

ORIGINAL PAPER



DOI: 10.26794/2304-022X-2025-15-4-20-29
UDC 502.131.1:346.26(045)
JEL L26, M21

On Ensuring Sustainable Development of Small and Medium-Sized Businesses in Russia

I.N. Geraskina^a, L.P. Goncharenko^b, G.A. Timoshenko^b

^a Saint Petersburg State University of Architecture and Civil Engineering, Saint Petersburg, Russian Federation;

^b Plekhanov Russian University of Economics, Moscow, Russian Federation

ABSTRACT

From the standpoint of systems and self-organization theory, this article presents the prerequisites for the qualitative and sustainable development of small and medium-sized enterprises (SMEs) in the Russian Federation. The **relevance of this issue** stems from the spatial and structural imbalance of key SME performance variables and the need to create conditions for achieving the priority directions of technological sovereignty, which will contribute to forming a qualitatively new structure of the national economy. The purpose of the study is to develop and propose methodological principles for achieving an optimal innovative structure of SMEs, while the main **objective** is to minimize losses and management costs in launching a mechanism of self-sustaining SME development. The authors apply the **methodological** framework of systems and self-organization theory, structural and cyclical dynamics, as well as methods of comprehensive and statistical analysis. The research is based on data from regulatory and legal reference systems and official statistics of the Russian Federation. As a **result** of the study, a methodological approach is proposed that enables managerial decision-making based on the principles of harmonious correlation of SME parameters (ownership forms, enterprise size, spatial and territorial characteristics, SME share in GDP, employment rate, etc.) and synergetic analysis. This approach shapes the systemic potential for the qualitative innovative development of SMEs and their transition into the sphere of large business.

Keywords: high-quality development; sustainable development; small and medium-sized enterprises (SMEs); innovative development; harmonious ratio; harmony in management; balanced management; socio-economic system

For citation: Geraskina I.N., Goncharenko L.P., Timoshenko G.A. On ensuring sustainable development of small and medium-sized businesses in Russia. *Upravlencheskie nauki = Management Sciences*. 2025;15(4):20-29. DOI: 10.26794/2304-022X-2025-15-4-20-29

INTRODUCTION

Under conditions of economic instability and technological transformation, the pursuit of sustainable economic development is impossible without a balanced relationship between the public and private sectors. At the same time, entrepreneurship — as an integral structural element of the economy — has always attracted significant attention, since it serves as a driving force of socio-economic development within a territory, contributes to the creation of new jobs, helps address unemployment challenges, and enhances labour productivity. In turn, state entrepreneurship shapes the structure of the economic space by implementing national projects, thereby regulating the transparency and the level of entropic dynamics, as well as authorizing the activities of economic actors and determining the vector of their interaction.

It is evident that the state is guided primarily by political and socio-economic interests, addressing a wide range of strategic objectives through authorized bodies and state-owned corporations. Among these, one of the key consolidating challenges is ensuring balanced innovative development of ecological–socio-economic systems (ESES). Its solution should be sought within the frameworks of systems theory and self-organization, drawing on an interdisciplinary and integrated body of knowledge, since the innovative development of humanity constitutes a natural evolutionary phenomenon with an inherent tendency toward acceleration. According to the authors' previous publications, “balanced innovative development of an ESES is understood as the coordinated transformation of its equivalent (homogeneous) subsystems (for example, resource flows, investments, economic actors, institutions, and others), the interconnections among them, and the processes that ensure the systemic potential and the capacity of an ESES to transition to a qualitatively new development trajectory” [1]. At the same time, the main challenge of management lies in understanding this mechanism, analyzing the

mutual influence of endogenous fundamentally non-equilibrium processes, and examining the role of the ESES structure in shaping a cyclical trajectory.

