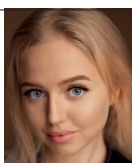


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The case of Thermodom: features of operation and development of construction holding companies in the residential real estate market of Penza

The article addresses the efficiency of construction holding companies that operate in the housing market of one Russian region. The main trends in the development of construction holding companies in the Penza region are outlined within the framework of the Strategy for the social and economic development of the Penza region through 2035. The co-authors analyze the principal characteristics of Thermodom, a Penza-based construction holding company. In particular, they explore the implementation of its market strategy, the cyclical nature of the housing market development, cycles of construction project development and implementation, and real estate sales over the period exceeding the last five years. Research methods include theoretical analysis and empirical research such as statistical data analysis, as well as data description and grouping. The co-authors have studied works on the operation of construction enterprises, research articles, monographs, electronic resources, and legal acts. Research methods, employed by the co-authors, include description, comparison, and classification. The co-authors use practical approaches to the monitoring and analysis of the activities performed by various construction holding companies with a special focus on the milestones of their strategic development and with regard for the factors of internal and external environments. This approach has enabled the co-author to project the main patterns of future sustainable development of these enterprises and the construction industry as a whole.

It is necessary to develop a system of legislative, regulatory and economic standards to efficiently solve the problem of unfinished construction projects, to switch over to innovative technologies and implement other innovations and proper development strategies with a focus on investments, innovations, internal and external market potential. The proper analysis of factors of external and internal environments is a must for the successful attainment of these objectives.

Keywords: construction holding company, features of company operation, analysis of operation and development of construction companies in the Penza region, cyclical development of the real estate market

PROBLEM STATEMENT AND RESEARCH

Competent high-quality management of construction activities in the Penza region affects the economic growth of other regional productive industries and plays a crucial role in the development of their economic, social and cultural potential. In this regard, construction holds one of central places in the economy of any region. This industry plays a key role in reproducing fixed assets and solving strategic tasks related to the long-term programmes of socio-economic development of the Penza region [1]. The level of the local construction industry determines the performance and development of a region. That's why effective management in the construction industry and development of construction enterprises are strategic factors of development of the whole region [2].

INTRODUCTION

Infrastructure determines the evolution of every subject of the Russian Federation. An effective construction industry must undergo continuous modernization and rise its productivity to be instrumental in boosting this evolution. The construction of competitive high-quality housing and the social infrastructure raises the living standards and attracts the workforce to the region.

The Penza region is comparatively young, and it has neither extensive deposits of natural resources,

nor large industrial enterprises. Its construction industry plays a huge role in the reproduction of fixed assets, and it is one of the key constituents of the region's economy. The operation of a construction holding company is a vital constituent part of this industry [3].

A construction holding company consists of the parent company and its subordinate enterprises (subsidiaries). Holding companies are not legal entities but their operations are most often perceived by the markets as unlimited in time, so it makes sense to talk about holding companies as permanently operating economic entities [4].

Thermodom holding company, Risan construction group, Penzgorstroyzakazchik, and Territoriya Zhizni have for a long time been on the list of leaders of the local construction industry. These companies build over 60 % of the total floor area in Penza and the Penza region per annum.

Moreover, large developers are unevenly distributed over the Penza region. So, Thermodom builds in Zasechnoye village (the town of Sputnik); Risan construction group works not far from Arbekovo; Territory of Life operates at a distance from Arbekovo (Arbekovskaya Zastava), Penzgorstroyzakazchik occupies the territory of the gas treatment plant [5]. Hence, there is no competition between the developers of Penza and the Penza region. In this regard, the quality of work is deteriorating; companies rarely draft any long-term corporate development strategies, and

this fact affects their ability to withstand any internal or external changes. This state of affairs has affected Penzgorstroyzakazchik, that has put its construction operations to a halt or had its projects completed by other companies, hence, its residential complex "The Eighth of March" was taken over by Termodom.

According to the Consolidated List of Russian Developers, Termodom has been the leader of the housing construction market in the Penza region since 2016. This company was awarded the gold sign "Reliable Developer of Russia" in 2018, 2019, 2020 and RREF AWARDS in 2020. The Sputnik City project won the award in the category "Affordable Housing (Regions of Russia)"; Sputnik City is the winner of the "TOP Housing 2021" award.

This holding company is a housing construction leader in the Penza region.

