The impact and response of urban land use planning on the feasibility of real estate projects

Xinyi Zhang

School of Education, University of Leeds, Leeds, LS29JT, UK

stellazhangxinyi@163.com

Keywords: urban land use planning; real estate projects; feasibility analysis

Abstract: This article deeply explores the multi-faceted impact of urban land use planning on the feasibility of real estate projects and proposes corresponding response strategies. Through the analysis of factors such as land supply and demand matching, planning restrictions, environmental impacts, etc., the direct challenges of planning to the project are revealed. In terms of feasibility analysis, the importance of land value assessment and return on investment analysis is emphasized. To address these challenges, multi-level strategies including strategic planning, innovative design, and policy optimization are proposed to improve the adaptability and social acceptability of the project. The research in this article provides planners and developers with a comprehensive thinking framework to better deal with the complex issues that urban land planning brings to the feasibility of real estate projects.

1. Introduction

1.1 Background

As two key components of urban development, urban land use planning and real estate project feasibility analysis are intertwined and directly affect the sustainable development of the city. Urban land use planning, as a guiding document for urban development, covers the rational use of land, urban spatial layout and development direction. At the same time, the feasibility analysis of real estate projects, as an execution tool for land planning, focuses on the economic, social and environmental feasibility of the project, which is crucial to ensuring the realization of planning goals.

Against this background, in-depth research on the impact of urban land use planning on the feasibility of real estate projects and how to formulate response strategies have become hot issues in the current field of urban planning and real estate development. Therefore, this study aims to systematically explore the specific impact of urban land use planning on the feasibility of real estate projects, deeply analyze related concepts, methods and strategies, and provide more comprehensive theoretical and practical support for sustainable urban development.[1].

1.2 Research purpose and significance

With the continuous advancement of urbanization and the expansion of city scale, the interactive relationship between urban land use planning and real estate projects has become increasingly significant, which makes in-depth research on the relationship between the two a top priority. The purpose of this study is to systematically analyze the impact of urban land use planning on the feasibility of real estate projects and propose corresponding response strategies, aiming to provide scientific decision-making basis for urban planners, real estate developers and decision-makers. Through a detailed literature review, this study aims to sort out the relevant concepts, evolution processes and common methods of urban land use planning and real estate project feasibility analysis, and lay a theoretical foundation for in-depth research. Through a review of previous research, we can understand the diversity of the relationship between land planning and real estate projects in different urban environments, providing inspiration for further empirical research. This study will provide an in-depth analysis of the specific impact of urban land use planning on the feasibility of real estate projects, focusing on factors such as the matching of land supply and demand, conflicts between

  DOI: 10.25236/semihs.2024.009

planning restrictions and feasibility, as well as environmental impact and sustainability considerations.[2].

2. Related concepts

2.1 Evolution of urban land use planning

Urban land use planning, as a strategic tool for urban development, has undergone profound evolution in the past few decades. Early urban land use planning mainly focused on single-use land zoning, that is, dividing urban land into independent functional areas such as residential areas, commercial areas, and industrial areas. This traditional zoning model usually takes "regional functional division" as its core and emphasizes the specificity of each functional area, but ignores the interaction and comprehensive utilization within the city. With the continuous development of urbanization and social economy, urban land use planning has gradually transformed from simple functional zoning to comprehensive mixed-use planning. This evolution reflects the need for more efficient use of urban resources, emphasizing the integration and synergy between different functions. Comprehensive mixed-use planning no longer divides the city into rigid functional areas, but achieves a more compact and diverse urban spatial layout through mixed use of the same plot of land. This trend is reinforced by the concepts of urban renewal, regeneration and sustainable development. As the concept of sustainable development gradually takes root in people's hearts, the evolution of urban land use planning not only focuses on functional integration, but also strengthens attention to environmental and social sustainability[3].

2.2 Common methods for feasibility analysis of real estate projects

Real estate project feasibility analysis is one of the key steps in early decision-making of real estate development. It evaluates the economic, social and environmental feasibility of the project through a systematic method to provide scientific basis for investment decisions. In modern real estate development, common real estate project feasibility analysis methods cover multiple aspects to ensure that the project is feasible at all levels. Economic analysis is the core of feasibility analysis of real estate projects. In economic analysis, land value assessment is one of the first tasks. By assessing the actual value of the land, developers can determine the appropriate use of the land and the best way to develop it, thereby providing basic data for the overall planning of the project. In addition, return on investment analysis is also an important part of economic analysis. Return on investment is a key indicator for evaluating investment benefits. It reflects the relationship between investment and income and helps investors judge whether a project is worth investing in[4].

