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The Economic Essence of the Environmental Approach in Urban Planning

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Abstract. The article studies the comprehensive multi-layer concept that is associated with the urban environment and whether it is convenient, comfortable, modern and efficient. Environmental approach that involves urban planning and development tools is particularly pertinent in view of the national project "Housing and Urban Environment" being adopted. The authors propose a conceptual model to employ the environmental approach in complex development of urban communities. The proposed model presents the groups within the environment with the corresponding elements, and it was suggested that every element affected the real estate capitalization in a community.

1. Introduction

Today more than 50% of the population of Earth lives in urban environment, and in Russia this share is even bigger with more than 75% of Russians living in cities and towns. This is why cities, in particular, urban environment are the main drivers of engaging high-quality human resources and further enhancement of competitiveness on the national level.

However, as a whole, both the separate and independent concepts can be interpreted very broadly. Initially, this concept was described as a complex multi-layer phenomenon that included a natural, environmental component and a cultural, artificial one [1]. In terms of architecture and design, the environment was seen as the unity of space and its contents that had been developed as a result of social interaction of different groups of people and social and cultural needs of every person [2]. Thus, in a broader context, the term "environment" covers the whole set of interconnected natural, natural and man-made, man-made and social and economic factors that directly or indirectly affect the population that support it as whole.

The term "environment" was first used in connection with urban communities in the late 20th century. A new vision of the urban environment as a continuous interaction of a human community and objective-spatial surroundings, various activity systems and forms of behaviour with the physical structures in space, results in the development of new methods of its design [3]. For example, together with the development of social psychology in urban construction, an environmental approach also emerges that focuses on both objective urban indicators and qualitative characteristics, such as interests and habits of the population. So, the environment now is seen as a substance that results from the interaction between humans and their surroundings, rather than as just objective-spatial surroundings.



The prerequisites for the environmental approach in the town planning in the USSR were associated with urban development and infrastructure. However, the popular standard planning did not allow to create unique environments, which is the essential characteristic of environmental planning. Under such conditions, spaces between houses that were filled in the last moment as part of urban development were like vacuum that needed to be filled and that gave the impetus to the development of the environmental approach in its modern version. However, both then and now infrastructure has been seen in town planning as a condition for ensuring and supporting life processes, it is standard, unified, this is why, it is a partner and a competitor to the environment.

The new environmental approach has been studied by many scientists. For example, many of them wanted to employ the concept of the environmental approach as a way to create a comfortable urban environment, as it concerns social and cultural, psychological, aesthetic and functional needs of city dwellers [4]. In town planning others saw a systemic approach to the design of town urban spaces from the point of view of the sustainable development of their environment [5]. Research that connects the environmental approach and environmentalization, urban ecology aimed at the creation of sustainable environment, is very popular today [6, 7]. Also, another promising area is the research of the inductive approach to the organization of objective and spatial urban structure on the principle of ergocentrism, and its prerequisites are implied by the environmental approach [8]. Many studies concerned the creation of a real environment for city dwellers in communities with standard apartment blocks [9]. A number of experts tried to identify the properties of participatory methodologies within the environmental approach, as well as the theoretical basis for the cooperation with urban communities for the purposes of developing the foundation for an urban policy [10].

The majority of the studies within the environmental approach that have been explored by the authors, does not answer the main question that concerns all the stakeholders in the development of the environment, in particular, the society, investors, developers and the municipalities: how can we create a favourable environment for our life and at the same time to benefit financially from such measures? The answer also provides an insight into the economic nature of the environmental approach in town planning.

2. Materials and methods

It is important to say that every subject of the environment creation and town planning activities as a whole have their interests, preferences and responsibilities [11].

The society as a rule is conservative and seeks to keep its environment. But if we consider new comprehensive construction, we will see that the society is interested in the creation of the best comfortable living environment, and the cost of its development and maintenance as whole does not concern it. For the said party, in the process of the creation of an environment, the most important thing is to develop public spaces that are comprehensively introduced into the existing urban structures.