The goal of the article is to identify the features of operation of this construction holding company that help it to maintain the leading market position.

1. TERMODOM AND ITS CHARACTERISTICS

Termodom construction holding company creates the environments and builds the houses where one can relax in comfort and walk around together with the whole family. Thousands of families reside in their houses and courtyards, built by Termodom.

The intent of the construction holding company is to establish the conditions for each resident to attain his or her goals. Each parameter is well thought out in every housing project, implemented by this holding company; the developer thinks ahead about the number of persons in every apartment to make sure that the infrastructure, technological solutions and layouts are in place.

Sputnik city is the most significant project, developed and implemented by Teplodom. This project encompassed the comprehensive development of the territory; it was launched in 2007. Sputnik city is located on the picturesque bank of the river Sura, it is a 15-minute drive from the city center.

Sputnik city is a self-sufficient district that maintains independent infrastructure and unique facilities that make it a new center of culture and sports [6, 7].

Sputnik city participated in the Federal contest, and it was one of 22 Russian projects that obtained rewards for the integrated development of territories.

The main goal of the company is to develop a strategy, that ensures both its sustainable operation and development of competitive strengths. At the same time, its strategy is to gain competitive positions (external elements) and continuously enhance itself (internal elements).

2. FEATURES OF OPERATION OF A CONSTRUCTION HOLDING COMPANY: THE CASE OF TERMODOM

- The principal strengths of Termodom, that make it different from its competitors, are:
- in-house production capacities;
- implementation of the market strategy based on growing mobility;
- project development cycle;
- ability to adapt to the present-day conditions in the housing market.

2.1. THE MAIN TYPES OF PRODUCTION FACILITIES NEEDED TO MAKE THE END PRODUCT AND PROVIDE SERVICES

The company's production arm, responsible for making building materials, helps to maintain moderate prices for residential housing.

Limited liability company "Penza Construction Administration" was founded in 2006 as the successor of UPP PUS, founded back in 1956. Its core business is the production of building materials. "Penza Construction Administration" is part of the construction holding company registered as a limited liability company, and it also operates as a farm:

The main items on the list of products offered by Termodom in the housing market are:

- reinforced concrete products;
- silicate brick;
- landscaping products;
- metalwork;



Fig. 1. "Arena" residential area, Saransk





- asphalt factory;
- concrete, mortar;
- production of panelized houses;
- production of plastic windows;
- production of wooden windows;
- roofing products;
- carpentry;
- paints and varnishes;
- building blocks made of expanded polystyrene.

In addition, this construction holding company provides the following types of services:

- laboratory testing;
- delivery of alluvial and quarry sand;
- transportation services;
- installation and removal of gantry cranes.

2.2. TERMODOM AND ITS MARKET STRATEGY IMPLEMENTED IN THE HOUSING MARKET

The market strategy is defined as the method of achieving pre-set goals and objectives outlined within the framework of the company's future development and with regard for external factors and internal capabilities. The market strategy is developed by the company in compliance with its internal decision-making rules [8–10].

The mission of the strategy is to develop production and business operations in the context of the market situation and the capabilities of an enterprise.

In 2018, on the eve of the World Cup, Saransk changed completely. In addition to the construction of a new stadium "Mordovia-Arena" in Saransk, the urban infrastructure was greatly modernized.

Intensive construction work performed in the city boosted the demand for large corporate developers from neighboring regions. Hence, Termodom built "Arena", a comfortable residential building in Yubileiny-2, a modern, fast developing district in Saransk. Brightly coloured houses that have peculiar and convenient layouts will appeal to energetic residents who appreciate comfort and an individual approach, while the well-developed infrastructure will support their active lifestyle. All buildings, comprising "Arena" residential area, have been commissioned (Fig. 1).

2.3. THE MAIN CYCLES AND STAGES OF A CONSTRUCTION PROJECT

It is important to have a clear idea of the future operation of a building to be constructed, that is, to realize the features of its life-cycle within the framework of development stages of a construction project.

If an exhaustive list of principal project works is available, a decision can be made to postpone the implementation of some of them. That's why it is necessary to split the life cycle of a project into stages. The project is broken down into the following stages: stage 1 — project preparation, stage 2 — project design development, stage 3 — project object preparation, stage 4 — construction work performance, stage 5 — project completion (Table 1).