RESULTS

One of the most important subsystems of the national economy is small and medium-sized enterprises (SMEs), which are capable of addressing not only a range of economic objectives — such as ensuring the sustainable development of regions, generating tax revenues, and increasing demand for the products of larger enterprises — but also social objectives, including ensuring employment and improvements in living standards, as well as the stimulation of competition and innovation. Moreover, SMEs play a fundamental role in promoting innovative development. SMEs contribute to the saturation of markets with goods and services by mobilizing citizens' financial resources, thereby enhancing the flexibility and adaptability of the national economy. Let us analyze the dynamics of the number of SME entities in Russia over the period from 2016 to 2025 (Fig. 1). According to the Unified Register,¹ by 2025 their number reached a record level of 6.6 million, largely due to the establishment in 2024 of more than 1 million legal entities and individual entrepreneurs.

In 2024, average monthly revenues amounted to 1.7 trillion rubles for micro-enterprises, 0.6 trillion rubles for small enterprises, and 0.2 trillion rubles for medium-sized companies. A notable positive development is that average revenue per enterprise increased by 11.2% over the period under review.

Plans for the implementation of the new national project “Efficient and Competitive Economy,” scheduled for launch in 2025, envisage a 20% increase in the incomes of SME employees by 2030, as well as an outpacing

¹ Unified Register of Small and Medium-Sized Enterprises URL: <https://rmsp.nalog.ru/index.html> (date of access: 10.09.2025).

