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Principal development features of the investment and construction complex in the Russian Federation

The article discusses the efficiency of construction enterprises in the Russian Federation. The main development trends of the Russian investment and construction complex were identified using the data made available by the Russian Federal State Statistics Service ("Rosstat") and the Unified Resource for Developers. The authors analyzed the total area of constructed facilities, the number of constructed facilities, the total area of constructed facilities whose commissioning was delayed, the average area of real estate facilities constructed in Russia, the average price per square meter. The methods of research include the theoretical analysis and empirical studies, namely, statistical data analysis, data description and pooling. Data resources, used to analyze this problem, include sources about the activities of the construction sector, research articles, monographs, electronic resources, and sources of legal information. The methods, used to draft this article, include description, comparison, and classification.
The effective operation of enterprises on the construction market requires the establishment of a set of legislative, legal and economic standards to ensure the effective resolution of the problem of unfinished construction and transition to innovative and technology-focused developments.
Keywords: *investment and construction complex, analysis of operation and development of the investment and construction complex of the Russian Federation, development strategy of the construction industry, efficiency of the country's construction industry*

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PROBLEM STATEMENT AND STUDY

The construction sector of the Russian Federation plays a crucial role in the development of the economic, social, and cultural potential of the country and each individual region. In this regard, the development of the construction industry is particularly important for solving regional and federal economic tasks. The construction sector is vital for the reproduction of fixed assets held by state-owned and private enterprises. It is also a key to the strategic tasks of Russia's long-term social and economic development programmes [1].

Well-balanced state control and management practices, applied to the construction sector, enable enterprises to adapt to rapidly changing external and internal factors. Notably, effectively operating construction enterprises influence the development of each region, the economic growth of regional industries engaged in the material production, which, in turn, affects the growth of the country-wide business and investment activity in terms of living standards [2]. Therefore, we believe that the advancement level of the construction industry determines the development level of the whole country and explains the importance of effective management of the construction industry and support provided to its business entities. A closer look at the recent statistics on the Russian enterprises is needed to accurately analyze the construction industry in the Russian Federation [3].

RESULTS

The construction complex of the Russian Federation has large, medium-sized, and small business entities. However, large enterprises are responsible for more than 90 % of construction work and services. The majority of these enterprises are privately owned. Over the last few years, the Russian market has had more than four thousand legal entities associated with the construction industry. As of January 2022, 3,742 companies were engaged in construction activities. 19 % of the total area of constructed facilities was built by the top ten companies. Table presents statistics on the construction industry over the last five years.

According to Rosstat and the Unified Resource for Developers, 2018 was the best year for the Russian construction industry, if we address the time period under study. The maximum total area of facilities under construction reached 136,596,558 sq. m. The number of houses under construction in the Russian Federation was maximal in 2018; it reached 16,198 units. However, relative to 2021, the area of construction facilities, whose commissioning was postponed, reached 35,920,016 sq. m in 2018. This trend is explained by a decrease in the total area of facilities under construction in 2021. Hence, the ratio of postponed commissioning to the total area of facilities under construction went down from 26.3 % in 2018 to 23.4 % in 2021[1]. Fig. 1 shows the pattern of change.

The analysis of changes in the total area of facilities under construction has proven the irregular pace of changes. The amount of construction work went up until 2018, when it reached its maximal value of 136,596 thousand sq. m. In 2018–2019,

1 Construction. Federal State Statistics Service. URL: https://rosstat.gov.ru/folder/14458 (date of appeal: 21.01.2022).

Russian construction industry

Indicator	Year				
	2017	2018	2019	2020	2021
The total area of constructed facilities, sq. m	115,817,529	136,596,558	130,870,821	110,149,961	104,911,219
Facilities under construction, units	14,463	16,198	14,543	10,885	10,067
The area of construction facilities, whose commissioning is postponed, sq. m	25,735,869	35,920,016	34,107,914	30,391,545	24,572,775
The average area of facilities under construction, sq. m	49.3	49.3	49.7	50.1	49.7
The average price per square meter, RR	64,672	68,589	76,605	91,233	123,939
The number of home mortgage loans, loans	813,342	1,174,604	1,007,995	1,310,651	1,558,473

the total area went down by 5,725 thousand sq. m. In 2019–2020, the total area of facilities under construction went down by 20,661 thousand sq. m, which is a maximum reduction over the studied period. In 2021, the area of facilities under construction reached its minimum of 104,911 thousand sq. m[2].