The authors interpret the term "investors" as both natural persons who buy residential real estate for personal use and natural persons and legal entities that buy real estate to invest their capital and to continue their business activities using it. Today the future real estate proprietary value not only its own parameters and qualities, but also the life outside the front door. As a whole, investors as well as the society are interested in the creation of the best favourable and comfortable environment. However, unlike the society, they are mainly concerned about the price-quality ratio when they select the object for their investments. The investors seek to get the best possible quality of the environment at the minimum cost of the real estate, but they still lack the understanding of the cost of the development and maintenance of that environment. This target group focuses primarily on the development of hallways in apartment blocks, yard spaces with various hardscaping and newly created landmarks in residential areas.

Developing companies are dynamic and are open to innovations. Their main goal in implementing comprehensive investment projects is to gain maximum profit. From the objective point of view, they are the main subjects of the creation of an urban environment. The investors' financial condition and

their joint purchasing power determine the environment within the developed element of the planning structure [12]. They also have a clear vision of the cost of the creation and sometimes of the maintenance of the environment on some level. However, within the legal framework the creation under the majority of projects is limited to minimum urban development and infrastructural support. It is associated mainly with the fact that developers do not know how expenditure on additional elements of the environment can influence the capitalization of real estate in a residential area. As a whole, developing companies are ready to create the best comfortable environment in residential areas, but under the condition that they get sufficient financial benefits under the implemented projects.

The most important task of the municipalities is to achieve the balance of interests for all the parties. They are interested in the creation of a best comfortable environment with minimum budget expenditures. They also know the cost of the creation of an environment in a city, but they mostly consider the maintenance costs for the environment to keep in a good condition, as the majority of the newly developed public spaces have to be maintained at the municipalities' expense. However, the fact that the Russian leadership had realized the unfavourable condition of the majority of Russian towns allowed to develop a national project "Housing and Urban Environment" to help the local authorities. One of its key goals is to make the urban environment more comfortable and to develop a mechanism for direct participation of citizens in its creation. The national project is to be implemented before 2024, with 287,8 billion rubles in funding for the creation of comfortable urban environment, where 83.5% are from the federal budget, 15.5% come from the budget of the subjects of the Russian Federation, and the rest have been allocated from extra-budgetary sources. Under the national project the basic target indicators up to 2024 are the following [13]: average quality of the urban environment in the Russian Federation improved by 30%; the share of cities with favourable environment in the total number of towns accounts for 60%; there are 31,0 thousand improved public spaces; the share of citizens who participated in solving the development issues in terms of urban environment has achieved 30%.

In order to ensure the accountability and balance of interests for all the business stakeholders as well as the implementation of the national project "Housing and urban environment" in terms of the creation of an urban environment, it is essential to develop a model that takes into account the environmental approach to the comprehensive development of an area from the point of view of the joint economic impact from the implementation of the project.

3. Results and discussion

Figure 1 shows the conceptual model that shows the economic nature of the environmental approach to urban construction. As we have said before, an urban environment is a certain symbiosis of all the types of infrastructure of a town and its comprehensive urban development. An environment and infrastructure are closely connected and merge with each other. The point of their convergence is urban development [14]. Urban development concerns both the environment and infrastructure and connects them physically and conceptually. However, neither the environment, nor the infrastructure are not the same thing as urban development, they do not come down to urban development and are not interchangeable.

However, today due to the modern town planning policy that is strictly regulated by the general plan and rules of land use and construction, the quality of the environment under the majority of developing projects need more attention [15]. As a result, the growing demand of the society for the transformation of values leads to the realization of the inadequacy of the environment that is being fostered today. The more it grows, the greater will be the need in a high-quality environment. This means that further urban development policy under the outdated non-flexible standards will lead to the environmental deficiency, and in future urban communities will begin to stagnate and lose high-quality human resources and the economy as a whole will be disrupted.

