

The Development Issues and Countermeasures of Real Estate Market in the Post-COVID-19 Era

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Abstract. Contemporarily, COVID-19 has swept across the country, causing a huge impact on China's economy, especially the real estate market. China is poised to enter a post-COVID-19 era as its real estate companies resume work in an orderly manner as the COVID-19 prevention and control efforts gradually make progress. This paper focuses on the real estate industry and analyzes the development status and problems of the real estate market in the post-COVID-19 era. According to the analysis, the real estate market will gradually recover in the post-COVID-19 era. Besides, this paper also puts forward some thoughts and suggestions in order to realize the recovery and revitalization of the real estate market in the post-COVID-19 era. These results shed light on guiding further exploration of the real estate market returned to the right track in the post-COVID-19 era and achieved rapid development.

Keywords: Real estate; the post-COVID-19; influence factor; coping strategy.

1. Introduction

Since ancient times, the real estate issue has been one of the most important issues concerning the human beings' livelihood. As shown in Table 1, the development of real estate market in various economies in the world can be roughly divided into five modes, each corresponding to a benchmark economy. The real estate industry is the pillar industry of all countries, which also accounts for a relatively high proportion in the GDP of all countries. The GDP created by China's real estate in 2021 is 7,756.1 billion yuan, about \$1202.2 billion, accounting for 6.78%. In 2021, the proportion of real estate in the national economic structure of the United States reached 11.52%, surpassing the proportion of manufacturing industry, which shows the important position of the real estate industry in the national economy.

The real estate industry of China started in the late 1970s and has four stages according to the time period. The period from 1979 to 1991 was the initial stage, during which laws and regulations related to real estate were not perfect, and the whole real estate market was in a disorderly state. From 1991 to 1999, it corresponds to the hype stage and adjustment stage. From 1999 to 2008, the development of the real estate industry entered a new development climax. In the fourth stage after 2008, policy regulation was repeatedly carried out to improve and promote the healthy development of the real estate market.

In 2020, the COVID-19 pandemic has swept across the world, and China's real estate market has been affected to some extent. It has a great impact on real estate sales, investment, land supply and policies, among which the impact of real estate sales is the most intuitive. According to the Statistics of the Ministry of Housing and Urban-Rural Development, in late January 2020, the transaction volume of real estate in China dropped by 95% compared with the Spring Festival of 2019. In provinces with heavy epidemic, the sales volume of commercial housing dropped by 6%. Although many cities launched online transactions, the actual effect was not great. However, during the pandemic, online sales have developed, enriching the way real estate is sold. In the post-COVID-19 era, China has issued a series of strong stimulus policies and local property policies have also lent real estate regulation policies. Nevertheless, the confidence in the real estate market is obviously depressed owing to the impact of real estate debt default, the epidemic, inventory and other factors, and needs to be picked up.

Contemporarily, COVID-19 has become a major obstacle for all industries. As for the real estate industry, plenty of scholars have studied and put forward suggestions on the development of real

estate in the era of COVID-19. Zhou made an in-depth analysis of the short-term and long-term impact of the epidemic on the real estate industry. Subsequently, development countermeasures are further put forward from the government and real estate enterprises that the real estate industry should adhere to the priority of stability and real estate enterprises should carry out innovation or transformation in the post-COVID-19 era [1]. Based on the analysis of Porter's Five Forces model, Shen and Xu concluded that there are many competitive enterprises in the real estate evaluation industry with obvious characteristics of low concentration and strong regionalization. Besides, they proposed three countermeasures for the development of the real estate evaluation industry in the post-COVID-19 era [2]. Fang used SWOT method to analyze the development of the real estate market under the normal situation of COVID-19, aiming to solve the problems and challenges brought by the epidemic and put forward targeted suggestions and measures [3]. Hoesli and Malle analyzed the impact of COVID-19 on the price of commercial real estate, and further discussed the changes of main factors affecting the price of commercial real estate [4]. Marzuki and Newell studied the impact of COVID-19 on global Real estate Capital flows and analyzed Real estate Capital flows to global markets in 2020 by comparing with previous years using the Real Capital Analytics database [5]. By introducing the research of Graaskamp, Worzala discussed the way to look at real estate investment from different perspectives in uncertain times against the background of COVID-19 normalization [6]. Dubach highlights the drivers of speculation in China's housing market and shows that COVID-19 has had little impact on it [7].

