UDC 33 **DOI: 10.34670/AR.2025.68.90.021**

Optimization of innovation process management: organizational and economic aspects

Zhang Yiwei

Postgraduate student
Graduate School of Management
Peoples' Friendship University of Russia
117198, 6, Miklukho-Maklaya str., Moscow, Russion Federation;
e-mail: 1507887410@qq.com

Abstract

The article examines issues related to the study of optimization processes in the management of innovation activities at enterprises, with a focus on addressing organizational and economic aspects. The author proposes a definition of the concept of "optimization of innovation process management" in enterprises. The main problems associated with implementing optimization in the management of innovation processes at the enterprise level are identified. The author emphasizes the importance of optimizing innovation process management from two perspectives: organizational and economic. Key organizational parameters involved in preparing for the optimization of innovation process management are considered. Various approaches to optimizing the management of innovation activities at enterprises are analyzed. An analysis of the dynamics of innovation activity indicators at Russian enterprises over the studied period is conducted, revealing that these indicators changed under the influence of internal and external factors. However, a general trend toward their growth in the medium- and long-term perspective was observed. A management concept based on the consideration of organizational and economic aspects has been developed, including a number of sequential implementation stages. Theoretical and practical recommendations for optimizing innovation process management at the enterprise level are proposed. The importance of employing a comprehensive approach to optimization—based on well-thought-out leadership policies as well as the involvement of the state and regional authorities in addressing strategic management challenges—is emphasized.

For citation

Zhang Yiwei (2025) Optimization of innovation process management: organizational and economic aspects. *Ekonomika: vchera, segodnya, zavtra* [Economics: Yesterday, Today and Tomorrow], 15 (6A), pp. 210-218. DOI: 10.34670/AR.2025.68.90.021

Keywords

Optimization; management; innovation processes; enterprise; organizational and economic aspects; development.

Introduction

In the context of a rapidly changing external environment and technological development, the optimization of innovation management processes is of significant importance for economic entities. It should be noted that innovation serves as a driving force behind economic and industrial development, a key success factor for many enterprises and organizations in the market, as well as a foundation for stability and prosperity in a competitive environment. There is an objective need for the optimization of innovation process management, which is driven by several reasons: the presence of potential risks and threats to economic security; numerous factors of resistance to change and the introduction of innovations from employees within the organization; the high cost of implementing innovative projects, among others. Therefore, the optimization of innovation process management is a critical factor in transforming the activities of enterprises and organizations under modern conditions. This underscores the relevance of the research topic and its theoretical and practical significance.

The main issue addressed in this study lies in the fact that the process of optimizing the management of innovation processes at enterprises encounters a number of challenges related to organizational and economic aspects of activity. These challenges include: the absence of flexible and effective management approaches within organizations; the complexity of accounting for and reconciling the interests of various organizational stakeholders; ineffective communication between the organization's leadership and its employees; the presence of risks and threats to economic security; insufficient investment for the development and implementation of innovative projects into business practice; limited access to innovations and developments, among others. These problems require close attention and the development of new approaches for their resolution.

The **object** of the study is the innovation processes within an organization.

The **subject** of the study is the optimization of the management of innovation processes at the enterprise level.

The **scientific novelty** of the research lies in the development of theoretical and practical recommendations for optimizing the management of innovation processes at enterprises.

The **theoretical significance** of the study consists in examining the theoretical aspects of optimizing the management of innovation activities at the enterprise level in the context of addressing organizational and economic issues.

The **practical significance** of the research lies in the fact that the developed theoretical and practical recommendations for optimizing the management of innovation processes at enterprises can be applied in business practice and taken into account in future studies on this topic.

Literature Review

The issues related to the optimization of innovation process management at enterprises have been addressed by many scholars, including O. S. Andreev, A. A. Dorogovtseva, A. B. Kuryatnikov, N. I. Komkov, Ya. V. Mochalova, I. V. Chistnikova, M. V. Chub, V. V. Batmanova, and others. We believe it is necessary to continue research in this area and to study certain aspects of the topic in greater detail.

Results

In modern society, innovation is one of the main tools for the development and prosperity of enterprises and organizations operating in a rapidly changing external market environment. In this

regard, the management policy of an enterprise and its implementation are of particular relevance [Mochalova et al., 2024, p. 1763].