The leaders in terms of facilities under construction were such developers as PIK Group, Samolyot Group, LSR Group and Setl Group Holding Company. In the aggregate, these companies build more than 10 % of the total area of construction facilities in the Russian Federation with a focus on the Moscow and Leningrad regions.

Moreover, almost each of the top fifteen developers, responsible for over 20 % of the total construction work, is headquartered in Moscow and St. Petersburg. Only two companies are based in other regions; they are the SouthStroyInvest Group of Companies (the Stavropol Territory) and SK SouthStroyImperial (the Krasnodar Territory). Many of the TOP100 Russian construction companies are based in Moscow and St. Petersburg, and the situation does not look favourable for other Russian regions, because each has 1 or 2 positions on the TOP100 list. Such a state of affairs prevents any direct competition between Russian construction companies and affects the total area of construction facilities, whose commissioning is postponed. Fig. 2 shows the breakdown of delayed commissioning [4].

2 Single resource of developers. LLC "Institute for the Development of the Construction Industry". URL: https://erzrf.ru/issledovaniya (accessed: 17.01.2022).

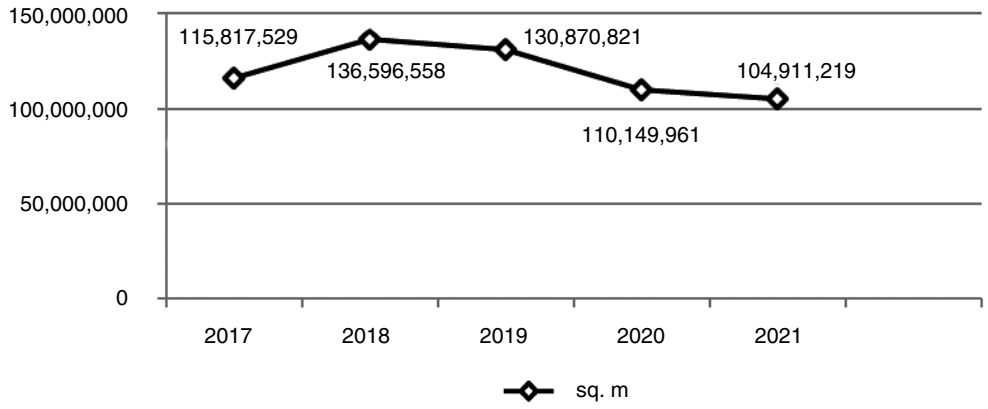

Fig. 1. A change in the total area of facilities under construction, 2017–2021

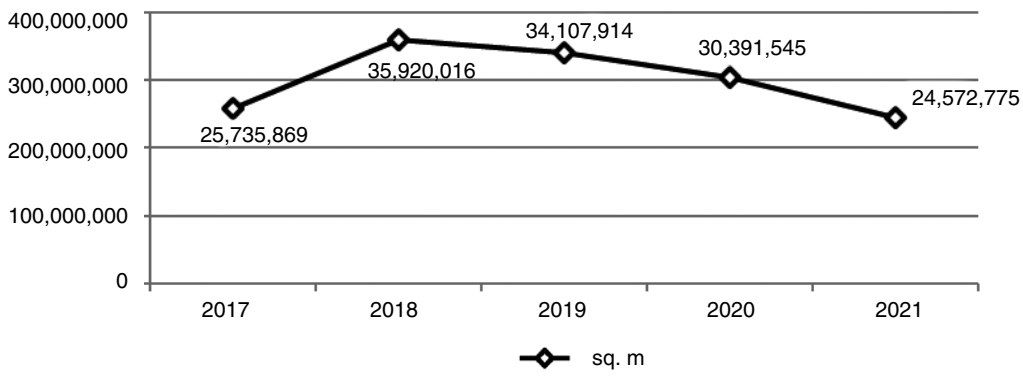

Fig. 2. Delayed commissioning of facilities under construction in 2017–2021

Low competition causes a decline in the quality of work. Companies rarely draft any long-term development strategies, and their unavailability affects their preparedness for internal and external changes [5].