2.4. ABILITY TO ADAPT TO EXTERNAL AND INTERNAL CONDITIONS IN THE HOUSING MARKET

The adaptability of a construction company is the ability to maintain a long-lasting balance between the internal potential and the external environment, which is achieved thanks to mobility, i.e., ability to swiftly respond to economic changes [11, 12].

The real estate market, like the economy as a whole, is developing cyclically, and its cycles are determined by periodic fluctuations in the main indicators of the business activity, caused by the misbalance between supply and demand. The real estate market is particularly cyclical because supply cannot catch up with the rapidly changing demand.

Cycles that accompany real estate market development do not coincide in time with cycles in other sectors of the economy. The decline in the real estate market precedes the decline in the economy as a whole and the rise in the real estate market precedes the rise in the economy (Fig. 2).

One can distinguish the following stages that characterize the life cycle within the framework of the real estate market development:

- 1 — The decline in the real estate market is observed when the market is oversaturated, when the number of unoccupied buildings is rapidly increasing; it is difficult for the owner of the real estate to sell it, and prices are going down. This market situation is called "the buyer's market";
- 2 — The acquisition of new real estate facilities occurs after the increase in demand for built facilities, when there are almost no new construction facilities in the market. This cycle is determined by the growing number and intensity of pre-investment studies covering the construction of new items of real estate;
- 3 — New construction reaches its maximum as a result of the growing demand for new construction facilities, and it is characterized by an increase in prices for construction facilities. This is "the seller's market";
- 4 — The real estate market is saturated when construction capacities are excessive and there is an oversupply of construction products in the market. Construction activity is curtailed. The growth of real estate sales slows down during this period.

This cyclical character is typical for the sales of residential real estate built by Termodom (Table 2).

Having analyzed this data, we can conclude that the demand for residential real estate increased during the period under review (2015–2020). Over the last five years, residential real estate sales have increased by 66,776 m².

This year turned out to be unique. Unexpectedly, the real estate market responded to the coronavirus pandemic and the economic crisis that it had triggered. Contrary to expectations, its activity increased. Changes in the average prices are presented in Table 3.

The growing demand for apartments can be explained by the following reasons:

1. The launch of the subsidized mortgage programme. The government programme of subsidized mortgages is a positive factor for

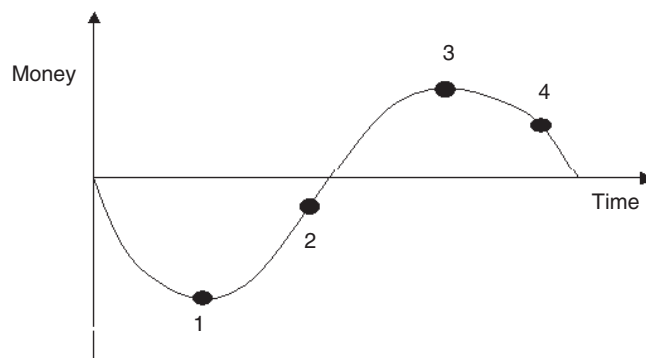


Fig. 2. Stages of the life cycle of the real estate market

the new real estate market, but it does not affect the secondary real estate market. This move has triggered the redistribution of demand and the outflow of consumers from the secondary market to the market of newly built apartments. This measure, taken in support of developers during the coronavirus pandemic, was proposed by the President of Russia in April 2020. As a result, the demand for new buildings has beaten all the previous records. According to Rosreestr (Federal service of state registration, land registry and cartography), 91,211 mortgage transactions were made in Moscow during the 11 months of 2020, which is the highest value in the history of the housing market.

2. Deferred real estate demand during the period of self-isolation. People, who planned to buy residential housing last year, did it after self-isolation requirements were lifted.

Nonetheless, apartment prices go up in the housing market. The main reasons are:

1. An increase in the cost of construction materials and workforce, the need to obtain project financing, as well as the completion status of projects.

