time, it analyses what social costs are incurred by society and how this affects the development of human capital.

The broad approach studies the impact of risks on different spheres of human life (among which the economic, social, political, cultural, technological [16] are priorities), which is considered a difficult task to analyze.

KEY FEATURES OF THE IMPACT OF FINANCIAL AND ECONOMIC RISKS

Identifying and understanding the impact of financial and economic risks on societal development is the first step towards creating a system (mechanism) to manage them.

Time (as an economic category) becomes an important characteristic that determines this impact.

Development in every sphere of human life proceeds according to its own laws and at different rates. The economy, for example, is characterised by a high dynamism, which is reflected in the constant change of micro- and macroeconomic indicators. In contrast, the cultural system is characterised by constancy, and change takes place over a long period of time (17). The same processes can therefore

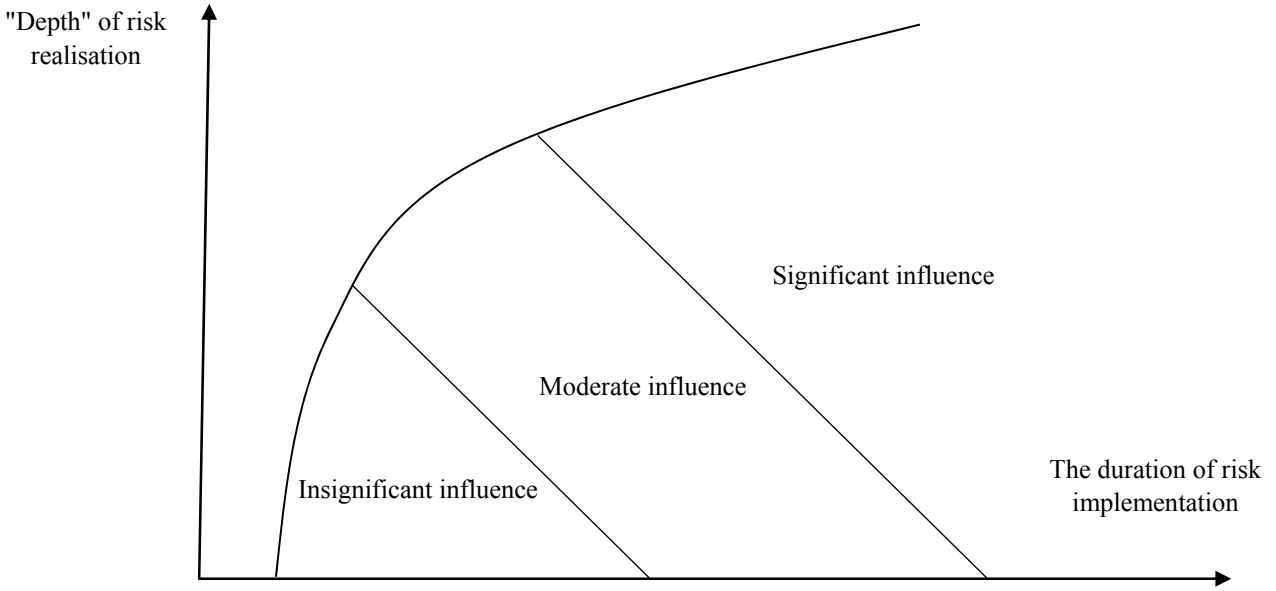


Fig. 3. **The impact degrees of financial and economic risks on society development**

Source: developed by the author.

appear chaotic or, conversely, consistent, and logical, depending on the scale of the time horizon.

The difference in the intensity of the processes involved means that for different types of societal development the time periods in which the effects of financial and economic risks manifest themselves and adapt to them do not coincide (*Fig. 2*). This is where the main danger lies: a reduction in financial resources at a certain time horizon can change the trajectory of this development not only in this period, but also in the future, much further away from the moment of risk realisation.

There are *different degrees* of impact of financial and economic risks on societal development. In case when the duration of their risk realisation is short-term, other things being equal, the negative effect may be negligible and, in some cases, non-existent at all. But as the duration of risks increases, the degree of their impact increases, and the extreme form is the onset of transformational processes, when the next phase of development is virtually unrelated to the previous one (i.e., there is a qualitative transformation).

Another important factor is the "depth" of risk realisation, reflected in the magnitude of the decline in output, the capitalisation of companies, as well as the level of capital outflows, etc.

Figure 3 shows the three conventional (conditional) degrees of impact of the realisation of financial and economic risks on societal development: insignificant, moderate, and significant. The horizontal axis corresponds to the duration of their impact, the vertical axis to the "depth" of their impact. The curved line defines the upper limit of the risk area under these variables (note that, in practice, in some cases it is difficult to draw a clear line).

There are *insurmounTable limitations* in assessing the impact of financial and economic risks on societal development — these are due to a combination of objective and subjective factors. Some of them can be fully or partially eliminated, while others are insurmounTable.

Most of the limitations are caused by internal contradictions and abstractness of the processes taking place in the society; among them there are those not sufficiently studied, as well as those that cannot be expressed numerically.

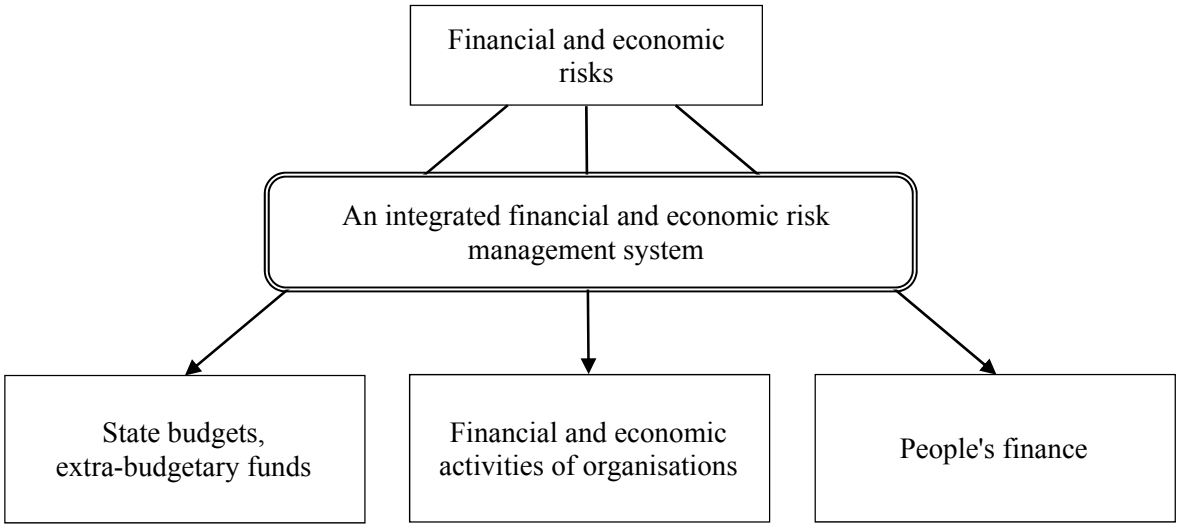


Fig. 4. **Integrated financial and economic risk management system**

Source: developed by the author.

In addition, elements of social development influence each other, and it is not always possible to establish an exact cause-and-effect relationship link between them.

Social stratification, territorial differentiation and uneven economic development are important constraints.

Difficulties in assessing the impact of risks also arise when only one research method is used. The resulting ambiguity in the interpretation of the results can lead to incorrect conclusions. Conducting work by different groups of people using several methods can significantly reduce the likelihood of these types of errors.

ESTABLISHING A COMPREHENSIVE FINANCIAL AND ECONOMIC RISK MANAGEMENT SYSTEM IS ONE OF THE KEY CHALLENGES OF THE FUTURE

Due to the highly integrated nature of the economic space, all the subjects of financial relations are exposed to financial and economic risks. And the successful implementation of risk management is only possible through the joint efforts of the state, corporate organisations, and the public, provided that a consensus is reached between them in determining which roles, tasks and functions each of them performs. Therefore, one of the promising areas is the creation of an integrated system that, by bringing together the various participants in financial relations and introducing new methods of risk management, can ensure long-term societal development (*Fig. 4*).

Its formation should take into account not only the features identified in the previous section, but also the specific impact of risks — separately on the state budgets at all levels, financial and economic activity of organisations, the finances of the population. The main objective of such a system should be not so much to guarantee risk avoidance, but rather to anticipate risks, assess possible consequences of their implementation, choose a strategy, methods, and opportunities to manage them both "from above" (from the position of state) and "from below" (from the position of different social groups and strata).

The classical provisions used in financial risk management by corporate entities cannot be fully applied here due to the different approaches to risk management *performance criteria*: there, they are expressed through

the assessment of the amount of possible loss (or potential loss of income), whereas in the integrated system they are expressed through the prism of the impact on the living conditions of the population. In addition, the task of financial risk management is to meet the recommendations and requirements set out in the regulations of regulators and financial authorities. The functioning of an integrated system is subject to continuous upgrading of existing risk management capabilities, including the development of formal guidance documents.

Let us also draw attention to the difference between public financial risk management and a comprehensive system of financial and economic risk management. In its most general form, the former is aimed at solving problems related to the full and timely implementation of the obligations undertaken by the authorities in relation to the population, business community and public institutions [18]. The integrated system is focused primarily on ensuring financial security of people's lives.

Its implementation will allow for a mutual distribution of responsibility for risk management between participants in financial relations (i.e., governance actors). It is important that it does not simply impose formal requirements on the latter, but encourages the state, corporate organisations, and the public to constantly modernise the existing management mechanisms [19].

The initial stage of establishing an integrated management system is to build a typology of financial and economic risks from the position of social development — their systematization into classes according to given criteria and the definition of the principles of identification (assessment).

The next step is to identify those who will carry out qualitative and quantitative risk analysis and functional division between individual structures of public administration apparatus (including regional and municipal authorities) and independent research teams. By providing assessments from different perspectives, the results will be more objective and less dependent on current political attitudes.

The last stage consists of developing and implementing measures to minimise the consequences of the realisation of financial and economic risks. Since the government, corporate entities and the public have different capabilities, three levels can be distinguished in the system. The first, which relates to the population, assumes that citizens actively use the risk management methods available to them, including insurance, accumulation (reservation), rather than being a passive participant in financial relations. The second level relates to corporate organisations, which through the use of various mechanisms can reduce employee losses associated with risk. The main (leading) role should belong to the state (third level). As the guarantor of social development stability, it is called upon to create favourable conditions for the continuous improvement of people's living standards by means of a complex system.

Given the multidimensional nature of societal processes, an integrated system cannot be a single entity. It is a set of measures aimed at reducing the impact of financial and economic risks in each specific area, e.g. in health care.

FINANCIAL AND ECONOMIC RISK MANAGEMENT (ON THE EXAMPLE OF HEALTH CARE)

The state of population's health (public health) is not only a key indicator of social development at the current moment, but is also of crucial importance for the future, being one of the factors of increasing competitiveness of the national economy and its innovative development. Therefore, the study of the impact of financial and economic risks on it is of particular interest in solving many practical problems.

Table 1

Expenses of the Russian budgetary system for health care in 2011–2020

Index	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
In current prices, RUB billion	1933	2283	2318	2533	2861	3124	2821	3316	3805	4964
In 2011 prices (per capita), thousand roubles	13.5	14.7	13.6	13.4	13.6	13.8	11.8	13.3	14.7	18.4
In 2011 prices (per capita), as% of the previous year	—	8.6	– 7.0	– 1.7	1.4	1.1	– 14.1	12.8	10.6	25.0

Source: calculated by the author based on Rosstat data URL: http://rosstat.gov.ru

One of the scientific methods consists in the analysis of the dynamics of health care financing and is based on the direct correlation between the level of per capita expenditure on this industry and people's health, confirmed by many quantitative studies [20]. And changes in the latter are directly or indirectly influenced by financial and economic risks, as financing depends on the state of the economy.

Let us determine which measures to reorganise the mechanism of public and private funds flow into the Russian healthcare system could be part of a comprehensive risk management system. To do so, it is necessary to analyse the dynamics of spending on this sphere, taking into account the risks realized during the crises in 2008–2010 and 2014–2015.

In the period of economic growth, the government increased the amount of money allocated to medical care each year. For example, according to the data of the Ministry of Health of the Russian Federation, from 2004 to 2007 the volume of financing of the Programme of state guarantees of free medical assistance to citizens (hereinafter — the Programme)[2] increased annually by 10% per capita (in 2003 prices, adjusted for inflation for medical services). In 2008 the increase was still 14%. In 2009, due to the crisis it was only 2%, and in 2010 it decreased by 3%, after which there was no increase since 2011.[3]

As the economy recovered, the state increased the number of financial resources allocated to healthcare. As a result, in 2012 the aggregate expenditures of the RF budget system on this sphere in constant prices (2011–100%) increased by 8.6% (*tab*. 1). However, the following year, funding from the federal and consolidated budgets of the Russian Federation in constant prices decreased, which led to an overall decrease in healthcare expenditures by 7.0%. This trend continued in the crisis year of 2014 (a decrease of 1.7% in constant prices), followed by an increase (of 1.4 and 1.1% in 2015 and 2016, respectively). In other words, from 2011 to 2018, public spending on health care decreased by 1.5% in constant prices. If we compare the

[2] The Programme defines the scope of medical care financed from public funds. This programme was first approved by Act No. 1499–1 of 28.06.1991 "On medical insurance for citizens in the Russian Federation" (no longer in force).

[3] On the implementation of the Programme of State Guarantees of Free Medical Care for the Citizens of the Russian Federation in 2001–2011: a report. Ministry of Health of the Russian Federation, 2002–2012. URL: https://minzdrav.gov.ru

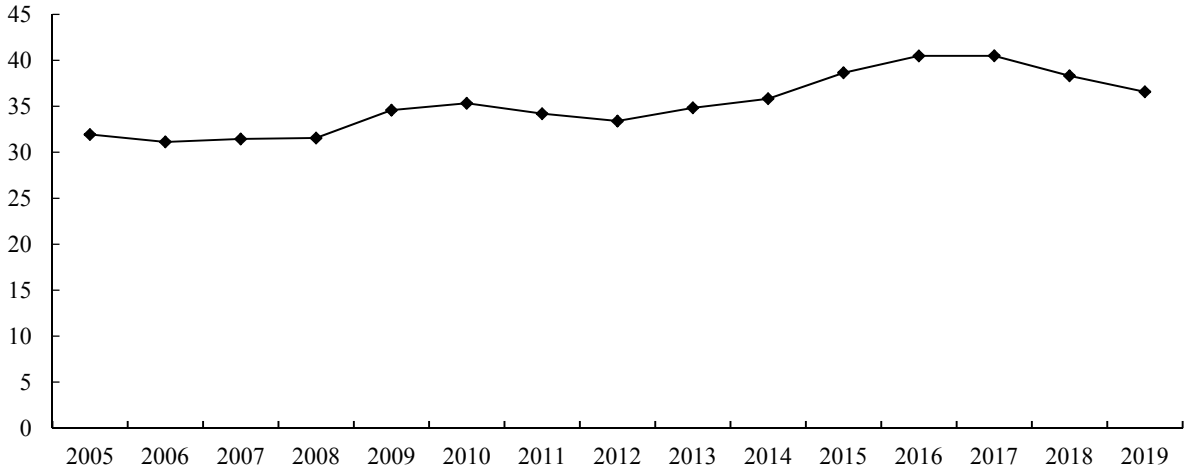


Fig. 5. **The share of personal expenses in the structure of total health care expenditures in Russia, %**

Source: World Health Organization URL: http:// https://apps.who.int/nha/database/ViewData/Indicators

financing of the sector in 2019 with previous periods, *Table 1* shows that in constant prices it only returned to the level of 2012.

Therefore, it can be said that when financial and economic risks are realised, public expenditure on health care (all other things being equal) starts to fall almost immediately. One of the reasons is the use of only a pay-as-you-go (allocation) funding mechanism, with all funds received being used to meet current consumption. The lack of other instruments to complement the pay-as-you-go (allocation) system increases the dependence of the sector in question on the current state of the national economy.

The dramatic increase in health care funding that occurred in 2020 may create the illusion that things have started to improve in the long term. The COVID-19 pandemic has brought about changes in various areas of people's lives. In many regions, the problem of poor social infrastructure (including inadequate hospital beds and staffing shortages) has worsened. A massive national response to the pandemic forced the government to allocate additional funds from the federal budget, but these were aimed at preventing the spread of the virus rather than addressing the previous lack of financial resources in the industry.

Against the background of low levels of budgeting, private spending on health care has increased. Between 2005 and 2017, the share of personal spending by citizens in relation to total expenditure in this area gradually increased (*Fig. 5*). It reached its highest value (40%) in 2016–2017, dropping to 38% and 37% in 2018 and 2019, respectively, in the following years (due to increased funding from the state). There has also been an increase in the expenditure pattern of the population on health services: while this level averaged 2.6% in the period 2005–2012, it increased to 3.2% in 2013–2019.[4]

At the same time, despite the significant role of medical care received by Russian residents from extra-budgetary (corporate and private) funds, for the state the private healthcare market is a regular commercial activity rather than an element of the national healthcare system, which not only reduces efficiency from the use of available financial resources, but also creates limitations in the implementation of risk management procedures.

[4] Calculated by the author on the basis of data from the Russian Economic and Health Survey of the National Research University Higher School of Economics. URL: http://hse.ru/rlms

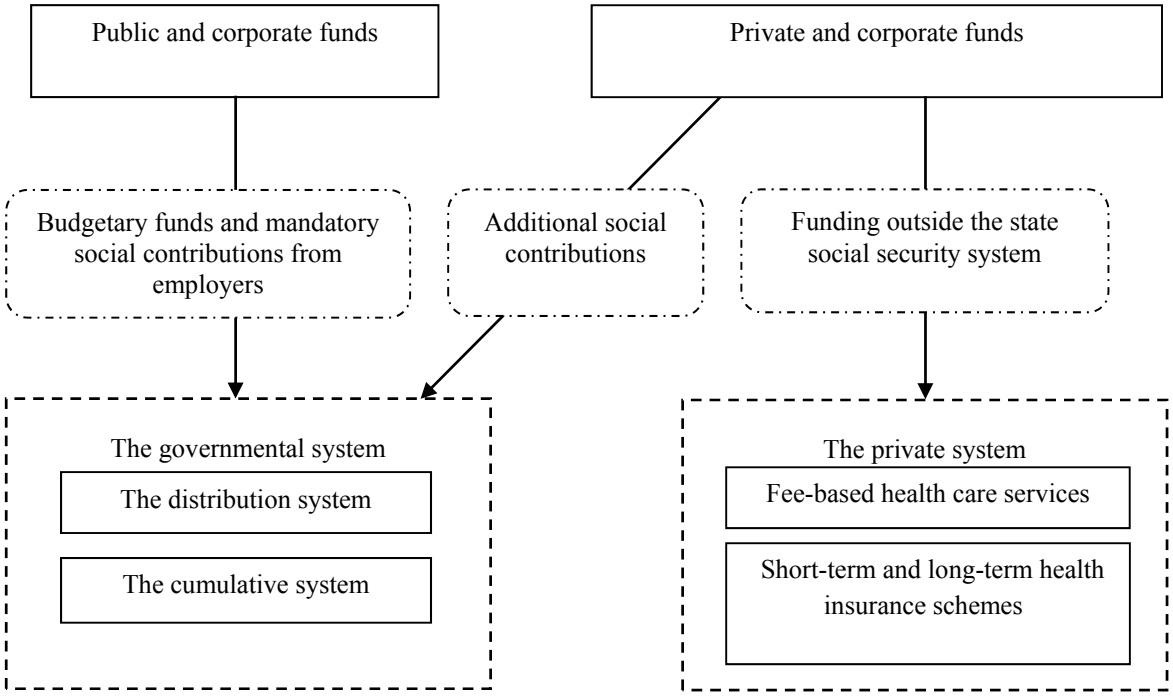


Fig. 6. **Fin Financial flows in Russian health care system**

Source: developed by the author.

It follows from the above that the priority areas for changing the financing of the Russian healthcare system are:

• The introduction of a cumulative mechanism which has the advantage of increasing financial resilience to negative changes in the economy in the short and medium term through the accumulation of finances;

• Defining, at the legislative level, the role of private and collective funds in financing the sector. This will ensure three levels of financial and economic risk management. In addition, the introduction of additional social contributions to the mandatory health insurance system is required in order to increase the amount of money in the public health system and to equalise the opportunities for the population to receive modern medical care.

Figure 6 illustrates one of the options for financial flows in the Russian healthcare system. In the state segment, in addition to the existing distributive mechanism of financing, a cumulative system should function, in which a part of budgetary funds and obligatory social contributions of employers are accumulated. Its task is to generate resources that can be used in accordance with the established acts, including the mitigation of financial and economic risks. The Federal Compulsory Medical Insurance Fund, for which these functions are basic, is responsible for allocating resources and controlling the efficiency of their use. It is proposed to compensate for the amount of funds allocated to the funded system and thus "dropping out" of the current financing of medical services through additional social contributions, which should be paid by the insured (whose income exceeds a certain level) or by their employer as part of the social package in the Compulsory Medical Insurance system. The above-mentioned persons have the right to refuse the additional payments, but in this case the state's social guarantees are reduced.

Paid (fee-based) medical services and voluntary health insurance are financed from

Table 2

Required changes in health system financing

Level	Changes
Level 1 (population)	• Development of a long-term healthcare insurance system; • Payment of additional social contributions
Level 2 (corporate entities)	• Extension of the social package for employees (payment of contributions: supplementary social security and long-term health insurance)
Level 3 (the state)	• Development of the state fully funded system; • Changes in the scope of social guarantees provided by the state

Source: developed by the author.

private and corporate funds (outside the system of state social guarantees). What is new is the creation and development of long-term health insurance (complementary to the public health care system), which assumes that during working life the insured person has savings in a personal account, which after retirement age are used to cover the costs associated with the provision of medical care privately. The level of contributions is agreed upon individually and depends on the amount of the insurance scheme. Like private pensions, long-term care insurance has the potential to become an important part of corporate social programmes. At the initial stage, it can be implemented on the basis of a specialised fund established under the Federal Compulsory Medical Insurance Fund, but in the future, it cannot be ruled out to be implemented within other organisations, including commercial ones.

A long-term health insurance system would reduce the dependence of funding of medical care for the population of retirement age on negative changes in the economy. Combined cumulative products combining voluntary pension and health insurance could also become a new form of social protection for this category of citizens.

These changes will modernise the distribution of funds at each of the three levels of the health-care system identified in the previous section (*Table 2*). Their introduction will not only reduce the impact of risks on financing the sector but will also make people more responsible for their own health and increase organisations' focus on the health of their employees.

It is worth noting that one of the main constraints to the development of an accumulative mechanism for financing medical care in the public and private systems is the lack of trust in them on the part of premium payers. The large time lag between paying and using the accumulated funds does not create a clear understanding of what the latter are formed for. Other obstacles are the possibility of "absorption" of cash flows by financial markets and the existence of a risk of depreciation of savings.

The implementation of instruments such as contributory accumulative financing, as well as the integration of public and private funds, and the differentiation of public social guarantees, would improve the financial sustainability of the health system and the manageability of cash flows in this area.

CONCLUSIONS

What new governance mechanisms aimed at reducing the impact of financial and economic risks on social processes can be introduced in the future is highly debaTable. This requires

not only the consideration of risk management procedures from a new angle, but also the creation of a dedicated infrastructure.

As a result of this study, two methodological approaches to the definition of financial and economic risks from the perspective of societal development have been proposed, which can be a starting point for further work in this direction.

The presented analysis of the specifics of risk impact has shown that the problem of risk management is large-scale and lies in the historical, economic and social planes. These features are one of the key reasons why the classical financial risk management provisions used in corporate structures cannot be applied in this case.

The integrated system proposed by the author, which brings together various participants in financial relations, is one of the promising directions in managing risks in the field of public development. The developed recommendations on changing the mechanisms of financing Russian health care can be seen as part of this system, aimed at reducing the impact of risks in public health protection, which requires changes in legislation (including the country's national security strategy), as well as the creation of conditions that promote the role of all subjects of financial relations in the process of risk management.

The prospects for implementing such a system are ambiguous, but the changes associated primarily with economic modernisation and the realisation of the importance of developing new innovative approaches in the regulation of many social processes are creating positive preconditions for its formation in the future. It should be noted that its effectiveness will largely depend on whether the government succeeds in building a proper dialogue with corporate organisations and the population.