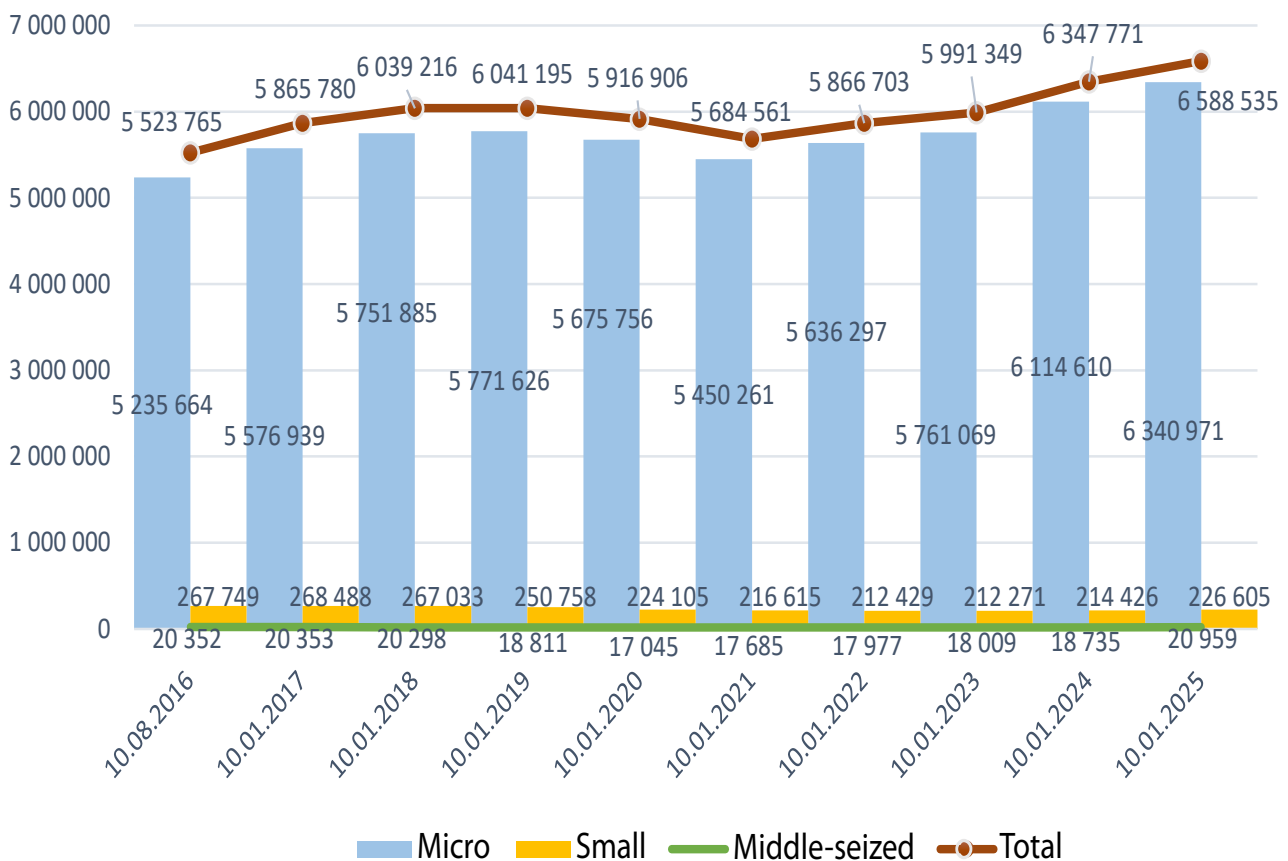


Fig. 1. Dynamics of the Number of SMEs in Russia, 2016–2025

Source: Compiled by the authors based on data from the Federal State Statistics Service.

growth of income per worker relative to GDP by a factor of 1.2.²

In recent years, the SME sector has not undergone substantial structural changes, with the exception of the expansion of retail trade conducted via postal services or the Internet. An increase has been observed both in the share of SMEs within the country's GDP structure (approximately 20%) and in business turnover, which rose by 14% (to 2,987 billion rubles). Based on the positive dynamics of quantitative indicators, it becomes possible to proceed with the implementation of the goals and objectives articulated by the President of Russia in 2024, namely, to initiate "a transition from quantitative growth to qualitative development of SMEs, the formation

of a supply-side economy, and the advancement of technological sovereignty in priority areas."³

Overall, the upward trend in quantitative indicators suggests a certain effectiveness of state support measures for SMEs. These include: expanding business opportunities to utilize non-bank sources of financing; providing company support through specialists of the "My Business" center, granting access to a wide range of services and informational resources, consultations, educational and trade fair events, accelerators, and product promotion tools; reducing transaction costs through the fast payment system; and lowering insurance contributions and the tax burden (the ratio of taxes paid to SME revenues in 2024 amounted to 5.2%).

² National project "Efficient and competitive economy" URL: https://www.economy.gov.ru/material/directions/np_effektivnaya_i_konkurentnaya_ekonomika/

³ The new role of SMEs in the Russian economy: an expert report. URL: <https://xn-80aapampemchfmo7a3c9ehj.xn--p1ai/new-projects/> (date of access: 10.09.2025).

It should also be noted that the highest concentration of SME entities (approximately 50%) is observed in two federal districts — the Central and Volga districts. The largest share (65.6%) is concentrated in Moscow (910 thousand) and the Moscow region (458 thousand), followed by Saint Petersburg (378 thousand), Krasnodar Krai (309 thousand), and Sverdlovsk Oblast (213 thousand). Within the Volga Federal District, the highest number of SME enterprises is registered in Tatarstan (178 thousand), Bashkortostan (142 thousand), Samara Oblast (135 thousand), and Nizhny Novgorod Oblast (130 thousand). The southwestern regions of Russia account for 116 thousand SME entities.⁴

The analysis of statistical indicators for 2025 in the SME sector points to a certain spatial and structural imbalance⁵:

a) the share of SMEs in the overall structure of the Russian Federation's GDP is 20% (whereas in developed countries this indicator reaches 50–60%);

b) medium-sized enterprises account for only 1% of the total number of legal entities;

c) the largest proportion of SME entities (32%) is located in the Central Federal District;

d) SME turnover represents 34% of the national total;

e) employment in the SME sector amounts to 38% (27.9 million people) of total employment in the country's economy.

It should be taken into account that accumulating structural disproportions typically provoke cyclical crises and financial difficulties, driving any economic system into a state of recession. Timely analysis and managerial adjustments to the sectoral and technological structure of SMEs can restore balance and, consequently, create prerequisites for sustainability [2].

DISCUSSION

The evolution of Nikolai Kondratiev's long economic cycles⁶ demonstrates the presence of

pronounced structural disproportions — both within the ecological–socio-economic systems (ESES) of individual territories and globally — driven by structural crises [3]. The latter emerge independently of cyclical dynamics, provoking economic crises and influencing their depth, scale, and duration, thereby determining the potential for evolutionary development. A structural crisis inherently accompanies the cyclical economic trajectory, as the two phenomena are closely interconnected and mutually conditioned.