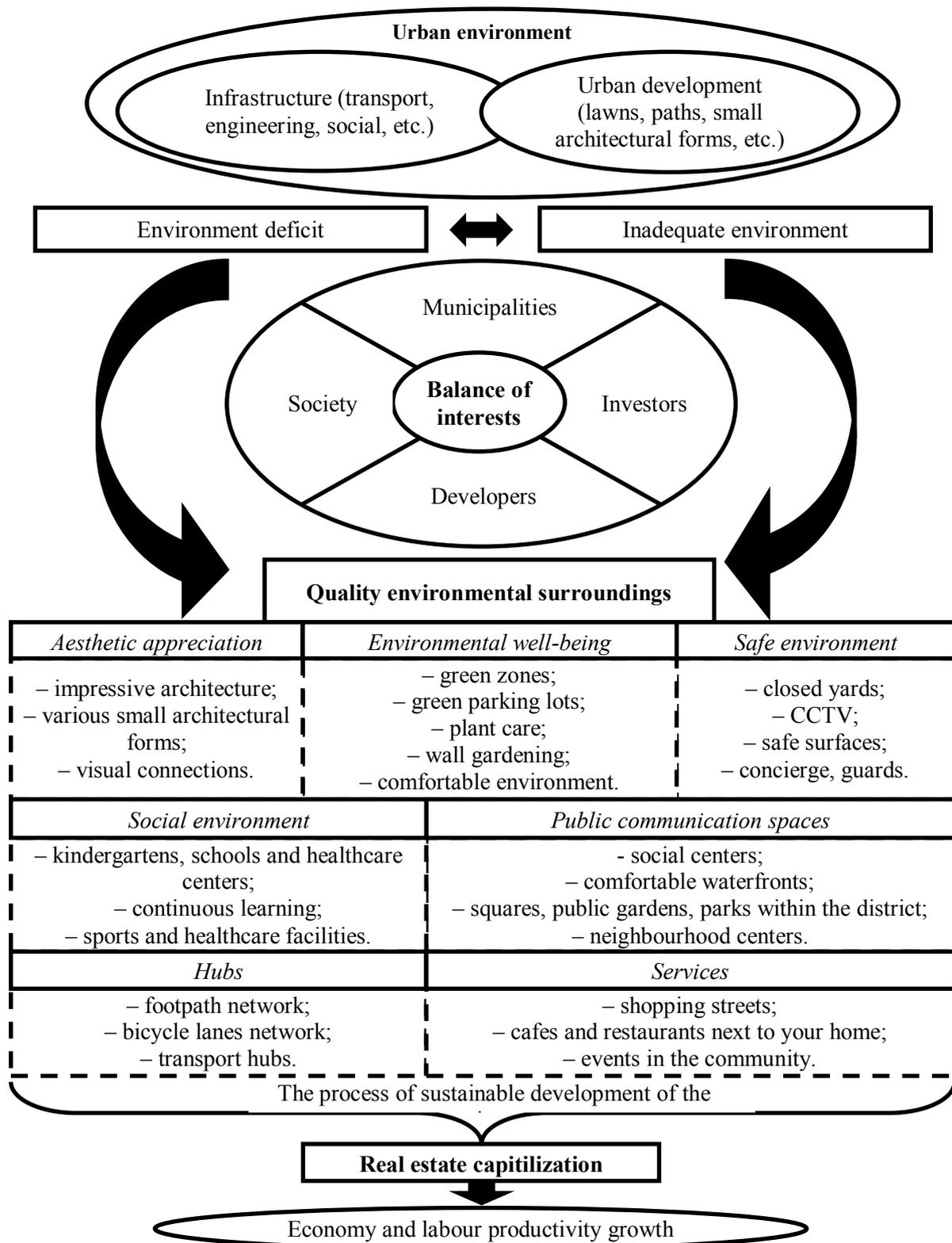


Figure 1. Conceptual model of the economic nature of the environment approach.

The authors propose to create the perfect environment on the basis of the balance of interests of the major stakeholders in investment and construction activities. In Figure 1 we try to divide the

environment into its parts. For example, we suggest that the following 7 groups of measures should be considered when a construction concept is developed, as they can positively affect the economic efficiency of the project:

1. Aesthetic appreciation of a community. The architectural design of buildings is important both for its inhabitants and all the city dwellers, in particular, if it is a prominent location. The designed profile of a building can later become the landmark of the city, which will boost the demand for real estate in the developed area and increase the capitalization of its real estate. Various small architectural forms that have a certain purpose can become the brand of a community, the thing that will make it different from the rest. The carefully planned visual links will allow to change the vision of the community inhabitants and make the area more people-oriented, the space will stop to be "concrete jungles" and turn into a favourable space for living.

