Competitive strategy of sustainable and eco-oriented development of investment-construction company

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Abstract. The most important factor in increasing the sustainability of development companies is the emergence of an eco-oriented demand for residential real estate on the market. The purpose of the study is to form a complex of organizational, economic and managerial mechanisms to ensure the competitiveness of investment and construction organizations with a primary focus on market relations based on balanced eco-oriented supply and demand, ensuring the sustainability of development systems. Materials of domestic and foreign researchers in the field of implementation of projects of various scales with priority in the fields of ecology, economics, marketing, management of companies both in construction and in related industries served as the theoretical basis of the study. The article actualizes: transformations in the housing market based on the formation and growth of segments of eco-oriented demand and supply with conceptual refinement; analysis of trends in the development of the territorial housing market and priorities of its ecological development and eco-oriented consumer demand; a competitive strategy for sustainable and eco-oriented development of a development company is formed. Measures for the effective application of the development strategy will ensure a significant increase in both the volume of eco-oriented demand and the volume of eco-oriented supply for residential real estate.

Keywords: construction, sustainable development, eco-oriented housing market, development company, investment and construction project, consumer, competitive strategy.

1 Introduction

Currently, the most important factor in increasing the sustainability of development companies is the emergence of an eco-oriented demand for residential real estate in the market within the framework of the state housing policy focused on "green" standards. According to Maslow's pyramid, a person's need for safe, comfortable housing belongs to the basic one, only after satisfying it, he moves on to self-expression, positioning in a social
group and other needs of a higher level [1]. Due to the formation of a separate layer of a specific segment of residential real estate built in accordance with "green standards", the activation and strengthening of public housing policy aimed at the development of environmentally sustainable cities, a systematic approach to the formation of solvent eco-oriented demand is needed. There is already a transformation of the consciousness of citizens in the direction of a high growth of the priority of eco-oriented consumer expectations in the field of residential real estate [2]. One of the main state tasks is to meet the housing needs of the population, while at the same time focusing on the formation of the need for efficiency in relation to the environment.

Real estate developers are obliged to ensure competitive and in-demand commissioning of housing that meets environmental requirements, built using "green" standards and forms a sustainable "green" environment in the city.

Despite the fact that the cost of residential real estate in the primary market is higher than in the secondary market, such housing is in high demand and more liquid [3], including through the use of modern construction technologies, space-planning solutions, energy-efficient solutions. This suggests that consumers can sacrifice part of their income in favor of more modern and high-quality housing. New opportunities are opening up for development organizations and a segment of the market – residential real estate with a priority on environmental consumer needs, they need to be introduced into this segment [4], but this is impossible without their reorientation to "green" construction standards. In this regard, developers need to develop strategies for concentrated growth with an emphasis on sustainable and eco-oriented development.

The purpose of the study is to form a complex of organizational, economic and managerial mechanisms to ensure the competitiveness of investment and construction organizations with a primary focus on market relations based on balanced eco-oriented supply and demand, ensuring the sustainability of development systems. At the same time, it is necessary to ensure the introduction of competitive housing that ensures the environmentally sustainable formation of the city.

The hypothesis of the study is that the formation and implementation of a competitive strategy for sustainable and environmentally-oriented development of a development company leads to an increase in effective demand.

The object of the study was the housing real estate market, the subject is the processes in the field of economics, management, ecology in the development of the city that arise during the formation of strategies for sustainable and environmentally-oriented development of a development company, ensuring its competitiveness.

Let's consider the works in the context of several areas: the formation of competitive strategies and sustainable eco-oriented development in construction.

The competitive strategy, as well as the competitive parameters of production, has a significant impact on the effectiveness of the organization's activities, Kianosh Ebrahimi believes [5], however, in order to effectively strengthen the current competitive advantages, it is necessary to understand the characteristics of the final product and consumer expectations, Meng-Shiunn Li notes [6]. At the same time, special attention should be paid to the corporate image, which is a powerful source of competitive advantage, allowing the company to create long-term added value, says Yuri Malancha in his research [7], as well as marketing strategy as the main factor influencing the competitiveness of companies [8]. However, in the context of national policy in the vector of development of environmentally sustainable cities, it is necessary to form competitive strategies with a focus on "green" construction, since eco-oriented demand forms a sought-after segment of residential real
estate, which allows for the sustainable development of a development company in case of successful entry into this segment.