In this context, the entrenched tendency of SMEs to base their economic activity on their own, often self-interested, short-term economic objectives and narrowly local concerns motivates the state, represented by authorized institutions, to undertake stringent coordinating actions aimed at regulating the formation of priority spheres of economic activity and determining directions for their development.

From the perspective of systems theory and self-organization, ensuring the sustainability of SME development, organizational coherence, and favourable qualitative transformations reduces to the challenge of mitigating structural-cyclical fluctuations within the economic system and understanding the nature of their mutual influence. The impact of evolutionary cycle shifts, driven by alternating periods of expansion and contraction, manifests differently at the global level (for example, within Russia's ESES) and at the local level (SMEs operating within a given territory). Smaller-scale systems, such as SMEs, experience more intense fluctuations, generating substantial disturbances that are largely neutralized through the multidimensional nature of development; a recession in one subsystem may be compensated by the achievements of others. Through self-organization, conditions emerge for the realization of synergistic and complementary systemic effects. Therefore, the harmonious and

phases of expansion and contraction of varying duration. They were described in the 1920s by the economist Nikolai Kondratiev.

⁴ Official website of the Federal State Statistics Service (Rosstat) URL: <https://rosstat.gov.ru/> (date of access: 10.09.2025).

⁵ Ibid.

⁶ Kondratiev cycles (K-cycles or K-waves) refer to periodic long-term fluctuations in the economy, characterized by alternating

balanced development of all ESES subsystems ensures sustainability and the potential for the improvement of its individual elements (specific territories) [4–7].

The systemic property of “sustainability” in economics is determined by the cyclical nature of energy (various resource) flows: from a given socio-economic system to its supersystem (the global economy, ecosystem) or to its subsystems (sectors, SMEs, industrial institutions), where the relationship between parts and the whole corresponds to the law of natural harmony (the Fibonacci principle). In this context, restoring the spatial and structural balance of SMEs requires achieving proportional relationships among the variables under consideration (for example, quantitative indicators), as well as a structural-functional balance of SMEs and their components. This implies dividing a given variable (an area of activity or a specific indicator) into parts such that the smaller relates to the larger as the larger relates to the whole quantity [8–10].

The principle of the golden ratio constitutes an objective law of development of ESES, manifesting itself in works of art, biology and genetics, psychology and politics, education and science, engineering and technology, economics and management, among other domains. An optimal relationship between the quantitative and qualitative parameters of SMEs ensures the attainment of essential systemic properties such as reliability, structural stability, economic efficiency, and the potential for qualitative transformations [1, 10, 11].

A sustainable and socially oriented economy may be considered one in which the share of state ownership reaches 60% (for example, as in Sweden), whereas a liberal-oriented economy corresponds to a level of approximately 40% state ownership (for example, Japan [35%] or the United Kingdom [40%]). In the Russian Federation, this indicator remains at the level of 10–15%, which is unsatisfactory from the standpoint of both socially and liberal-oriented economic models [1, 10, 11].

As the study demonstrates, the achieved parameters of the resulting variables of SME system development in Russia do not meet the criteria of harmony and sustainability, specifically the ratio of 62% to 38%. In particular, the share of SMEs in the overall GDP structure of the Russian Federation should tend toward 38%; the proportion of small and medium-sized enterprises within the total number of SMEs should correspond to 38%; and the number of employees in the SME sector should amount to 62% of total employment in the economy.

If relationships among SME elements and processes are dominated by proportions consistent with harmonic balance, the system will develop in a stable and balanced manner with minimal management costs. Although the described structure is idealized, it serves as an important benchmark for conducting systematic and objective analysis of economic systems and for elaborating effective governance strategies. The sustainability and balanced trajectory of SME development also contribute to managerial efficiency among entrepreneurial actors, optimal predictability of the economic space, the formation of innovative potential, and qualitative transformations [10, 12, 13].