REFERENCES

1. Polterovich V.M. Towards a general theory of socio-economic development. Part 2. Evolution of coordination mechanisms. *Voprosy ekonomiki*. 2018;(12):77–102. (In Russ.). DOI: 10.32609/0042–8736–2018–12–77–102
2. Muringani J., Fitjar R.D., Rodríguez-Pose A. Social capital and economic growth in the regions of Europe. *Environment and Planning A: Economy and Space*. 2021;53(6):1412–1434. DOI: 10.1177/0308518X211000059
3. Salamon L.M., Sokolowski S.W., Haddock M.A. Explaining civil society development: A social origins approach. Baltimore, MD: Johns Hopkins University Press; 2017. 321 p.
4. Avdyskiy V.I., Bezdenezhnykh V.M. Problems and trends in the development of management of complex socio-economic systems, taking into account the risk-based approach. *Razvitie i bezopasnost'*. 2021;(2):42–54. (In Russ.). DOI: 10.46960/2713–2633_2021_2_42
5. Eriashvili N.D., Groshev I.V., Guseva S.G. Entrepreneurial risks management in the system of economic security. *Vestnik ekonomicheskoi bezopasnosti = Vestnik of Economic Security*. 2018;(2): 374–379. (In Russ.).
6. Postula M. Risk analysis as an instrument of public management. In: Raczkowski K., ed. Risk management in public administration. Cham: Palgrave Macmillan; 2017:93–113. DOI: 10.1007/978–3–319–30877–7_4
7. Kukushkin S.N. Economics of information society. Moscow: Impuls; 2018. 231 p. (In Russ.).
8. Lima de Miranda K., Snower D.J. Recoupling economic and social prosperity. IZA Discussion Paper. 2020;(12998). URL: https://docs.iza.org/dp12998.pdf
9. Bodrunov C.D. Global transformation of modern society and national development goals of Russia. *Nauchnye trudy Vol'nogo ekonomicheskogo obshchestva Rossii = Scientific Works of the Free Economic Society of Russia*. 2021;230(4):54–65. (In Russ.). DOI: 10.38197/2072–2060–2021–230–4–54–65
10. Solodovnikov S. Yu. Risk economy. *Ekonomicheskaya nauka segodnya*. 2018;(8):16–55. (In Russ.).

11. Beck T. Finance in the times of COVID-19: What next? In: Baldwin R., Weder di Mauro B., eds. Mitigating the COVID economic crisis: Act fast and do whatever it takes. London: CEPR Press; 2020:179–184. URL: https://cepr.org/system/files/publication-files/60118-mitigating_the_covid_economic_crisis_act_fast_and_do_whatever_it_takes.pdf
12. Beazley I. Financial management in government: insights on skills development. *OECD Journal on Budgeting.* 2019;18(3):81–124. DOI: 10.1787/52185bf3-en
13. Mikhalska-Zyla A., Stolbov V. P. The interdependence of quality of life and resources of social capital. *Sotsiologicheskie issledovaniya = Sociological Research*. 2018;(7):71–80. (In Russ.). DOI: 10.31857/S 013216250000187–8
14. Gigerenzer G. The bias bias in behavioral economics. *Review of Behavioral Economics*. 2018;5(3–4):303–336. DOI: 10.1561/105.00000092
15. Santalova M. S., Borshchova A. V., Ermilina D. A., Soklakova I. V. Anti-crisis management of socio-economic systems. 4th ed. Moscow: Dashkov & Co.; 2022. 236 p. (In Russ.).
16. Smyshlyaev V. A. The process of social development as an object of state regulation: Definitional, political-philosophical and innovative aspects. *Innovatsionnaya ekonomika: perspektivy razvitiya i sovershenstvovaniya = Innovation Economy: Prospects for Development and Improvement*. 2016;(1):242–247. (In Russ.).
17. Kleer J. Cultural system and social development. *Obshchestvennye nauki i sovremennost = Social Sciences and Contemporary World*. 2018;(5):18–30. (In Russ.). DOI: 10.31857/S 086904990000382–2
18. Ivanov O. B., Buchvald E. M. Risk-based Management in the system of public power in Russia. *ETAP: ekonomicheskaya teoriya, analiz, praktika = ETAP: Economic theory, analysis, and practice*. 2021;(4):25–42. DOI: 10.24412/2071–6435–2021–4–25–42. (In Russ.).
19. Carlsson-Wall M., Kraus K., Meidell A., Tran P. Managing risk in the public sector — the interaction between vernacular and formal risk management systems. *Financial Accountability & Management.* 2019;35(1):3–19. DOI: 10.1111/faam.12179
20. Ulumbekova G. E., Ginoyan A. B., Chaban E. A. Quantitative analysis of the factors influencing the state of health of the population in the Russian Federation. *Meditsinskoe obrazovanie i professional'noe razvitie = Medical Education and Professional Development.* 2016;(2):107–120. (In Russ.).

ABOUT THE AUTHOR

Boris I. Trifonov — Cand. Sci. (Econ.), external lecturer of the Department of Global Financial Markets and Financial Technologies, Plekhanov Russian University of Economics, Moscow, Russia
https://orcid.org/0000-0001-7985-6052
trifonov.b@gmail.com

Conflicts of Interest Statement: The author has no conflicts of interest to declare.

The article was submitted on 19.07.2022; revised on 24.10.2022 and accepted for publication on 25.11.2022. The author read and approved the final version of the manuscript.

ORIGINAL PAPER

DOI: 10.26794/2304-022X-2022-12-4-76-88
UDC 336.225(045)
JEL E26

Risk Management at the Informal Economy Cutback (The Example of the Republic of Uzbekistan)

M.R. Pinskaya, S.D. Shatalov, K.A. Ponomareva
Financial Research Institute of the Ministry of the Finance of Russian Federation, Moscow, Russia

ABSTRACT

The paper analyzes ways of the informal economy cutback in the Republic of Uzbekistan, used in the tax sphere. The purpose of the study is to summarize the tax measures to solve this problem. During past few years, there have been taken certain steps in this direction, such as concessions for small businesses in catering, reducing the turnover tax rate in the real estate business, holding large-circulation "check" lotteries with valuable prizes, bringing construction industry workers into the legal field, digitalization of tax administration. According to the authors, the proposed tools correspond both to the practices characteristic of foreign experience and to the conditions peculiarities for making business in Uzbekistan. Also, the authors identified some directions for improving the state tax policy in counteracting the spread of the informal economy: focusing on reducing cash turnover through the use of tax deductions for personal income tax and VAT refunds on purchases; the overall tax culture development; digitalization of the tax reporting procedure; improving a legal status the regulation of the self-employed citizens; initiation of a single tax account mechanism. The scientific novelty lies in the research methodology. Based on a comparative legal analysis, the experience of various countries is used to illustrate the features of tax measures applied in practice to reduce the informal economy. The authors assume the theoretical results of the work will embody in proposals for improving the national tax legislation and will improve the Russian economic and legal doctrine, as well as the level of legal research within the EAEU and the CIS.

Keywords: taxation; informal economy; CIS; foreign experience; Republic of Uzbekistan; risks; tax regulation; tax policy; tax administration

For citation: **Pinskaya M.R., Shatalov S.D., Ponomareva K.A. Risk management at the informal economy cutback (the example of the Republic of Uzbekistan).** ***Management sciences.*** **2022;12(4):76-88. DOI: 10.26794/2304-022X-2022-12-4-76-88**

INTRODUCTION

The informal economy has traditionally been defined as the performance of legal economic transactions without declaring them in the manner prescribed by tax, labour or other legislation. It is also defined in the literature as[1] [1, 2]:

- a field of human activity aimed at obtaining benefits, the main regulation of which takes place through dominant informal norms;
- all economic activity, for various reasons (non-monetary turnover, high taxes, legal prohibitions, etc.) not accounted for by official statistics and not included in GNP;
- a set of economic activities that are completely or partially not subject to state regulation, not supported by formal contracts and not captured by statistical and fiscal accounting.

Employment in the informal sector poses a number of socio-economic problems: due to its low productivity it holds back the economic growth of the state, representing an irrational diversion of resources [4, p. 64].

The problems of the informal economy have been widely studied in the foreign literature [5–8]. The negative and sometimes even destructive effects it has on many areas of society are far-reaching. Of particular importance are those related to investment, capital accumulation, labour force and economic growth.

In terms of fiscal measures to combat these adverse effects, the authors show a clear negative correlation between the volume of payments, including electronic payments, and the size of the informal economy. Approaches used by states to achieve better control over cash transactions have also been considered [5] — emphasising that many new (and sometimes innovative) methods developed to support the formalisation of such activities will have little impact on the shadow economy if applied in isolation. A successful taxation strategy requires a holistic management approach in which traditional tax monitoring and law enforcement tools play a key role [5, 6].

The reasons for the development of hidden employment are well known, and the financial aspect remains decisive. Above all, it is a matter of absolute necessity (or desire) to increase one's resources or reduce one's costs. The objective pursued is to reduce the direct (wages, social contributions) or indirect costs (social or environmental regulations) associated with the intention to withdraw from a legal obligation. In addition, the emergence and development of shadow schemes are explained by such macroeconomic factors as the economic situation, the level of unemployment and the level of tax burden [9, p. 27].

Many international organizations are concerned about the problems of the informal economy. As noted by the International Labour Office, unregistered and unregulated enterprises often do not withhold deductions from wages as tax agents and do not pay insurance contributions, which deprives their employees of social protection and leads to their unfair competition with other organisations.[2]

Informal work is essentially synonymous (though not entirely adequate) with poverty and vulnerability. Although certain activities provide income and wealth, most informal economy workers work in

[1] Popov A. I. Economic theory. Textbook for Higher Education Institutions. 4th edition. St. Petersburg: Peter; 2006. 544 p.

[2] International Labour Office. "Transition from the informal to the formal economy". Report V (I) URL: https://www.ilo.org/wcmsp5/groups/public/—-ed_norm/—-relconf/documents/meetingdocument/wcms_218371.pdf

precarious and hazardous conditions and are illiterate, poorly qualified and lack training opportunities; their income is less predicTable and less regular and they earn less than workers in the formal economy, they have to work for longer hours; they do not bargain collectively, have no representative rights and are often hired on uncertain or hidden terms; they are more financially and physically vulnerable, as they are excluded or effectively outside the scope of social security systems and occupational health and safety, maternity protection and other labour law provisions.[3]

The conclusions of the International Labour Office in 2002 note that "although there is no universal, precise or accepted description or definition of the term 'informal economy', there is a common understanding that it refers to a wide variety of conditions in which workers, businesses and entrepreneurs find themselves, but which are characterised by certain characteristics. They face particular difficulties and problems, the intensity of which may vary according to national, rural or urban conditions". Measures to improve productivity levels include modernizing the institutional framework of small and medium-sized enterprises (SMEs), increasing their access to financial markets, and assisting them in technological development. For example, laws in the Dominican Republic, Nicaragua, Peru aim to create an enabling, stimulating, and competitive environment for SMEs; these countries provide incentives for women, older workers, persons with disabilities and youth to enter the workforce.[4]

A. Portes and S. Sassen-Koob put forward three points about the informal sector:

1) these activities are essentially transitory, a consequence of the lack of penetration of modern capitalism in underdeveloped regions and thus destined to disappear with the success of industrialisation;

2) it is assumed that the principal reason for the persistence of the informal sector is the availability of surplus labour force;

3) the informal sector is mostly characteristic of peripheral economies, being essentially another expression of their underdevelopment [10].

The successes of the transition implementation to formal activities are related to the presence of favourable macroeconomic, social, legal, and political conditions. They are not stand-alone projects but an integral part of national development strategies. A new outlook allows for a change in the policy and regulatory framework for SMEs as well as labour and employment conditions.

In terms of taxation issues, two main types of informal activity can be distinguished:

1) the activities of unregistered enterprises and self-employed working entirely outside the formal economy (unregistered employment);

2) the operation of companies registered in the formal sector that deliberately underreport the scale of their activities (misreporting) [11].

While the former completely evade taxes and usually do not comply with other mandatory legal requirements, such as wages or working conditions, the latter may (especially in cash transactions) not report only part of their profits or revenues, and

[3] International Labour Office. "Transition from the informal to the formal economy". Report V (I), п. 3. URL: https://www.ilo.org/wcmsp5/groups/public/—-ed_norm/—-relconf/documents/meetingdocument/wcms_218371.pdf

[4] International Labour Organization. The informal economy in Africa: Promoting transition to formality: Challenges and strategies. URL: https://www.ilo.org/wcmsp5/groups/public/—-ed_emp/—-emp_policy/documents/publication/wcms_127814.pdf

conceal information regarding salaries in order to reduce their taxes and contributions [12, p. 48].

Let us consider these types of informal activity and directions of its reduction using the example of the Republic of Uzbekistan as a post-Soviet country that has common features with the Russian Federation.

GENERAL CHARACTERISTICS OF TAX MEASURES TO COMBAT THE INFORMAL ECONOMY IN UZBEKISTAN

The informal economy is a significant socio-economic phenomenon for Uzbekistan. As of 2020, it was estimated at 245 trillion som, equivalent to almost half the national GDP.[5] The country ranks first among Central Asian countries on this indicator.[6] "The shadow" economic turnover is particularly prevalent in the sectors of trade, catering, accommodation services, road transport, etc.[7] Undoubtedly, the problems of informal economy are typical for many post-Soviet countries [13–16]. Thus, it originated and spread in Belarus in the field of legal economy in such areas as production of consumer goods, agriculture, services, construction and industry [17, p. 55]. In Kyrgyzstan, the share of the non-observed (hidden and informal) economy in the gross domestic product is also high and amounted to 23.2% in 2014. According to the National Statistical Committee of the Kyrgyz Republic, its volume, as estimated from the production side, increased from 92.8 billion KGS in 2014 to 102.3 billion KGS in 2015. Its share in GDP has also increased, from 23.2 to 23.8%, and compared to 1995, by 17 times [18, p. 108].

Informal employment in Uzbekistan has long been out of sight and not seriously considered. Only after the adoption of the Strategy of Action on the Five Priority Development Areas of the Republic of Uzbekistan for 2017–2021,[8] fundamental reforms in this area began [19, p. 78].

An important step towards eliminating the negative consequences of the spread of the informal economy was the presidential decree "On organisational measures to reduce the shadow economy and increase the effectiveness of the tax authorities". The document provides for the following measures:

- the possibility of SMEs engaged in catering temporarily excluding payments from individuals from taxable income;
- reduction of the turnover tax rate for entities engaged in real estate activities to 13%;
- monthly reporting by construction organisations concerning employees hired without a contract (indicating the amounts paid);
- possibility of purchase of goods (services) by entities via corporate cards without a contract, subject to receipt of electronic invoices (online receipts);
- notification of the Business Ombudsman under the President of Uzbekistan on the initiation of tax audits and on-site inspections;
- conducting "receipt" lotteries in all regions of Uzbekistan in 2020;
- equipping tax authorities with server equipment and software in conjunction with a reduction in the number of employees;

[5] Uzbekistan's shadow economy is estimated to be worth 245 trillion soums. Uz24 (online). 29.10.2020. URL: https://uz24.uz/ru/articles/tenevaya-ekonomika (accessed on: 20.06.2022).

[6] Uzbekistan has the biggest shadow economy in Central Asia. Radio Ozodi. URL: https://rus.ozodi.org/a/uzbekistan-zanimaet-pervoe-mesto-po-tenevoy-ekonomike-v-tsentralnoy-azii/31335526.html (accessed on: 20.06.2022).

[7] How the Finance Ministry proposes to reduce the shadow economy. Gazeta.UZ (online). 15.10.2020. URL: https://www.gazeta.uz/ru/2020/10/15/shadow-economy/ (accessed on: 20.06.2022).

[8] Approved by Presidential Decree No. PD-4947 of 07.02.2017. URL: https://lex.uz/docs/3107042#3109624 (accessed on: 20.06.2022).

• Uzbekistan's accession to the OECD automated tax information exchange.[9]

The practice of introducing such measures is consistent with foreign experience. For example, a lottery with the possibility of winning valuable prizes (including cars) has led to a significant increase in the number of receipts and in the number of entities using virtual cash registers (VCs) in their economic activities. Due to the identified effectiveness, this tool is expected to be used on a regular basis.[10]

Improving the taxation of construction companies is also strategic. Despite the rapid growth of the industry, as of 2022, half of its enterprises have only one employee, which clearly indicates the presence of labour tax evasion schemes.[11] Thus, strengthening the control and administrative function of the fiscal authorities will bring employees in the construction industry into the legal field, which will also increase competition in this area and eliminate distortions in the business environment between good taxpayers and tax-evading organisations.

Moreover, a significant transformation of Uzbekistan's tax system can be expected in the medium term. In particular, in 2022 the President announced the need to reduce the tax burden on businesses to 25% (from the current 28%), the VAT rate reduction to 12% (starting from 2023), and to combine land and property taxes.[12] In addition to economic support to entrepreneurs in the post-pandemic period due to COVID, these measures will ensure the stability of tax revenues.

It should be stressed that Uzbekistan is also an active participant in the labelling programme under the auspices of the Russian Centre for Development of Advanced Technologies (CDAP). Experts have already noted that digital control of cigarette sales has led to a 20% increase in excise duties; as a result of such measures, two alcoholic beverages have been taken out of the "shadows", while imports have grown by 50%. In this regard, based on the peculiarities of the Uzbek economy, further expansion of the labelling system for gas-fueled equipment and vegeTable oils is planned.[13]

DIRECTIONS FOR IMPROVING UZBEKISTAN'S TAX POLICY TO COUNTERACT THE INFORMAL ECONOMY

Let us consider promising directions for tax policy development in terms of counteracting the informal economy, in particular a number of measures that are not sufficiently reflected in it (see *Table*).

Let's look at the Table data in more detail.

IMPROVED INFORMATION EXCHANGE BETWEEN TAX AUTHORITIES AND "THIRD" PARTIES

In the first instance, this could involve a closer exchange of financial information between the "third" parties and tax authorities. Such initiatives have already been discussed

[9] OECD — Organisation for Economic Co-operation and Development — An international economic organisation of developed countries that recognises the principles of representative democracy and free market economies.

[10] State Tax Committee — on the economic effect of receipt games. Gazeta.UZ (online). 04.01.2021. URL: https://www.gazeta.uz/ru/2021/01/04/check-games/ (accessed on: 20.06.2022).

[11] How real estate developers in Uzbekistan evade paying taxes. State Tax Committee reveals typical schemes Podrobno.UZ (online). 23.06.2022. URL: https://www.podrobno.uz/cat/proisshestviya/kak-zastroyshchiki-v-uzbekistane-uklonyayutsya-ot-uplaty-nalogov-v-gnk-rasskazali-o-tipovykh-skhemakh/ (accessed on: 20.06.2022).

[12] Presidential Decree of the Republic of Uzbekistan "On the New Uzbekistan Development Strategy for 2022–2026". Lex UZ. URL: https://lex.uz/ru/docs/5841077 (accessed on: 20.06.2022).

[13] How Uzbekistan has benefited from digital labelling of goods. Sputnik Uzbekistan (online). 18.06.2022. URL: https://uz.sputniknews.ru/20220618/kakuyu-polzu-prinesla-uzbekistanu-tsifrovaya-markirovka-tovarov-25437130.html (accessed on: 20.06.2022).

Table

Perspective direction for the tax policy development to counteract the informal economy

Direction	Comment
Improved information exchange between tax authorities and "third" parties	Consistent with international best practices
Improving measures aimed at discouraging the use of cash by the population	Development of personal income tax deductions or a VAT refund mechanism on purchases is appropriate
General development of taxpayers' tax culture	Eliminating the conflict between the interests of honest taxpayers and informal business entities when filing complaints
Developing the use of digital technologies	
Submission of tax returns declarations	Assumes the additional use of technical means in calculating the tax liabilities of persons
Improving taxation of self-employed citizens	Improving the taxation mechanism for taxi drivers, including those operating through Internet platforms
Introduction of a single taxpayer account mechanism	Eliminates errors in tax payments and reduces the cost of fulfilling tax obligations
Interactive display of purchases by business entities	Can increase taxpayers' tax culture (engagement) and reduce manifestations of 'fiscal illusion'
Developing tax relations between levels of government	Assumes the transfer of some taxation powers to the local level

Source: compiled by the authors.

in professional expert forums in Uzbekistan, in particular, the launch of inter-agency automatic exchange of bank account data (subject to electronic request), as well as real-time monitoring of the movement of funds and cash-flow on plastic cards of the citizens (if the legally established criteria are met) were the subjects of discussion.[14]

Such measures are generally in line with best international practice. However, the decision to implement them should be based on whether the information obtained can best be used in the state's fiscal function. Such instruments should be narrowly focused, based, for example, on the identification of a typical "profile" of tax evaders. Otherwise, such practice can lead to increased administrative burden on taxpayers as well as pressure on businesses by regulatory authorities.

IMPROVING MEASURES AIMED AT DISCOURAGING THE USE OF CASH BY THE POPULATION

As of today, the informal economy is predominantly cash-based. Therefore, it is important to make it more attractive for taxpayers to use electronic means of payment as compared to their "paper" counterparts.

[14] State Tax Committee: Card turnover project will affect 500–700 people Gazeta.UZ (online). 11.04.2020. URL: https://www.gazeta.uz/ru/2020/04/11/turnover-cards/ (accessed on: 20.06.2022).

Such an approach is widely represented in the practice of foreign countries. For example, in the Republic of Korea, taxpayers are allowed to deduct from their income tax return a percentage of the amount of their purchases paid for with credit or debit cards. It is argued that this has led to an increase in the number of electronic transactions [7].

A number of countries have imposed restrictions on cash payments. For example, in Turkey, payments over 8,000 liras (and any rentals over 500 liras) must be made through the banking system or post offices.[15]

Thus, the development of tax measures aimed at discouraging Uzbek residents from using cash can be seen as a promising direction. The introduction of any separate taxes (e.g., on cash withdrawals or withholding tax) on such transactions may be redundant. At the same time, starting from 1st January 2022, taxpayers who register purchases in the Soliq app[16] will be entitled to claim a taxpayer's bank card cashback of 1% of the amount of purchases (except for some types of transactions, such as purchases of railway tickets, utilities, communication services, etc.).[17]

GENERAL DEVELOPMENT OF TAXPAYERS' TAX CULTURE

The tax system and tax culture of a country are interconnected and interdependent. When establishing taxes and changing their elements, the level of tax culture of society and individuals should be taken into account [20, p. 28].

The areas of work to improve the level of tax culture include: launching education programmes for taxpayers, including the recognition and encouragement of those who are "bona fide"; conducting research within different segments of the population, among other things to determine the factors reflecting their trust (mistrust) in the activities of tax authorities.

It should also be emphasised that improving the financial literacy of taxpayers is also an important task for the Russian Federal Tax Service. Various formats of events are used to address it: starting from organising excursions to schoolchildren visiting tax offices, giving open lectures at universities for students, and up to mobile tax offices visiting individual businesses (organisations) or even remote rural and urban settlements.[18]

Finally, it is important to assist developing countries to increase taxpayer involvement in tax collection [the experience of the African Tax Administration Forum (ATAF) in encouraging exchange of experience[19] in this area is exemplary in this context].

Communication tools (media messages, social media, launching an advertising campaign, etc.) should be used to increase the attractiveness of coming "out of the shadows". In order to remove the psychological barriers preventing taxpayers from applying to the fiscal authorities, tax amnesty could be granted to economic entities.

[15] Information note "Reducing opportunities for tax non-compliance in the underground economy". OECD. URL: https://www.oecd.org/tax/forum-on-tax-administration/publications-and-products/49427993.pdf (accessed on: 20.06.2022).

[16] Electronic government services portal for tax authorities my.soliq.uz

[17] Eradicating the "shadow economy" in Uzbekistan: how does the receipt-issue process work? Uzreport (online). URL: https://uzreport.news/society/iskorenenie-tenevoy-ekonomiki-v-uzbekistane-kak-prohodit-protsess-vidachi-chekov- (accessed on: 20.06.2022).

[18] The implementation of a regional project to improve financial and tax literacy was discussed at a meeting. Federal Tax Service of Russia (official website). 17.01.2022. URL: https://www.nalog.gov.ru/rn53/news/activities_fts/11799033/ (accessed on: 20.06.2022).