2.3 Findings from previous studies on the feasibility of land use planning for real estate projects

Previous research has established a profound connection between urban land use planning and real estate project feasibility and achieved a series of important findings. These studies not only provide insight into the potential impact of land use planning on real estate projects, but also provide practical guidance for planners and developers in formulating strategies. On the one hand, previous studies have emphasized the importance of matching land supply and demand. The matching of land supply and demand refers to the degree of matching between the land demand in the plan and the actual market demand. The study found that when the planned land use cannot meet the actual market demand, the feasibility of the real estate project is seriously affected. This shows that planners need to be more flexible in adjusting land use plans according to market demand to ensure the actual feasibility of the plan. On the other hand, planning constraints and feasibility conflicts are also the focus of research. Planning constraints include restrictions in regulations, policies, and rules and regulations, while feasibility conflicts refer to conflicts between different elements of planning. Previous research has found that restrictions and conflicts in planning can hinder the implementation of real estate projects and increase project costs and risks[5].

3. The impact of urban land use planning on the feasibility of real estate projects

3.1 Matching land supply and demand

Matching land supply and demand is a crucial consideration between urban land use planning and the feasibility of real estate projects. Research in this area shows that in planning, demand forecasts for land need to match actual market demand to ensure the feasibility of the project. This process involves a comprehensive analysis of urban development trends, population growth, economic activities and other factors. Matching land supply with demand requires an in-depth understanding of a city's development needs. Planners need to consider urban population growth trends, changes in industrial structure, and the direction of future economic development. By analyzing these trends, planners can predict the overall trend of future land demand, including different types of land such as residential, commercial, and industrial. Market demand is a key factor in matching land supply with demand. Planners need to communicate closely with market developers, investors and residents to understand the actual needs and preferences of the market. This includes detailed research on the demand characteristics of different residential groups, the demand scale of commercial activities, and the demand for industrial land. Figure 1 illustrates the matching land supply and demand.

Figure 1 Matching land supply and demand

3.2 Conflict between planning restrictions and feasibility

The conflict between planning restrictions and feasibility is another key aspect that is closely related to urban land use planning and the feasibility of real estate projects. Planning restrictions cover elements from multiple levels such as regulations, policies, and social culture, while feasibility conflicts refer to contradictions and conflicts between different goals in planning. The mutual influence between the two directly affects the actual advancement of real estate projects. Planning restrictions largely determine the extent and direction of land use. Government regulations, urban planning laws, environmental protection policies, etc. stipulate land use standards, purpose divisions and corresponding development requirements. These planning restrictions are an important means to ensure sustainable urban development, but they may also become constraints on the feasibility of real estate projects. For example, a certain area may be subject to environmental regulations, resulting in more stringent environmental requirements for industrial projects in that area.

3.3 Environmental impact and sustainability considerations

Environmental impact and sustainability considerations are crucial dimensions in urban land use planning and real estate project feasibility. Figure 2 shows environmental impact and sustainability considerations. As global environmental issues become increasingly prominent, urban planners and developers are paying more and more attention to environmental impact and sustainability considerations when formulating plans and advancing projects. Environmental impact assessment aims to identify, evaluate and manage the potential impacts of land use planning and real estate projects on the natural environment. This includes direct or indirect impacts of land development on ecosystems, water resources, air quality, etc. Through systematic assessment, planners can better understand potential environmental risks, take appropriate measures to mitigate negative impacts, and ensure that projects strike a balance in ecological protection. Sustainability considerations emphasize land use planning and long-term sustainable development of real estate projects. This includes

integrating economic, social and environmental considerations in project design and implementation to meet current needs without compromising the needs of future generations. Sustainability considerations focus not only on the project itself, but also on its role in the overall sustainability of the city. For example, planners may promote sustainable development measures such as green buildings, energy efficiency, and public transportation to ensure that projects advance urban development while reducing their environmental burden.

Figure 2 Environmental impact and sustainability considerations

4. Feasibility Analysis Methods for Real Estate Projects

4.1 Economic analysis

(1)Land value assessment

Land value assessment plays a vital role in the feasibility analysis of real estate projects and is the basis for ensuring the economic feasibility of the project. This process involves a comprehensive assessment of various elements of the land to determine its current and future economic value. Land value assessment is not only the basis for formulating reasonable sales prices and rents, but also the basis for decision-makers to make investment decisions and plan land use. A land value assessment involves a detailed investigation of the physical characteristics of the land such as its location, size, shape, etc. Geographic location is a key factor affecting land value, while the size and shape of the land directly affects its availability. For example, land located in a prosperous part of a city center tends to be worth more, while land with a regular shape may be easier to develop efficiently.[6].