The practical value of such balance-achievement methods represents the quintessence of complex optimization-based governance technologies, ensuring the reasoned and objective character of evolutionary trends. A number of Russian SMEs applying contemporary advances in the theory and methodology of innovation management successfully employ harmonic proportions in improving their structural-functional forms, as well as in developing marketing and competitive strategic actions [14].

METHODOLOGY

To model the harmonic space of SMEs, let us represent the market as an unbalanced structure comprising a complex of interconnected economic entities, in which medium-sized enterprises account for only 1% of the total number of legal entities producing a good (G):

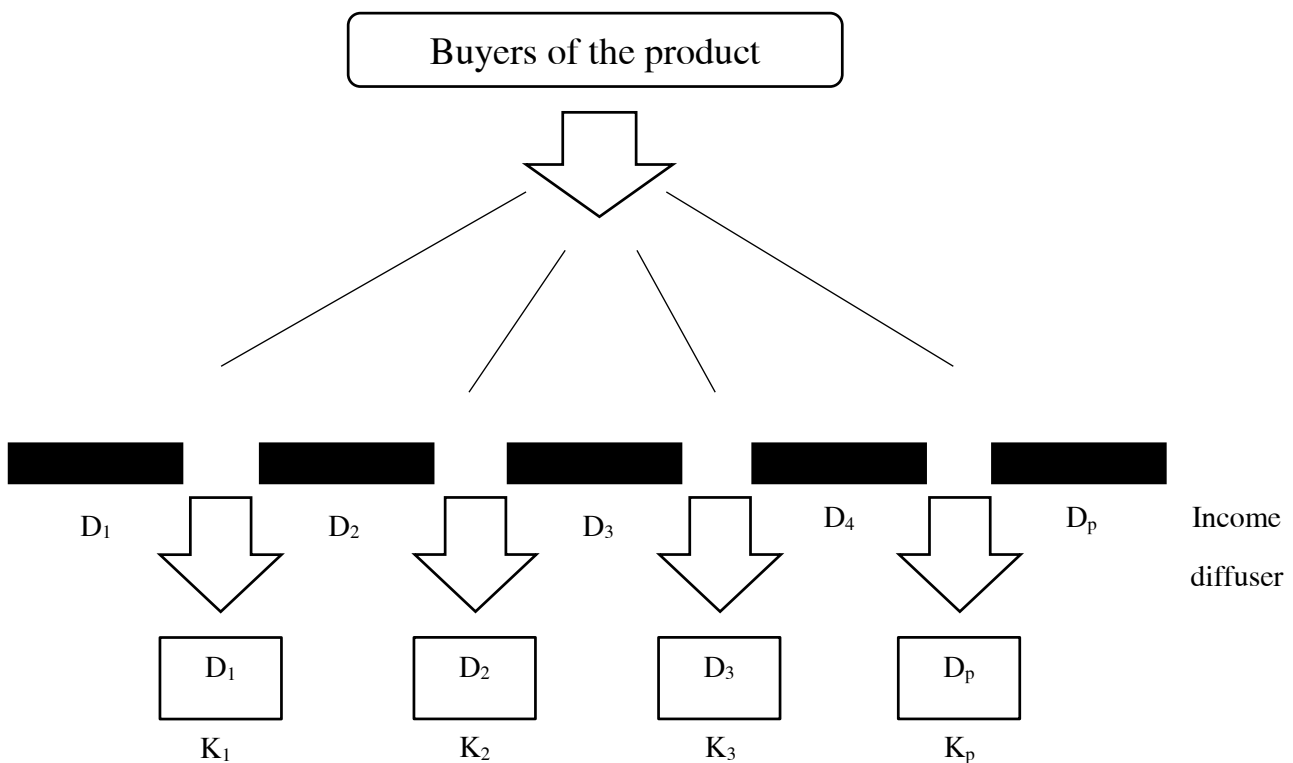


Fig. 2. Key Components of the SME Market Model

Source: Compiled by the authors based on [1, 9, 10, 11].