[19] OP-ED: 5 reasons why the Tax Administration Library is a great hub for publications from African Tax Administrations. ATAF (online). 31.01.2022. URL: https://www.ataftax.org/5-reasons-why-the-tax-administration-library-is-a-great-hub-for-publications-from-african-tax-administrations (accessed on: 20.06.2022).

Starting from January 2022, residents of Uzbekistan will be entitled to a reward (20% of the fine) if they complain, for example, about "inappropriate" behaviour of a salesperson or when a receipt is not given or when an item is overpriced when paid by credit card (or not accepted by a shop employee).[20] This initiative has already resulted in both a significant increase in tax revenues and an increase in the involvement of citizens in tax relations. Despite this, the increased use of the rewards system may lead to resistance from unscrupulous individuals. There have already been instances of vigilante justice against citizens when they demand receipts from retailers, even going so far as to initiate threats, insults, posting videos on the internet and accusations of "snitching or fingering".[21]

Obviously, information from the purchaser about the commission of an offence by the seller, on the contrary, contributes to the effectiveness of the tax function of the state. However, the existence of such aggressive manifestations may directly affect the effectiveness of the institution of voluntary tax reporting.

SUBMISSION OF TAX RETURNS DECLARATIONS

In pursuit of the goal of full digitalisation of tax relations and legalisation of business activities, taxpayers will be obliged to submit tax returns via the "E-aktiv" and "E-rent" systems. The first mechanism is aimed at achieving full electronic control over the accounting of inventory movements, while the second involves mandatory submission of lease agreements by taxpayers in order to prevent fraud.[22]

It was originally intended that from 2022 the use of both systems would be compulsory for a wide category of taxpayers. However, the test use of the services has shown that the current situation is making tax administration dramatically more complicated due to the "unreadiness" of the software code used, the unclear methodology for filling in the required documents and the general unpreparedness of the users. Thus, there is a risk of a new round of "shadowing" of certain individuals and unintentional distortion of business conditions between "unscrupulous" and "legal" economic entities.[23]

Foreign experience of introducing digital tax administration systems demonstrates that the occurrence of software errors at the first stage of their functioning is absolutely normal. In particular, in the process of transition to the pre-filling of tax returns to individuals at the first stage, erroneous versions of them can be provided [21]. However, digitalisation, if properly configured, can, firstly, free up considerable human resources and, secondly, allow the tax authorities to generate either the same income with a lower tax burden or a greater amount with the same level of tax burden.

Reducing tax rates is impossible without increasing the transparency of commodity and financial flows. In this regard, we can only welcome the prudent position of Uz-

[20] In Uzbekistan, a shopper can get 20% of the fine for not giving out a receipt by a shop assistant. Retail Loyalty (online). 16.05.2022. URL: https://retail-loyalty.org/news/v-uzbekistane-pokupatel-mozhet-poluchit-20-ot-shtrafa-za-nevydachu-cheka/ (accessed on: 20.06.2022).

[21] Not snitches, but helpers. Since the beginning of the year, citizens have reported more than 46,000 violations in retail outlets to tax authorities Podrobno.Uz (online). 29.04.2022. URL: https://podrobno.uz/cat/obchestvo/ne-stukachi-a-pomoshchniki-s-nachala-goda-grazhdane-soobshchili-nalogovoy-o-bolee-chem-46-tysyachakh/ (accessed on: 20.06.2022).

[22] Property tax, E-Ijara, E-Aktiv, tax gap. The main thing from the meeting with the head of the State Tax Committee. Gazeta.UZ (online). 18.01.2022. URL: https://www.gazeta.uz/ru/2022/01/18/taxes/ (accessed on: 20.06.2022).

[23] From entrepreneur to criminal. Changes in tax legislation have raised a lot of objections. From Radio Ozodi. URL: https://rus.ozodlik.org/a/31656826.html (accessed on: 20.06.2022).

bekistan's fiscal authorities on gradually attracting businesses to use the E-aktiv system. Thus, starting from April 2022, its compulsory application will apply only to four categories of goods (cement, glass, timber and cotton), and further expansion of this list will be determined based on the results obtained for the "pilot" categories. Working groups are planned to improve the methodology, so that the mechanism is expected to be operational by the fourth quarter of 2023. A moratorium on penalties for non-use of "E-aktiv" (except for "pilot" goods) is also introduced, and the use of certain indicators indicating the existence of tax risks for taxpayers in terms of their VAT payments is suspended.[24] Finally, in order to improve the attractiveness of paying property tax, the criteria for the minimum value of taxable objects will be revised, including a wider application of reduction factors.[25]

IMPROVING TAXATION OF SELF-EMPLOYED CITIZENS

As an important aspect, further improvement in the regulation of the legal status of the self-employed can certainly be highlighted, and in the first place we are talking about the position of taxi drivers. At present, according to Uzbekistan's legislation, only organisations (i.e., legal entities) can carry out such activities and individual citizens need to conclude an employment agreement with a taxi company. However, this approach may be considered outdated given that the current global business model is for drivers to generate income through the use of mobile aggregator apps.

The issue of improving the business tax environment for taxi drivers has been raised regularly, but the options have never gone beyond legislative drafts.[26] In 2017, the possibility of granting patents to drivers was the subject of discussion, but the idea had to be abandoned due to unpreparedness for the upcoming changes. In 2018 and 2019, there were proposals for taxi drivers to act as individual entrepreneurs. Finally, in 2020, the Uzbek tax authorities announced the possibility of paying drivers through mobile aggregator apps and charging them with social tax and a reduced personal income tax.

The main reason for state "resistance" to the idea of changing the legislation in this part is that the widespread introduction of simplified taxation regimes could aggravate public security concerns. To address such concerns, the state tax authorities have even proposed requiring intermediaries to open separate subdivisions in Uzbekistan (with publication of full information about themselves), to host servers in the country, and to fully integrate internal control systems with state regulations.[27] However, experts point out that Uzbekistan has an acute shortage of "bona fide" taxi drivers in a generally developed "shadow" segment.[28] Thus, the legalisation of drivers would not only increase

[24] Businesses will be encouraged to use E-aktiv in stages. UzReport news agency (online). 27.02.2022. URL: https://uzreport.news/economy/biznes-budet-privlekatsya-k-ispolzovaniyu-e-aktiv-poetapno (accessed on: 20.06.2022).

[25] Ministry of Finance clarifies new procedure for calculating property tax. Buxgalter.Uz (online). 22.02.2022. URL: https://buxgalter.uz/publish/doc/text179109_minfin_razyasnil_novyy_poryadok_rascheta_naloga_na_imushchestvo (accessed on: 20.06.2022).

[26] On the fifteenth of May, the taxi experiment launches. What will change. Spot (online). 08.05.2021. URL: https://www.spot.uz/ru/2021/05/08/taxi/ (accessed on: 20.06.2022).

[27] Decree of the President of the Republic of Uzbekistan "On Additional Measures for Further Improvement of Linear Taxi Activities in the Republic of Uzbekistan". Portal for discussion of normative legal acts. URL: https://regulation.gov.uz/ru/document/2910 (accessed on: 20.06.2022).

[28] Legalisation of "gypsy cab drivers" and the Uber model: from 1st of July, individuals will be allowed to provide taxi services and operators will be obliged to host servers in Uzbekistan. Spot (online). 26.03.2019. URL: https://www.spot.uz/ru/2019/03/26/taxi/ (accessed on: 20.06.2022).

tax revenues, but also provide drivers with a minimum social package.

In 2021, an experiment to "whitewash" this market was launched. Uzbek individual entrepreneurs are given the opportunity to provide taxi services subject to a simple list of conditions concerning the age of the driver, the period of operation and exploitation of the vehicle, etc.[29] In our view, based on Russian and international experience, such a strategy leads to positive results in the necessary liberalisation of the market and increased competition.

The creation of distortions in the business environment (depending on the form of its organisation) can be highlighted as a disadvantage of the extension of preferential taxation regimes. This distortion can lead to the creation of tax schemes whereby a taxpayer who performs an employment function 'surreptitiously' recognises himself as self-employed in order to reduce his tax liabilities. To date, this type of tax evasion can be combated at the legal level, namely through the development of general and specific principles indicating the unfairness of the economic transaction performed.

INTRODUCTION OF A SINGLE TAXPAYER ACCOUNT MECHANISM

Speaking at the first Tashkent International Investment Forum, the President of Uzbekistan pointed out that the total number of taxes has been reduced from 13 to 9 (while reducing the tax burden on taxpayers). It was also noted that over the past five years the country has significantly simplified the procedure for issuing licences and permits.[30] The implementation of these measures is a continuation of the systematic actions to improve fiscal policy and tax administration. The use of a single tax account would make it much easier for taxpayers to make payments to the budget and increase the attractiveness of doing business legally.

A similar mechanism already exists in the Russian legislation.[31] A Single Tax Account (STA), to which a single tax payment (STP) should be transferred, indicating only its amount and TIN, will be opened in the Federal Treasury for each citizen.

At the same time, the tax authority, on the basis of available documents and information (including information provided in some cases), will independently set off the STP against the taxpayer's fulfilled tax payment obligation. Russian experts note that there are currently more than 900 trillion variants of payment documents when completing tax declarations, which leads to a significant risk of error.[32]

CONCLUSIONS

The paper considers measures to counteract the informal economy applied in various countries, including the Republic of Uzbekistan, for which the significance of this problem is confirmed by the results of the conducted analysis. Over the past few years, the state has introduced a wide range of tax instruments aimed at combating the negative consequences of the informal economy, and these, according to the authors of the study, are consistent with practices used abroad (e.g. conducting tax lotteries) and the specifics of

[29] This will improve competition — Yandex Go on the taxi experiment. Spot (online). 20.05.2021. URL: https://www.spot.uz/ru/2021/05/20/taxi/ (accessed on: 20.06.2022).

[30] Uzbekistan cuts total taxes — Mirziyoyev. Regnum news agency. 24.03.2022. URL: https://regnum.ru/news/economy/3543279.html (accessed on: 20.06.2022).

[31] Federal Law No. 263-FL of 14.07.2022 "On Amendments to Parts One and Two of the Tax Code of the Russian Federation." URL: https://www.consultant.ru/document/cons_doc_LAW_421873/

[32] The Federal Tax Service is preparing a single tax bill for businesses. National News Agency (online). 10.08.2021. URL: https://nsn.fm/economy/fns-gotovit-edinyi-nalogovyi-schyot-dlya-biznesa (accessed on: 20.06.2022).

the business environment in Uzbekistan (e.g. in terms of improving taxation of business activities of construction organisations).

In the medium term, a more significant digital transformation of the tax system can be expected, but, at the same time, a number of possible areas for improvement of the country's tax policy to counteract the informal economy are worth noting: development of information exchange between tax authorities and "third" parties; introduction of a unified taxpayer account mechanism; interactive reflection of purchases made by individuals using non-cash funds; improvement of the taxation mechanism for self-employed persons, including taxi drivers and so on.

ACKNOWLEDGMENTS

The authors' team is grateful to Nikolai Milogolov, Cand. Sci. (Econ.), for his help in preparing the article.

REFERENCES

1. Nikolaeva M.I., Shevyakov A. Yu. Shadow economy: Methods of analysis and evaluation. Moscow: Central Economics and Mathematics Institute of the USSR Academy of Sciences; 1987. 53 p. (In Russ.).
2. Nikolaev D.A. Problems of identifying the causes and scope of the shadow economy in modern conditions. *Ekonomika: vchera, segodnya, zavtra = Economics: Yesterday, Today and Tomorrow.* 2020;10(8–1):181–189. (In Russ.). DOI: 10.34670/AR.2020.66.66.018
3. Barsukova S. Yu. Informal economy: Concept, structure. *Ekonomicheskaya sotsiologiya = Economic Sociology*. 2003;4(4):15–36. (In Russ.).
4. Himchenko A.N., Degtyarev S.V. Informal economy: Employment in the informal sector of the economy. *Obshchestvo, ekonomika, upravlenie = Society, Economy, Management*. 2021;6(2):62–72. (In Russ.). DOI: 10.47475/2618–9852–2021–16211
5. Awasthi R., Engelschalk M. Taxation and the shadow economy: How the tax system can stimulate and enforce the formalization of business activities. World Bank Policy Research Working Paper. 2018;(8391). URL: https://openknowledge.worldbank.org/bitstream/handle/10986/29603/WPS 8391.pdf?sequence=1&isAllowed=y
6. Mazhar U., Méon P.-G. Taxing the unobservable: The impact of the shadow economy on inflation and taxation. *World Development*. 2017;90:89–103. DOI: 10.1016/j.worlddev.2016.08.019
7. Enste D.H. The shadow economy in industrial countries. *IZA World of Labor*. 2018:127. DOI: 10.15185/izawol.127.v2
8. Němec D., Kotlánová E., Kotlán I., Machová Z. Corruption, taxation and the impact on the shadow economy. *Economies*. 2021;9(1):18. DOI: 10.3390/economies9010018
9. Myasoedov A.I., Ivanova S.P. Informal economy: Statistical analysis in European countries. *Ekonomika. Informatika = Economics. Information Technologies*. 2020;47(1):23–30. (In Russ.). DOI: 10.18413/2687–0932–2020–47–1–23–30
10. Portes A., Sassen-Koob S. Making it underground: Comparative material on the informal sector in western market economies. *American Journal of Sociology*. 1987;93(1):30–61. DOI: 10.1086/228705
11. Sung M.J., Awasthi R., Lee H.C. Can tax incentives for electronic payments reduce the shadow economy? Korea's attempt to reduce underreporting in retail businesses. World Bank Policy Research Working Paper. 2017;(7936). URL: https://openknowledge.worldbank.org/bitstream/handle/10986/25945/WPS 7936.pdf?sequence=1&isAllowed=y

12. Korytin A. Tax policy approaches to reducing informal economy in the area of a small business and self-employment. *Ekonomicheskoe razvitie Rossii = Russian Economic Development*. 2018;25(10):47–57. (In Russ.).
13. Khamidov A. Kh. Informal sector of the service economy of Tajikistan. Dushanbe: ER-graf; 2020. 216 p. (In Russ.).
14. Saidmurodov L. Kh. Economic theory of open economy and problems of modern Tajikistan. Dushanbe: Irfon; 2005. 260 p. (In Russ.).
15. Ubaidov F. S. The shadow economy as a threat to security and tools for its neutralization in a transitional economy (based on the materials of the Republic of Tajikistan). Dushanbe: Tajik Technical University named after academician M. S. Osimi; 2012. 26 p. (In Russ.).
16. Dzhonmamadov S. B., Khamidov A. K. The informal sector in the border areas of the Republic of Tajikistan. *Finansovo-ekonomicheskii vestnik = Financial and Economic Bulletin*. 2021;(4):35–41. (In Russ.).
17. Ulasevich Yu.V., Rusak I. N. Features of shaping and maturation of informal economy in the Republic of Belarus. *Pravo. Ekonomika. Psikhologiya = Law. Economics. Psychology*. 2021;(4):52–58. (In Russ.).
18. Dzhenalieva M. A., Akylbekova N. I. The causes of the shadow economy and ways to reduce it. *Izvestiya Issyk-Kul'skogo foruma bukhgalterov i auditorov stran Tsentral'noi Azii = News of the Issyk-Kul Forum of Accountants and Auditors of Central Asian Countries*. 2021;(2):105–111. (In Russ.).
19. Tagaev B. E. Regulating informal employment in Uzbekistan in conditions of economy modernization. *Vestnik Rossiiskogo ekonomicheskogo universiteta imeni G. V. Plekhanova = Vestnik of the Plekhanov Russian University of Economics*. 2020;17(2):74–84. (In Russ.). DOI: 10.21686/2413–2829–2020–2–74–84
20. Reut A. V. The influence of the tax culture on tax charging (on the example of the personal income tax). *Finansovoe pravo = Financial Law*. 2020;(8):29–33. (In Russ.). DOI: 10.18572/1813–1220–2020–8–29–33
21. Vaillancourt F., ed. Prefilled personal income tax returns: A comparative analysis of Australia, Belgium, California, Québec, and Spain. Calgary: Fraser Institute; 2011. 114 p. URL: https://www.fraserinstitute.org/sites/default/files/prefilled-personal-income-tax-returns.pdf (accessed on on 20.06.2022).

ABOUT THE AUTHORS

Milyausha R. Pinskaya — Dr. Sci. (Econ.), Associate Professor, Head of the Tax Policy Center of the Financial Research Institute of the Ministry of the Finance of Russian Federation, Moscow, Russia
http://orcid.org/0000-0001-9328-1224
mpinskaya@nifi.ru

Sergey D. Shatalov — Dr. Sci. (Econ.), Associate Professor, Principal Researcher of the Tax Policy Center of the Financial Research Institute of the Ministry of the Finance of Russian Federation, Moscow, Russia
http://orcid.org/0000-0001-9680-4166
shatalovsd@nifi.ru

Karina A. Ponomareva — Dr. Sci. (Jur.), Associate Professor, Leading Researcher of the Tax Policy Center of the Financial Research Institute of the Ministry of the Finance of Russian Federation, Moscow, Russia
http://orcid.org/0000-0002-2951-3067
kponomareva@nifi.ru

Authors' declared contribution:
Pinskaya M.R. — problem statement and formation of research conclusions.
Shatalov S.D. — article concept development.
Ponomareva K.A. — critical literature analysis, description of the results.

Conflicts of Interest Statement: The authors have no conflicts of interest to declare.

The article was submitted on 30.09.2022; revised on 01.10.2022 and accepted for publication on 03.11.2022.
The authors read and approved the final version of the manuscript.

ORIGINAL PAPER

DOI: 10.26794/2304-022X-2022-12-4-89-102
UDC 331.1(045)
JEL C53, O15

Geo-Information Modeling for Determining the Movement of Human Capital

R.V. Fattakhov[a], P.V. Stroev[b], M.M. Nizamutdinov[c], O.V. Pivovarova[d], M.I. Akhmetzyanova[e]
[a, b, d] Financial University, Moscow, Russia;
[c, e] Institute for Socio-Economic Research UFRC RAS, Ufa, Russia

ABSTRACT

The paper considers the application of Geographic Information Systems (GIS) to assess the attractiveness of territorial entities of the Russian Federation in terms of the movement of human capital. The relevance of the study is because of the uneven distribution of human capital, the high rate of its migration from underdeveloped regions and municipalities, and the insufficient effectiveness of the policy pursued by regional authorities and local self-government. The purpose of the research is to develop a GIS monitoring of the socio-economic attractiveness of municipalities to determine the movement of human capital. The research methodology is based on the use of complex and statistical analyses, methods of geo-information modeling. The information basis of the study is the data of the regulatory legal framework of reference systems, official statistics of the Republic of Bashkortostan, and investment passports of municipal districts and cities of the region. The authors justify and formulate a list of requirements and limitations for the GIS software and tool complex. Also, the authors identified and disclosed the requirements for GIS information support: reliability, completeness, relevance, consistency, understandability (unambiguity). There have been generated major conditions for the correct operation of the GIS software for monitoring the attractiveness of municipalities, considering the limitations of the current legislation. The research developed and described the functional basis of the GIS, which includes two key components with corresponding structural elements and tools: an organizational block and a modeling and visualization block. The authors proposed a list of key statistical (attribute) and spatial data and the attractiveness coefficient of a municipality as a criterion for assessing the opportunities for the development of human capital in a particular territory. The authors developed the scheme of the algorithm for the functioning of GIS monitoring the attractiveness of municipalities of the Republic of Bashkortostan, as well as they introduced the interface and user tools. The proposed GIS allows users to search for the municipality with the subsequent output of information about it containing the values of demographic, migration, socio-economic and environmental indicators in tabular and graphical forms. The results of the research make it possible to predict the level of attractiveness of municipalities in the short and medium term, depending on the chosen governance strategy and also allow zoning of municipalities by groups. The authors conclude they developed GIS monitoring of socio-economic attractiveness of municipalities to determine the movement of human capital in the Republic of Bashkortostan can serve as the basis for creating a fully functional decision support system at the regional level in all subjects of the Russian Federation.

Keywords: human capital; geo-information system; municipality; socio-economic development; attractiveness; differentiation; zoning; regional policy

***For citation*: Fattakhov R.V., Stroev P.V., Nizamutdinov M.M., Pivovarova O.V., Akhmetzyanova M.I. Geo-information modeling for determining the movement of human capital. *Management sciences*. 2022;12(4):89-102. DOI: 10.26794/2304-022X-2022-12-4-89-102**

INTRODUCTION

In modern conditions the most important factor in the development of territories is human capital because it is a person, on the one hand, who is a resource and a productive force of economic growth of this territory, and on the other hand, the one who uses and consumes the results created on this very territory. This, in turn, predetermines the goal setting and allocation of economic growth quality criteria, which are based on the fact that the human being is the supreme and ultimate value. However, the population of the Russian Federation (and thus human capital) is extremely unevenly distributed across the country: about 80% of its citizens live in European Russia (which accounts for only 25% of its territory), while only 21% live in Asia (which comprises 75% of its territory). In the northern part of Russia, the proportions are 5% and 74%, respectively. In addition, there are significant differentiations in living standards: the proportion of the population in regions with incomes below the subsistence level ranges from 5.5 to 84.7%; unemployment levels are from 0.9 to 55%; and per capita consumption ranges from 29.4 to 321 thousand roubles.[1]

In underdeveloped regions and municipalities, the reduction in the number of working-age citizens and the decline in their qualification potential leads to the problems of maintaining existing industries let alone developing them. The limited labour market makes it problematic to locate and improve any new industrial technologies, which, in turn, affects the socio-economic development of the territory concerned and its attractiveness and, as a consequence, the outflow of human capital.

From a global cross-country perspective, there is a growing body of evidence that the economy is becoming a powerful driver of socio-spatial trends in population mobility. This is discussed in the works of S.J. South, K. Crowder, E. Chavez [1], M. van Ham, W.A.V. Clark [2], B. Robson, K. Lymperopoulou, A. Rae [3]. In recent decades migration processes directed to the most developed countries or regions of the country (if we are talking about internal migration) have become the cause of one of the main tangles of economic, social, and cultural problems of the global world [4]. Consequently, human capital is redistributed at a particularly high rate in the direction of those territories where the socio-economic level is high enough and is therefore accumulated there.

Such differentiation, in turn, predetermines the relevance of analysing and assessing the attractiveness of Russia's territorial entities in terms of human capital development in order, on the one hand, to identify "growth points" and identify key factors and conditions that ensure this position and, on the other hand, "risk zones", which will allow to develop measures aimed at minimizing their negative impact on the country's economy. Finding solutions to these problems is impossible without the use of modern information technology.

Geographic information systems (GIS), which combine operations such as recording, storing, and retrieving information from databases with the advantages of full visualization, geographic (spatial) and mathematical analysis, providing a representation of geospatial data on a map,— meet these needs to the greatest extent [5]. These features distinguish Geographic information systems from all other information systems and ensure their unique application for a wide range of tasks, including analysis and modelling of socio-economic processes (spatial develop-

[1] Official website of the Federal State Statistics Service. URL: https://rosstat.gov.ru/ (accessed on: 07.07.2022).

ment of the economy, human capital development, spatial mobility of the population of Russian regions, etc.), allowing for more effective decision-making at different levels of governance and administration.

The market for instrumental Geographic information systems is now well developed. There is a sufficient number of such systems applied to assess the subjects of the Russian Federation with a focus on different aspects. However, it should be noted that for a better understanding of the migration (including intra-regional migration) of human capital [6], it seems appropriate to use municipal entities as a geographical object for linking thematic GIS data.

The present study aims to develop geographic information systems to monitor the socio-economic attractiveness of these territorial units in order to determine the movement of human capital within the subject of the Russian Federation.

RESULTS

In order to build these Geographic information systems, it is necessary to create a software and toolkit including specific software products:

- providing the functionality of map data entry, editing, visualisation, as well as search and retrieval of the map data;
- allowing for the analysis of geospatial materials on the socio-economic development of municipalities in the constituent entities of the Russian Federation with the methods used to solve the problems of the system under development.

In addition to such a complex consisting of integrated software products (including GIS in the narrow sense), the geographic information system for monitoring the socio-economic attractiveness of municipalities should include information support for the system. In particular, two databases should be included: cartographic information and socio-economic indicators related to the subject area [5, p. 62], and spatially referenced for analysis.