This is exactly what happened in the Republic of Bashkortostan and the Krasnoyarsk Territory in 2021, whose major developers failed to meet the deadlines and delayed the commissioning of more than 80 % of the total construction volume. Indeed, in Bashkortostan, GK FSK Archstroyinvestitsii delayed the commissioning of more than 379,763 of 473,870 sq. m. Hence, the commissioning of 80.1 % of the total facilities under construction was delayed. In the Krasnoyarsk Territory, Monolitholding Group of Companies and KKFZhS delayed the commissioning of 530,879 of 552,493 sq. m; therefore, the commissioning of 96 % of facilities under construction was delayed [6].

In Russia, 2017 was the best year for the construction industry when the lowest percent of delayed commissioning was recorded: it reached 22.2 % or 25,735 thousand sq. m. The largest percent of delayed commissioning was in 2018, when it reached 26.3 %, or 35,920 thousand sq. m. An increase was triggered by the larger total area of facilities under construction. The next three years (2019–2021) are characterized by a gradual decrease in delayed commissioning to 24,572 thousand sq. m. However, this trend does not mean any construction industry improvement, since the decrease occurred against the background of the annual reduction in the total area of facilities under construction, and the average percent of delayed commissioning was 23.1 %.

The analysis of the number of facilities under construction has proven that this situation was triggered by the construction market crisis, which affected the majority of the Russian companies (Fig. 3).

First of all, a decrease in the number of facilities under construction was caused by a decrease in the total area of constructed facilities. Indeed, this number was maximal in 2018, it was 16,198 of facilities under construction. In the next three years, this number went down by 6,131 facilities and dropped down to 10,067 facilities under construction in 2021. Hence, the construction market has grave problems that decelerate the construction of new facilities. The economic and construction crisis affects long-term strategies, implemented by the developers that minimize their risks and reduce the number of facilities under construction [7].

A reduction in the number of facilities under construction has barely affected the average area of apartments under construction. Indeed, in 2017 the average area was 49.3 sq. m, while in 2021 this value was up by 0.4 sq. m and reached 49.7 sq. m. However, this trend has not affected the average price for one square meter. During the period under discussion, it nearly doubled due to the economic and construction crisis, the shortage of building materials, the adoption of the 175-FZ law, etc. A change is shown in Fig. 4.