2. Environmental well-being of the population. Under the conditions of the environmental challenges that have recently become more acute, this group in particular is important for the society. The green framework that is a chain of continuous green alleys that smoothly run into each other connecting major recreation landmarks of the city and provide both the aesthetic pleasure and improve health of the human resources. Large areas for parking lots incorporated into this framework with the help of the modern "green parking" technology will produce even a more favourable effect. However, the problem associated with the majority of plants dying in 1-2 years after a residential complex was commissioned, calls for the development of maintenance measures and additional funding to implement them. Also, the design of modern layouts should be provided with a view to envisage wall gardening. Along with the above-mentioned measures, it is essential to focus on the natural environment in a community and a city as a whole, in particular to prevent air, soil and water pollution in the area.

3. Safe environment in the community. Even today there are a number of development projects envisage yards that closed for cars. Under the condition of growing number of cars, this will allow to create a barrier free zone for all the society groups, for example for children, older people and people with disabilities. Isolating cars and CCTV will allow people to feel safer and will foster a more open environment. Another advantage is associated with a special safe rubber floor surface in children's playground, slides, etc. At the request of the residents, maintenance staff can be envisaged that will ensure security in a residential complex, for example a concierge, a security.

4. Social environment in the community. This group includes basic elements that affect the education and healthcare for the population. Modern kindergartens, schools, healthcare centers and further education establishment are necessary for all social groups. The more such institutions are there in close proximity, the more the population is satisfied with the living conditions and therefore with the environment. As for sports and healthcare institutions, we should say that not all residential areas provide an opportunity to develop such large facilities. However, smaller facilities can be located directly on the first floors of residential buildings or in small commercial buildings in the territory of a residential complex.

5. Open public communication spaces. This group includes major public centers, squares, parks and public gardens, in other words, places where residents can openly assemble, communicate and interact with one another. Some projects envisage a developed embankment as such a place. In this case, if the location does not provide for such spaces, then neighbourhood centers should be created, where residents can communicate and solve their problems together.

6. Hubs in the community. A well-developed and dense network of bicycle and pedestrian walks across the area with major small architectural forms, commercial objects and public spaces should be provided for. Such walks should not overlap motorways, or if it is necessary, the safety of pedestrians and cyclists must be ensured. Large transport hubs on the border of a residential area that connects personal and public transport (buses, trains and metro) are a significant advantage for the real estate capitalization.

7. Services in the community. Shopping streets should be envisaged where the number of pedestrians is the highest, with various institutions providing consumer services for the population. It

is also necessary to plan several restaurants and cafes in landmark and scenic locations in the area. These measures will improve the profile of a location and will allow the population to receive all the services without leaving the district. It is also recommended to provide for places to organize community events, for example collective celebrations or workshops, markets, exhibitions, sales. The design of future landmark spaces for certain events will allow to both engage the population in the process of self-improvement and promote the development of small and medium businesses in the area.

The authors suggest that a creation of perfect environment would boost the sustainable development of the environment, and, as we have said above, this will increase the aggregate cost of the real estate in the area (a residential complex) and in the city as a whole. The real estate capitalization will help to create a more competitive environment and attract high-quality human resources, and that will result in better labour productivity and stronger economy as a whole.

4. Conclusion

The study allows to understand the economic nature of the environmental approach to town planning. As a result, the environment must be seen as a group of separate elements that can influence the psychological perception of a territory by its residents. First of all, the developers must realise that the impact of a certain element introduced in the concept of a residential area can repay the expenditures on its construction many times. Here we must identify the scale for employing this approach. In order to study the evaluation of the environment elements influencing the real estate capitalization, it is essential to analyse every element of the urban environment and make the necessary calculations on the basis of the developed concept model.

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