In view of the mentioned above, it seems appropriate to identify the factors influencing the movement of human capital in order to form a list of key socio-economic indicators for GIS. It should be said that to date, modern science has not formed a consensus on what to understand by the movement of human capital or the so-called "spatial and social mobility", which, according to N.V. Mkrtchyan, L.B. Karachurin [7], J. Urry [8], N.N. Cattan [9], G. Zimmel [10], are synonymous terms and cover a wide range of relations, processes, and resources.

In the early twentieth century, as scientists began to increase their attention to the impact of urbanisation processes on the social status of people, R. Park and R. McKenzie proposed the theory of human ecology, according to which "the spatial structuring of human movements constitutes an ecological order" [11, 12]. According to this approach human mobility is associated with a change of residence, work, a change in the location of an institution, service, or activity of people.

In turn, W.A.V. Clark, M. van Ham, R. Coulter highlight financial and economic factors as the determinants influencing the spatial and social mobility, suggesting that individuals and families when moving choose areas and regions with better socio-economic conditions for this period of their life [13]. The results of such analysis reflect, as a rule, the desire of people to move to ensure a better quality of life (S.J. South, K. Crowder, E. Chavez [1]) or indicate the desire to leave depressive areas (B. Robson, K. Lymperopoulou, A. Rae [3]).

The Department for Communities and Local Government has attempted to assess

spatial and social mobility and its effects and consequences by calculating multiple deprivation indices, which measure the so-called 'deprivations' in seven different categories, each of which has a different list of socio-economic indicators and a level of significance as a weight [14]:

- Lack of livelihoods and means of sustenance (income deprivation) — 22.5%;
- Lack of access to decent work (employment deprivation) — 22.5%;
- Low level of education and qualifications (deprivation of education, skills and training) — 13.5%;
- Poor health and nutritional status (health deprivation) — 13.5 per cent
- Unsatisfactory environmental conditions — 9.3 per cent
- High crime rates in the area — 9.3%;
- Barriers in obtaining housing and necessary social services — 9.3%.

As a result, all areas are assigned their own scores in each of the listed deprivation categories and then an overall score is calculated, characterising the standard of living in a particular area. In doing so, decile (10% of citizens) groups are highlighted, allowing the most and least deprived areas to be identified separately in England, Wales and Scotland. Accordingly, as populations move from one area to another, deprivation indices are compared to identify key areas of human capital movement.

In the world theory and practice there are other approaches to the measurement of spatial and social mobility, among which the works of the Brazilian researcher L. M. Cavalcante de Melo [15], who singles out socio-professional conditions as a determining factor, and groups of Estonian scientists — K. Mägi, K. Leetmaa, T. Tammaru and M. van Ham [16], who pay special attention to the location of ethno-linguistic groups.

Thus, when building the information base, in particular the list of socio-economic indicators, in the GIS under consideration, it is useful to apply the above mentioned experiences and approaches to the understanding and assessment of spatial and social mobility.

The backbone and foundation of a GIS is the information support, as without proper organization no effective geographic information system can be built. Despite the primary importance of the digital map in any GIS, it should be noted that semantic, attributive data play an important role in the application systems, since prolonged time series of annual statistical indicators are required for a meaningful assessment of dynamic effects. The key requirements for GIS information support, taking into account the foreign experience considered, are:

- credibility;
- completeness;
- relevance;
- coherence;
- comprehensibility (unambiguity).

Credibility can be ensured by choosing an authoritative source of information on the demographic and socio-economic indicators of municipalities. Naturally, official statistics (if available) may be the most appropriate option from this point of view. However, frequently, and especially at the municipal level, the availability of official data is difficult. In this case, the high requirements for reliability (i.e. using only official sources) start to contradict the conditions for completeness of information, which in our case means having publicly available data for all indicators under consideration at each site for the entire given time horizon. Gaps can be filled by using several alternative sources, including public data and statistical information that is not considered to be the official or formal material or information.

At the same time, ensuring the completeness of the data set implies guaranteeing its relevance, which in most cases indicates that it has been available for the most recent time periods in question. Referring to several alternative sources can facilitate the task of supplying the GIS with up-to-date information.

In addition, in the course of the useful lifetime of the GIS, there should be a tool to update the data inputs (including the automated mode) in order to ensure the main purpose of monitoring — that is the ability to make effective operational and strategic management decisions based on it.

But addressing the issue of completeness and relevance of information through several alternative data resources poses some challenges: practice shows that even data provided by one and the same official and formal source can be inconsistent, and problems are ineviTable when multiple sources are used. There are a number of techniques for identifying and automatically correcting such inconsistencies, but their application does not guarantee error-free correction of all the situations or 100% success.

Issues of comprehensibility (unambiguity) of indicators are directly related to the methodology of their collection and calculation in the organisations generating the primary data, as it is not possible to change and improve the quality of these inputs as part of the GIS information management process.

Thus, it is difficult to meet all the requirements for the nature of the information simultaneously and completely (due to the presence of discrepancies). Nevertheless, it is possible to improve the integral value of data quality through the judicious and sensible use of alternative sources of inputs and the use of methods to resolve contradictions between them.

Given the large number of municipalities, as part of the information provision for the GIS, it is advisable to automate not only the processes of creating an array of demographic and socio-economic indicators in terms of municipalities but also the collection, verification and updating of raw data, which requires the development of software modules [17].

Based on the mentioned above, it is possible to formulate the main requirements for a GIS software tool to monitor the attractiveness of municipalities, which should:

- include an information repository (database) containing demographic and socio-economic indicators for municipalities in the region over different time periods;
- have the means for collecting, updating and entering data into the data warehouse, including automated means for dealing with large volumes of information from a predefined set of loosely structured sources, in particular open municipal statistical materials;
- have the capacity to check data correctness and consistency, editing options (including automated conversion) and also generate final refined data sets, with the possibility of versioning and updating them;
- have the tools to link objects from the information repository of demographic and socio-economic indicators with spatial data from the GIS for monitoring the attractiveness of municipalities, including by implementing an automated linking function.

Of course, such work for all the municipalities of the Russian Federation requires certain costs and expenses. In this regard, in the framework of this study the development of GIS monitoring of socio-economic attractiveness of municipalities is carried out on the example of the Republic of Bashkortostan, but the highlighted requirements,

features and approaches are applicable to other subjects of the Russian Federation and their municipalities and can be transposed to the territory of the entire country.

A separate problem in the creation of GIS, which is particularly relevant in the current climate of sanctions, is the obligation for the federal executive authorities and state extra-budgetary funds to use only domestic software products for their tasks and solution seeking. This is regulated by Order No. 486 "On Approval of the Classifier of Programs for Electronic Computing Machines and Databases".[2] However, no suiTable Russian developments are currently available, so it seems reasonable to use "open source" software, as this does not contradict legal requirements.

"In this regard, the following software products were chosen to develop a geo-information system for monitoring the attractiveness of municipalities in the Republic of Bashkortostan:

- QGIS — to prepare cartographic material and create a geodatabase;
- XAMPP — to publish services with spatial data;
- PostgreSQL — DBMS for creating a database;
- JavaScript — to program the user interface;
- PHP — to work with the database, display data on a web page;
- HTML — for the layout of a web page;
- CSS — for the design of the user interface;
- Notepad++ — as a web application development environment" [17].

In accordance with the features and requirements highlighted above, the GIS structure should include two key blocks: organisational, modelling and visualisation.

In doing so, the first actually provides the functional backbone of the entire GIS and includes four interrelated elements integrated into a single system:

- sources of information;
- spatial scales;
- functionality module;
- modelling and visualization module.

In turn, the modelling and visualization block defines the system's capabilities within mapping, zoning, editing, searching, and forecasting.

Let us take a closer look at how the structural elements of the proposed GIS function.

The first component of the organizational block — "Information Sources" — is based on statistical data on the socio-economic development of municipalities of the Republic of Bashkortostan. To form the information base, data from the territorial body of the Federal State Statistics Service and investment passports of municipalities and cities of the region were used.

The indicators that characterize the attractiveness of a given territory and have a significant impact on the movement of human capital (taking into account the reviewed foreign experience in assessing spatial and social mobility and the specifics of municipal statistics) were chosen as the following:

1. Population, people.
2. Total fertility rate, ppm (per thousand).[3]
3. Total mortality rate, ppm.
4. Number of departures, persons.
5. Average monthly nominal accrued wages, thousand rubles.
6. Number of pollutants emitted into the atmosphere from stationary sources, thousand tonnes.

[2] Ministry of Digital Development, Communications and Mass Media of the Russian Federation. 22.09.2020. Order No. 486 "On Approval of the Classifier of Programs for Electronic Computing Machines and Databases". URL: https://digital.gov.ru/uploaded/files/prikaz-486-gv.pdf (accessed on: 07.11.2022).

[3] The fertility rate — is the ratio of the number of births (live) in a calendar year with respect to the average annual population. Calculated in ppm, i.e. per 1,000 population.

Table

Feature layer sets

Name of the spatial feature layer set	Description of the spatial feature layer set	Spatial feature layers	Geometry type
Districts	Map of administrative areas	Administrative division	The polygon
Base-map	Base-map OpenStreetMap	Administrative division	The polygon

Source: compiled by authors.

7. Value of own-produced goods shipped, works and services performed by own forces (excluding small businesses), mln rub.

8. Volume of investment in fixed capital, mln rub.

The above-mentioned indicators should be collected over a period of at least 5 years. It should also be noted that in addition to the initial absolute values, there is also a calculation per 1,000 population, as well as rationing of these values, which subsequently allows the resulting base to be used for correct analysis.

The main role of the second component of the organizational block — "Spatial Scale" — is primarily the visualization of the collected statistical base of the municipalities of the region and implies the use of cartographic data. "The general geographical layers in scale, with the projection coordinate system EPSG:4326-WGS 84-Geographic, describing the territory of the republic and including the layers of municipalities, and cities" are used as the basic ones (see *Table*) [18].

The QuantumGIS desktop Geographic Information System (QGIS) is the basis for combining statistical (attributive) and spatial data for each municipality. Its application in the study allows to integrate the cartographic basis for each of the selected areas and to link to it the information describing the socio-economic development in different time intervals.

The third component of the organizational block — "Functional Capacity Module" — in addition to presenting statistical data in terms of municipalities of the Republic of Bashkortostan allows assessing their socio-economic attractiveness in terms of human capital development by calculating the municipality's attractiveness ratio for the working-age population [18].

By component analysis of the above-mentioned socio-economic indicators, the results of which are presented in more detail in the studies [19–21], an appropriate attractiveness coefficient is determined for each municipality of the Republic of Bashkortostan.

To visualize the results on a map and to classify municipalities, the GIS functionality module classifies them into groups according to their attractiveness using one of the most common methods of grouping and classifying objects according to a set of indicators — hierarchical cluster analysis based on the Ward's universal method.

In this way, territories are grouped according to their belonging to a certain cluster, which makes it possible to determine the level of their socio-economic attractiveness in the context of human capital movements.

The fourth component of the GIS organisational block — "Modelling and Visualisation" — enables scenario-

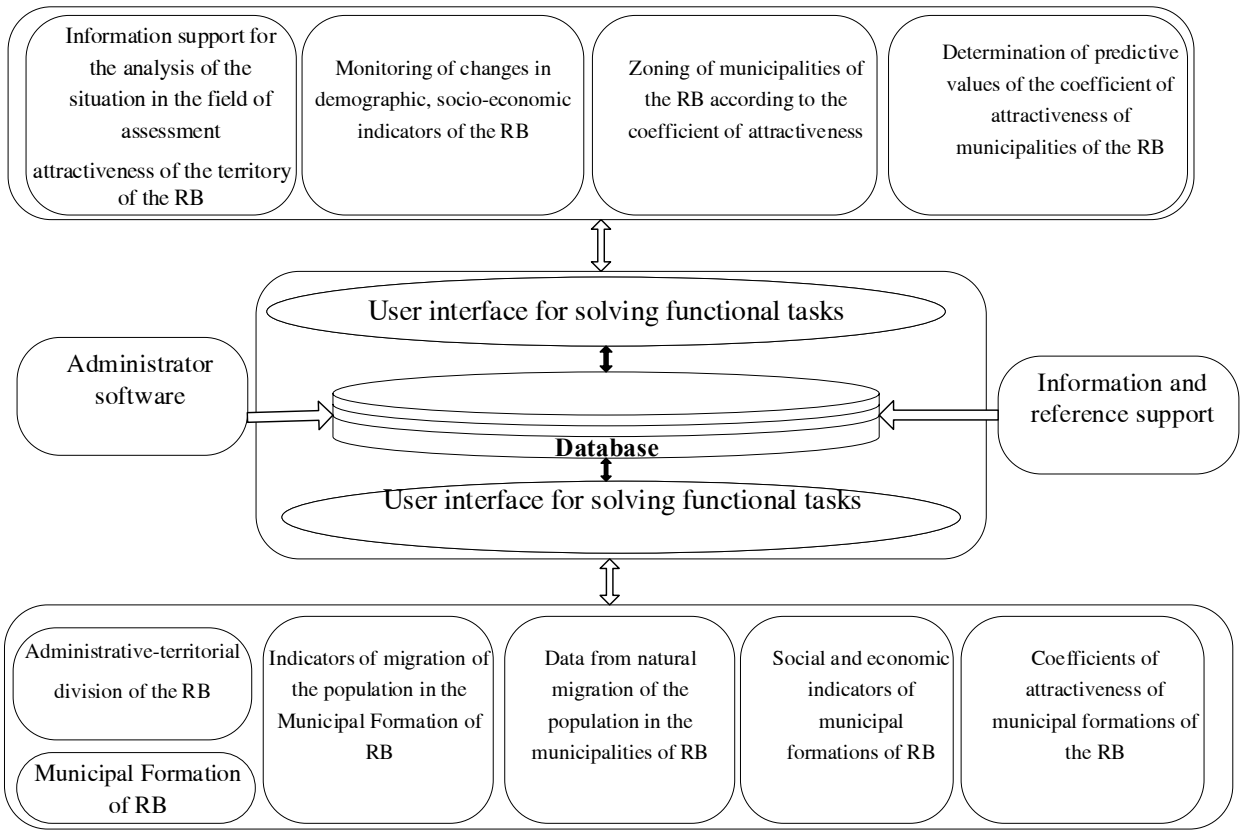


Fig. 1. **Logical structure of GIS for monitoring the socio-economic attractiveness of the municipalities of the Republic of Bashkortostan**

Source: compiled by the authors.

based forecasting of the level of socio-economic attractiveness of municipalities by calculating coefficients and visualising them on a map, forming an information and analytical basis for strategic management decisions.

The logical structure of the GIS under consideration, demonstrating the principles of this system, the composition and types of the implemented information processes, their division into GIS elements based on functional content, as well as the order and rules of their interaction in processing and exchange of information are shown in *Fig.1*.

In order for the user to understand the capabilities of the proposed GIS, a schematic diagram of its functioning has been developed (*Fig. 2*).

The modelling and visualisation block is directly linked to the GIS interface for monitoring the socio-economic attractiveness of municipalities and is a map of the municipalities of the Republic of Bashkortostan with layers and a toolbar, the functionality of which corresponds to the relevant tasks.

The following GIS tools are available for the users to work with spatial data:

- connecting and disconnecting layers;
- viewing explanatory pamphlets of the map;
- navigating on the map; zooming in/out;
- viewing information about the objects displayed on the map;
- searching for municipalities by name;
- editing;

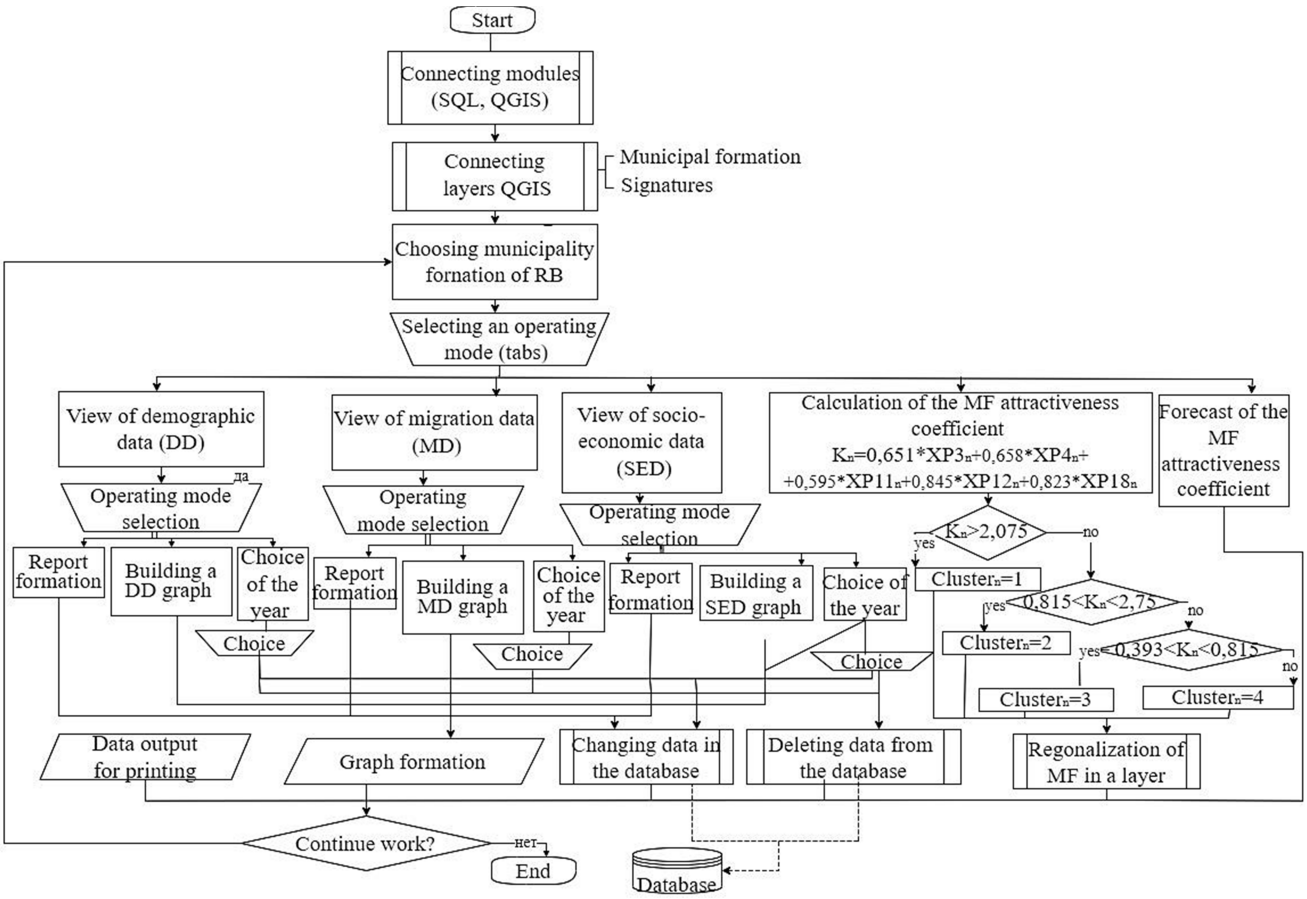


Fig. 2. **Scheme of the GIS functioning algorithm for monitoring the attractiveness of municipalities of the Republic of Bashkortostan**

Source: compiled by the authors.

- histogram construction;
- zoning the territory of the Republic of Bashkortostan.

A distinctive feature of the developed GIS is the ability to view comprehensive background information on a particular municipality, systematised according to the above-mentioned socio-economic indicators to assess the factors affecting the development of human capital in it — to do this, click on the layer of interest and it will display the relevant information pop-up window containing the field name and its values (*Fig. 3*).

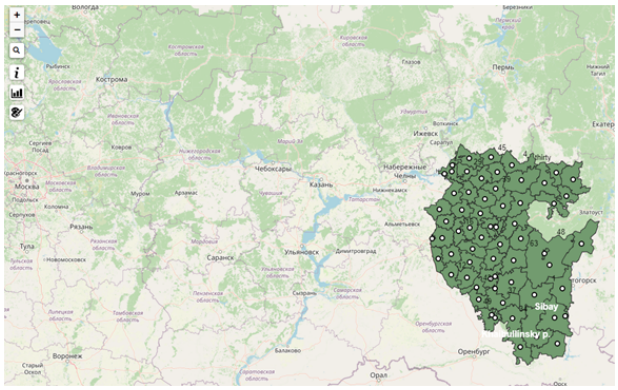
It also contains an example of a histogram showing the population of Bakalinsky district of the Republic.

The GIS provides such a possibility as the construction of graphs for the values of socio-economic indicators of municipalities for a selected period of time in order to visualize the flows of redistribution of human capital.

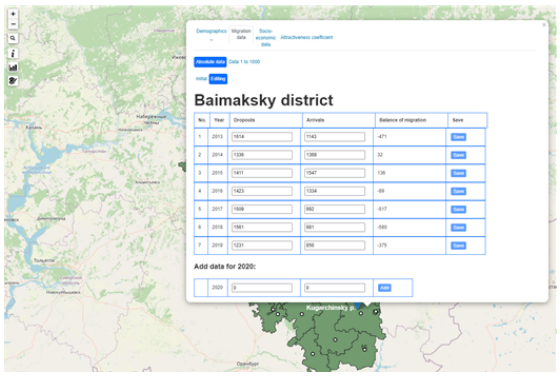
The system also includes the tools to adjust statistical data to socio-economic indicators, which is particularly relevant in terms of repeated clarification of economic and demographic data at the end of the reporting period.

One of the key functions of the Geographic information system for monitoring the socio-economic attractiveness of municipalities in the Republic of Bashkortostan within the block of modeling and visualization is the zoning

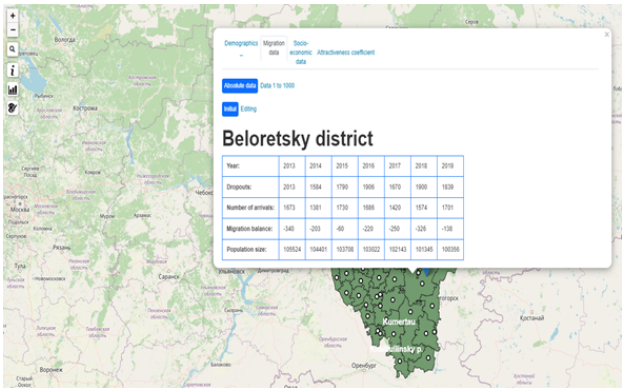
General view of GIS monitoring of municipalities of the Republic of Bashkortostan



Window with attribute information about demographic indicators



Window for editing socio-economic indicators



Distribution of the Republic Bashkortostan municipalities by attractiveness coefficient

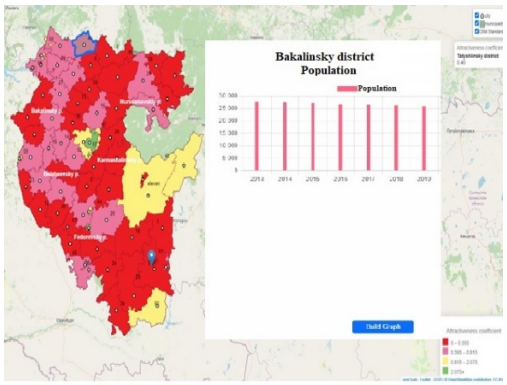


Fig. 3. **Output of GIS data for monitoring the socio-economic attractiveness of municipalities of the Republic of Bashkortostan**

Source: compiled by the authors.

of territories according to the value of their attractiveness coefficient. The resulting map (see *Fig.* 3) allows us to do this. On the other hand, such clustering makes it possible to determine the range of relevant tasks related to the improvement of housing conditions, increase in labour activity and socio-economic development of both individual municipalities and the region as a whole. Consequently, the results of the zoning of municipalities in accordance with the attractiveness factor can become the basis for forecasting the movement of human capital and improve the efficiency of managerial decision-making in the formation of migration policy in the subject of the Russian Federation.

CONCLUSIONS

As a result of this research, the need for geo-information systems to assess the movement of human capital has been substantiated, resulting in the development and testing of a geo-information system for monitoring the socio-economic attractiveness of municipalities.

For this Geographic information system, the key requirements and main limitations of the information and software tools were formulated, taking into account the existing regulations. In the process of creation, its functional framework and corresponding tools have been described in detail and an interface has been proposed.