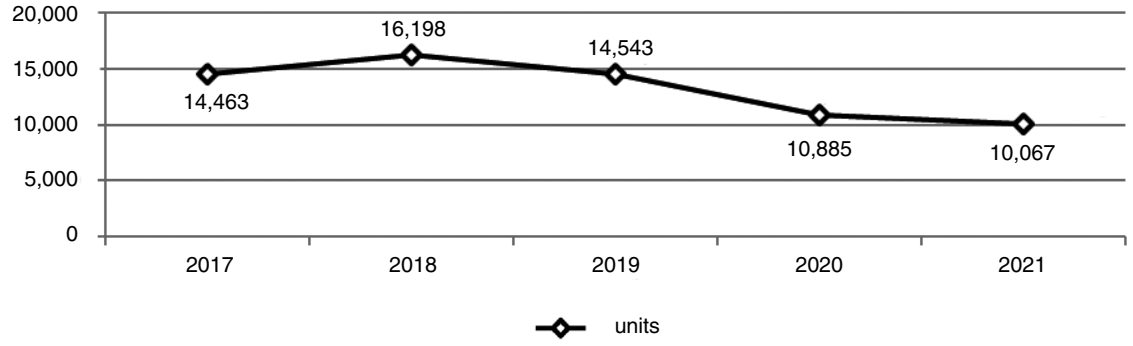

Fig. 3. A change in the number of facilities under construction in 2017–2021

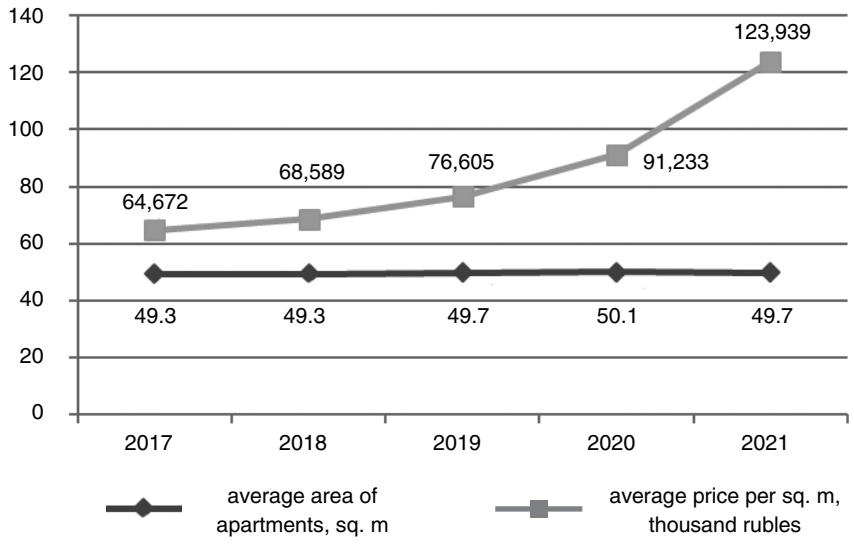

Fig. 4. Changes in the average area of apartments and the average price per square meter in 2017–2021

Changes in the average area of apartments had imperfect periodicity. It was minimal in 2017–2018, when it reached 49.3 sq. m. The average area of apartments was maximal in 2020, when it reached 50.1 sq. m. The average area of a residential unit was 50.3 sq. m. This means a relatively high demand for one-room, two-room apartments and studio apartments in the Russian Federation.

The average price per square meter kept growing. In 2017, it was 64 RR. The growth rate was maximal in 2020–2021, when it reached 32,706 RR. During the entire period, the average price went up by 59,267 RR and reached 123,939 RR per square meter in 2021. The average apartment price went up from 3,188,329 RR in 2018 to 6,159,768 RR in 2021.

An increase in the cost of construction projects, in particular, residential real estate construction undertakings, affected the number of mortgage housing loans. Fig. 5 shows the loan issuance pattern.

Changes in the number of home mortgage loans had imperfect periodicity. In 2017–2018, the number went up by 361,262 and reached 1,174,604. Later it went down to 166,609 in 2019. Until 2021, the number of home mortgage loans had an upward trend in Russia. In 2021, this number reached its absolute maximum of 1,558,473 loans. During the analyzed period it went up by 52.19 %.

A 2020–2021 upward trend is explained by a set of actions taken to support the construction industry, which suffers from the crisis. The President of the Russian Federation relaxed the monetary policy of the Bank of Russia, and government programmes were implemented in the construction industry to stimulate the issuance of mortgage loans. The average mortgage rate was 6.5 % [8–10].