The process of managing innovation activities within an enterprise is a crucial component of the policy pursued by its leadership and staff. The success and effectiveness of the approaches and principles applied in management directly determine the final outcomes of the organization's operations: the achievement of strategic goals and objectives, the realization of its scientific, technological, and production potential, the maintenance of a leading position in the market, the generation of profit, the assurance of a high level of economic security, and more.

The optimization of innovation process management at an enterprise should be considered from two perspectives:

– achieving economic efficiency (defined as the ratio of the results obtained to the resources invested);
– achieving organizational efficiency (defined as the enterprise's ability to accomplish its goals and objectives in the medium- and long-term perspective) [Kuryatnikov, 2024, p. 17].

We believe that both economic and organizational aspects of the enterprise's activities must be taken into account when developing a management policy.

When constructing the process of optimizing innovation process management at an enterprise, several key parameters of activity should also be considered and prepared for the upcoming changes: current processes and interactions, the level of corporate culture within the enterprise, the existing personnel motivation system, staff readiness for change, and the potential for optimizing the organizational structure.

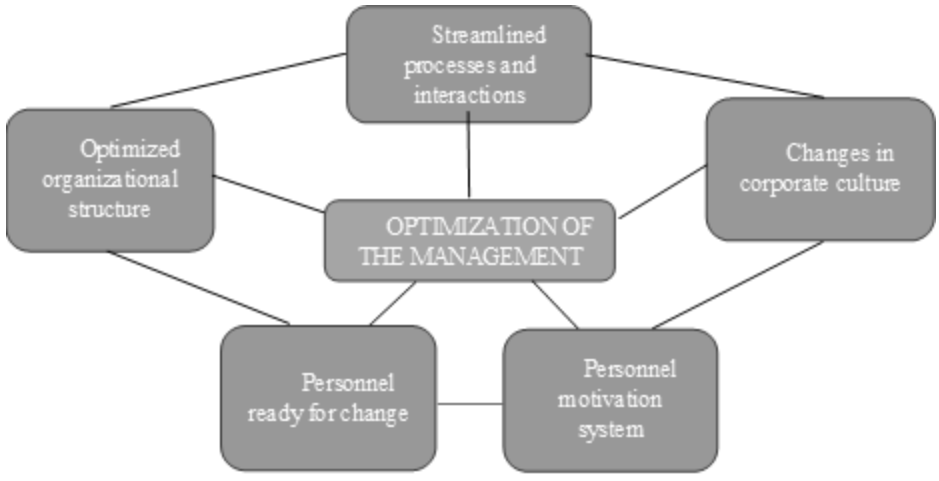


Figure 1 - Key organizational parameters in preparation for the optimization of innovation process management

There are various approaches to defining the concept of "optimization of innovation process management" at enterprises. For example, N. I. Komkov believes that the optimization of innovation process management should be understood as the reduction of the time required to achieve the set goals and objectives of production and economic activities, as well as ensuring the continuity of their execution in order to obtain specific economic effects [Andreev, 2023, p. 261].

K. A. Kazantsev believes that the optimization of innovation process management at an enterprise involves the creation of an effective methodological foundation based on management principles, as well as the use of innovative tools to manage all organizational processes within the organization

[Semenova, 2015, p. 1].

In our view, the optimization of innovation process management should be understood as a set of activities related to current and strategic planning, forecasting of expected results and economic benefits, development of effective approaches to organizational changes within the enterprise team, and the use of modern digital technologies and tools for organizing the management process.

In the system of innovation process management, the following elements are identified:

– **Subjects of innovation process management** – these include the manager, organization staff, and other individuals involved in the management process and in making key decisions;
– **Objects of innovation process management** – these refer to the products created within the sphere of the enterprise's production and economic activities, as well as the innovation processes themselves;
– **Set of internal environmental factors** – a set of interconnected elements that ensure the functioning of the enterprise (such as technologies, finances, personnel, corporate culture, organizational structure, etc.);
– **Set of external environmental factors** – a set of interconnected elements that influence the enterprise from the outside (including political, economic, social conditions, environmental factors, etc.) [Komkov, 2024, p. 123].

Существуют различные подходы к процессу оптимизации управления инновационной деятельностью на предприятиях, к числу которых можно отнести следующие:

1) междисциплинарный подход, который заключается в том, что управление инновационными процессами на предприятии, а также принятие важных решений осуществляет команда специалистов из различных областей и сфер деятельности. Такой подход позволяет находить неординарные решения, осуществлять анализ на всех этапах внедрения инноваций, а также проводить оценку эффективности полученных результатов деятельности;

There are various approaches to the process of optimizing the management of innovation activities at enterprises, including the following:

1) The interdisciplinary approach, which involves the management of innovation processes and the decision-making process being carried out by a team of specialists from different fields and areas of expertise. This approach enables the development of unconventional solutions, allows for comprehensive analysis at all stages of innovation implementation, and provides the opportunity to evaluate the effectiveness of the results achieved.