As a result of testing this Geographic information system on the example of municipalities of the Republic of Bashkortostan it was possible to form a comprehensive statistical database on all municipalities with the possibility of editing and visualizing information in tabular and graphical forms, as well as zoning the region by attractiveness factor and the distribution of the municipalities into groups depending on their belonging to a particular cluster, which predetermines the opportunities for "gravity" and human capital development.

The developed Geographic information system for monitoring the socio-economic attractiveness of the municipalities (created on the basis of agent-based modelling) can become the basis for a fully functional decision-making support system at the regional level with the ability to visualize the results of modelling, develop and evaluate alternative options of management decisions on human capital development. It should be noted that this kind of toolkit is a promising direction of digitalization at the global level and is in demand to solve the problems of tactical and strategic management at the level of Russian regions. The introduction of such info-communication technologies can become the basis for a manifold increase of the operability and efficiency of the governmental authorities' activities in the sphere of human capital development.

In particular, such a Geographic information system can be integrated as a separate functional module into the existing complex of information systems of the Management Centre of the Republic of Bashkortostan, whose activities are aimed at developing and monitoring the implementation of a wide range of tasks in the socio-economic development of the region.

Thus we can conclude that the developed geoinformation system for monitoring the socio-economic attractiveness of municipalities to determine the movement of human capital is suiTable for use in all regions of the Russian Federation, providing a wide range of opportunities to assess the performance of regional and municipal authorities, and forms the basis for the creation and implementation of a fully functional decision support system, which corresponds and is in line with global and nationwide trends in digitalization and management optimization.

ACKNOWLEDGEMENTS

The research was prepared with the financial support of the Russian Foundation for Basic Research, grant No. 20–010–00783.

REFERENCES

1. South S.J., Crowder K., Chavez E. Exiting and entering high-poverty neighborhoods: Latinos, Blacks and Anglos compared. *Social Forces*. 2005;84(2):873–900. DOI: 10.1353/sof.2006.0037
2. Van Ham M., Clark W.A.V. Neighbourhood mobility in context: Household moves and changing neighbourhoods in the Netherlands. *Environment and Planning A: Economy and Space*. 2009;41(6):1442–1459. DOI: 10.1068/a4182
3. Robson B., Lymperopoulou K., Rae A. People on the move: Exploring the functional roles of deprived neighbourhoods. *Environment and Planning A: Economy and Space*. 2008;40(11):2693–2714. DOI: 10.1068/a40241

4. Hedman L., van Ham M., Manley D. Neighbourhood choice and neighbourhood reproduction. *Environment and Planning A: Economy and Space*. 2011;43(6):1381–1399. DOI: 10.1068/a43453
5. Stroev P.V., Kashin V.K., Pivovarova O.V., Reshetnikov S.B., Lapenkova N.V. Information support of geoinformation modeling of spatial development (the case of the TASED in the Khabarovsk territory). *Vestnik Tyumenskogo gosudarstvennogo universiteta. Sotsial'no-ekonomicheskie i pravovye issledovaniya = Tyumen State University Herald. Social, Economic, and Law Research*. 2019;5(3):60–81. (In Russ.). DOI: 10.21684/2411–7897–2019–5–3–60–81
6. Loseva O.V. The automated information system for the estimation of the regional human potential. *Izvestiya Penzenskogo gosudarstvennogo pedagogicheskogo universiteta im. V.G. Belinskogo*. 2010;(22):163–173. (In Russ.).
7. Karachurina L.B., Mkrtchyan N.V. The potential of spatial mobility of the unemployed in Russia. *Sotsiologicheskie issledovaniya = Sociological Research*. 2012;(2):40–53. (In Russ.).
8. Urry J. Sociologie des mobilités: Une nouvelle frontière pour la sociologie? Paris: Armand Colin; 2005. 256 p.
9. Cattan N. Territoire mobile. De l'impossible concept à l'apport des études genres. In: Rosière S., Cox K., Vacchiani-Marcuzzo C., Dahlman C., eds. Penser l'espace politique. Paris: Ellipses; 2009:69–86.
10. Simmel G. Die Großstädte und das Geistesleben. In: Petermann T., ed. Die Großstadt. Vorträge und Aufsätze zur Städteausstellung. Jahrbuch der Gehe-Stiftung zu Dresden. Dresden: Zahn & Jaensch; 1903:185–206. (Russ. ed.: Simmel G. Bol'shie goroda i dukhovnaya zhizn'. *Logos*. 2002;(3):23–34.).
11. Park R.E. Human ecology. In: Park R.E. On social control and collective behavior: Selected papers. Chicago, London: The University of Chicago Press; 1967:69–84. (Russ. ed.: Park R. Ekologiya cheloveka. In: Filippov A.F., ed. Teoriya obshchestva: fundamental'nye problemy. Moscow: Kanon-Press; 1999:384–400.).
12. McKenzie R. The ecological approach to the study of the human community. *American Journal of Sociology*. 1924;30(3):287–301.
13. Clark W.A.V., van Ham M., Coulter R. Socio-spatial mobility in British society. IZA Discussion Paper. 2011;(5861). URL: https://www.econstor.eu/bitstream/10419/51628/1/669714356.pdf
14. Stroyev P.V., Kan M.I. The spatial mobility of population: Economic and social aspects. *Ekonomika. Nalogi. Pravo = Economics, Taxes & Law*. 2016;9(6):35–41. (In Russ.).
15. Cavalcante de Melo L.M. Mobilidadesócio-ocupacional e mobilidadeespacial: diferenciações entre hierarquiasurbanas para o mercado de trabalho formal, Brasil, 2000–2009. Tese de Doutorado. Belo Horizonte, MG: Universidade Federal de Minas Gerais; 2012. 166 p. URL: https://repositorio.ufmg.br/bitstream/1843/AMSA-8WZH4P/1/tese_luzia_maria_cavalcante_de_melo.pdf
16. Mägi K., Leetmaa K., Tammaru T., van Ham M. Types of spatial mobility and the ethnic context of destination neighbourhoods in Estonia. IZA Discussion Paper. 2015;(9602). URL: https://docs.iza.org/dp9602.pdf
17. Fattahov R.V., Nizamutdinov M.M., Oreshnikov V.V. Methodological aspects of developing a database for GIS monitoring of the spatial development of Russia. *Vestnik Finansovogo universiteta = Bulletin of the Financial University*. 2017;21(3):177–188. (In Russ.).
18. Nizamutdinov M.M., Atnabaeva A.R., Akhmetzyanova M.I. Research of interregional migration processes based on simulation modelling. *Izvestiya Ufimskogo nauchnogo tsentra RAN = Proceedings of the RAS Ufa Scientific Centre*. 2020;(3):93–99. (In Russ.). DOI: 10.31040/2222–8349–2020–0–3–93–99
19. Fattakhov R.V., Nizamutdinov M.M., Atnabaeva A.R., Akhmetzyanova M.I. Assessment and forecasting of the Russian regions attractiveness as a factor of interregional migration. *Upravlencheskie nauki =*

Management Sciences in Russia. 2021;11(4):55–70. (In Russ.). DOI: 10.26794/2404–022X-2021–11–4–55–70

20. Akhmetzianova M.I., Atnabaeva A.R. Research of the attractiveness of municipal districts and cities of the Republic of Bashkortostan using component and cluster analyzes. *Vestnik Evraziiskoi nauki = The Eurasian Scientific Journal*. 2020;12(5):3. (In Russ.).
21. Smyslova O.Y., Stroev P.V., Nesterova N.N. Mechanism of increasing the sustainability of socio-economic development of regions with using GIS-technologies. *Upravlencheskie nauki = Management Sciences in Russia*. 2018;8(4):84–93. (In Russ.). DOI: 10.26794/2404–022X-2018–8–4–84–93

ABOUT THE AUTHORS

Rafael V. Fattakhov — Dr. Sci. (Econ.), Scientific Supervisor, Institute of Regional Economics and Interbudgetary Relations, Professor of the Department of Public Finance of Financial Faculty, Financial University, Moscow, Russia
https://orcid.org/0000-0002-5863-7982
RFattakhov@fa.ru

Pavel V. Stroev — Cand. Sci. (Econ.), Director, Institute of Regional Economy and Interbudgetary Relations, Associate Professor, Public Finance Department of Financial Faculty, Financial University, Moscow, Russia
http://orcid.org/0000-0003-4770-9140
stroevpavel@gmail.com

Marsel M. Nizamutdinov — Cand. Sci. (Tech.), Associate Professor, Head of the Sector of Economic and Mathematical Modeling, Ufa Federal Research Centre of the Russian Academy of Sciences, Ufa, Russia
https://orcid.org/0000-0001-5643-1393
marsel_n@mail.ru

Olga V. Pivovarova — Cand. Sci. (Econ.), Deputy Director, Institute of Regional Economy and Interbudgetary Relations, Financial University, Moscow, Russia
https://orcid.org/0000-0002-1755-5972
olga_piv@mail.ru

Milyausha I. Akhmetzyanova — postgraduate student, Junior Researcher, Sector of Economic and Mathematical Modeling, Institute for Socio-Economic Research, Ufa Federal Research Centre of the Russian Academy of Sciences, Ufa, Russia
https://orcid.org/0000-0002-4875-7876
ms.milyash1997@mail.ru

Authors' declared contribution:
Fattakhov R.V. — development the paper's concept, formulation of the research hypothesis, participation in preparing experiments, exegesis of the results.
Stroev P.V. — statement of the issue, literature critical analysis, formation of conclusions.
Nizamutdinov M.M. — substantiation of the indicators' choice, preparation of the experimental plan, development of the calculation scheme.
Pivovarova O.V. — selection of sources, analysis of theoretical basis on the research theme.
Akhmetzyanova M.I. — development of the model structure, working on the geo-information system, experiments.

Conflicts of Interest Statement: The authors have no conflicts of interest to declare.

The article was submitted on 16.08.2022; revised on 10.10.2022 and accepted for publication on 11.11.2022.
The authors read and approved the final version of the manuscript.

ORIGINAL PAPER

DOI: 10.26794/2304-022X-2022-12-4-103-114
UDC 331.5.024.5(045)
JEL J80

Decent Work Systems: Management Model Analysis on the Example of Russian Railways

K.V. Gileva
Siberian Transport University, Novosibirsk, Russia

ABSTRACT

Decent work governance for modern socio-economic systems is a key goal and a common operating methodology. The current literature does not fully disclose the questions posed, which require the proposal of system management models, formed considering the factors of the external and internal environment that determine the characteristics of management in different sectors of the economy. The purpose of the paper is to update the modern provisions of the decent work theory, the formation of a basic model for managing decent working conditions and its substantive justification on the example of Russian Railways enterprises. For this purpose, the author describes the implementation research work using the methods of interdisciplinary analysis of literature and practical experience, as well as a regulatory framework, professional recruitment, including for the transport industry, strategic documents and concepts in responsible work. Also, the research used the method of counter modeling, which represents the decomposition of the theoretical model into the results of the production conditions, financial and socio-economic activities of a particular enterprise. As a result of the work carried out, the author built a model for managing suiTable labor at the enterprise based on the scheme of suiTable labor management, also relying on empirical data and the regulatory framework of Russian Railways. This model has become a methodological basis for analyzing the situation of decent labor management at the enterprises of Russian Railways. The data obtained testify to the operation of managerial, legal, supervisory, institutional and financial mechanisms for managing suiTable work. The practice of applying the results of the study led both to positive results and identified problem areas that cause socio-economic risks in implementing personnel policy measures of Russian Railways.

Keywords: decent work governance; social and labor relations; personnel policy; directions for ensuring decent work at railway transport enterprises; national qualification system; professional standards

For citation: **Gileva K.V. Decent work systems: Management model analysis on the example of Russian Railways.** ***Management sciences.*** **2022;12(4):103-114. DOI: 10.26794/2304-022X-2022-12-4-103-114**

INTRODUCTION

Against the background of dramatic socio-economic change, global restructuring of the working environment, and high risks in the system of social and labour relations, the concept of decent work can be seen as strategically oriented, balancing employment and contributing to social justice.

The concept implemented under the auspices of the International Labour Organization (ILO)[1] in each country has its own specific features associated with the level of development of national economies, the characteristics of labour markets, the quality of social and labour relations [1]. In addition, significant differences in the understanding and practice of this approach can be found in different spheres and areas of the economy due to internal sectoral factors. This study is devoted to the creation of a system-wide model of decent labor management and its subsequent use for the analysis of human resource practices not only in railway transport enterprises (taking into account intrasectoral specifics), but also in any other organizations.

LITERATURE REVIEW

Ideas about the importance of freedom, equality, security, safety, and dignity at work were first articulated in the report of the ILO CEO H. Somavia to the 87th session of the International Labour Conference in 1999. The key provisions of this document relate to the need to find new grounds for consensus between employers, employees, and the state by:

- promoting and realising principles and rights at work;
- increasing opportunities for women and men to obtain decent employment and income [2];
- increasing the coverage and effectiveness of social protection for all;
- strengthening tripartism and social dialogue.[2]

Four strategic objectives — decent work and pay, social protection, rights at work and social dialogue — have formed the basis of the concept of Decent Work [3], and in 2006–2007, the founding documents adopted by the UN as a key element of the programmes promoted in the UN Member States.

Decent work is now a priority for the ILO and has been implemented through the Declaration on Fundamental Principles and Rights at Work,[3] the Declaration on Social Justice for a Fair Globalization,[4] the ILO Decent Work Agenda and Decent Work Programmes, which are agreements between the ILO and its national partners (including specific targets, activities and timeTables).

In our country, the aforementioned concept has been approved in the form of the Programme of Cooperation between the Russian Federation and the International Labour Organization. The main provisions of the document fully correspond to the ILO strategic objectives and consist in promoting the further development of social and labour relations in the Russian Federation towards achieving and implementing the principles of decent work by focusing on such areas as employment expansion, social protection, social security, working conditions and labour pro-

[1] International Labour Organization (ILO) — The United Nations specialised agency for the regulation of labour relations. The ILO currently has 187 member states. URL: https://www.ilo.org/global/lang — ru/index.htm

[2] ILO Declaration on Fundamental Principles and Rights at Work. URL: https://www.un.org/ru/documents/decl_conv/declarations/ilo_principles.shtml (accessed on: 23.07.2022); ILO Declaration on Social Justice for a Fair Globalisation. URL: https://www.un.org/ru/documents/decl_conv/declarations/pdf/fair_globalization.pdf (accessed on: 16.07.2022).

[3] ILO Declaration on Fundamental Principles and Rights at Work. 1998. URL: https://www.un.org/ru/documents/decl_conv/declarations/ilo_principles.shtml (accessed on: 23.07.2022).

[4] ILO Declaration on Social Justice for a Fair Globalisation. 2008. URL: https://www.un.org/ru/documents/decl_conv/declarations/pdf/fair_globalization.pdf (accessed on: 16.07.2022).

tection, international labour standards and fundamental principles and rights at work, social dialogue.

According to E.D. Bogachenko, J. Asanasu and V.S. Polovinko, the current stage of social and labour relations is characterised by the following features:

- Generational change and scientific and technological progress have brought a new type of worker to the labour market, one who is more intellectual, educated, proactive, mobile, ready for self-development and keen to maintain a work-life balance [4];
- Crisis processes in the world economy, as well as the globalisation of world markets, have led to increased inequalities, precarisation processes and the growth of the informal labour market in both developed and developing countries [5];
- These circumstances have led to a 'dual' labour market with an imbalance between quality jobs with decent working conditions and vulnerable employment [6];
- With the changing structure of the economic sectors, the emergence of new occupational fields and new forms of employment, the supply from employers is changing substantially and is not fully supported by a sustained aggregate demand for labour. Social and labour relations between employees and employers are becoming more complex and require new forms of interaction;
- The high importance of decent work for the implementation of innovative development through the rapid adaptation of workers to the changing production environment and a particular focus on technological innovation, rationalisation and the generation of new ideas is highlighted;
- Socio-economic and demographic factors continue to have a pronounced impact on the world of work and need to be taken into account when planning decent work management programmes [6].

The concept of decent work prepares the world for the global challenges of the future, not only the problems of unemployment, precarisation and the 'working poor', but also the prospect of a comprehensive reshaping of forms of activity due to changes in technology and demography.

The current realities of social and socio-economic development pose serious challenges to the subjects of social and labour relations [7]. Social dialogue and social partnership in the field of labour and employment takes on particular importance in the context of the global epidemic (which has led to the loss of more than 400 million jobs globally[5]) [8]. "The economic impact and consequences of the COVID 19 pandemic add to the already existing crisis of low pay and job insecurity. One in two people have no financial safety cushion, no ability to save for the difficult times ahead, and rely solely on wages for basic survival. Without savings or social protection, millions of people in the pandemic faced a choice between working or going hungry," said Sh. Barrow, Secretary General of the International Trade Union Confederation (ITUC) in a statement).[6]

Global economic risks have updated a whole list of issues, which has necessitated a review and amendment of some of the ILO's framework provisions. In 2019, it adopted the Declaration "On the Future of Work", which sets out forward-looking directions in this area, based on harnessing the potential of technological progress,

[5] World Day of Action for Decent Work. All-Russian Electrical Trade Union (official website). URL: https://www.elprof.ru/activity/mezhdunarodnoe-sotrudnichestvo/detail.php?ID=3890 (accessed on: 21.07.2022).

[6] The role of social partnership in dialogue between civil society and government. Proceedings of an international conference (Moscow, 06–07.10.2021). URL: https://yic-mfp.ru/mezhdunarodnaya-konferentsiya-rol-sotsialnogo-part.html (accessed on: 30.06.2022).

ensuring decent work and sustainable development that guarantees self-fulfilment and an equiTable distribution of benefits for all, and facilitating continuous learning for workers. The ideas of social dialogue, "healthy and productive" workplaces and "safe and healthy" working conditions remain the key ones.[7]

The ILO global summit in July 2020 identified the need to protect employees on the ground through working time, earnings, social protection and occupational safety and health.[8]

In October 2021, an international conference was held at the Training and Research Centre of the Moscow Federation of Trade Unions,[9] whose resolution emphasised the need for sustained action to strengthen the institution of social partnership based on the values of cooperation, decent work and leisure, the well-being of citizens, and cultural and spiritual development.[10]

In the Russian Federation, the legal basis for the organisation of social partnership in labour relations and employment is the Russian Labour Code, which defines it as "a system of relations between employees (or their representatives), employers (or their representatives) and public authorities aimed at ensuring harmonisation of the interests of all parties in the sphere of labour relations",[11] as well as the Federal Act "On trade unions, their rights and guarantees of operation",[12] the Federal Act "On associations of employers",[13] and the Federal Act "On the Russian Tripartite Commission for the Regulation of Social and Labour Relations".[14]

The specific nature of a particular area of economic activity within the framework of sectoral agreements and collective bargaining agreements plays an important role in the organisation and regulation of social partnership.

In pursuance of the Presidential Decree "On the national development goals of the Russian Federation until 2030"[15] over 60 sectoral agreements are in force in our country, containing provisions relating to employee health care, the establishment of a minimum wage level and a share of the wage rate, provision of state guarantees for increasing the real level of wages, compensation, and incentive payments, and guarantees in the area of housing and youth policy [9].

Effective management of decent work can result in a range of qualitative and quantitative indicators, including its economic

[7] ILO Centenary Declaration on the Future of Work. URL: https://www.ilo.org/wcmsp5/groups/public/—-ed_norm/—-relconf/documents/meetingdocument/wcms_715175.pdf (accessed on: 15.07.2022).

[8] Concept note. Based on the ILO Global Summit "COVID-19 and the world of work". 2020. URL: https://www.ilo.org/wcmsp5/groups/public/—-dgreports/—-dcomm/documents/meetingdocument/wcms_747992.pdf (accessed on: 14.11.2022).

[9] International conference at the Training and Research Centre of the Moscow Federation of Trade Unions: expert opinion. 11.10.2021. URL: https://smolprof.ru/2021/10/11/mezhdunarodnaya-konferenciya-v-uchebno-issledovatelskom-czentre-moskovskoj-federaczii-profsoyuzov-mneniya-ekspertov/

[10] The role of social partnership in dialogue between civil society and government. Proceedings of an international conference (Moscow, 06–07.10.2021). URL: https://yic-mfp.ru/mezhdunarodnaya-konferentsiya-rol-sotsialnogo-part.html (accessed on: 30.06.2022).

[11] Labour Code of the Russian Federation of 30.12.2001 No. 197-FL (amended on 04.11.2022). URL: http://www.consultant.ru/document/cons_doc_LAW_34683/?ysclid=laiati41za49465680

[12] Federal Act No. 10-FL of 12 January 1996 "On trade unions, their rights and guarantees of operation". URL: http://www.consultant.ru/document/cons_doc_LAW_8840/?ysclid=laiauw99ex294697992

[13] Federal Law of 27.11.2002 No. 156-FL "On Associations of Employers". URL: https://www.consultant.ru/document/cons_doc_LAW_39744/?ysclid=laiax54kan547286711

[14] Federal Law No. 92-FL of 01.05.1999 "On the Russian Tripartite Commission for the Regulation of Social and Labour Relations". URL: https://www.consultant.ru/document/cons_doc_LAW_22938/?ysclid=laiayz1u9q139853076

[15] Presidential Decree No. 474 of 21.07.2020 "On the National Development Goals of the Russian Federation for the period until 2030". URL: http://www.kremlin.ru/acts/bank/45726 (accessed on: 23.07.2022).

and social context, employability, adequate earnings and productive work, productive working time, etc. [10].

HYPOTHESES AND RESEARCH METHODS

The methodology of the systemic approach allows us to accept as necessary elements of the decent work management model: factors of external and internal influence; goals of key actors of the management system; mechanisms, principles and directions of implementation, including a list of indicators for assessing the effectiveness of management actions.

Due to the fact that the subject of development has a high degree of abstraction and is itself a theoretical construct, to increase the objectivity and validity of the obtained result, the author used the method of counter modeling [11], which involves the construction of the initial qualitative model in the form of a scheme at the first stage, and its filling with quantitative data for binding to a specific time and place at the second stage. Thus, the substantive part of the study is a model reflecting the main elements of the decent work management system as applied to the practice of the largest employer of the Russian Federation — JSC "Russian Railways" (hereinafter — the Company).

RESEARCH RESULTS

When examining the practice of the concept of decent work in the current socio-economic conditions, it is important to understand that behind the ideology, social philosophy and humanistic tradition is the concrete practice of management in Russian enterprises. In order to provide a more focused and in-depth analysis of the situation in individual organizations, the Decent Work Management Model is proposed which allows you to clearly define the key areas to be considered in order to compare the actual management activities with the provisions of the concept of decent work. The main blocks of the model and the links between them are shown in the *figure* below.

Let us briefly describe it in the form of a set of factors that have the most noticeable influence. Among the external ones is the state personnel policy, which determines the legal field of social and labour relations, mechanisms of their regulation [12] and is of particular importance for state and municipal authorities, their subordinate institutions, as well as state and municipal enterprises.

PEST factors[16] on the supply and demand side of the labour market depend on general political decisions, the economic situation, socio-demographic processes, the speed, and generality of technical and technological changes taking place in the country or in a particular sector of the economy.

The activity of international and national institutions promoting the ideas of decent work, their activity, credibility, and the existence of mechanisms for cooperation with the authorities make it possible to implement the most relevant projects in this area, including the promotion of the ideas of humanisation of management [13].

Internal environment factors and corporate characteristics, which are the most important conditions for the implementation of this concept, are related to the size of the enterprise, its organisational and legal structure, and its industry affiliation. The latter determines the corporate HR standards and philosophy, recruitment, training, motivation, etc.

Based on external and internal conditions, the goal of managing decent work, and in the case of an organisation, human capital, through the realisation of its social

[16] PEST factors — are key areas of research into the external environment, including political (P), economic (E), social (S) and technological (T) factors.

