

**RUSSIAN PRESIDENTIAL ACADEMY OF NATIONAL ECONOMY AND
PUBLIC ADMINISTRATION
NORTH-WEST INSTITUTE OF MANAGEMENT**

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**ENSURING ECONOMIC SECURITY OF
CONSTRUCTION ORGANIZATIONS IN THE CONDITIONS OF DIGITAL
TRANSFORMATION OF THE ECONOMY**

Speciality: 5.2.3 - Regional and sectoral economy

Abstract

of the dissertation for the degree of Candidate in Economic

Scientific supervisor:

Doctor of Economics, Associate Professor

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Saint Petersburg – 2025

Relevance of the chosen topic. Ensuring the economic security of an organization is one of the most important tasks of the company's management. In the context of sanctions pressure, the influence of digital technologies on various sectors of the economy and constant competition with opponents, it is necessary to pay attention to the financial and economic stability of both an individual subject of market relations and the entire sphere as a whole.

A company's work in the market can be assessed by the market share it occupies or by the amount of resources it has. However, any indicator will be included in ensuring economic security. Also, a rapidly changing external environment requires prompt decision-making by the company's management to create new competitive advantages. The creation of new jobs, the development of infrastructure and the possible reduction in the cost of logistics of goods will have a positive effect on the economic climate and security of the country.

However, in the construction industry, there is a competitive struggle both for the consumer and for the use of new technologies to gain competitive advantages.

At the same time, a number of threats affect the construction industry. In 2020, the main threat was the situation caused by the COVID-19 pandemic, as well as the changing growth in prices for building materials and metals. In 2021, the situation changed and the consequences of the pandemic began to have a much smaller impact on the construction sector, while the rise in prices for construction materials, on the contrary, began to have a strong impact on the activities of construction companies. In 2022, this was also accompanied by a shortage of personnel and the need for import substitution of materials and equipment. In 2023, the construction sector was also affected by the Central Bank of the Russian Federation rate, the volatility of the national currency exchange rate, and the need to use TIM when participating in government procurement. In 2024 and 2025, the trend of negative influence of the voiced factors continued.

In the field of implementation of digital technologies, there is a negative trend. Violation of deadlines, quality of construction, exceeding planned budgets are the most common reasons that negatively affect the process of digital transformation and the entire construction industry as a whole.

In addition to the above threats, the quality of construction products has an impact on the economic security of construction companies. Threats can be minimized by influencing the quality of construction products and the safety of the organization - this is the competent implementation of the digital transformation of the construction sector. However, in the Russian Federation, the implementation of digital technologies and digital transformation of the construction industry are not moving as fast as in foreign countries. Including in the development of personnel for the construction industry due to the lack of training of current personnel to use new software.

However, in construction organizations, there is still a need to have such competitive advantages that would have both quantitative and qualitative expression in the field of implementation of elements of the digital economy.

For this, such a tool as open-source information search (OSINT) and competitive intelligence, as well as the creation of a structural unit in the organization that would be responsible for research in the field of the digital environment, are suitable.

The company structure must have such a structural unit that could track changes or emerging trends among competitors and apply or propose to the company's management to improve the level of economic security of the organization measures for the successful implementation of elements of the digital economy, which will reduce the commissioning time, improve the quality and safety of construction products, which will affect the economic security of the company.

Degree of development of the problem.

The following Russian scientists studied issues of ensuring economic security of organizations: A. V. Dmitriev, A. V. Smirnov, A. V. Karpushkina, V. P. Cherepanov, V. I. Muntiyan, G. V. Safonov, E. A. Gorbashko, E. S. Mokretsova, I. V. Bogdanov, K. S. Staroverov, M. I. Bazhanova, M. Yu. Gvozdev, N. A. Grigoriev, O. V. Kharchenko, E. A. Oleinikov, O. P. Shestakov, O. I. Mityakova, O. S. Elkina, O. S. Nadezhdina, P. Zavyalov. Among foreign scientists who consider the problems of economic security, we can highlight K. Button, M. Kahler, S. Johnson, S. Lessman, T. Becker, etc.