For the first time the term "sustainable development" in the modern sense was used in 1972 at the World Conference on the Environment in Stockholm [9]. If we talk in general about the theory of sustainability, then the category of "sustainability" has a multidisciplinary character, he believes. Against the background of exponential reduction of natural resources and continuous and accentuated deterioration of environmental quality, ensuring the sustainability of economic and social processes has become a reality of everyday life. However, the focus is on environmental degradation, which has a major impact on global warming. The idea of sustainable development is based on three fundamental pillars, namely economic, social and, last but not least, ecological, according to Michaela Onofrey, Adeline-Andrea Siriteanu and Erica-Maria Doake [10]. Within the framework of the theory of sustainable development, the directions of greening of all construction projects and processes are relevant: green energy-efficient construction, the introduction of "smart" and "passive systems", according to Silvia Blasi, Andrea Ganzaroli, Ivan De Noni [11]; multifunctional buildings, the use of local, recyclable and renewable building materials, according to Massimo Cecchini, Ilaria Zambon, Antonella Pontrandolfi [12], application of material-saving technologies, etc. In the conceptual provisions of sustainable construction, three fundamental conditions are distinguished – resource efficiency [13], cost-effectiveness and complexity of design [14], which provides a holistic approach to the field of design and construction [15]. The issues of sustainability in the theory of urban planning occupy one of the central places [16]. Based on the provisions of UN resolutions on sustainable development, sustainable directions for the development of urbanized and urban areas are being actively developed.

The problems of the subject area under study are not fully considered, the main stages of the formation of a competitive strategy for sustainable and environment-oriented development of a development company, mechanisms that allow increasing the volume of demand and supply in the segment of residential real estate that meets the priorities of consumers in the field of "greenness" and comfortable, high-quality housing built on the principles of "green" construction and ensuring sustainable ecological development of settlements.

2 Materials and Methods

Materials of domestic and foreign researchers in the field of implementation of projects of various scales with priority in the fields of ecology, economics, marketing, management of companies both in construction and in related industries served as the theoretical basis of the study, as well as materials from the official website of the United Nations, the Government of the Russian Federation, the Russian State Statistics Committee, reports and reports of domestic and foreign scientific organizations.

Methods of theorization, formalization, and mathematical modeling were used to solve the tasks set to analyze the trends in the development of the territorial housing market and the priorities of its ecological development and eco-oriented consumer demand. In addition, empirical methods of observing the behavior of groups of consumers of residential real estate were used as private methods; a survey in the form of a questionnaire; practical modeling in terms of developing measures to improve the effectiveness of the sustainable development strategy.
3 Results

3.1. Actualization of transformations in the housing market based on the formation and growth of segments of eco-oriented supply and demand with conceptual refinement.

The conducted research has shown that the development of modern competitive strategies for sustainable and environmentally-oriented development of development companies is associated with the identification of significant transformations in the housing market. It has been established that there is a steady demand not for traditional types of residential real estate, but for "green" construction products. It can be argued that both a special type of eco-oriented demand and a specific segment of eco-oriented supply are actively forming and increasing in the housing market. Expert estimates of the authors show that the market share of green construction in Russia is now about 20% and in the next 5 years, according to our estimates, it should increase to 50-60%. But if we consider the volume of certification of housing to national standards of green construction, then such volumes of green construction are significantly less and amount to no more than 1% of all housing construction. For a relatively short period of time of the existence of domestic standards in relation to "green" construction, one can observe the trend of its development and application. But not all developers-developers and consumers of finished construction products understand the advantages of erecting buildings focused on eco-standards with the use of "green" technologies. For the majority of the population, including eco-developers, the concept of ecological construction, ecological housing is associated with construction in some ecologically clean place, near a forest area. Or the concept of eco–building is identified with the use of one innovative technology, which in turn is considered incorrect, because "green" construction based on eco-certification standards is a set of measures to ensure the most comfortable indoor environment, measures related to cost savings during the operational period. Despite this, environmental standards are applied in our country. At the moment, more than 3.5 million m2 of housing has been certified. This, of course, is negligible compared to the total number of housing commissioning (102.7 million m2 for 2022), but the development of this direction, the experience of its application is already available in our country.

To spread this interesting and relevant direction in the housing sector, a flexible policy of the authorities is needed, the dissemination of information about completed projects, the advantages of using "green" technologies, eco-standards.