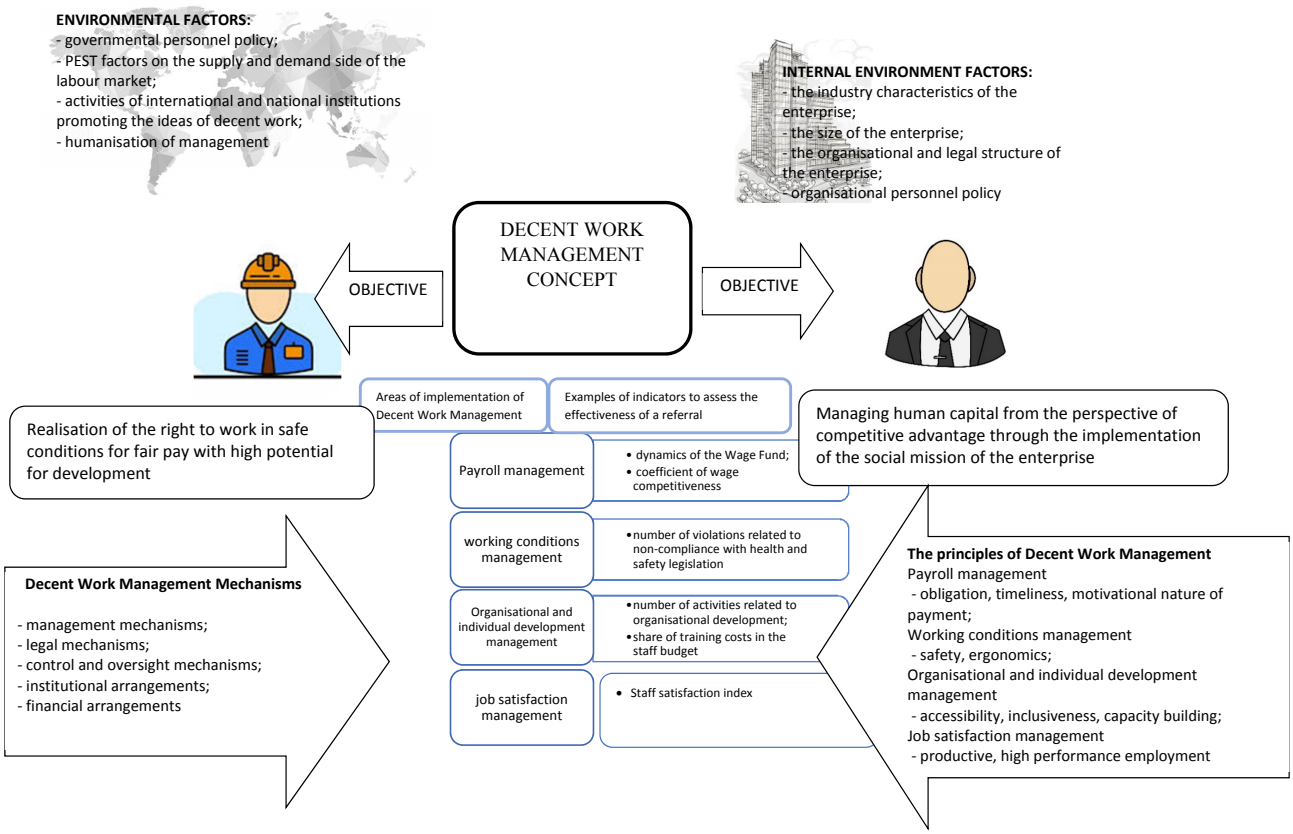


Fig. **Decent work governance model**

Source: compiled by the author.

mission from the perspective of competitive advantage, is formed. Thus, for commercial enterprises the emphasis is placed on competitiveness through effective human resource management, which ensures additional profits. For non-profit organisations, it is more important to be able to fulfil their social obligations towards their own employees.

The Decent Work concept framework enables employees to work in a safe and rewarding environment, while realising their professional and personal potential.

The human resources function contributes to the achievement of these objectives by managing pay and conditions, organisational and personal development, and job satisfaction.

Within the framework of each of these, the objectives should be set, performance indicators (indicators of effectiveness) should be calculated, appropriate measures should be selected, deadlines should be set and people responsible should be appointed.

This project-targeted approach can act as a guarantee of the real change oriented towards ensuring conditions for decent work in the company.

At the heart of the Decent Work Management target platform are a number of fundamental principles that include ideas and rules of conduct for managers in the exercise of their management functions. For example, with regard to remuneration policy, it is mandatory, timely and motivating; with regard to working conditions, it is safe and ergonomic. Development management must be based on accessibility, inclusiveness and a focus on improving staff capabilities. An integral part of human resources manage-

ment is work satisfaction management, which should be based on the principles of productive, high performance employment.

The mechanisms for implementing the concept, or the means of influencing the labour process and the technology for selecting them, can be classified as follows:

- managerial (administrative, socio-psychological, organisational);
- legal (labour law provisions guaranteeing the observance of the basic ideas of the concept of decent work);
- control and supervisory (state regulation of social and labour relations);
- institutional [specially created institutions that help to implement the ideas of decent work — educational institutions of secondary vocational education (SVE), higher education (HE), additional vocational education (AVE); organizations that conduct a special assessment of working conditions (SAWC); employment service, etc.]
- financial (financial support of measures to implement projects in the field of decent work).

Russian Railways (OJSC "RZhD") is one of the largest employers in the Russian Federation, employing more than 720,000 people in 1,500 professions and occupations. The average salary of employees according to the Social Report 2020 was RUB 61,400 per month, which is 20% higher than the national average.[17]

In the context of drastic socio-economic changes, global restructuring of workplace approaches and high risks in the system of social and labour relations at Russian Railways (OJSC "RZhD"), the concept of decent work is seen as strategically oriented, ensuring a balance in employment, and contributing to social justice, which allows the Company to be viewed as an example of a domestic socially responsible business. At the same time, some data on the turnover of young specialists, the dynamics of occupational injuries and the decline in employee satisfaction require analysis, identifying strengths and weaknesses in the methods of managing decent work at its enterprises. In 2019, the "Russian Railways Human Capital Development Programme" was adopted.[18] The programme is based on the classical concept of T. Schulz and G. Becker [14], the basic provisions of which prove a direct link between the growth of innovativeness and creativity of the national economy and the quality of human capital. The latter, based on the analysis of various sources and modern approaches, can be considered the result of investments of individual economic agents and macroeconomic systems in the form of the level and quality of education, health, professional and cultural skills, physical and mental abilities, and motivations used in different spheres of social reproduction. Investment in human capital affects the amount of income of its holders and collectively determines the rate and quality of economic development of society.

Guided by this point of view, it is possible to identify the main directions of the Company's activities with respect to human capital development, which are fully consistent with the standards of decent work. To describe and analyse them further, we will use the Decent Work Management Model shown in the *figure* above.

Using the counter modelling method, we will fill the presented theoretical construct with specific management data, which were collected using Russian Railways' regulatory and methodological documents, reports on the company's sustainable development for

[17] Russian Railways Sustainability Report. 2020. Russian Railways (official website). URL: https://www.akm.ru/upload/akmrating/RGD_sustainability_report_2020.pdf (accessed on: 27.07.2022).

[18] Ibidem.

2019–2020, the results of the 2020 collective agreement concluded for 2020–2022, and data from open official sources.

As mentioned above, the management of decent work within a particular organisation depends on a number of interrelated external and internal factors. The first are state human resources policy, which determines the legal framework of social and labour relations and the mechanisms of their regulation.

The aim of its formation for the Russian Federation as a member of the International Labor Organization is to ensure the possibility of *decent work* for all workers. In addition to the requirements of safety and fair remuneration, this concept also includes the criterion of work satisfaction, the existence of conditions for an employee to fully express their abilities, skills, and mastery at a particular workplace, in given organizational, economic, and legal conditions [15]. The above mentioned suggests that workplace efficiency cannot be considered outside the context of decent work.

At the same time, according to many scientists who develop these issues, the mechanisms for the development and build-up of human capital at the national level are not being implemented effectively in Russia today. The concept of the state human resources policy of the Russian Federation has not yet been adopted; there is no unity of opinion on the priority goals, objectives, and tools for the management of the country's human resources potential [16]. In this regard, a well-developed, systematic, and formalized personnel policy of large domestic employers (which includes Russian Railways) that provide jobs at the level of entire industries and spheres of activity is of particular importance,

As for the PEST factors, the current situation on the labour market, which determines the specifics of supply and demand for professions related to the railway industry, is as follows.

The Company's long-term development strategy envisages overhaul of infrastructure and construction of new railway lines, unlocking the socio-economic potential of the Baikal-Amur Mainline, etc. The implementation of these plans involves improving the internal as well as the external labour market of Russian Railways, especially in working professions.

Current socio-demographic studies have revealed a shortage of skilled workers. The dynamics of the indicators shown in the *Table* reflect the fact that the number of active CVs posted on the HH.ru platform have decreased by 4%, while the number of available vacancies for this professional area have increased.

The analysis shows that while the number of vacancies for this professional field has increased significantly, the number of active resumes CVs has decreased by 4%.

hh. Index, indicating the number of candidates per vacancy in transport and logistics, has amounted to 2.9. Thus, the labour market deficit in the transport sector is obvious.

Russian Railways is the largest employer in the Russian Federation — as mentioned above, it employs more than 720,000 people. Compared to the previous year, the headcount has decreased by 2.6% (this is a reduction of a planned nature). With a set turnover rate of 8%, the turnover rate is 6.2%, the lowest in four years.[19] At the same time, the calculations do not reveal data on latent turnover.

Russian Railways' personnel policy is of the closed type, but it also has elements of openness: on the one hand, the Company aims to attract and retain young employees, build man-

[19] Russian Railways Sustainability Report. 2020. Russian Railways (official website). URL: https://www.akm.ru/upload/akmrating/RGD_sustainability_report_2020.pdf (accessed on: 27.07.2022).

Table

Comparison of the vacancies dynamics and resumes in transport and logistics for 2021

Professional sphere	Vacancy dynamics	Resume (CVs) Dynamics	hh. Index *	Suggested salary, rub.
All occupational fields	+63%	+1%	4.1	49 572
Transportation, logistics	+83%	–4%	2.9	52 618

Source: compiled by the author based on the company's HeadHunter analytical data. URL: https://hh.ru

Note: * hh.Index — the ratio of the number of active resumes to vacancies.

agerial careers through the talent pool technology, and implement a comprehensive social policy; on the other hand, given the shortage of highly qualified employees and high mobility of candidates, the Company has to use resources of the external labour market. For this purpose, among others, Russian Railways has established a separate recruitment area in the form of HR centres in 2020. They should ensure the prompt closing of vacancies in regional divisions and recruitment (including from outside), i.e. become an "entry window" for all candidates. This will allow to form a unified base of applicants and conduct their professional initial assessment.

Attracting specialists and retaining them is done through systematic work with personnel potential. The main task of the HR management system is to provide the Company with qualified and motivated personnel in accordance with current and prospective production needs.

In accordance with the standards of decent work, Russian Railways creates such conditions for employees so that they can work in a safe environment for fair remuneration, realising their professional and personal potential. This is achieved through the efforts of the HR Department, its activities in the areas of staffing, improving personnel efficiency, motivation and creating a corporate culture and environment. Each area includes HR processes supported by a goal, objectives, principles, improvement measures, as well as indicators to measure the effectiveness of each process with planned target values.[20]

The target platform of Russian Railways' HR policy is based on a number of fundamental principles: efficiency, objectivity, focus on internal customers, business objectives, flexibility of the HR system, predictability, introduction of modern tools (including automation), compliance with best practices, unity of approach, efficiency and quality, etc.

The relevant mechanisms are of great importance in the management of decent work conditions — for the model we have developed, they are managerial, legal, control and supervision, institutional and financial.

The former is represented by the operation of the organisational structure of the personnel management system, which includes 4 divisions of the management apparatus of JSC Russian Railways; personnel

[20] Russian Railways Sustainability Report. 2020. Russian Railways (official website). URL: https://www.akm.ru/upload/akmrating/RGD_sustainability_report_2020.pdf (accessed on: 27.07.2022).

management services (PMS) in regional centres, in functional branches of JSC Russian Railways and their structural subdivisions, and personnel management departments in line units. The overall structure includes the Russian Railways Corporate University, as well as non-state healthcare institutions and other social facilities.

The personnel management system ensures the development of key methodological, strategic, and methodological documents in its area of activity, the implementation of the Company's unified Human Resource policy and control over its implementation. This mechanism is implemented through a system of local regulations, an organised structure of internal communications, and common platforms for sharing experience and best practices коммуникаций, общие площадки для обмена опытом и передовыми практиками.

The operation of legal mechanisms is based on the mandatory application of all labour law norms, consistent implementation of the recommendations of the Ministry of Labour, the principles of the national qualification system, etc. Thus, the collective bargaining agreement of Russian Railways for 2020–2022[21] was developed on the basis of the Constitution of the Russian Federation, the Labour Code of the Russian Federation, the Federal Laws "On Railway Transport in the Russian Federation" and "On Trade Unions, Their Rights and Guarantees of Activity", as well as the Industry Agreement for Railway Transport Organisations.

The control and supervision mechanisms presented by inspections by the State Labour Inspectorate and prosecution authorities are aimed at detecting general labour law violations, wage arrears, accidents at enterprises, administrative violations, labour protection, etc. Their results are made publicly available[22] by the Legal Labour Inspectorate of the Russian Trade Union of Railwaymen and Transport Builders (ROSPROFZHEL). In 2020, with the participation of legal labour inspectors from this organisation, 825 situations of compliance with labour legislation were examined and 4,525 inspections were carried out, resulting in 1,738 submissions to employers to eliminate 6,458 violations, including in the area of wages and other payments — 33.2%, local regulations — 24%, working time and rest time regime — 21.3%. The number of cases of unlawful disciplinary liability was halved (242 penalties were cancelled in 2020, 465 in 2019), as well as the amount of money unpaid to personnel (59.2 million roubles last year, 133 million roubles in 2019) Four employees were reinstated following the legal inspectors' reports.

Institutional mechanisms to ensure decent working conditions at Russian Railways companies are represented by an extensive network of health centers, health resorts, children's camps and departmental hospitals that help maintain the health of employees. Continuous development issues are the responsibility of the Corporate University, industry-specific universities, colleges and secondary specialized sducational institutions, vocational training institutes and professional qualification centres.

Financial mechanisms are used to budget projects related to decent work, including Human Resource and social policy activities.

CONCLUSIONS

The following conclusions are drawn from the study:

[21] Collective Bargaining Agreement of Open Joint Stock Company "Russian Railways" for 2020–2022 URL: https://company.rzd.ru/ru/9353/page/105104?id=1604 (accessed on: 14.11.2022).

[22] URL: https://rosprofzhel.ru/deyatelnost/rabota_pravovoy_inspektsii (accessed on: 14.11.2022).

• The current practice of implementing decent work conditions in the Russian Federation is based on the ideas of social dialogue, ensuring safe and healthy working conditions and productive workplaces.

• JSCo "Russian Railways" is the largest employer in the Russian Federation whose personnel policy formally enshrines and practically implements the key elements of decent work.

• All measures to improve the Company's HR processes are aligned with the main provisions of the Decent Work concept and are designed to provide it with qualified and motivated personnel by creating conditions for improving their efficiency and engaging them in corporate tasks.

• An analysis of decent work management practices, based on the model we have developed, has enabled us to identify significant external and internal environmental factors, mechanisms and principles that enable the Company to implement the concept of decent work in the field.

REFERENCES

1. Burchell B., Sehnbruch K., Piasna A., Agloni N. The quality of employment and decent work: Definitions, methodologies, and ongoing debates. *Cambridge Journal of Economics*. 2014;38(2):459–477. DOI: 10.1093/cje/bet067
2. Bastagli F., Hunt A. Social protection and the future of work: A gender analysis. ODI Working Paper. 2020;(590). URL: https://cdn.odi.org/media/documents/Social_protection_and_the_future_of_work_a_gender_analysis.pdf (accessed on on 16.07.2022).
3. Baimurzina G.R., Valiakhmetov R.M., Kolosova R.P. Realization of decent work concept principles in Russia: Regional aspect (on the example of Bashkortostan). Ufa: Academy of Sciences of the RB, Gilem; 2012. 216 p. (In Russ.).
4. Bogachenko E.D. Implementation of decent work principles in youth employment. Cand. econ. sci. diss. Saratov: Yuri Gagarin State Technical University of Saratov; 2017. 236 p. (In Russ.).
5. Athanasou J.A. Decent work and its implications for careers. *Australian Journal of Career Development*. 2010;19(1):36–44. DOI: 10.1177/103841621001900108
6. Polovinko V.S., Arbuz A.V. Migration processes as a factor in the socio-economic development of the region: Assessment and methods of regulation. Omsk: Omsk State University named after F.M. Dostoevsky; 2019. 138 p. (In Russ.).
7. Vaughan-Whitehead D., Ghellab Y., Muñoz de Bustillo Llorente R., eds. The new world of work: Challenges and opportunities for social partners and labour institutions. Geneva: International Labour Organization; 2021. 673 p. URL: https://www.ilo.org/wcmsp5/groups/public/—-dgreports/—-dcomm/—-publ/documents/publication/wcms_833561.pdf
8. Svicher A., di Fabio A. Job crafting: A challenge to promote decent work for vulnerable workers. *Frontiers in Psychology*. 2021;12:681022. DOI: 10.3389/fpsyg.2021.681022
9. Shirokova L.N., Skovpen' V.A., Starokozheva V.P. Reflection of national development goals of the Russian Federation in general and industry agreements. *Sotsial'no-trudovye issledovaniya = Social & Labour Research*. 2020;(4):94–110. (In Russ.). DOI: 10.34022/2658–3712–2020–41–4–94–110
10. Babenko I.V., Babenko A.I. Statistical assessment of the decent work category in Russian and international practice. *Ekonomika: teoriya i praktika = Economics: Theory and Practice*. 2021;(1):68–73. (In Russ.).
11. Mazur L.N. Human capital as a topic of historical research. *Chelovecheskii kapital = Human Capital*. 2020;(11):34–48. (In Russ.). DOI: 10.25629/HC.2020.11.02

12. Shubenkova E.V., Shichkin I.A. Ensuring decent work and social protection for labour migrants in regional integration. *Innovatsii i investitsii = Innovation & Investment.* 2021;(2):81–86. (In Russ.).
13. Lapina T.A. Dynamics of the state of humanization of labor in Russia. In: Omsk scientific readings-2019. Proc. 3rd All-Russ. sci. conf. Omsk: Omsk State University named after F.M. Dostoevsky; 2019:690–691. (In Russ.).
14. Schultz T.W. Human capital: Policy issues and research opportunities. In: Schultz T.W. Economic research: Retrospect and prospect. Vol. 6: Human resources. Cambridge, MA: National Bureau of Economic Research; 1972:1–84. URL: https://www.nber.org/system/files/chapters/c4126/c4126.pdf
15. Meynhardt T., Brieger S.A., Hermann C. Organizational public value and employee life satisfaction: The mediating roles of work engagement and organizational citizenship behavior. *The International Journal of Human Resource Management*. 2020;31(12):1560–1593. DOI: 10.1080/09585192.2017.1416653
16. Shatskaya I.V. National employment policy of Russia and directions of its improvement. *Rossiiskoe predprinimatel'stvo = Russian Journal of Entrepreneurship*. 2017;18(17):2579–2586. (In Russ.). DOI: 10.18334/rp.18.17.38281

ABOUT THE AUTHOR

Kristina V. Gileva — Cand. Sci. (Psych.), Associate Professor, Department of social psychology of management, Siberian Transport University, Novosibirsk, Russia
ORCID https://orcid.org/0000-0001-8030-7552
kristi_1@mal.ru

Conflicts of Interest Statement: The author has no conflicts of interest to declare.

The article was submitted on 19.09.2022; revised on 10.10.2022 and accepted for publication on 16.11.2022.
The author read and approved the final version of the manuscript.

ORIGINAL PAPER

DOI: 10.26794/2304-022X-2022-12-4-115-128
UDC 330.8(045)
JEL B15

On the Development of Views on Management Economy of Regions in the Countries of the World

V.I. Marshev [a], V.F. Bogachev[b], S.E. Chernov[c]
[a, c] Lomonosov Moscow State University, Moscow, Russia;
[b] Institute for Problems of Regional Economics of the RAS, St. Petersburg, Russia

ABSTRACT

XXII International Conference on the History of Management Thought and Business "Development of views on regional Economic management in the countries of the world: History and modernity" was held on July 1 and 2, 2022 at the Faculty of Economics of Lomonosov Moscow State University. The event was announced in the informational paper of the journal "Management Sciences" [2022;12(1):96–98]. The participants at the conference were asked the following questions:

– Why did ideas and concepts of regional economic management arise and develop?
– How did the authors' views of the concepts of regional governance differ and what were the factors and reasons for changing these views?
– Which way and what aspect languages (political, economic, socio-cultural, etc.) were measured and estimated the concepts and results of conflict governance in managing the economies of regions in various countries of the world?
– How and why did the views change on the staffing of regional economic management processes?

Over 90 people attended the conference (in online and offline forms) — students, masters, graduate students, lecturers, scientists and practitioners from 6 countries. They had read 32 lectures and reports. This paper provides an analytical review of some of them.

Keywords: regions; regional economy; interregional conflicts; regional economy governance; interregional conflicts governance

For citation. **Marshev V.I., Bogachev. V.F., Chernov S.E. On the Development of Views on Management Economy of Regions in the Countries of the World. *Management sciences*. 2022;12(4):115-128. DOI: 10.26794/2304-022X-2022-12-4-115-128**

Since 1996, it has become a tradition for Russian and foreign management specialists to gather within the walls of Lomonosov Moscow State University at international conferences on the "History of Management Thought and Business" (HMT&B) to discuss topical historical and scientific problems of managing social objects or organizations. Over the years, 21 conferences were held, and on July 1 and 2, 2022, the 22nd conference on the original theme "Development of views on regional Economic management in the countries of the world: History and modernity" was held. 32 papers were discussed and historical materials on regional and interregional governance in Russia, as well as in Belarus, Ukraine, Spain, Brazil and Australia were presented.

We must frankly acknowledge that, despite a management history of many thousands of years, we cannot today boast of identified factors and causes of changing management systems and views on regional and interregional management.

In order to involve as many specialists in the field as possible, several rhetorical questions have been formulated in advance, as usual, which are listed in the abstract of this article and the answers to which were planned to be obtained at the conference.

The conference was opened by the Dean of the Department of Economics of Moscow State University, Professor **Alexander Auzan**, and the Deputy Dean for Science, **Alexander Kurdin**. They welcomed the participants to the conference,

wished them success and noted the relevance of the topic.

The first speaker was Professor **V. I. Marshev** from the Department of Economics of Moscow State University, who spoke on "Some results, problems and trends in the History of Management Thought". He began by explaining the reason for choosing the theme of the 22nd conference. It was prompted by the words of Gavriil Kharitonovich Popov, the founder of the Department of Organisational Management of Department of Economics of Moscow State University, which he said in an interview on 20 September 2021 after the elections to the RF State Duma. G. Kh. Popov emphasized the relevance and necessity of development of the Russian regions through a significant increase in the provision of their resources — human, financial, material, information, etc., in order to ensure successful, and most importantly, sustainable development of the country. This led the author to investigate the history of regional economic management in the context of the development of systems and views on this issue in different countries during certain periods of history.

V. Marshev in his speech noted that the problem of interaction between the center and the regions, the administrative origin of which was very acute back in the era of ancient kingdoms, is objectively eternal. The uneven development of individual territories in the countries of the world is caused by both exogenous and endogenous reasons, which require their identification and "implementation" in the formation of a different approach to the management of the economy of the regions. Exogenous reasons are environmental (and/or geographic) factors, generating sectoral specificity and structure of the regional economy, or, for instance, pandemics, political and economic sanctions of some countries against others, which occurred in the last few years. Endogenous reasons can be considered as human, financial and other similar ones.

The rapporteur then presented a new classification of the scientific foundations of management (see Table), according to which a "Historiography of historical-management studies" (HHMS), along with the already known "History of Management" (HM) and "History of Managerial Thought" (HMT) are included in the series of "Historical and Managerial Sciences" (HMS) [1].

The need for HHMS as an indispensable component of historical scholarship has long existed, but until the early 2000s it was "fictitious" because there were not enough publications on HM and HMT: in other words, there was a lack of HHMS objects. But then the appearance of hundreds of works on HM and HMT, and above all of monographs and textbooks (in Russian and other languages), generated interest in HHMS in order to identify the causes of such publications and the formation of scientific knowledge about the processes of creation of various, articles, etc. as the subject area of HHMS.