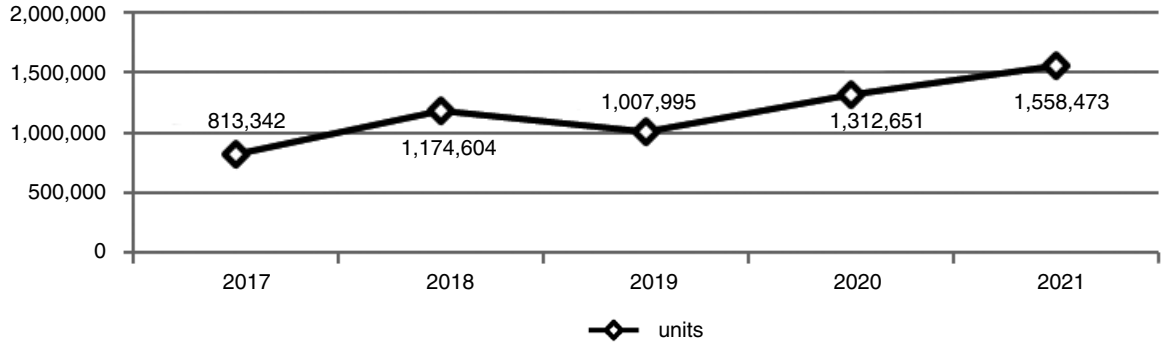

Fig. 5. A change in the number of home mortgage loans in 2017–2021

CONCLUSION

Indeed, according to the data made available by the Federal State Statistics Service of the Russian Federation, the Unified Resource for Developers and the analysis made by the authors, the construction market of the Russian Federation suffers from grave problems. The market values went down from 2017 to 2021. They include the total area of constructed facilities, the number of facilities under construction and the postponed commissioning. At the same time, there is a trend towards an increase in the cost of one square meter of facilities under construction. These factors mean that the Russian construction market faces serious problems, such as the 175-FZ law, the economic crisis, the unfinished programme on the RF construction industry development through 2030. All these factors have a negative effect on the country's construction industry. However, many small, medium-sized and even large developers are not ready to face these changes, neither do they put enough effort into long-term corporate development strategies [11–13].

REFERENCES

1. Runeson G. Research methods: A practical guide for students and researchers. Construction Economics and Building. 2018; 18(1):83-84. DOI: 10.5130/AJCEB.v18i1.5979
2. Chatterjee U., Biswas A., Mukherjee J., Majumdar S. Advances in urbanism, smart cities and sustainability. Taylor & Francis Group/ CRC Press, 2022; 520. DOI: 10.1201/9781003126195
3. Ortizab O., Castellsa F., Sonnemannc G. Sustainability in the construction industry: A review of recent developments based on LCA. Construction and Building Materials. 2009; 23(1):28-39. DOI: 10.1016/j.conbuildmat.2007.11.012
4. Khrustalev B.B., Meshcheryakova O.K., Meshcheryakova M.A., Antipov V.A. Main features of the development of the investment and construction complex of the Penza region. News of higher educational institutions. Construction. 2020; 10(742):79-88. URL: http://izvuzstr.sibstrin.ru/uploads/publications/4fee2422af9e3f518d8e7fa231de28d2f0217f73.pdf (rus.).
5. Hayward D. Housing construction industry, competition and regulation. International Encyclopedia of Housing and Home. 2012; 395-403. DOI: 10.1016/B978-0-08-047163-1.00229-0
6. Hellmuth R. Update approaches and methods for digital building models — literature review. Journal of Information Technology in Construction. 2022; 27:191-222. DOI: 10.36680/j.itcon.2022.010
7. Sarhan S., Pretlove S. Lean and sustainable construction: State of the art and future directions. Construction Economics and Building. 2021; 21(3). DOI: 10.5130/AJCEB.v21i3.7854
8. Khrustalev B.B., Chudaykina T.N. Market potential as an element of strategic enterprise planning. Economics of Construction. 2018; 2(50):41-52. (rus.).
9. Opoku A., Akotia J. Special issue: urban regeneration for sustainable development. Construction Economics and Building. 2020; 20(2). DOI: 10.5130/AJCEB.v20i2.7191
10. Khrustalev B.B., Ayupova Z.V. Situational analysis of the location of commercial real estate in Penza. Real Estate: Economics, Management. 2019; 3:32-36. URL: https://www.elibrary.ru/item.asp?id=41520073 (rus.).
11. Khrustalev B.B., Moiseeva A.A. The main features of the scientific organization of construction of low-rise residential real estate. Real Estate: Economics, Management. 2018; 3:74-79. URL: https://www.elibrary.ru/item.asp?id=36332743 (rus.).
12. Khrustalev B.B., Valchuk E.V. Theoretical aspects of finance of construction organizations. Real Estate: Economics, Management. 2019; 2:20-22. URL: https://www.elibrary.ru/item.asp?id=41187206 (rus.).
13. Khrustalev B.B., Antipov V.A. Factors affecting sustainable development of enterprises investment-construction complex of the Penza region. Real Estate: Economics, Management. 2020; 2:68-72. URL: https://www.elibrary.ru/item.asp?id=44822027 (rus.).

Основные особенности развития инвестиционно-строительного комплекса Российской Федерации

В статье рассматриваются вопросы эффективности работы строительных предприятий на территории Российской Федерации. Согласно данным Росстата и «Единому ресурсу застройщиков» выявлены основные тенденции инвестиционно-строительного комплекса Российской Федерации. В частности, дана оценка таким показателям, как совокупная площадь строящихся единиц, количество возводимых объектов, перенос срока ввода в эксплуатацию кв. м (с прошлых периодов), средняя площадь строящихся объектов недвижимости в России, средняя цена за 1 кв. м. Методами исследования являются теоретический анализ и эмпирическое исследование, в частности анализ статистических данных, а также описание и группировка данных. Информационной базой для анализа данной проблемы стали литературные источники по вопросам деятельности строительного комплекса, научные статьи, монографии, электронные ресурсы, источники правового характера. Методологической основной при выполнении статьи послужили такие научные методы, как описание, сравнение, классификация.