- the aggregate of producers (P) supplying the good (G);
- the set of consumers purchasing the good (G);
- the revenues (R) of producers.

The total monetary flow $K = \sum(K_1 + K_2 + K_3 + \dots + K_p)$ from consumers to producers stimulates the production of the good over a certain period of time.

At the same time, each i -th seller receives the i -th share of the financial flow K_i , depending on the difference between its own revenues R_i and those of competitors. As a consequence of self-organization, after some time the system acquires a temporary competitive–compromise structure with a certain degree of stability.

For example, the aggregate revenues of small enterprises $R = \sum(R_1, R_2, \dots, R_p)$ operating in a given market may conventionally be represented in the form of an “income membrane”

that performs a barrier function in determining the scale of SME actors. Such an income barrier should correspond to the material and financial flows within a particular sphere of economic activity of small enterprises and to the flow (K) within the given market segment, ultimately determining the spatial and structural trajectory. Therefore, the initial monetary flow (K), passing through a certain barrier, is divided into (P) parts and becomes partially ordered, exhibiting a tendency toward stability (Fig. 2) [1, 9, 10, 11].

The structural-technological and spatial balance of a competitive SME market should be based on proportional relationships consistent with the harmonic ratio. For this purpose, within the existing set of revenue values of SME entities, two key values are distinguished: the minimum revenue $R_{\min} = \sum \min(R_1, R_2, \dots, R_p)$ and the maximum revenue $R_{\max} = \sum \max(R_1, R_2, \dots, R_p)$. The entire revenue range $[0, R_{\max}]$ is divided

into two parts: the variable component $R_{var} = (R_{max} - R_{min})$ and the constant component $R_{const} = (R_{min} - 0)$. The latter is determined by the stable revenue component of the good.

A proportion is constructed in accordance with the principle of harmonic distribution:

$$(R_{const} + R_{var}) / R_{const} = R_{const} / R_{var},$$

where $R_{min} / R_{max} = 0,62$.

Such a structural distribution in a real SME market would represent the best possible configuration [1, 9, 10, 11].

For example, the average revenue of an entrepreneur may be compared with the industry-weighted average. In this case, the statistical analysis of sales data for various goods produced by SME organizations can be expressed as:

$$(R_{avr} - R_{min}) / (R_{max} - R_{min}) = 0,62.$$

The average revenue per entrepreneur should correspond to its variable component (R_{var}) in the following proportion:

$$R_{min} / R_{max} = (R_{avr} - R_{min}) / (R_{max} - R_{min}) = 0,62,$$

which constitutes a necessary condition for a sustainable and balanced structure of the SME market.

A substantial deviation of these variables from the optimal value of 0.62 would indicate instability, leading to an increase in entropy and, consequently, excessive expenditures of all types of resources. Minor deviations, in turn, may be corrected through appropriate regulatory and managerial interventions.

If self-organization of the SME market proves impossible, and the system fails to achieve stability or satisfy the conditions of balance, its subsequent behavior becomes unpredictable and weakly controllable. Preventing such situations requires an understanding of the inherent properties, regularities, and governing parameters of SMEs [14, 15].

FINDINGS AND RECOMMENDATIONS

As practice demonstrates, at present the achievement of sustainability for an economic entity is

often pursued through a single and rather rudimentary method — namely, the expansion of financial resources. However, when asset volumes become excessively large, difficulties arise in maintaining them, while the entropic component and associated costs continuously increase. Existing management practices cease to remain effective, creating a demand for organizational and managerial innovations. Such innovations should be grounded in the principles of optimizing governance systems and balancing the structure of ESES in accordance with the golden ratio. In order to ensure a sustainable and qualitatively new development trajectory for SMEs, it is advisable not only to impose order on assets, but also to cultivate cultural, scientific, and intellectual potentials that reduce system entropy and contribute to increased managerial effectiveness [1, 14, 16].

The foundation of the modernization process is innovative potential, understood as the inherent capacity of an entity to generate and adopt innovations, realized under the availability of resources and appropriate conditions.