2. After the transition of the construction industry to the sale scheme, involving an escrow account, the number of new construction projects decreased, which also led to an increase in the cost of

Table 1. Construction project development cycles and stages

No.	Stage Title			Duratio
Stage 1. Project Preparation				
1	Negotiations between top officials concerning the mutually beneficial cooperation			
2	Product demand			21 days
3	Searching for the best location for the residential and commercial property Scope of research: • analysis of competitors in the adjacent area; • costs; • balances on sale; • a poll among potential customers (What do they need?); • apartment floor plans and the cost			
4	Land plot selection (options)			21 days
5	Pre-sketching activities (2-3 options)			7 days
6	Economic rationale for each option • sale costs; • approximate cost; • profitability of each individual option in percent and in rubles			7 days
Stage 2. Design				
7	Issuance of a request for proposal: • specifications; • final floor plans		Search for the design company: • collection of offers; • analysis of reliable companies	30 days
8	Land purchase/lease			Up to 3 months
9	Making a contract with a design company (14 days)	Issuance of technical specifications (3 months)	Receipt of the urban plan from urban authorities (1 month)	
Stage 3. Project object preparation				
10	Examination			1 month
11	Issuance of a building permit (2 weeks)		Submission of documents to a bank (1.5 months)	1.5 months
12	Publication of the project declaration in the media (1 month)		Construction work commencement	
13	Sale launch			
Stage 4. Construction work				
14	Construction and installation works			
Stage 5. Project completion				
15	Commissioning			

Table 2. Sales, net of commercial real estate, (m²)

	2012	2013	2014	2015	2016	2017	2018	2019	2020
January		2,505.5	7,543.7	5,019.0	3,356.0	5,274.0	5,366.6	5,321.2	4,051.2
February		2,442.0	11,972.2	1,949.2	3,257.2	3,716.4	6,882.1	5,468.6	7,336.4
March	407.9	5,441.1	12,068.4	6,740.0	4,197.9	6,260.5	7,205.4	3,609.5	9,862.8
April	235.8	4,112.3	10,223.8	3,818.8	3,058.4	3,768.5	5,746.3	5,502.6	4,177.5
May	0	3,064.0	10,271.3	3,337.9	2,068.5	3,811.0	6,212.2	3,285.5	9,051.4
June	0	5,950.7	8,028.4	4,667.8	2,632.9	5,927.0	5,626.7	5,120.7	11,590.3
July	498.1	7,375.0	9,768.6	5,618.8	3,514.6	6,036.6	4,995.6	4,662.5	16,311.6
August	675.6	11,372.3	14,421.9	7,328.0	6,630.1	7,165.0	9,008.4	5,540.2	18,367.1
September	364.3	6,804.2	9,094.3	5,634.7	4,291.5	5,373.4	6,393.3	6,525.5	16,748.3
October	411.3	6,615.9	14,360.9	4,484.4	6,886.6	5,577.1	8,073.5	3,968.0	17,388.8
November	1,089.1	9,852.7	10,665.3	1,993.5	9,625.0	6,859.8	7,852.0	4,046.4	6,866.3
December	1,951	10,933.3	16,891.2	4,383.2	7,179.7	5,496.6	7,148.0	5,166.1	
	5,633.1	76,468.9	135,310.0	54,975.3	56,698.4	65,266.0	80,240.1	58,216.8	121,751.6

housing. Many developers were forced to leave the market or reduce construction volumes.

3. Instability of the ruble exchange rate. As of the year-end, the ruble depreciated by 25 % against the dollar. In addition, lower bank deposit interest rates and the introduction of a deposit tax have made bank deposits a completely unattractive investment for those who would like to protect their savings. Therefore, they withdraw their bank deposits from banks and try to invest these amounts. The weakening ruble, as usual, arouses interest to one of the main domestic assets, that is, real estate.

4. Since 2021, a deposit tax has been charged to deposit amounts exceeding one million rubles. Therefore, Russians consider the purchase of real estate as a long-term investment.

Therefore, if one compares the price indicators of the Penza residential real estate market in 2020–2021, one can observe their significant growth. The upward trend in residential housing prices is caused by misbalanced supply and demand.

These factors contribute to the growth of the real estate market. At the same time, we must not forget about the negative consequences of market oversaturation, in other words, when supply exceeds demand, the process of decline in the construction and commissioning of new "square meters" of housing can be triggered [13, 14].