In addition, the presentation provided an overview of research on "Entrepreneurship as a factor of development of economic governance in the regions of the world". The rapporteur illustrated the ambiguity of country-specific assessments of this factor over a given historical period, taking into account exogenous and endogenous causes. In the context of the conference theme, characterization of one study became interesting — how local communities in formerly developed states are perceiving industrial decline and how the historical experience of industrialization influenced the subsequent development of local entrepreneurial cultures [2]. The authors of this research paper showed how the legacy of the past persists in informal institutions, often hindering the development of entrepreneurial levels and slowing the adoption of innovative ideas and practices of regional economic management.

In conclusion, V. I. Marshev once again urged the speakers and participants of the discussions to focus their presentations and comments not only and not so much on the *facts of differences in views* on regional economic management and inter-regional conflicts, as on their *factors and*

Table

Scientific foundations of organization management

Fundamental sciences	Applied sciences	General theoretical and historical-management sciences
Philosophy History Geography Statistics Sociology Economics Psychology Theology, etc.	Law Accounting Planning Finance Psychology of management Cybernetics etc.	The science (theory) of organizational management History of Management History of Management Thought Historiography of historical and management research

Source: compiled by the authors.

causes, following the subjects of the three above-mentioned historical and management sciences.

The report **by I.V. Dvoluchanskiy**, Senior Lecturer of the Department of Economics of Moscow State University, "The origins of the formation of ideas on the history of management thought as a science in the fundamental works of Russian researchers" was the first attempt in the country to make a *historiographical analysis* of works on history of management thought published from 1985 to 2000.

In 1985 was published the first textbook in the USSR "The History of Managerial Thought"[1] by D.N. Bobryshev and S.P. Sementsov, and in 1987 — a textbook of the same name by V.I. Marshev,[2] in which the author for the first time in the world literature introduced the definitions of two historical-management sciences: "History of the science of management" and "History of management".[3]

In 1990, the works of E.B. Koritsky from St Petersburg appeared, many of which were devoted to scientific organisation of work (SOW). In one of them, the author defines the subject of his research in the following way: "...the history of the science of labour and management explores the process of the movement of scientific and managerial thought...". [3]. In addition, he introduces the author's term "Soviet managerial thought" (SMT), the subject of which is "the process of managerial thought movement that reflects the regularities of the formation and development of socialist economic management relations".[4] The work of a group of authors headed by E. Koritskii, published in 1999 and dedicated to the study of managerial ideas of domestic authors, was the most successful.[5]

The disciplines of History of Managerial Thought and History of Management are actively developing, and the History of Managerial Thought is being studied as an independent academic discipline, which has led to an increase in publications: to date, more than 250 textbooks and teaching aids have been published in Russia. This prompted the speaker to start a historiographical study. At the end of his presentation, he urged the conference participants to intensify their research on this topic.

The report by Professor of Bauman Moscow State Technical University **A.D. Kuzmichev** "The Time of Troubles and the Science of Administration. To study the issue" considers the interpretations of the term "troubled times" by different authors (famous Russian historians of the XIX century N.I. Kostomarov, S.M. Solovyov, S.F. Platonov,

[1] Bobryshev D.N., Sementsov S.P. History of managerial thought. Textbook. Moscow: Academy of National Economy under the USSR Council of Ministers; 1985. 38 p.

[2] Marshev V.I. History of managerial thought. Textbook. MOSCOW: MGIAI; 1987. 238 p.

[3] Ibidem. p. 7.

[4] Koritskiy E.B. Soviet Managerial Thought of the 20s: A Brief Name Guide. Moscow: Economics; 1990. 231 c.p. 5.

[5] Koritskiy E.B., Nintsieva G.V., Shetov V. Kh. Scientific Management. Russian history. Textbook for universities. SPb.: Piter; 1999. 384 p.

V. O. Kluchevsky and modern authors), who studied and examined its various aspects and manifestations from the ancient times, as well as the problems of governance in the "troubled times" in the past and in the present.

The rapporteur mentioned a treatise by contemporary authors P. P. Marchenya and S. Yu. Razin, which identifies three periods of the Time of Troubles in Russian history: the first Troubles (17th century), paradigmatic for New Age Russia — the "classical" period; the second Troubles — the "modernist" period of the New Age (the Troubles of the early 20th century); the third Troubles — the "postmodernist" period of modern "New Russia" [4].

The rapporteur emphasized that when studying the processes of management of regional organizations exactly in the mentioned time intervals should be identified the implementation of all 6 functions (operations) of management, following the classification of A. Fayol [5], but a special emphasis should be made on insurance function, whose task, according to Fayol, is "to protect property and persons from robberies, fire, floods; to insure against strikes, attempts and in general against any obstacles of social character, which can cause damage to a social course and even a life of the enterprise… insurance function is any action which provides safety to the enterprise, and the personnel — a peace of mind necessary for it". According to the rapporteur, in the Time of Troubles it is the "insurance function" in the regional governance that should be the key one.

The topic "On regional studies in Russia" was addressed in his presentation by **V. A. Aksenov**, Associate Professor at Nizhny Novgorod State University. He noted that regional studies (as a part of scientific thought) have an ancient history.

Observations, surveys, interviews, studies, experiments were used to study and describe the territory, nature, population. In the 16th-17th centuries, due to the industrial revolution and the development of production, regional markets emerged, nations and nation states with different forms of centralisation emerged. The need for systematic studies of territorial problems and the organisation of their management appears [6].

In the nineteenth century, regional studies acquired a conceptual character with its own paradigm, becoming a science in its own right,[6] with the aim of explaining the causality of objects and phenomena and, as a result, adapting human society and natural conditions.

In Russia in the 18th and 19th centuries, the socio-cultural approach dominated for quite a long time. The constant advancement to the North-East (Siberia, the Arctic, Primorye) was expressed in the relocation of people from the central part of the country to sparsely populated areas and was paid off by mutually beneficial exchanges of goods or justified by ideological and political considerations (as V. N. Tatishchev, V. K. Arseniev, P. P. Semenov-Tyan-Shansky, S. Krasheninnikov, G. I. Nevelskoi and others wrote about).

Two scientific schools in the field of socio-economic geography emerged in Russia in the 20th century. The first one, which was associated with pre-revolutionary views, had a sectoral-statistical character and was led by V. E. Dan (1867–1930).

The second, which had a pronounced regional studies direction, was headed by N. N. Baransky. It included economic zoning, cartography and geographical urban studies. Under the leadership of Baransky a *Soviet regional school* was created. The first and most important stage in its formation was the development of the GOELRO plan (the first-ever Soviet plan for national economic recovery and development. It became the prototype for subsequent Five-Year Plans drafted by Gosplan) in 1920, which divided the country's territory into economic districts to form local energy, transport, and industrial systems.

In the 1970s, in connection with the transition from the territorial principle of economic manage-

[6] Ritter K. Earth science in relation to nature and human history. Textbook. 1817.

ment to the sectoral one, there appeared works of socio-cultural and geographical and political-geographical nature. As a result, regional studies, a field of scientific knowledge studying the territorial organization of the economy, was formed and included in the Russian state educational standard in the 1990s as an academic discipline.

The report of the Rector of the Moscow International University, Professor **A. Yu. Maniushis** "System transformation of territorial organization and management in Russia: on the way to sustainable development (methodology and experience of historical analysis)" emphasized the relevance of formation and improvement of scientific approach to the transformation of regional organization and management, gave the basic concepts and definitions of this approach, economic and organizational mechanisms of territorial management. Based on the works of G. H. Popov and V. I. Marshev, the speaker substantiated the general methodology for studying the history of territorial management changes, which allows (in his opinion) to analyze the existing mechanism of territorial management, identify its main "bottlenecks", systematically reform and apply it in managing the sustainable development of regions. It is also important to study the historical experience of territorial transformations. A. Maniushis made a critical review of the formation of theories of management of territorial transformations.

A systemic concrete-historical approach to reforming territorial organisation and management in Russia at the present stage, namely its "bottlenecks requiring systemic and comprehensive improvement and development", is proposed in a recently published collective monograph, whose scientific editor is the author of the report [7].

In conclusion, A. Yu. Maniushis formulated the problems of efficiency of territorial administration and, above all, the question of the optimal number of its staff.

The joint presentation by **D. D. Bekoeva**, Associate Professor of Moscow State University, and **S. V. Radchenko-Drayar**, Associate Professor of Sorbonne University (Paris), "The personal aspect of regional territory management" considered *personalization of environment and territory* as means of reflecting the system of social relations, forms of manifestation of common mentality of a group and community, unity in historical origins and creation of cultural symbols. As one of their arguments, the speakers used the words of I. Altman: "Territoriality is a mechanism of regulation of borders between itself and the rest, including personalization and designation of a certain place and notification of its possession by an individual, group, organization and the state". [8].

The history of territorial management directly points to the presence of a personal dimension, the personalisation of the environment. An example is the famous Hanging Gardens of Semiramis, which were built in the seventh century BC by order of the Babylonian ruler Nebuchadnezzar II for his beloved wife, Queen Amitis, the daughter of Cyaxares, the king of Midia, to whom they were a reminder of her mountainous, green, and fertile homeland.

The ways of personalising territories and managing them can be varied: inscriptions on the house, references to the owner, fencing off parts of the territory, demonstrating their values (political, religious economic, etc.), representations of cultural and aesthetic orientation through drawings, photographs, indications of a particular time, event, etc. In all cases, the factors described above should also be considered when seeking answers to the question: "Why are territorial management systems changing?

Professor **S.I. Neizvestny** (Financial University under the Government of the Russian Federation) in his presentation "Default logic as the main concept of regional governance in Russia" considered some specific features of regional governance in Russia in XVIII–XIX centuries, which in those times (up to the beginning of XX century) was based on the *principle of trust* between the participants of "business processes": contractual

relations were based on "word" given by the parties to each other. Management was devoid of complicated procedures of paperwork, conclusions, contract control, and mutual interference in internal affairs. All this made the business of the time highly productive and profiTable, even in the absence of accompanying tools (technologies, methodologies), which are so rich in modern management. Most management decisions were made at the regional level on the basis of trust and default logic — managers "in the field" did not need to spend significant resources of time, effort on obtaining approvals, approvals, permits, targeted instructions "from the centre".

According to the rapporteur, research into the history of changes in regional governance and the factors that have led to them requires an examination not only of active action, but also of intangible assets such as *trust* and the *reputation* of the leaders.

Professor **M. V. Lychagin** from Novosibirsk University in his paper "Regional and Urban History through the Prism of Innovative Bibliometric Analysis based on ECONLIT" described the experience of applying methods of statistical processing of publication data (or bibliometrics), whose possibilities have been enhanced by digitalisation and development of electronic bibliographies and libraries, to study regional and urban government history.

At the same time, the author believes that a promising direction is the search and analysis of new research areas based on EconLit and the subject classification developed in 1991 — by the American Economic Association for use in the Journal of Economic Literature (JEL). Within the 20 macro-categories of JEL, there is an area of research with code N and the title "Economic History", divided into 10 meso-categories: No. 9 is called "Regional and Urban History" and consists of 10 micro-categories, divided by continent and specific historical periods.

The report for the first time in the world literature presented the methodology and results of the analysis of 226 publications on all the mentioned 10 micro-categories from 1998 to 2020.

The report of Professor of Kuban State University **T. T. Avdeeva** "Evolution of the concepts of municipal economy in the historical past and present of Russia" was devoted to the transformations related to the activities of local self-government, which from 1990 to 2022 passed through three stages of formation.

The first one started in 1990, when the "Law on General Principles of Local Self-Government and Local Economy in the USSR"[7] was adopted. In Article 10 of the Law, the notion of "communal property as the basis of local economy" was enshrined for the first time, and then, in 1991, the Law "On Local Self-Government in the Russian Federation"[8] was adopted. The process of formation of *municipal property* (or municipalization) as well as private property (privatization) and property of the subjects of the federation (federalization) can be considered a peculiarity of this stage.

However, a number of problems arose. Local self-governments (primarily in small district towns, villages, and rural settlements) had little or no discernible influence on privatisation processes. As a result, the majority of potentially profiTable municipal enterprises "went" to the private sector, and local self-governments were deprived of the opportunity to receive more or less sTable income, while taking unprofiTable social-cultural and community facilities into their balance sheets, which caused a significant increase in the current expenditures of local authorities.

Another reason for the ineffectiveness of the first experience of municipalisation in modern Russia was the lack of experience and competence of municipal managers to work in an economically

[7] USSR Law of 09.04.1990 No. 1417-I "On the General Principles of Local Self-Government and Local Economy in the USSR". URL: https://base.garant.ru/5228211/?ysclid=lb26khxegs338030154#friends

[8] Law of the Russian Federation of 06.07.1991 No. 1550–1 "On Local Self-Government in the Russian Federation" (latest edition). URL: https://www.consultant.ru/document/cons_doc_LAW_105/?ysclid=lb26pv4ani548687385

self-sufficient regime when social facilities, sometimes exceeding the social infrastructure of a large European state, were put under management.

The second stage of local self-government reform in Russia lasted from 1995 to 2003, starting with the adoption of the "Law on the General Principles of Local Self-Government Organization in the Russian Federation",[9] in August 1995. It was characterised by a slowdown in the process of rapid privatisation of enterprises and municipalisation of social facilities and by an increase in related financial difficulties. This was manifested, in particular, in the fact that municipalization of departmental social facilities took place formally, without any changes in the economic nature of their functioning and financing.

Finally, the third stage of the reform started in 2003 and is still ongoing. This is related to the adoption of the new Federal Law "On General Principles of Organization of Local Self-Governance in the Russian Federation".[10] The law "On General Principles of Organization of Local Self-Governance in the Russian Federation", which is in force up to the present day, provides for establishment of a two-tier system of local self-government on the territory of the Russian Federation, which, in turn, implies delimitation of property between municipalities of different types: urban districts, municipal areas, urban/rural settlements. At the same time, municipal property may include only that which is necessary for the implementation of the powers of local government as public authorities, while property intended for commercial use (profitmaking) must be transferred to other owners.

As a result, municipalities do not have enough money to maintain the "acquired" property and fulfil or exert the relevant powers.

In a joint report by **O.A. Pyastolov** (Associate Professor of RANEPA), **S.A. Demuria** (Master of RANEPA), **N.N. Tyutyuryukov** (Professor of Financial university) and **E.A. Arustamov** (professor of Moscow State Regional University), entitled "Comparative analysis of production factors in Russia and their special role in the regional aspect", presented trends, methods, mechanisms and means of development of production factors (Entrepreneurial Talent, Labour, Capital, Land) in Russian regions, identified problems associated with the improvement and harmonization of the latter.

According to the authors, today the need to review the role of regional governance in the formation of new production network institutional structures, as well as their systemic interrelationships that accelerate the development and optimal use of the considered factors of production in order to ensure sustainable development of the national economy is overdue and has already manifested itself. According to the rapporteurs, the measures proposed by them to transform the region's investment policy will help to form new sources of funding to achieve this goal.

A.Y. Alyoshina, associate professor of the Department of Economics of the Moscow State University, presented her report "Development of views on the management of regional insurance markets in Russia", highlighting the main stages of changes in the insurance markets in Russia and the factors determining them.

The emergence of insurance in Russia is associated with the mention of legal norms in "Russian Pravda" (Russian Truth) (approximately XI–XII centuries), which outlined the principles of *mutual insurance*.

In the Russian Empire it was established in 1765, when the first insurance society, the "Riga Mutual Fire Insurance Society", was created, and its state regulation was legalised during the reign of Catherine II with the manifesto "On the establishment of the State Loan Bank" adopted on 28 June 1786.

Numerous examples showed insufficient efficiency of state monopolies in the insurance market,

[9] Federal Law of 28.08.1995 No 154-FL "On General Principles of Organising Local Self-Government in the Russian Federation" (latest version). URL: https://www.consultant.ru/document/cons_doc_LAW_7642/?ysclid=lb26wb5urh490083942

[10] Federal Law No 131-FL of 06.10.2003 (version of 14.07.2022) 'On the General Principles of Organising Local Self-Government in the Russian Federation'. URL: https://www.consultant.ru/document/cons_doc_LAW_44571/?ysclid=lb2714ii6j868315858

so in the 19th century their influence was gradually reduced, and private companies emerged.

After the 1917 revolution, the existing system of joint-stock, mutual, territorial (zemstvo), and state insurance was retained at first, but in November 1918, again the state monopoly was declared on this kind of activity.[11] All private societies and organisations in the sector were abolished and zemstvo and town mutual insurance societies were nationalised.

A significant reform took place in the mid-1980s with the adoption of the Law "On Co-operation in the USSR".[12] The law authorised cooperatives and their associations to set up insurance institutions. In 1990 the state monopoly on insurance was legally abolished.[13] which is the legal basis for insurance activities and is still in force today (as amended and supplemented) was adopted.

The insurance market in general is characterised by high regional differentiation, with a limited choice of insurance products available in most parts of the Russian Federation, which has been exacerbated during the pandemic and by macroeconomic sanctions. According to the rapporteur, the establishment of regional mutual insurance societies can significantly increase access to this type of service for local organisations and the public.

A joint presentation by **A. V. Tebekin** (Professor at MSU and MGIMO), **N. V. Mitropolskaya-Rodionova** (Associate Professor at MGIMO) and **A. V. Khoreva** (Senior Lecturer at MGIMO)"The Model of Consideration (Accounting) of Management Aspects at Various Stages of Regional Economy Management" introduced the four-level model that supports decision making at various stages of regional economy management, and includes consideration (accounting) of business cycles of economic activity: large technological (50 years), medium construction (20 years), small banking (10 years) and short (5 years). In addition, 16 binary combinations of the impact of factors on the economic entities of the region were considered: for each of them the approach and recommendations for the formation of strategies were formulated, taking into account the aspect characteristics of management at different phases of cycles of economic activity of different duration and amplitude.

The paper "Evolution of views on the marketing functionality in the management of regional economic development projects" by **S.E. Chernov**, Associate Professor of the Department of Economics of the Moscow State University, described the economic management of Russian territories as a "historically relevant problem". Along with the expansion of the state borders over the past at least 500 years — the market space, the system of internal, inter-regional and, for some regions, international relations were formed, which prompted the need to create and improve the management of regional marketing.

According to the rapporteur, regional marketing is not only a functional but also a management philosophy for the development of economic life in the region, creates a specific market-oriented or (in an outward impact orientation) adaptive (adhocratic) organisational culture, and thus brings to life *a market-oriented concept for managing* economic development [9].

Relying on the works of foreign authors, S. E. Chernov characterized the evolution of views on regional marketing management at different stages of the life cycle of organizations. In particular, he mentioned modifications of the latter in both holistic and the concept of positive organizational behavior of employees and managers of the regional level [10], in socially responsible marketing [11], in the management of positive organizations [12].

A joint report by **R. A. Babkin** (senior staff scientist in Plekhanov Russian Economic

[11] Decree of the Council of People's Commissars of the RSFSR (Russian Soviet Federative Socialist Republic) of 28.11.1918 "On the organisation of insurance business in the Russian Republic".

[12] USSR Law of 26.05.1988 No. 8998-XI "On Co-operation in the USSR". URL: https://www.consultant.ru/document/cons_doc_LAW_1361/?ysclid=lb27df1s9d340700060

[13] Resolution No. 835 of the USSR Council of Ministers of 16.08.1990 "On Measures for Demonopolisation of the National Economy". URL: http://www.libussr.ru/doc_ussr/usr_17052.htm?ysclid=lb27hq9ryo556686277

University) and **A.G. Makhrova** (leading research scientist in Moscow State University) 'Moscow Agglomeration as a Driver of Socio-Economic Development' describes several stages of formation and modernisation of Moscow and the Moscow Region governance and its main causes.

The initial stage in the rise of Moscow in the 13th-15th centuries and the consolidation of settlement around it was connected with this appanage principality's use of its favourable economic and geographical position, when security was the main factor and at the same time the criterion for regional development. It was precisely for this reason that fortress cities were built around Moscow at a distance of a day's march of troops and densified on strategic directions.

In the pre-industrial period (from the fifteenth century — to the first half of the eighteenth century), the main reason for the development of Moscow and the Moscow suburbs was the location of handicraft and artisan industry centres, and the spread of industrial crops (hemp, flax, etc.) in the agricultural area surrounding Moscow predetermined the accelerated development of light industry enterprises.

Its active growth continued during the Early Industrial Stage (second half of the 18th century to the first half of the 19th century) in the Moscow suburbs, while the industrial boom of the 1930s and 1940s made Moscow a major centre of manufacturing industry surrounded by conglomerates of rural industries.

The industrial period of regional governance development (1860–1910) is associated with the formation of the first prerequisites for the emergence of the Moscow agglomeration. The causes were the emergence and development of railway transport, as well as the abolition of serfdom and the associated formation of the capitalist economy. As a result, centripetal flows of people and goods towards Moscow became even more active and formalised, and the processes of corporatisation of industrial enterprises and creation of shareholding companies were in full swing.

During World War I, a significant number of enterprises were evacuated to Moscow and other urban centres around Moscow and the Non-Black Earth Region from Poland and the Baltic States, which further increased the economic significance of the region in the national context and demanded increased attention to its management.

The early Soviet period of formation of the Moscow agglomeration (before 1941) was associated with such significant factors as the transfer of the capital from Petrograd to Moscow, the transition to a planned economy, and the implementation of industrialisation and collectivisation policies in the national economy.

The post-war stage in the development of Moscow and the Moscow region is due to the creation of new manufacturing industries and the saturation of the capital region with scientific, educational, and other organisations. The transport network was being modernised (development of the underground, electrification of the suburban railways, emergence of suburban bus services, etc.). Another important circumstance during this period was the enlargement of Moscow to include several cities, towns, and villages.

Thanks to effective management, the capital continued to lead the country in terms of the speed of innovation and the implementation of transformational processes in urban management, even in the post-Soviet period..[14]

A joint paper by MSU professor **I.V. Kuptsova** and MSU postgraduate student **N.E. Laktaeva** "Edward J. Blakely and Richard Hu's theory of innovation territory development management using the example of Australia" examined the conditions of innovation activities in this country as part of the transition from resource-based to knowledge-based economy and new models of regional governance.

[14] From the authors of this article we note that in the post-Soviet period the first mayor of Moscow was Professor Gavriil Kharitonovich Popov, founder of the Department of Public Production Management, Department of Economics, Moscow State University.

Australia's main problem is that its industrial growth is predominantly in the mining and related sectors. And reliance on non-renewable resources cannot guarantee the country's future economic success and prosperity.

For the purpose of development of innovation territories in Australia, the concept of E.D. Blakely and R. Hu [13] was chosen as a methodological basis, according to which certain objects, places and territories in each city deserve special attention, the innovative potential of which can form the global competitiveness of the country. And in order to stimulate innovation and knowledge economy, Blakely and Hu propose to move to the paradigm of co-design and creation of innovative places by three levels of Australian government.

The federal government should play not the role of the manager of the projects or programmes it has developed, but the role of a pool of resources, allowing local organisations to use them within the framework of the adopted strategies.

At the regional level (states and territories), authority remains over land use — controlling a crucial component of innovation placemaking, whose quality and location are the basis for new urban innovation areas.

Local governments are at the centre and play multiple roles (so-called assistants, launching pads, facilitators, stimulators, co-creators), each of which helps promote innovation and allows the municipality to compete at different levels.

According to the speakers, these ideas by E. Blakely and R. Hu deserve attention when adjusting the innovation policy of regional governance in Russia.

E.I. Kudryavtseva, Associate Professor of the St. Petersburg Higher School of Economics, in her presentation "The battle for water: history and current state of water management in Spain" presented the historical models applied by the most arid European country.

As the trend of dehydration of territories is increasing every year [14], the topic of fresh water for Spain is not only a subject of current management, but also a rationale for the formation of the state as a whole. One of the main factors is the historical heritage on the issue of water use, which is based on the fundamental principle proclaimed by the ancient Romans that water as the most important resource of a given territory belongs to the category of "*res publica*", i.e. the subject of the social contract.

It is this idea that has caused the most complicated socio-political problems and at the same time the basis for the most significant managerial decisions from antiquity up to the present day. Inhabitants of the Spanish Roman provinces have formed an important social construct for themselves: "water is a private matter and hydraulic engineering is a public matter", which, having survived for more than two millennia, turned out to be the centre of people's perceptions of relations in the field of water resources use.