A great contribution to the development of competitive intelligence was made by domestic and foreign specialists: B. Gilad, V. P. Mac-Mac, G. E. Lemke, D. Moorhead,

E. L. Yushchuk, I. Yu. Nezhdanov, L. V. Kantarovich, L. Fuld, N. I. Bayandin, R. Combs, C. Halliman. The problems of construction development in Russia are the subject of the works of such scientists as A. A. Petrov, A. N. Asaul, A. N. Larionov, A. O. Berezina, V. A. Zarenkov, E. V. Pesotskaya, E. B. Smirnov, E. G. Guzhva, I. V. Drozdova, I. V. Fedoseyev, K. L. M. Kaplan, N. G. Pletneva, R. A. Faltinsky. The works of A. V. Smirnova, B. E. Velichkovsky, V. V. Talapov, E. N. Galichanin, K. V. Postnov, M. Sh. Mustafina are devoted to the implementation of information technologies in the activities of construction organizations.

At the same time, issues of assessing the economic security of a construction organization, taking into account the use of digital technologies and the implementation of measures aimed at the digital transformation of the economy, have not previously been considered in domestic and foreign literature, as well as issues of the impact of information security on the components of the economic security of a construction organization.

The purpose of the dissertation research – development of methodological tools for ensuring the economic security of construction organizations in the context of digital transformation of the economy.

To achieve the described goal, the following tasks have been set:

1. Classify threats to economic security taking into account the specifics of construction activities of economic entities.
2. Analyze probable prerequisites and conditions for the implementation of digital technologies in construction organizations.
3. Develop criteria for ensuring the economic security of construction companies in the context of digital transformation of the construction industry.
4. Propose a methodology for assessing the digital transformation of the organization's structure to ensure the economic security of a construction organization.

Object of dissertation research – this is the economic security of construction organizations of various forms of ownership.

Subject of dissertation research – organizational and economic relations arising in the process of developing preventive measures to ensure the economic security of construction organizations caused by the digital transformation of the economy.

The dissertation research corresponds to the passport of the scientific specialty 5.2.3 "Regional and sectoral economy":

- 13.11. Methods of monitoring economic security in the context of digital technology development.
- 13.12. Development and application of methods, mechanisms and tools for improving economic security.

Theoretical and methodological basis of the research. The theoretical basis was the works of domestic and foreign authors devoted to the problems of ensuring the economic security of organizations, competitive intelligence and digital technologies, research into the features of the functioning and problems of construction organizations. The methodological basis of the study is represented by an information and cybernetic approach, methods of economic and mathematical modeling, general scientific techniques of classification, comparison, expert interview, formalization, synthesis.

The information base of the dissertation was empirical data describing the experience of digital technologies in the construction industry, contained in printed publications, scientific publications, practical research, the Internet, materials of scientific and practical conferences, publications of the Federal State Statistics Service of the Russian Federation, the Central Bank of the Russian Federation.

The theoretical significance of the dissertation lies in the study of threats affecting the introduction of elements of the digital economy into the activities of construction organizations, as well as in the theoretical development of tools for assessing the economic security of construction companies in the context of the digital transformation of the economy.

The work was carried out within the framework of scientific research areas conducted by the scientific school of the Department of Security of the North-West Institute of Management of the Russian Presidential Academy of National Economy and Public Administration.

The practical significance of the dissertation lies in the possibility of quantitative assessment of external environmental threats affecting the economic security of a construction organization; providing the basis for the implementation of competitive intelligence in the activities of construction organizations; implementation of certification of construction organizations in the field of digital technologies when implementing elements of the digital economy; application of the functionality of forming competitive advantages of a construction organization, including training of employees according to the proposed Professional Standard "Specialist in digital research of the digital environment" (analysis of relationships with other business entities; use and provision of technical support for existing and implemented information and communication technologies to search for and develop competitive advantages, etc.); use of the methodology for assessing the implementation of digital technologies in the activities of a construction company to minimize costs.

The scientific novelty of the study lies in the substantiation of the scientific and methodological apparatus for ensuring the economic security of construction organizations, taking into account the specifics of activities in the context of the digital transformation of the economy.