There are 32 national rating systems for the evaluation of GC facilities in 24 countries: Australia – Green Star; Brazil – AQUA; Great Britain – BREEAM; Finland – PromisE; France – HQE; Germany – DGNB; Hong Kong – HK BREAM; India – GRIHA; Italy – Green Building Council Italia; Spain – VERDE; Canada – LEED Canada; China – GBAS; Malaysia GBI Malaysia; Netherlands – BREEAM Netherlands; USA – LEED; Switzerland – Minergie; South Africa – Green Star SA; Japan – CASBEE. Among the most advanced international rating systems should be noted English - BREEAM, American - LEED and German – DGNB.

Countries that have been practicing the priority of implementing "green" standards for a long time are an example for applying the experience gained in Russia and practical implementation in the activities of companies. International practice shows that "green" buildings are created with increasing volumes, if at each stage of process management an effective mechanism of interaction is implemented between the bodies responsible for measures in the field of high-quality energy conservation, improvement of the regulatory
framework for construction, financing and implementation of voluntary environmental standardization.

The analysis made it possible to propose the following concept as a definition of the conceptual category "eco-oriented demand" - this is an economic category of the housing market, which reflects the desire of consumers (buyers) in the priority acquisition of eco-oriented residential real estate in the primary and secondary housing markets in increasing volumes in certain price categories, which forms both a separate segment of demand and requirements for a specialized eco-oriented offer from development companies in the conditions of the formation of a national housing strategy of ecological sustainable development of cities.

Based on the concept of "eco-oriented demand" proposed by the authors, the following author's concept can be formulated: the competitive strategy of sustainable and eco-oriented development of an investment-construction (development) company is defined as a set of organizational, economic and managerial mechanisms to ensure the competitiveness of investment and construction organizations with a primary focus on market relations based on balanced eco-oriented demand and supply, what ensures the sustainability of the development of development systems in the context of green building priorities.

3.2. Analysis of trends in the development of the territorial housing market and priorities of its ecological development and eco-oriented consumer demand.

The real estate market always raises issues of providing the population with high-quality and affordable living spaces, therefore innovative approaches to solving the housing problem and the formation of housing policy are needed. Housing construction in Russia is influenced by three key factors: increased demand for housing; limited supply and rising costs of developers. 2022 was a record year in terms of housing construction (Figure 1).

![Graph showing the dynamics of residential real estate commissioning in the period 2000-2022](image)

**Fig. 1.** Dynamics of residential real estate commissioning in the period 2000-2022 In the Russian Federation [compiled by the author on the basis of Rosstat data].
Every year the share of commissioned housing is increasing, while the share of low-rise housing is steadily increasing, which directly and indirectly confirms the strengthening of eco-oriented demand.

In the Penza region, the volume of housing commissioning is also increasing, while the share of low-rise buildings is also increasing (Fig. 2).

![Fig. 2. Dynamics of residential real estate commissioning in the Penza region for the period 2000-2022 [compiled by the author on the basis of Rosstat data].](image)

We will analyze competing development companies in the housing market of the Penza region. Currently, 23 companies are represented in the housing construction market, only two of which (GC RKS Development, T-Stroy) represent another region, while three companies in terms of current construction occupy a share of more than 15%: the Territory of Life group of companies (23%), the Risan construction group (21%) and Thermodom construction holding (19%). Further, the segmentation of the primary market objects was carried out. Penza is under construction according to quality characteristics. According to the results of the analysis of websites and project declarations of developers on the territory of Penza, as of March 2023, 29 residential buildings under construction were identified, while the selection was carried out according to the following criteria, observed simultaneously: construction permits were issued; project declarations were officially published in the public domain; buildings were not put into operation. Of these, two residential complexes belong to the "Elite" class: the Holmes Residence residential complex (developer СG Risan) and the Moskovskaya 36 residential complex (developer Penzgorstroyzakazchik company) (7%); eight residential complexes belong to the "Business" class (28%); sixteen residential complexes belong to the Comfort class (55%); three residential complexes belong to the economy class (10%).

If we talk about the presence of eco-oriented housing on the housing market, then there is a complete absence of facilities certified in accordance with "green" standards in the region. Elements of these standards, such as: special requirements for infrastructure, space-planning solutions, the surrounding area, elements of a "smart" house, are used everywhere and are objects that stimulate additional eco-oriented demand. The analysis of the cost of primary market apartments of various classes and characteristics in the Penza city limits for the developers studied above was carried out according to the official websites of developers showed that prices on the market have a fairly large spread, and
residential objects in the segment of eco-oriented demand have a price on the market 15-20% higher than objects outside this segment. The result of the analysis was information about insufficient filling and satisfaction of eco-oriented demand in the territorial housing market of Penza. This allows us to conclude that it is necessary to reorient the strategies of development companies to investment and construction housing projects, the implementation of which will ensure a sustainable eco-oriented solvent demand for final construction products (apartments).