A historical attempt to return the unified concept of water as "res publica" was made by the Spanish politician, lawyer, economist and historian Joaquin Costa in the revolutionary epoch of 1860–1870s. Largely thanks to his active position, two fundamental laws on water were adopted: the Royal Decree (1860) and the Code of Laws (1879). They arose from the realisation that Spanish agriculture had become a powerful global industry, the need for irrigation had increased and it was necessary to establish uniform principles of water use, public ownership of natural water sources and hydraulic works. On the basis of these laws, the first concessions were established, which evolved into the modern water supply, irrigation and sewerage companies.

In the twentieth century, special water management institutions were created, legalised by the Royal Decree of 5 March 1926 on the Confederation of Hydrography (CSH), which had full managerial and legal autonomy.

New times came in 1985 with the adoption of the "Water Law" which introduced a number of specifications defining the principles of water use in the country and, in the context of our

conference, outlined the reasons for changes in inter-regional conflict management in Spain. The first clarification is the acceptance of the unity of the hydrological cycle and is the awareness of the integrity of the water system, regardless of which "modality" of the resource is represented in a particular situation: surface or groundwater, rain or industrial run-off, sea or marsh. The second is an assertion of the primacy of public administration of water resources and the legal separation of waters to which there is general access and those for which a permit or licence must be obtained.

A report by **O.V. Stulov**, Associate Professor of the Faculty of Economics of Moscow State University, entitled "Managing the eco-development of the Brazilian Amazon region in the context of its socio-economic history. Lessons for Russia" spoke about one of the country's potentially rich but little-studied regions, the Amazonian regions, which covers the territory of several states (an area of over 5 million square kilometres, which is approximately 61% of Brazil's territory) with a population of 21 million people. It contains deposits of iron ore, bauxite, copper and cassiterite, mineral assets of gold, silver, diamonds, kaolin, niobium, manganese, and gas.

In 1966, the Federal Presidential Government of Castelo Branco established the General Directorate of Amazonian Development (SUDAM), tax and financial incentives were developed to attract national and foreign private investors and, to this end, the Free Economic Zone of MANAUS (ZFM) and the Industrial Pole of MANAUS (PIM) were created. However, the original objective of establishing ZFM as an *export* platform has not been achieved in practice, as it has become a window for *imports* into the Brazilian market.

In 2007, the SUDAM Reform Act was enacted to "reduce regional economic disparities in line with the requirements of the government's Regional Development Policy". Among the measures proposed in the document were special incentives for businesses in the region, such as a 75% reduction of the corporate tax rate (IRPF), provided that these entities are located in Amazonia and 20% of their production is classified.

In 2019, J. Bolsonaro's government came to power, embarking on neoliberal reforms. The new administration proclaimed a Regional Development Policy (PNDR) and the plan was approved by the SUDAM (CONDEL/SUDAM) Consultative Council by special decision no. 77 of 23.05.2019, which is still pending in Congress (the delay is due to the need to deal with the pandemic).

A large number of Free Ecological Zones are being formed in the Amazon. Discussions are underway to convert MANAUS FEZ into a Free Ecological Zone to promote sustainable development of multiple systems of healthy, socially equiTable and economically viable production and to generate new potential for the area.

According to the rapporteur, the material presented could be useful for the development management of Russia's regions, which are rich in natural resources but remote and sparsely populated.

The most representative presentations were given by the three representatives of the Institute of Regional Economic Problems of the Russian Academy of Sciences (IREP RAS). In the joint report of its scientific director, RAS academician **V.V. Okrepilov** and the director, Professor **A.D. Shmatko** "Current issues of regional development. Challenges of Public and Municipal Management" presented current and prospective research carried out by IREP. In the field of strategic planning of socio-economic development, the focus of scientific work is focused on the quality-of-life management.

The Institute conducts fundamental and applied research into the spatial development of regional economies, which is systematic and interdisciplinary in nature, and its contribution to the St Petersburg Social and Economic Development Strategy 2035[15] has been recognised as significant.

[15] Strategy for socio-economic development of St Petersburg until 2035. URL: https://www.gov.spb.ru/gov/otrasl/c_econom/strategiya-ser-2035/

The Centre for Regional Problems of Quality Economics, headed by V. V. Okrepilov, has formulated an approach to managing the population's quality of life in the regions, based on an optimal combination of quality economics and economic and mathematical modelling methods. For the first time in the world practice, in order to monitor the implementation of the above-mentioned Strategy, the application of the *territorial quality of life management system* is proposed.

The joint report of **A. D. Shmatko** and **A. N. Leontieva** (Head of IREP RAS Laboratory) "Motivational aspects of human resource management in public civil and municipal service in regional projection" presents the current context of human resource policy implementation in executive authorities and local self-government. The motivational component is singled out, its significance for the digital transformation of public administration is substantiated, methods of incentives for state and municipal employees are considered, approaches to the motivation of managerial personnel are characterized, the feasibility of developing methods of non-material motivation of employees taking into account the dominant type of organizational culture is substantiated. Improvement of methodological support for the management of personnel potential of state and municipal civil service in the new conditions of development of the country, taking into account regional specifics, has been proposed as a scientific task.

A joint report by **A.D. Shmatko**, **V.F. Bogachev** (Professor, Chief Scientific Officer, IREP RAS) and **A.S. Mikulenok** (Associate Scientific Officer, IREP RAS) "On the history of interregional relations development in the Russian Arctic" described the multi-year process of shaping the economic management system of Russia's Arctic regions.

The first person to realise the scale and special importance of these territories was M. V. Lomonosov, who regarded the Arctic not only as a short transport route across the Arctic Ocean, but also as part of a country with numerous natural resources. However, the state did not give it the attention it deserved. In this regard, it is of interest to look at the changing stages of the state's involvement in managing the region's socioeconomic development and the reasons for its decisions.

During the sixteenth to nineteenth centuries, large-scale settlement of the previously nearly uninhabited Arctic regions and the formation of authorities seeking to create an environment for the indigenous peoples of the North took place. Water communication with the mainland and the organisation of special maritime expeditions to the Pacific Ocean began to develop; data on the developed territories began to be systematised and later formed the basis for geographical maps; a management system was formed to use the seas of the Arctic Ocean as transport communications, to ensure the sTable development of the integrated northern territories and permanent control over activities in the Russian Arctic zone.

Increased state attention is associated with the establishment in 1919 of the Committee of the Northern Sea Route, transformed in 1928 into the North Siberian State Joint Stock Company ("Komseverput"), which laid the foundation for the future powerful production and technological potential of the Arctic zone. To solve the practical task of laying an original sea corridor from the White Sea to the Bering Strait in December 1932, the Chief Directorate of the Northern Sea Route ("Glavsevmorput") was formed under the leadership of the famous polar explorer Otto Yulyevich Schmidt. One of the reasons for this decision was the desire of the country's leadership to pursue a unified regional policy with regard to the operation of this transport artery along its entire length from Murmansk to Vladivostok, for which purpose the territorial offices of Glavsevmorput were opened in Murmansk, Arkhangelsk and Vladivostok.

In the 1930s and 1940s, large-scale industrial development of the region continued; scientific research was carried out to explore the potential of the northern territories; and Arctic navigation and shipping along the rivers flowing into the Arctic Ocean were developed.

The period from the 1950s to 1990s saw a transition to a resource-based model of Arctic development and strategic planning of economic processes, as well as the implementation of the concept of interregional management through the creation of territorial-production complexes (TPCs).

At present, the Arctic Zone of the Russian Federation (AZRF) is a formal association of nine regions with different population sizes (varying several-fold) and their own development strategies.

A key issue for the AZRF is the modernisation of the current regional management system. In this regard, the idea of developing a mechanism for their interaction based on the principles of horizontal integration with the mandatory introduction and implementation of Quality Management System standards deserves attention.

At the end of the conference, the participants exchanged their views and assessments of the presentations and made proposals for the themes of the next 23rd "History of Management Thought and Business" Conference in 2023.

REFERENCES

1. Marshev V.I. History of managerial thought. Moscow: Prospekt; 2021. 944 p. (In Russ.).
2. Gherhes C., Vorley T., Brooks C. Making sense of industrial decline: How legacies of the past influence the development of entrepreneurship cultures in formerly industrialized places. *Entrepreneurship & Regional Development*. 2020;32(9–10):899–921. DOI: 10.1080/08985626.2020.1842914
3. Koritskii E.B. At the origins of scientific organization of labor: Forgotten discussions and unrealized ideas. Leningrad: Leningrad State University; 1990. 336 p. (In Russ.).
4. Marchenya P.P., Razin S. Yu. The "study of troubled times" as a "Gordian knot" of the Russian studies: From empire to strife, from strife to…? *Rossiya i sovremennyi mir = Russia and the Contemporary World*. 2010;(4):48–65. (In Russ.).
5. Fayol H. Administration industrielle et générale. Paris: H. Dunod et E. Pinat; 1917. 174 p. (Russ. ed.: Fayol H. Obshchee i promyshlennoe upravlenie. Moscow: Central Institute of Labor; 1923. 122 p.).
6. Petty W. A treatise of taxes & contributions. London. 1662. 72 p.; Petty W. Verbum sapienti. In: The political anatomy of Ireland. London: Printed for D. Brown and W. Rogers; 1691.; Petty W. Quantulumcunque concerning money to the Lord Marquess of Halyfax. London: Printed for A. and J. Churchill; 1695. (Russ. ed.: Petty W. Izbrannye raboty. Traktat o nalogakh i sborakh. Verbum sapienti. Raznoe o den'gakh. Moscow: Os'-89; 1997. 110 p.).
7. Manyushis A. Yu., ed. Management of sustainable development of large cities and regions: Problems and ways of transformation. Moscow: Nauchnaya biblioteka; 2021. 572 p. (In Russ.).
8. Altman I. The environment and social behavior: Privacy, personal space, territory, crowding. Monterey, CA: Thomson Brooks/Cole Publishing Co.; 1975; 256 p.
9. Cameron K.S., Quinn R.E. Diagnosing and changing organizational culture: Based on the competing values framework. Reading, MA: Addison-Wesley Publishing Co.; 1998. 288 p. (Russ. ed.: Cameron K., Quinn R. Diagnostika i izmenenie organizatsionnoi kul'tury. St. Petersburg: Piter; 2001. 320 p.).
10. Luthans F. Organizational behavior: An evidence-based approach. New York: McGraw-Hill/Irwin; 2011. 574 p.
11. Kotler Ph., Keller K.L. Marketing management. Englewood Cliffs, NJ: Prentice-Hall; 2006. 816 p. (Russ. ed.: Kotler Ph., Keller K.L. Marketing menedzhment. St. Petersburg: Piter; 2012. 816 p.).
12. Quinn R.E. The positive organization: Breaking free from conventional cultures, constraints, and beliefs. Oakland, CA: Berrett-Koehler Publishers, Inc.; 2015. 168 p. (Russ. ed.: Quinn R.E. Pozitivnaya organizatsiya. Osvobozhdenie ot stereotipov, prinuzhdeniya, konservatizma. Moscow: Olymp-Business; 2017. 208 p.).

13. Blakely E.J., Hu R. Crafting innovative places for Australia's knowledge economy. London, New York: Palgrave Macmillan; 2019. 282 p.
14. Böhnisch A., Mittermeier M., Leduc M., Ludwig R. Hot spots and climate trends of meteorological droughts in Europe — Assessing the percent of normal index in a single-model initial-condition large ensemble. *Frontiers in Water*. 2021;(Sep.). DOI: 10.3389/frwa.2021.716621

ABOUT THE AUTHORS

Vadim I. Marshev — Dr. Sci. (Econ.), Honored Professor of Moscow University, Professor of the Department of Organization Management, Economics Faculty, Director of the Sports Management Center, Lomonosov Moscow State University, Moscow, Russia
https://orcid.org/0000-0002-1808-2054
vmarshev@mail.ru

Victor F. Bogachev — Dr. Sci. (Econ.), Professor, Head of the Laboratory of the Institute for Problems of Regional Economics of the Russian Academy of Sciences, St. Petersburg, Russia
https://orcid.org/0000-0002-6059-7406
vic-bogachev@mail.ru

Sergey E. Chernov — Cand. Sci. (Econ.), Associate Professor, Senior engineer of the Department of Management, Economics Faculty, Lomonosov Moscow State University, Moscow, Russia
https://orcid.org/0000-0002-7268-6166
sergchernov@mail.ru

Authors' declared contribution:
Marshev V.I.— abstract, review of reports by V.I. Marshev, I.V. Dvoluchansky, A.D. Kuzmicheva, V.A. Aksenova, A. Yu. Manyushis, D.D. Bekoeva and S.V. Radchenko-Drayar, S.I. Neizvestny.
Chernov S.E.— review of reports by M.V. Lychagin, T.T. Avdeeva, O.A. Pyastolova, S.A. Demuria, N.N. Tyutyuryukov and E.A. Arustamova, A. Yu. Aleshina, A.V. Tebekina, N.V. Mitropolskaya-Rodionova and A.V. Khoreva, S.E. Chernova, R.A. Babkin and A.G. Mahrova.
Bogachev V.F.— review of reports by I.V. Kuptsova and N.E. Laktaeva, E.I. Kudryavtseva, O.V. Stulova, V.V. Okrepilova and A.D. Shmatko, A.D. Shmatko and A.N. Leontieva, A.D. Shmatko, V.F. Bogachev and A.S. Mikulenok.

Conflicts of Interest Statement: The authors have no conflicts of interest to declare.

The article was submitted on 05.10.2022; revised on 24.10.2022 and accepted for publication on 30.11.2022. The authors read and approved the final version of the manuscript.

Development of Russian Corporate Governance Practice: Strength Test (Review of the Round Table "Development of Russian Corporate Governance Practice: Strength Test")

On October 27th 2022, the Institute of Economics of the Russian Academy of Sciences' Expert Council on the issues of Corporate Governance of Companies with State Ownership (hereinafter referred to as the "IE RAS Expert Council on Corporate Governance") in conjunction with the Financial University under the Government of the Russian Federation held a round Table entitled "Development of Russian Corporate Governance Practice: " A Strength Test". The event was co-organised by the self-regulatory organization "National Association of Corporate Directors", the Corporate Governance and Investment Committee of the Russian Managers Association (RMA) and the Russian Institute of Directors.

The discussion was moderated by **A. A. Voronin**, PhD in Economics, Chairman of the Expert Council on Corporate Governance at the Institute of Economics of the Russian Academy of Sciences, leading researcher of the Centre for Public Administration Research at the Institute of Economics of the Russian Academy of Sciences, and **I. Yu. Belyaeva**, Doctor of Economics, Professor, member of the Expert Council on Corporate Governance at IE RAS, Research Director of the Corporate Finance and Corporate Governance Department at the Financial University under the Government of the Russian Federation.

The announced topics of the round Table generated genuine interest. More than **100** professional corporate directors, representatives of the academic scientific community and leading national universities, heads of executive authorities, public organisations and professional associations registered for the event, which was held in a mixed format. The representatives of "VTB" PJSC, "Alrosa" PJSC, "Roskartografia" JSC, "Rosgeologiya" JSC, "Moscow Stock-Exchange" PJSC, "Voskhod DPO" JSC, "Roscosmos" and "Rosatom" state corporations were present.

The participants presented research papers and took part in discussions on pressing issues of corporate governance development in the Russian Federation.

In particular**, I. V. Belikov**, Director of the nonprofit partnership "Russian Institute of Directors", Chairman of the Corporate Governance and Investment Committee of the Russian Managers Association, and member of the Corporate Governance Expert Council of the Bank of Russia, presented his vision of the main challenges facing the corporate governance system in the Russian Federation in his speech "Corporate Governance in the New Reality: Key Challenges".

The new foreign policy and economic reality will have an increasing impact on corporate governance practices due to its long-lasting nature.

From 1992 until the end of 2021, the key driver of corporate governance development was the presence of Western portfolio investors, whose influence has been severely diminished in the new situation. Domestic and non-Western investors will not be able to replace them in this role.

Consequently, the attractiveness of corporate governance development (as a driver of rapid capitalisation growth) is no longer working. Of the three main aspects: legal, investment and governance, the second is undergoing the most serious collapse since 1991. The factor of preserving the established legal framework of corporate governance is playing a key role.

Improving corporate governance as a means of improving the quality of management of a company as a whole is of paramount importance. But the extent to which Russian companies will accept it as a practical guide is still unclear. It is fundamentally important to preserve the established corporate governance tools and working terminology, which are an important element of civilized business conduct and an element of "recognition" of Russian companies by partners from both economically developed and emerging markets.

M. E. Kuznetsov, Advisor to the Russian Deputy Minister of Finance on Corporate Governance, Director of the Centre for Systemic Transformations of the Department of Economics at Lomonosov Moscow State University, and the member of the boards of directors of JSC "PA (production association) Kristall" and PJSC "Sovcomflot", described in his report on 'Corporate Governance in a Turbulent Era' how the organisation of the board of directors is changing and the communication and information support processes for its work are limited in the new environment. He also highlighted the need to fight bureaucracy in corporate procedures and noted that there is and will be no alternative to the further development of corporate governance.

A. A. Voronin, PhD in Economics, Chairman of the Expert Council on Corporate Governance at the IE RAS, a leading researcher at the Centre for Public Administration Research at the IE RAS, in his presentation "Major Trends in the Transformation of the Corporate Governance Model in the New Reality" presented his own interpretation of the transformation of the corporate governance model in a global reorganisation of the world, detailing both the major current trends and risks for the Russian economy in this area and forecasts regarding social and economic systems in Russia and worldwide until 2025. The speaker voiced the three trends which have recently taken the lead in the attention of corporate directors of major companies:

1) The digitalisation of corporate business processes and the resulting transformation of corporate governance;

2) the orientation of corporate governance practices towards ESG and sustainability goals;

3) the formation by many corporations of their own ecosystems (starting from primitive loyalty cards with participation of all structures of a corporation in these programmes and up to the creation of global ecosystems: foreign ones — "Google", "Amazon", "Tencent", etc., Russian ones — "Sber", "Yandex", "OZON", etc.).

Mr. Voronin also spoke separately on the directions of key priorities in the corporate governance of Russian companies in the coming years. Among other things, he pointed to the growing tendency for the Russian stock market to diminish its role as a mechanism for attracting financial resources to public joint-stock companies.

The speaker went on to present the main parameters and characteristics of the emerging global corporate governance models. Socio-political and economic processes both globally and in Russia are shaping up to be a 'perfect storm' for corporations. The way out of the current global crisis for public companies will be a change in previous paradigms, namely the transition to one of the two corporate governance models emerging in the twenties of the 21st century (i.e. right before our eyes): "paternalistic" — when implementing the inertial option, and "transformational" — when there is an optimistic scenario of socio-economic changes, development and application of best corporate governance practices and a proactive position of corporate directors of public companies and corporations.

Further on, ***N. V. Starchenko***, executive director, member of the board of the self-regulatory organization "National Association of Corporate Directors", member of the Collegium of the Expert Council on Corporate Governance

of IE RAS, member of the Board of Directors of "GTsV" JSC, member of the SC of "Rosgeologiya" JSC and "Roskartography" JSC, delivered a report on "How to Transform the Russian Corporate Governance Model in Modern Conditions". He stated that, along with the dramatic change in the external environment in 2022, the goals of Russian companies have also been transformed. In the commercial sector, the response to the ongoing processes was generally timely and appropriate. Corporate governance responses manifested themselves in a greater involvement of boards of directors and shareholders in the work of corporations and strengthening of their controlling functions. In the public sector, however, responsiveness to change and difficulty in articulating key development objectives in the new environment has lagged. In the speaker's view, the transformation of corporate governance should primarily take place through giving boards of directors real controlling powers and aligning existing regulation with the existing ownership structure, including through the introduction of the concept of a "state-owned joint-stock company" into legislation and rules for the management of such a business entity.

Then the floor was given to ***O. R. Fedorov***, a member of the Expert Council on Corporate Governance of the IE RAS, an independent director and member of the Board of Directors of PJSC "ROSSETI North-West". In his presentation "On the Culture of Corporate Governance in the New Reality" he drew attention to the increasing relevance of the issues mentioned against the background of the "survival" of inefficient business models in the 1990's. The response to that challenge was a U-turn towards investors through an increased level of corporate culture. He said that the current economic system in the Russian Federation, while under pressure, required precisely a new quality of corporate culture to enable companies to access capital and for domestic investors to invest in sectors of the economy domestically. In this context, the key to improving corporate efficiency lies precisely in the quality of corporate governance, its goal-setting and the active application of its tools and best practices in the new reality.

In his presentation on "Changes in Corporate Governance: Recent Trends", ***I. N. Repin***, Deputy Executive Director of the "Professional Investors Association", member of the Collegium of the Expert Council on Corporate Governance of the IE RAS, member of the Supervisory Board of "VTB Bank" PJSC, member of the Shareholder Advisory Council of "VTB Bank" PJSC, supported the idea of actively using corporate governance tools and mechanisms in working with in-house investors. He stressed the need to improve the efficiency of interaction with Russian shareholders (especially individuals), highlighted the issues of succession and the quality of boards of directors, and suggested returning to the in-person format of general meetings of shareholders (at least for large public joint stock companies with a large number of shareholders) in order to develop communication and increase trust between them and the management of major Russian joint stock companies, as well as exerting discipline over the latter.

A. S. Yukhno, PhD in Law, a member of the Expert Council on Corporate Governance at the IE RAS, Deputy Chairman of the Public Council at Rosimushchestvo, in his presentation "Development of Russian corporate governance practices under new conditions" noted that in the new reality the traditional approaches to business management are changing fundamentally. Proposed solutions to the emerging challenges should be economically justified and used to enhance the efficiency of corporate structures. With companies gradually adapting to the new environment and "rules of the game", boards will start to shift their priorities towards sustainable development at the expense of strategic development. The speaker presented his views on improving Russian corporate governance practices: he singled out six dimensions to help

corporate structures achieve their sustainability goals in the new environment; he raised the issue of ensuring that the agenda of board meetings is aligned with ongoing changes in business strategy, corporate competitiveness and transition to a new technological mode; he noted the need to revise practical tools for business environment analysis, changing the approach to corporate sustainability in the new environment, and developing a new set of corporate governance standards. As practical recommendations, the boards of directors were asked to identify and prioritise the company's priorities in order to concentrate resources in these areas; to revise the system of key performance indicators with their weighting; to recommend that the company's management continue to implement innovative solutions in the business model and cooperate with various stakeholder groups to implement strategic changes.

During the discussion, ***S. V. Eliseev***, member of the Expert Council on Corporate Governance at the Institute of Economics of the Russian Academy of Sciences, drew attention to the corporate governance model taking shape in the new environment, the need to develop deterrence mechanisms in crisis situations and highlighted the main current task of the board of directors — to create conditions for management to quickly reorient itself. ***I. I. Smotritskaya***, Doctor of Economics, Head of the Center for Public Administration Problems Research of the Institute of Economics of the Russian Academy of Sciences, member of the Board of Corporate Governance Expert Council of IE RAS, supported the idea of developing corporate governance tools to attract domestic investors and stressed the urgency and immediacy of the problem. Other members of the Expert Council on Corporate Governance at the IE RAS, members of the National Association of Corporate Directors and guests of the round Table ***A. A. Gogol, G. Yu. Soldatov, M. V. Sharatsky*** also took part in the discussion.

The presentations and speeches made by prominent representatives of the academic and professional communities set the stage for a wide-ranging discussion of corporate governance issues, including corporate disclosure, corporate governance models, the role of stakeholders and the need to maintain business stability in the current environment, its "survival" under sanctions and closure of Western capital markets for Russian joint-stock companies. The participants also pointed to the increasing role of the government and its influence on transformational processes of corporate governance models in Russian companies.

In conclusion, **A.A. Voronin and I. Yu. Belyaeva**, summarising the session, thanked the speakers, partners, co-organisers and all those present.

I. Yu. Belyaeva, *Doctor of Economics, Professor,*
A member of the Expert Council on the issues of Corporate Governance over companies at the Institute of Economics of the Russian Academy of Sciences, Research Director of the Corporate Finance and Corporate Governance Department at the Financial University under the Government of the Russian Federation

A.A. Voronin, *PhD in Economics,*
Chairman of the Expert Council on the issues of Corporate Governance over companies at the Institute of Economics of the Russian Academy of Sciences, leading researcher of the Centre for Public Administration Research at the Institute of Economics of the Russian Academy of Sciences

A.S. Yukhno, *PhD in Law,*
A member of the Expert Council on Corporate Governance over companies at the Institute of Economics of the Russian Academy of Sciences, Deputy Chairman of the Public Council at Rosimushchestvo