2) Formation of an innovative corporate culture within the enterprise – this approach involves creating a favorable psychological atmosphere among employees in order to stimulate their interest in developing and implementing innovations into the organizational process. An innovative culture also helps to reduce tension within the team, eliminate conflicts, foster mutual trust among employees, and promote respect and understanding.

3) Use of digital technologies – this approach is based on the active use of digital technologies and new opportunities by enterprise employees for innovation-driven development, economic growth, and management. These new technologies include artificial intelligence, cloud computing, digital twins, and many others.

4) Development of idea management systems – this approach is based on the use of modern information platforms that integrate new ideas, automatically search for and analyze them, and accelerate the process of introducing innovations into enterprise activities;

5) Evaluation of final performance indicators and adjustment of innovation processes – this approach involves the systematic analysis of enterprise operations in order to identify problems and

deviations in performance, as well as to develop a strategy for future development and the management of innovation processes [Mochalova et al., 2024, p. 92].

Before presenting recommendations for optimizing the management of innovation processes at enterprises, it is necessary to conduct an analysis of the innovation activity of Russian enterprises across the regions of the Russian Federation. **Table 1** shows the dynamics of innovation activity among Russian enterprises from 2020 to 2024.

Table 1 - Dynamics of Innovation Activity of Russian Enterprises from 2020 to 2024

Region of the Russian Federation	Level of Innovation Activity of Enterprises, %				
	2020	2021	2022	2023	2024
Russian Federation (overall)	10,8	11,9	11	11,5	12,4
Federal Districts					
Central	12,5	12,6	12,1	12,5	12,9
Northwestern	10,8	11,0	11,3	11,9	12,4
Southern	8	11,9	12,1	12,8	13,1
North Caucasian	3,5	4,6	5,5	6,1	6,5
Volga	15,5	16,7	16,9	17,4	17,4
Ural	10,2	11,1	11,1	11.7	11,9
Siberian	9,8	9,3	10,2	11,6	12,3
Far Eastern	6,9	7,7	6.9	7,3	7,7

Source: Compiled and calculated by the author based on data from Rosstat [Federal State Statistics Service, www].

Thus, the conducted analysis showed that the level of innovation activity among Russian enterprises fluctuated throughout the study period. This was due to several factors, including the instability of the geopolitical situation, insufficient financial resources for enterprises to create and implement innovations, a low level of corporate culture within organizations, a weak level of management development in the field of innovation process management, and many other reasons. However, overall, there has been a clear upward trend in these indicators, which is undoubtedly a positive development in the operations of many enterprises. For example, across the Russian Federation as a whole, the level of innovation activity increased by 2.4% from 2020 to 2024.

It should be noted that in 2024, the level of innovation activity across the Russian Federation reached 12.4%, which is 0.9% higher than the previous year. Among the federal districts, the highest levels of innovation activity in 2024 were recorded in the Volga District (17.4%) and the Southern District (13.1%). Other districts reported the following results: Central District – 12.9%, Northwestern – 12.4%, Ural – 11.9%, and Siberian – 12.3%. Against the backdrop of increasing innovation activity in these districts, the most lagging regions remain the North Caucasian District (6.5%) and the Far Eastern District (7.7%) [Tsalova, 2009, p. 105].

Therefore, in order to increase the level of innovation activity in many Russian enterprises, it is necessary to employ effective tools and approaches for optimizing operations.

In addition, it is necessary to develop a management concept based on the consideration of organizational and economic aspects of activity, which includes the following key stages:

- First stage – analysis of the current management system at the enterprise, identification of shortcomings in its implementation mechanism, and detection of operational failures;
- Second stage – determination of priority strategic goals and objectives for the medium- and long-term perspective (in accordance with the developed innovation development strategy);
- Third stage – development of organizational and economic measures aimed at transforming the management process of enterprise or organizational activities;