The determination of consumer preferences that form demand in the primary residential real estate market, necessary to identify and systematize the share of eco-oriented demand, was carried out in several stages (Fig.3):

![Diagram](image_url)

**Fig. 3.** Two-stage model for determining consumer preferences in the primary housing market [compiled by the authors].

The survey (both paper questionnaires and the Internet survey method were used), which involved both masters and bachelors of the Penza State University of Architecture and Construction, and more than 6,000 people of various levels of wealth, age, social status, 354 people were selected as interviewers. Very popular for respondents aged 20 to 30 years turned out to be the method of Internet survey with the posting of questionnaires in popular social networks, questionnaires in printed form were used to identify the opinions of categories of citizens aged 35 to 60 years. The main focus of the survey is to identify the eco-oriented priorities of housing consumers. More than 65% of the able-bodied population replied that the environmental and "green" aspects of housing play a high role in its acquisition, and they would prefer it even lower in cost. Although for the remaining 30%, this aspect plays less importance and tends to zero, which is due to the low solvency of this category.

It is established that at present the most important factor in increasing the sustainability of development companies is taking into account the emergence of a new type of demand for residential real estate on the market - *eco-oriented consumer demand for capital housing construction*. This is confirmed by the survey results. He points out that 65% of respondents identify as a special priority area of their solvent demand interest in housing with priority environmental orientation.
Thus, in conditions of economic instability, the priority preferences of buyers are directed to the eco-oriented segment of residential real estate. This segment is underdeveloped and is a promising niche for the implementation of investment and construction projects. Let's move on to the last stage of the research - the development of a competitive strategy for sustainable and environmentally-oriented development of a development company.

3.3. Formation of a competitive strategy for sustainable and environmentally-oriented development of a development company.

When developing a development strategy under existing conditions, it is advisable to adopt a concentrated growth strategy as a basic one, assuming the following subtypes: a strategy for developing the market of eco-oriented residential real estate as an innovative segment; a strategy for strengthening positions in the market of eco-oriented residential real estate as an innovative segment.

The measures for the effective application of the sustainable development strategy of the development company are shown in Figure 4.

![Diagram of competitive strategy for sustainable and eco-oriented development of a development company](image)

**Fig. 4.** Competitive strategy of sustainable and eco-oriented development of a development company [compiled by the authors as a result of the synthesis of data obtained at the previous stages of the study].
Measures for the effective application of the competitive strategy of sustainable development include two directions: measures aimed at increasing the volume of environmentally-oriented demand; measures aimed at increasing the volume of environmentally-oriented supply.

4 Discussion

Undoubtedly, the attempt to form a competitive strategy for sustainable development of a development company with a priority focus on eco-oriented demand is a very popular and difficult task to ensure the sustainability of urban development, while the implementation of this direction is possible taking into account the priorities of national housing policy by updating urban planning standards, standards of "green" construction, as well as through the development of public support of eco-oriented projects. This determines both the breadth of research directions and the importance of developing other aspects of theoretical modeling and practical application of competitive strategies for sustainable and environmentally-oriented development of development companies.

The analysis shows that important yet undisclosed and promising areas of creative development of the theory of sustainability of city development from the standpoint of the formation and practical implementation of competitive strategies of development companies include:

1) the importance of developing the theory of sustainability of development companies, not only in terms of internal processes of increasing competitiveness, but also in terms of the formation of national housing policy with an orientation to environmentally-oriented demand;

2) in the author's research, when developing a competitive strategy for sustainable and environmentally-oriented development of a development company, measures for its effective application are proposed, which determines the importance of expanding the author's methodology in terms of developing algorithms for their implementation;

3) a debatable issue requiring creative development should include the need to develop a methodology that allows regulating the volume of eco-oriented demand and eco-oriented supply for residential real estate.

The above-mentioned number of controversial issues should be attributed not so much to the shortcomings, but mainly to the prospects for its development.

5 Conclusions

In conditions of economic instability, the eco-oriented segment of residential real estate causes priority preferences of buyers. This segment is poorly developed, but it is a promising niche for the implementation of investment and construction projects. Development companies have opportunities for effective activity if, when planning and implementing projects, they use the principles of forming a competitive strategy for sustainable and environmentally-oriented development that ensures priority preferences of consumers in the housing market. Measures for the effective application of the development strategy will ensure a significant increase in both the volume of eco-oriented demand and the volume of eco-oriented supply for residential real estate.

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