The main results of the dissertation work, possessing scientific novelty and obtained personally by the applicant:

1. The main threats that have affected the construction sector are classified: import substitution policy; the need for complex data processing; the threat to information security; the increasing role of investment risks in the field of technology implementation that negatively affect the economic security of construction organizations and the minimization of which is possible with the introduction of digitalization elements into the organization's activities to reduce the time and cost of construction, improve business processes occurring within the organization and improve the quality of products, and the similarities and differences in the field of ensuring the economic security of construction companies are highlighted (similarities in the need to control the flow of income and expenses, differences in the specifics of the company's type of activity and the availability of important licenses and certificates)

2. The conditions and prerequisites for the implementation of digital technologies in the activities of a construction company have been identified: the need for continuous and comprehensive improvement of the organization's work in the era of digital transformation of the economy; the emergence of large amounts of data necessary for making strategic decisions; lack of protection against threats in the field of information security; the need for technological development, and when using such technologies, it becomes possible to form new competitive advantages of the organization based on obtaining more complete information about the activities of competitors and using best practices in the field of construction;

3. The proposed criteria for economic security in the information security vector include financial stability, resource management efficiency, diversity of the organization's projects, reliability of the implemented technology, access to data and economic security indicators: company innovativeness, taking into account the number of innovative projects in the structure of the company's overall projects, the diversity coefficient of the company's projects, which allows assessing the share of projects using digital technologies, an indicator of time control, the number of errors and resources used, reflecting the progress of the implementation of digital technologies in the activities of a construction organization, ensuring the required level of data quality; data protection (TIM, AI, etc.) when accessed by employees of different departments; reducing the time for mastering new digital tools;

4. A methodology has been developed for assessing the performance of a construction organization to ensure the economic security of the construction organization, which allows assessing the work of a construction organization taking into account the introduction of digital technologies, assessing the potential effect of digital technologies on the economic security indicators of a construction organization, and identifying key areas for using the organization's resources to minimize threats.

Testing the research results. The main provisions, conclusions and results of the dissertation were reported and discussed at the following conferences:

"Economic Security in the Construction Sector: Experience, Problems, Prospects" (St. Petersburg, SPbGASU, April 27-28, 2020).

I Interuniversity Scientific and Practical Conference of the Faculty of Economics and Management "Economics and Management: Trends and Prospects" (St. Petersburg, SPbGASU, March 2-3, 2020).

International Science and Technology Conference "Earth Science" (Vladivostok, December 8-10, 2020).

II Interuniversity Scientific and Practical Conference of the Faculty of Economics and Management "Economics and Management: Trends and Prospects" (St. Petersburg, SPbGASU, March 1, 2021).

74th Scientific and Practical Conference of Students, Postgraduates and Young Scientists "Actual Problems of Modern Construction" (St. Petersburg, April 6-9, 2021).
National Student Scientific and Practical Conference (Ryazan, November 23, 2022)

III International Scientific and Practical Conference "Sociology of Management: Current Issues of Our Time" (St. Petersburg, SPbUTUE, October 12-13, 2023).

VI International Scientific and Practical Conference "Current Issues of Ensuring Economic Security: Trends, Challenges, Opportunities" (St. Petersburg, RANEPa under the President of the Russian Federation, North-West Institute of Management, December 15, 2023).

II National (All-Russian) Scientific and Practical Conference "Current Issues of Economics and Management in Construction" (St. Petersburg, April 18-19, 2024)

The results of the study have been implemented and used in the activities of the construction organization SRO A "Petrovskoye Association of Builders", as well as in SK "Citadel" at the investment and operational stages of the implementation of investment and construction projects.

Publications. The main provisions and conclusions of the dissertation research are presented by the author in 6 scientific papers published in peer-reviewed scientific journals included in the List of the Higher Attestation Commission under the Ministry of Education and Science of Russia, as well as included in the List of publications approved by the decision of the Academic Council of the Russian Presidential Academy of National Economy and Public Administration published in a total volume of 5.96 p.p. (author's contribution 4.0 p.p.).

Structure and scope of work. The dissertation consists of an introduction, three chapters, a conclusion, and a list of references. The list of references contains 167 sources of literature, including 144 domestic and 23 foreign authors. The main part of the dissertation research material consists of 142 pages of typewritten text, 38 figures, and 14 tables.