CONCLUSIONS

Hence, this article highlights the features of a construction holding company, addresses the importance of knowledgeable implementation of the housing market strategy based on growing

Table 3. Changes in the average prices

March 2020			March 2021		
District	Average offer price, rub/sq. m.	Maximum number of facilities for the period	District	Average offer price, rub/sq. m.	Maximum number of facilities for the period
Center: Suvorovsky, shopping center	61,700	107	The Eighth of March	68,181	31
Center	57,642	893	Novo-Kazan	65,461	81
Far Arbekovo	55,170	208	Center: Suvorovsky, shopping center	64,757	116
Shuist	54,265	186	GPZ-24	64,749	197
GPZ -24	52,169	203	Far Arbekovo	64,091	352
Center: The Victory Monument	50,145	75	Arbekovskaya Zastava	62,076	367
Near Arbekovo	46,057	862	Zapadnaya Polyana	61,997	166
Okruzhnaya	44,526	176	Center	61,831	612
Yuzhnaya Polyana	44,058	332	Sputnik	60,715	262
Zavodskoy	41,206	199	Teplichniy	59,333	20

mobility and the breakdown of the life cycle of a construction project into five main stages. The life cycle of a construction project is characterized by the most important stages of its implementation, which can be slightly modified depending on the region.

Real estate prices have demonstrated substantial growth in 2020–2021, in particular, the average market price for one square meter of an apartment in the city and its districts has risen. The upward trend in residential housing prices is caused by misbalanced supply and demand.

To sum up, it is noteworthy that the Penza housing market continues to grow and it gradually begins to meet consumer demand. Many new houses have been built for a wide range of consumers recently. Many state programs that simplify the purchase of housing, mortgage lending as well as installment programs are offered today.

Thus, this article highlighted the features of the construction holding company, established the importance of competent implementation of the housing market strategy hbased on increased mobility, as well as by means of dividing the life cycle of the construction project into 5 main stages combined by time characteristics of the project. The life cycle of construction projects is characterized by the most important stages of its implementation, which can be slightly modified depending on the region of its application.

Price comparison from 2020 to 2021 in Penza residential real estate market showed that there is its significant increase, in particular, the average market value of 1 square meter of the total area of apartments of various types in the city as a whole and its districts. The upward trend in residential prices is due to imbalances in supply and demand.

To sum up we can note that the residential real estate market in Penza continues its growth and gradually begins to saturate consumer demand. In recent years, many new housing have appeared for a wide range of consumers. Nowadays many state programs for the purchase of housing, as well as mortgage lending and installments programs are offered.

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Особенности функционирования и развития строительных холдингов на рынке жилья в Пензенской области на примере СХ «Термодом»

В статье рассматриваются вопросы эффективности работы строительных холдингов (СХ) на рынке жилья на примере отдельно взятого региона. Определены основные тенденции перехода предприятий инвестиционно-строительного комплекса Пензенской области на сбалансированный этап развития в рамках принятой «Стратегии социально-экономического развития Пензенской области до 2035 года». Кроме того, выявлены основные особенности функционирования СХ «Термодом». В частности, дана оценка реализации рыночной стратегии, цикличности развития рынка недвижимости, приведены цикл формирования строительного проекта и динамика реализации жилой недвижимости за последние пять лет. Методами исследования являются теоретический анализ и эмпирическое исследование, в том числе анализ статистических данных, а также описание и группировка данных. Информационной базой для изучения данной проблемы стали литературные источники по вопросам деятель-

ности строительных предприятий, научные статьи, монографии, электронные ресурсы, источники правового характера. Методологической основой при выполнении статьи послужили такие научные методы, как описание, сравнение, классификация. Проведение постоянного мониторинга и анализа деятельности различных строительных холдингов с использованием практических подходов по реализации на основе результатов на главных этапах стратегии с учетом факторов внешней и внутренней среды позволяет определить основные пути устойчивого дальнейшего развития как самих предприятий, так и всего инвестиционно-строительного комплекса в целом.

Для эффективной работы предприятий на строительном рынке необходимы создание системы законодательных, правовых и экономических нормативов по обеспечению эффективности решения проблемы незавершенного строительства, перехода к инновационным и технологическим новшествам, а также грамотное выстраивание стратегий дальнейшего развития с ориентацией на следующие направления: инвестиционное, инновационное, внутрифирменное и рыночное. Для успешного прогресса в данных направлениях необходимо правильно учитывать факторы внешней и внутренней среды.

Ключевые слова: строительный холдинг, особенности функционирования, анализ функционирования и развития строительных холдингов Пензенской области, цикличность развития рынка недвижимости

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