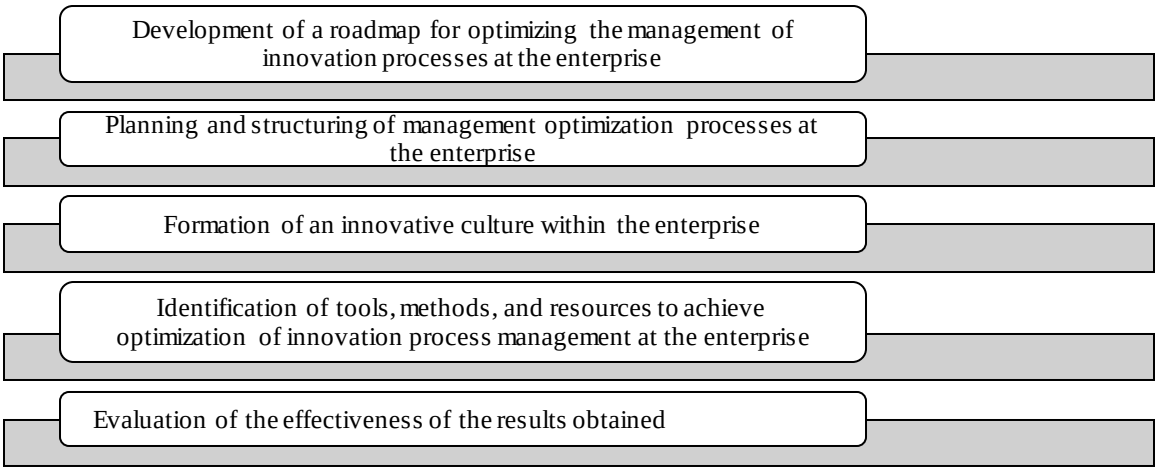
– Fourth stage – implementation of organizational and economic measures into the business practices of enterprises and organizations;
– Fifth stage – summarizing the results of activities (evaluation of the effectiveness of the outcomes obtained) [Dorogovtseva, 2024, p. 6259].

It should be noted that the use of modern digital tools and models is of particular interest in the practice of optimizing the management of innovation processes, as they allow for increased effectiveness in organizational and economic decision-making. Promising digital tools may include: artificial intelligence, project management systems, business process automation, and real-time production process modeling.

A clear example of using a model for optimizing the management of innovation processes is the **OTEC Company**, which implemented the concept of lean manufacturing into its operations. This allowed the company to reduce material costs by approximately 50% and proportionally increase its profit. In addition, it contributed to improved work quality, increased productivity, and reduced time spent on core production operations [Sanochkina, 2021, p. 17].

Another example is **PJSC MMC Norilsk Nickel**, which integrated new management approaches based on modern digital solutions and innovations into its production activities. As a result, the company managed to double its profit, reduce production costs, and minimize risks and losses [Семенова, 2024, p. 7].

In this study, theoretical and practical recommendations for optimizing the management of innovation processes at enterprises have been developed and are visually presented in Figure 2.



Developed by the author

Figure 2 - Recommendations for optimizing the management of innovation processes at an enterprise

Discussion

We believe that the developed theoretical and practical recommendations for optimizing the management of innovation processes at the enterprise contribute to improving operational efficiency in the context of achieving economic and organizational goals and objectives. The main expected outcomes from the implementation of these recommendations may include: enhanced operational efficiency, optimization of the organizational management structure, and the achievement of maximum

positive results in the form of increased profits.

The current conditions of the Russian economy necessitate the search for new approaches and solutions for conducting innovation activities. This is due to the high level of market competition, the need for further enterprise development, the pursuit of opportunities for economic growth, maintaining leading market positions, and so on. Today, innovation processes play a crucial role in the development and operation of many enterprises and organizations. They also contribute to achieving economic and organizational results in the activities of business entities. We believe that in order for enterprises to operate effectively, their activities must be optimized and managed at all levels of implementation. In this regard, a management concept based on the consideration of organizational and economic aspects of activity can be particularly useful.

Conclusion

It can be concluded that the optimization of innovation process management enables enterprises and organizations to achieve maximum performance results. Above all, it contributes to increased labor productivity, reduction of material and financial costs, maximization of profits, and stimulation of employee interest in achieving high performance outcomes. Among the external positive effects are: securing leading market positions by economic entities, increasing the innovation activity of enterprises and organizations, optimizing the structure of demand for innovations, improving competitiveness and financial stability, and enhancing economic security in a turbulent environment. It should be noted that in the development and implementation of a policy for optimizing innovation process management at an enterprise, a comprehensive approach must be applied—one that takes into account the approaches and decisions made by the organization's leadership, as well as the national innovation development strategy and the initiatives of regional authorities.