(2)Return on investment analysis

Return on investment (ROI) analysis is one of the crucial financial indicators in the feasibility assessment of real estate projects, providing investors with an intuitive understanding of the project's profit potential. This analysis quantifies the return on investment in the project by comparing the project's costs and benefits. The level of return on investment directly affects investors' decision-making on the project. ROI analysis needs to consider the cost structure of the project. This includes land acquisition costs, building development costs, infrastructure construction costs, etc. Detailed cost analysis helps ensure a comprehensive understanding of all potential expenditures and protect against potential investment risks. In land projects, a series of land development costs, such as geological survey fees, planning and design fees, etc., should also be taken into consideration. The analysis of return on investment should focus on the expected benefits of the project. This includes rental income, sales income, asset appreciation and other sources of income. Forecast future cash flows from projects, taking into account market demand and price trends to accurately assess the return potential of an investment. When considering returns, you also need to pay attention to the impact of external factors such as inflation, interest rates and market competition on returns.

4.2 Social impact assessment

Social impact assessment is an important dimension considered in the feasibility analysis of real estate projects. It aims to gain an in-depth understanding of the possible impact of the project on various aspects of society, including but not limited to employment opportunities, community impacts, public service needs, etc. This assessment not only helps planners and developers better understand

a project's interaction with society, it can also improve a project's social acceptability. The social impact assessment needs to consider the impact of the project on employment. The implementation of real estate projects usually involves multiple links such as architecture, design, and engineering construction, which may create local employment opportunities. By analyzing the size, type and labor requirements of the project, the potential impact of the project on the local labor market can be estimated. In addition, it is also necessary to pay attention to the pulling effect of the project on the relevant industrial chain to comprehensively assess the employment impact of the project. Social impact assessment also needs to focus on the impact of the project on the community. The construction and operation of real estate projects may bring about changes in community structure, culture, social networks, etc.

4.3 Environmental impact assessment

Environmental impact assessment plays a crucial role in urban land use planning and feasibility analysis of real estate projects. This assessment uses a systematic approach to comprehensively study the direct or indirect impacts that land use planning and real estate projects may have on the natural environment. Today, when environmental issues are of great concern, emphasizing environmental impact assessment is crucial to the long-term sustainability and social acceptance of projects. Environmental impact assessments focus on the potential impacts of land use planning and real estate projects on ecosystems. This includes the assessment of ecological elements such as vegetation, water sources, animal and plant populations, etc., with the aim of predicting possible damage or changes to ecosystems caused by planning and projects. Through scientific ecological risk assessment, planners and developers can prevent potential ecological problems in advance before project implementation and take measures to protect and maintain the local ecological environment to the greatest extent.

5. Strategies to deal with the impact of urban land use planning

5.1 Strategic planning and planning frontier forecasting

Strategic planning and planning frontier forecasting are important components in dealing with the impact of urban land use planning on the feasibility of real estate projects. The goal of this link is to provide strategic guidance for the planning and implementation of real estate projects through in-depth research on urban development strategies and future planning trends to adapt to future urban development trends. Strategic planning involves a deep understanding of the overall direction of the city. Planners need to consider the city's overall plan, development vision and various development strategy documents to grasp the general trend of the city's future development. This may include factors such as the direction of urban expansion, industrial structure adjustment, and infrastructure development. The planning of real estate projects should be coordinated with the overall city strategy to ensure that the development of the project is consistent with the future needs of the city. Planning Frontier Forecast involves the study of the latest trends and innovative directions in the field of urban planning. The field of urban planning is in a process of constant change, with new technologies, concepts and methods constantly emerging. Planners need to pay attention to cutting-edge trends in urban planning, such as smart city technology, sustainable urban design, innovative transportation solutions, etc. Incorporating these innovative elements into planning frontier forecasts can help make real estate projects more competitive and sustainable in the future.