With regard to SMEs, it should be noted that morally and physically obsolete production assets, as well as unqualified and unmotivated labour resources, regardless of their structure, cannot contribute to the manifestation of innovative potential within an organization or to the establishment of harmonic proportions [2, 17].

In light of the above, SME innovation development policy should adopt a multi-dimensional perspective, proceeding from an understanding of entrepreneurship as a subsystem of the national ESES, rather than focusing on isolated solutions to particular problems of the structural and technological development of SME entities. These entities are constantly engaged in dynamic interaction, generating local and systemic transformations that should ultimately lead to balance, sustainability, and qualitative change in response to the demands of innovation-driven progress and contemporary challenges [2, 14].

Achieving the strategic objective of transitioning from the quantitative growth of SMEs to the

qualitative development of the economy is possible through the following measures:

- periodic monitoring of the dynamics of the key parameters of the SME system and assessing their compliance with the harmonic approach (structure). For systemic characteristics, phenomena, and processes, the point of equilibrium is represented by the proportional ratio of 62:38. This approach should be applied in the allocation of SME resources, the selection of areas and instruments of managerial intervention, the maintenance of structural stability, and the formation of innovative potential. This process should be carried out using technologies of economic and mathematical modeling,

digital solutions, and artificial intelligence tools [18, 19];

- the implementation of a multi-dimensional management framework, in which the direction and intensity of managerial influence aimed at ensuring effectiveness are based on an understanding of the inherent properties of SMEs at each specific moment and on consideration of their spatial and temporal position;
- the cultivation of innovative actions by SME entities and their structural-functional interaction across all hierarchical levels, which will undoubtedly contribute to organizational integrity and to the creation of the potential for transition into the sphere of large-scale business.

REFERENCES

1. Geraskina I.N. Balanced innovative development of the investment and construction complex of the Russian Federation. Doct. econ. sci. diss. Moscow: Plekhanov Russian University of Economics; 2017. 376 p. (In Russ.).
2. Makarkin N.P. On the conditions of innovative development. Moscow: Ekonomika Publ.; 2012. 148 p. (In Russ.).
3. Tuncel C. O. Neo-Schumpeterian long wave theory and nanotechnology: Assessing the future of manufacturing industry. *Journal of Economics and Development Studies*. 2015;3(1):57–81. DOI: 10.15640/jeds.v3n1a5
4. Kavtaradze D.N. Is sustainable development controllable?! *Vestnik Moskovskogo universiteta. Seriya 21: Upravlenie (gosudarstvo i obshchestvo) = Lomonosov Public Administration Journal. Series 21*. 2004;(3):28–39. (In Russ.).
5. Bertalanffy L. von. General system theory: A survey. In: Bertalanffy L. von. General system theory: Foundations, development, applications. New York, NY: G. Braziller; 1968. (Russ. ed.: Bertalanffy L. Obshchaya teoriya sistem — obzor problem i rezul'tatov. In: Sistemnye issledovaniya: ezhegodnik. Moscow: Nauka; 1976:30–54.).
6. Snakin V.V. Global environmental processes: Unsustainability of development. *Zhizn' Zemli = Life of the Earth*. 2018;40(3):342–349. (In Russ.).
7. Mainzer K. Thinking in complexity: The computational dynamics of matter, mind and mankind. Berlin, Heidelberg: Springer Verlag; 2007. 482 p. (Russ. ed.: Mainzer K. Slozhnosistemnoe myshlenie: Materiya, razum, chelovechestvo: novyi sintez. Moscow: Librokom; 2009. 464 p.).
8. Akaev A. A., Korotaev A. V., Malinetskii G. G. Forecast and modeling of crises and world dynamics. Moscow: LKI; 2014. 352 p. (In Russ.).
9. Kharitonov A. S. Harmony and symmetry — basis of new society management technology. *Problemy okruzhayushchei sredy i prirodnikh resursov*. 2000;(2):29–32. (In Russ.).
10. Pranghishvili I. V., Ivanus A. I. System regularity of the golden section and system stability and harmony. *Problemy upravleniya = Control Sciences*. 2004;(2):2–8. (In Russ.).
11. Haken H. Erfolgsgeheimnisse der Natur. Synergetik: Die Lehre vom Zusammenwirken. Stuttgart: Deutsche Verlags-Anstalt; 1994. 254 p. (Russ. ed.: Haken H. Tainy prirody. Sinergetika: uchenie o vzaimodeistvii. Moscow-Izhevsk: Institute for Computer Science; 2003. 320 p.).