References

1. Andreev, O. S. (2023). Upravlenie innovatsionnymi proektami v usloviiakh transformatsii ekonomiki [Management of innovation projects in the context of economic transformation]. Menedzhment [Management], (9), 261–275.
2. Dorogovtseva, A. A. (2024). Iskusstvennyi intellekt v sisteme upravleniia predpriiatiem: evoliutsiia, innovatsii i perspektivy [Artificial intelligence in enterprise management systems: Evolution, innovations, and prospects]. Ekonomika, predprinimatelstvo i pravo [Economics, Entrepreneurship and Law], (11), 6259–6272.
3. Komkov, N. I. (2024). Optimizatsiia mekhanizma innovatsionnogo protsessa [Optimization of the innovation process mechanism]. Vestnik Instituta ekonomiki RAN [Bulletin of the Institute of Economics of the Russian Academy of Sciences], (3), 123–178.
4. Kuryatnikov, A. B. (2024). Upravlenie innovatsionnymi protsessami kholdinga [Management of innovation processes in a holding company]. Strategiia biznesa [Business Strategy], (1), 17–25.
5. Mochalova, Ya. V., Chistnikova, I. V., Chub, M. V., & Batmanova, V. V. (2024). Povyshenie innovatsionnoi aktivnosti rossiiskikh promyshlennykh predpriiatii v usloviiakh tsifrovoi transformatsii [Enhancing innovation activity of Russian industrial enterprises under digital transformation]. Regionalnaia ekonomika. Yug Rossii [Regional Economy. South of Russia], *12*(2), 92–102.
6. Naugolova, I. A. (2023). Evoliutsiia podkhodov k upravleniiu promyshlennym predpriiatiem: rol innovatsii v sovremennykh usloviiakh [Evolution of approaches to industrial enterprise management: The role of innovations in modern conditions]. Kreativnaia ekonomika [Creative Economy], (5), 1763–1784.
7. Sanochkina, Yu. V. (2021). Sovershenstvovanie metodov upravleniia innovatsionnym razvitiem otrasli [Improving methods for managing innovation development in the sector]. Vestnik evraziiskoi nauki [Bulletin of Eurasian Science], (13), 17–32.
8. Semenova, O. V. (2024). Problemy upravleniia innovatsionnymi proektami v organizatsii [Issues of innovation project management in organizations]. Mir nauki [World of Science], (3), 7–16.
9. Semenova, A. A. (2015). Modelirovanie protsessa optimizatsii innovatsionnoi deiatelnosti predpriiatiia [Modeling the process of optimizing the innovative activity of an enterprise]. Naukovedenie [Science Studies], (7), 1–10.
10. Tsalova, I. N. (2009). Osnovnye printsipy upravleniia innovatsionnymi protsessami na predpriiatii [Basic principles of

innovation process management at the enterprise level]. Regionalnaia ekonomika i upravlenie [Regional Economy and Management], (3), 105–113.
11. Federal State Statistics Service. (n.d.). Ofitsialnyi sait [Official website]. Retrieved June 3, 2025, from https://rosstat.gov.ru

Оптимизация управления инновационными процессами: организационно-экономические аспекты

Чжан Ивэй

Аспирант,
Высшая школа менеджмента,
Российский университет дружбы народов им. Патриса Лумумбы,
117198, Российская Федерация, Москва, ул. Миклухо-Маклая, 6;
e-mail: 1507887410@qq.com

Аннотация

В статье рассматриваются вопросы, связанные с исследованием процессов оптимизации в управлении инновационной деятельностью на предприятиях, с акцентом на решение организационных и экономических аспектов. Автор предлагает определение понятия “оптимизация управления инновационными процессами” на предприятиях. Выявлены основные проблемы, связанные с внедрением оптимизации в управление инновационными процессами на уровне предприятия. Автор подчеркивает важность оптимизации управления инновационными процессами с двух точек зрения: организационной и экономической. Рассматриваются ключевые организационные параметры, участвующие в подготовке к оптимизации управления инновационным процессом. Анализируются различные подходы к оптимизации управления инновационной деятельностью на предприятиях. Проведен анализ динамики показателей инновационной активности российских предприятий за исследуемый период, выявивший, что эти показатели изменялись под влиянием внутренних и внешних факторов. Однако наблюдалась общая тенденция к их росту в средне- и долгосрочной перспективе. Разработана концепция управления, основанная на учете организационных и экономических аспектов, включающая ряд последовательных этапов внедрения. Предложены теоретические и практические рекомендации по оптимизации управления инновационными процессами на уровне предприятия. Подчеркивается важность применения комплексного подхода к оптимизации, основанного на хорошо продуманной политике руководства, а также участии государственных и региональных органов власти в решении задач стратегического управления.