5.2 Innovative design and land development

Innovative design and land development are one of the key means to deal with the impact of urban land use planning. It aims to improve the feasibility and market competitiveness of real estate projects through novel design concepts and sustainable land use methods. Innovation in this area can involve many aspects such as architectural design, land structure, and environmental friendliness. Innovative design emphasizes incorporating forward-looking ideas into project planning and architectural design. This may include the adoption of smart building technologies, green building design, mixed-use site design, etc. By introducing innovative elements, real estate projects can better adapt to the needs of

future urban development, improve the resource utilization efficiency of buildings, and reduce the impact on the environment. Innovative design can also be reflected in the way land is used. Traditional land development methods may face problems such as waste of space and traffic congestion. By adopting innovative approaches such as mixed-use development and compact urban design, planners can use land resources more efficiently, reduce erosion of the natural environment, and improve the overall benefits of the land[7].

5.3 System construction and policy optimization

Institutional construction and policy optimization are strategic measures to address the feasibility challenges of real estate projects in urban land use planning. This aspect of work aims to provide strong institutional support for real estate projects and reduce uncertainty and risks in project implementation by establishing sound laws and regulations and optimizing policy systems. System construction involves establishing and improving land use planning, land ownership, development approval and other relevant regulatory systems. Reasonable, transparent and stable laws and regulations can help regulate land use behavior and provide developers with a reliable legal basis. In addition, emphasizing the protection of land property rights and clear development approval processes are also important directions for system construction, which will help improve the investment attractiveness of real estate projects. The direction of policy optimization mainly includes incentive policies, tax policies, etc., to promote the feasibility of real estate projects. Incentive policies can include rewarding projects that meet sustainable development standards and encouraging innovative design and the application of environmentally friendly technologies. The optimization of tax policies can reduce project costs and increase project investment returns by reducing taxes on environmentally friendly projects.

6. Conclusion

Based on the above review of the impact and response of urban land use planning on the feasibility of real estate projects, we can draw a series of conclusions. First of all, urban land use planning is directly related to the feasibility of real estate projects, involving many aspects such as the matching of land supply and demand, conflicts between planning restrictions and feasibility, environmental impact and sustainability considerations. The analysis methods for the feasibility of real estate projects include multi-dimensional assessments such as economic, social, and environmental, among which land value assessment and investment return rate analysis are the core contents. In future land planning and real estate project implementation, the following points should be paid attention to. Strengthen in-depth research on the relationship between land supply and demand and ensure a more solid foundation for the feasibility of the project through reasonable land use planning. In the feasibility analysis, it is necessary to strengthen social impact assessment, focus on community participation, improve the social acceptability of the project, and establish a harmonious and win-win development model. In addition, innovative design should become the norm in project planning, by introducing cutting-edge concepts and green technologies to improve the sustainability of the project and shape its competitiveness in the market. In terms of system construction and policy optimization, the transparency and stability of regulations should be strengthened, and innovation and sustainable development should be encouraged through policy incentives.

References

[1] Morano P, Tajani F, Anelli D .Urban planning decisions: an evaluation support model for natural soil surface saving policies and the enhancement of properties in disuse[J].Property Management, 2020, ahead-of-print(ahead-of-print).DOI:10.1108/PM-04-2020-0025.

[2] Gao J, Li H, Cheng S G. Analysis and evaluation on land carrying capacity in environmental impact assessment of urban master planning[C]//International Conference on Electrical & Control Engineering.IEEE, 2011.DOI:10.1109/ICECENG.2011.6058380.

[3] Tajani F, Morano P .An evaluation model of the financial feasibility of social housing in urban redevelopment[J].Property Management, 2015, 33(2):133-151.DOI:10.1108/PM-02-2014-0007.

[4] Goodwin P M. Fringe town: revitalization on the margin, assessing small downtown revival and catalytic real estate development feasibility on the urban fringe[D]. Massachusetts Institute of Technology, 2015.

[5] Huang L, Zheng B, Huang L .Simulation of the Self-Adapting Process of Urban Land-Use Structure Based on Land Value Indication: A Theoretical Demonstration[C]//2011 International Conference on Management and Service Science.IEEE, 2011. DOI:10.1109/ICMSS.2011.5998668.

[6] Li-Li Y .Research on the Evaluation of Sustainable Urban Land Use in Urbanization[J].Journal of Anhui Agricultural Sciences, 2006, 34(16):4069-4059.DOI:10.1360/aps040178.

[7] Yuming T, Binhua Z .A STUDY OF THE FEASIBILITY OF A REAL ESTATE DEVELOPMENT PROJECT[J]. Journal of Suzhou Institute of Urban Construction and Environmental Protection, 1995.