12. Dallago B. The organizational effect of the economic system. *Journal of Economic Issues*. 2002;36(4):953–979. DOI: 10.1080/00213624.2002.11506531
13. Forrester J. W. World dynamics. Portland, OR: Productivity Press; 1973. 144 p.
14. Geras'kina I. N., Goncharenko L. P., Timoshenko G. A. Concerning sustainable development of economic systems. *Vestnik Rossiiskogo ekonomicheskogo universiteta imeni G. V. Plekhanova = Vestnik of the Plekhanov Russian University of Economics*. 2024;(6):5–14. (In Russ.). DOI: 10.21686/2413-2829-2024-6-5-14
15. Ashby W. R. General systems theory as a new discipline. In: General systems. 1958;3. (Russ. ed.: Ashby W. R. Obshchaya teoriya sistem kak novaya distsiplina. In: Issledovaniya po obshchei teorii sistem. Moscow: Nauka; 2009:125–142.).
16. Yakunin V. I., Bagdasaryan V. E., Kulikov V. I., Sulakshin S. S. Variability and cyclicity of global social development of humanity. Moscow: Nauchnyi ekspert; 2009. 464 p. (In Russ.).
17. Wang X., Zhou Y. Structural imbalance, inequality and economic growth. In: Deepening reform for China's long-term growth and development. Canberra: ANU Press; 2014:51–71.
18. Geraskina I., Zatonitskiy A., Petrov A. Modeling of the investment and construction trend in Russia. *International Journal of Civil Engineering and Technology*, 2017;8(10):1432–1447.
19. Zatonitskiy A. V., Ufimtseva V. N. Design of object oriented software to multi-agent modeling of enterprise processes. *Vestnik Astrakhanskogo gosudarstvennogo tekhnicheskogo universiteta. Seriya: Upravlenie, vychislitel'naya tekhnika i informatika = Vestnik of Astrakhan State Technical University. Series: Management, Computer Science and Informatics*. 2018;(4):56–62. (In Russ.). DOI: 10.24143/2072-9502-2018-4-56-62

ABOUT THE AUTHORS



Inna N. Geraskina — Dr. Sci. (Econ.), Prof. of the Department of Management in Construction at the Faculty of Economics and Management, Saint Petersburg State University of Architecture and Civil Engineering, Saint Petersburg, Russian Federation
<https://orcid.org/0000-0003-3540-8164>

Corresponding author:
Geraskina82@mail.ru



Lyudmila P. Goncharenko — Dr. Sci. (Econ.), Prof., Director of the Research Institute “Green Economy”, Plekhanov Russian University of Economics, Moscow, Russian Federation

<https://orcid.org/0000-0002-9975-4296>
Goncharenko.lp@rea.ru



Georgy A. Timoshenko — Cand. Sci. (Econ.), Leading Researcher at the Research Institute “Green Economy”, Plekhanov Russian University of Economics, Moscow, Russian Federation

<https://orcid.org/0000-0003-4049-8723>
Timoshenko.ga@rea.ru

Authors' declared contribution:

I.N. Geraskina — development of the article concept, formulation of the research hypothesis, preparation of the experiment plan and conducting experiments, interpretation of the obtained results, selection of literary sources.

L.P. Goncharenko — critical analysis of literature, formation of conclusions, justification of the choice of model indicators, participation in experiments.

G.A. Timoshenko — development of calculation schemes and analysis of theoretical provisions on the research topic.

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

The article was submitted on 24.09.2025; revised on 30.09.2025 and accepted for publication on 28.10.2025. The authors read and approved the final version of the manuscript.