Для цитирования в научных исследованиях

Чжан Ивэй. Optimization of innovation process management: organizational and economic aspects // Экономика: вчера, сегодня, завтра. 2025. Том 15. № 6А. С. 210-218. DOI: 10.34670/AR.2025.68.90.021

Ключевые слова

Оптимизация; управление; инновационные процессы; предприятие; организационно-экономические аспекты; развитие.

Библиография

1. Andreev, O. S. Management of Innovation Projects in the Context of Economic Transformation. // Management. 2023. No. 9. Pp. 261–275. (Андреев О. С. Управление инновационными проектами в условиях трансформации экономики // Менеджмент. 2023. № 9. С.261-275.)
2. Dorogovtseva, A. A. Artificial Intelligence in Enterprise Management Systems: Evolution, Innovations, and Prospects. // Economics, Entrepreneurship and Law. 2024. No. 11. Pp. 6259–6272. (Дороговцева А. А. Искусственный интеллект в системе управления предприятием: эволюция, инновации и перспективы // Экономика, предпринимательство и право. 2024. № 11. С. 6259-6272.)
3. Komkov, N. I. Optimization of the Innovation Process Mechanism. // Bulletin of the Institute of Economics, RAS. 2024. No. 3. Pp. 123–178. (Комков Н. И. Оптимизация механизма инновационного процесса // Вестник института экономики РАН. 2024. № 3. С.123-178.)
4. Kuryatnikov, A. B. Management of Innovation Processes in a Holding Company. // Business Strategy. 2024. No. 1. Pp. 17–25. (Курятников А. Б. Управление инновационными процессами холдинга // Стратегия бизнеса. 2024. № 1. С.17-25.)
5. Mochalova, Ya. V., Chistnikova, I. V., Chub, M. V., Batmanova, V. V. Enhancing Innovation Activity of Russian Industrial Enterprises under Digital Transformation. // Regional Economy. South of Russia. 2024. Vol. 12. No. 2. Pp. 92–102. (Мочалова Я.В., Чистникова И.В., Чуб М.В., Батманова В.В. Повышение инновационной активности российских промышленных предприятий в условиях цифровой трансформации // Региональная экономика. Юг России. 2024. Т. 12. № 2. С. 92-102.)
6. Mochalova, Ya. V., Chistnikova, I. V., Chub, M. V., Batmanova, V. V. Enhancing Innovation Activity of Russian Industrial Enterprises under Digital Transformation. // Regional Economy. South of Russia. 2024. Vol. 12. No. 2. Pp. 92–102. (Наугольнова И. А. Эволюция подходов к управлению промышленным предприятием: роль инноваций в современных условиях // Креативная экономика. 2023. № 5. С. 1763-1784.)
7. Sanochkina, Yu. V. Improving Methods for Managing Innovation Development in the Sector. // Bulletin of Eurasian Science. 2021. No. 13. Pp. 17–32. (Саночкина Ю. В. Совершенствование методов управления инновационным развитием отрасли // Вестник евразийской науки. 2021. № 13. С.17-32.)
8. Семенова О. В. Проблемы управления инновационными проектами в организации // Мир науки. 2024. № 3. С.7-16.
9. Semenova, O. V. Issues of Innovation Project Management in Organizations. // World of Science. 2024. No. 3. Pp. 7–16. (Семенова А. А. Моделирование процесса оптимизации инновационной деятельности предприятия // Науковедение. 2015. № 7. С.1-10.)
10. Tsalova, I. N. Basic Principles of Innovation Process Management at the Enterprise Level. // Regional Economy and Management. 2009. No. 3. Pp. 105–113. (Цалова И. Н. Основные принципы управления инновационными процессами на предприятии // Региональная экономика и управление. 2009. № 3. С.105-113.)
11. Federal State Statistics Service [Electronic resource]. URL: https://rosstat.gov.ru (accessed on 03.06.2025). (Федеральная служба государственной статистики [Электронный ресурс]. URL: https://rosstat.gov.ru (дата обращения 03.06.2025).)