Для эффективной работы предприятий на строительном рынке необходимо создание системы комплекса законодательных, правовых и экономических нормативов по обеспечению эффективности решения проблемы незавершенного строительства, перехода к инновационным и технологическим новшествам.

Ключевые слова: *инвестиционно-строительный комплекс, анализ функционирования и развития инвестиционно-строительного комплекса Российской Федерации, стратегия развития строительной сферы, эффективность строительной отрасли страны*

СПИСОК ИСТОЧНИКОВ

1. Runeson G. Research methods: A practical guide for students and researchers // Construction Economics and Building. 2018. Vol. 18. Issue 1. Pp. 83–84. DOI: 10.5130/AJCEB.v18i1.5979
2. Chatterjee U., Biswas A., Mukherjee J., Majumdar S. Advances in urbanism, smart cities and sustainability. Taylor & Francis Group/CRC Press, 2022. 520 p. DOI: 10.1201/9781003126195
3. Ortizab O., Castellsa F., Sonnemannc G. Sustainability in the construction industry: A review of recent developments based on LCA // Construction and Building Materials. 2009. Vol. 23. Issue 1. Pp. 28–39. DOI: 10.1016/j.conbuildmat.2007.11.012
4. Хрусталев Б.Б., Мещерякова О.К., Мещерякова М.А., Антипов В.А. Основные особенности развития инвестиционно-строительного комплекса Пензенской области // Известия высших учебных заведений. Строительство. 2020. № 10 (742). С. 79–88. URL: http://izvuzstr.sibstrin.ru/uploads/publications/4fee2422af9e3f518d8e7fa231de28d2f0217f73.pdf
5. Hayward D. Housing construction industry, competition and regulation // International Encyclopedia of Housing and Home. 2012. Pp. 395–403. DOI: 10.1016/B978-0-08-047163-1.00229-0
6. Hellmuth R. Update approaches and methods for digital building models — literature review // Journal of Information Technology in Construction. 2022. Vol. 27. Pp. 191–222. DOI: 10.36680/j.itcon.2022.010
7. Sarhan S., Pretlove S. Lean and sustainable construction: State of the art and future directions // Construction Economics and Building. 2021. Vol. 21. Issue 3. DOI: 10.5130/AJCEB.v21i3.7854
8. Хрусталев Б.Б., Чудайкина Т.Н. Рыночный потенциал как элемент стратегического планирования предприятия // Экономика строительства. 2018. № 2 (50). С. 41–52.
9. Opoku A., Akotia J. Special issue: urban regeneration for sustainable development // Construction Economics and Building. 2020. Vol. 20. Issue 2. DOI: 10.5130/AJCEB.v20i2.7191
10. Хрусталев Б.Б., Аюпова З.В. Ситуационный анализ расположения коммерческой недвижимости в городе Пенза // Недвижимость: экономика, управление. 2019. № 3. С. 32–35. URL: https://www.elibrary.ru/item.asp?id=41520073
11. Хрусталев Б.Б., Моисеева А.А. Основные особенности научной организации строительства малоэтажных объектов жилой недвижимости // Недвижимость: экономика, управление. 2018. № 3. С. 74–79. URL: https://www.elibrary.ru/item.asp?id=36332743
12. Хрусталев Б.Б., Вальчук Е.В. Теоретические аспекты финансов строительных организаций // Недвижимость: экономика, управление. 2019. № 2. С. 20–22. URL: https://www.elibrary.ru/item.asp?id=41187206
13. Хрусталев Б.Б., Антипов В.А. Факторы, влияющие на устойчивое развитие предприятий инвестиционно-строительного комплекса Пензенской области // Недвижимость: экономика, управление. 2020. № 2. С. 68–72. URL: https://www.elibrary.ru/item.asp?id=44822027

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