In general, in the process of China's establishment and improvement of the market economy system, the real estate industry continues to develop and prosper. Additionally, it also drives the development of finance, building materials, construction, intermediary, home furnishing and other industries. The speed and quality of its development determine the speed and quality of China's economic and social development to a certain extent. Since the COVID-19 epidemic spread across the country in 2020, China's real estate market has been affected to a certain extent. The country has adopted a series of policies to regulate and control the real estate market, which has played a certain role, but some problems have not been completely solved. At different times for different analysis real estate problems, adjust measures to local conditions to take different measures to help the real estate market healthy and sustained development. With this in mind, this paper focuses on the real estate industry and investigates the present situation and development of the it based on questionnaires and SPSS analysis tools. Besides, this research puts forward some ideas and Suggestions to realize the recovery and revitalization of the real estate market in the post-COVID-19 era. The rest part of the paper is organized as follows. The Sec.2 will analyze the data obtained from the questionnaire survey and its analysis method. The Sec.3 will discuss the impact of the COVID-19 on China's real estate market from four aspects. The Sec.4 will put forward the corresponding solution strategy.

Table 1. Five modes of real estate market development in various economies in the world

The free market The United States	Weak intervention Japan	Strong interference South Korea	Social cooperation Germany	Rationing Singapore
The government cannot interfere with the market	Indirect intervention by tax and financial means	Price limit, purchase limit, sale limit, purchase area, etc	Intervene in the rental market and encourage housing cooperatives to build houses	The government builds houses and distributes them to its citizens

2. Data & Method

To understand the changes in demand for housing and their views on the real estate market after the COVID-19 pandemic, this study designed a questionnaire based on so jump platform. Variables

measured in this questionnaire include age, job attributes, income, housing type etc. According to the collected data, people under the age of 30 account for 29.82%, workers in administrative institutions accounted for the largest proportion, about 28.95%, the people whose income drop by 50% owing to COVID-19 accounted for 28.95% of the total. This paper will analyze the impact of COVID-19 on people's incomes, house purchase plan and the direction of house purchase.

3. Empirical analysis for China

3.1 Impact on the national level

The transformation of housing delivery mode in double carbon economy. In the wake of COVID-19, health and environmental protection have been a top priority in China's development. Under the increasingly severe problem of global warming, reducing carbon emissions has become the consensus of most countries in the world. China has proposed the "20·30" dual carbon target to achieve "carbon peak" and "carbon neutral" (seen from Table. 2). Green and low-carbon buildings are the development trend of the real estate industry in the future in front of such a tough dual carbon target. The dual carbon economy has gradually affected the real estate industry. The essence of the concept of "carbon neutrality" is a thorough reflection and inspection of the traditional construction and real estate industry. The carbon generated by people's buying, housing, consumption and travel should be offset by energy conservation and carbon reduction measures. The environmental awareness of the new generation of home buyers poses new challenges to developers in the design and marketing of green and healthy buildings. Therefore, the delivery mode of housing has gradually shifted from rough housing delivery mode to healthy housing delivery mode with fine decoration and green environment protection [8].

Table 2. The 14th five-year development goals and plans for carbon neutrality and carbon peak in some regions

City	Development Goals and Plans
Shanghai	We will give high priority to ecology and green development, step up environmental governance, and accelerate the implementation of ecological projects that benefit the people, so that green development becomes the most prominent underlining of high-quality urban development.
Jiangsu	Vigorously develop green industries, accelerate the energy revolution, promote the green and low-carbon transformation of production and life style, strive to achieve carbon peak in advance, and fully display the beauty of beautiful Jiangsu construction of natural ecology, livable urban and rural beauty, beauty of water and culture, and beauty of green development.
Hunan	We will implement the national action plan for peaking carbon emissions, adjust and optimize the industrial and energy structures, build an economic system that promotes green, low-carbon and circular development, and promote all-round green transformation in economic and social development. We will move faster to build an ecological civilization system that ensures clear property rights, diverse participation, and equal emphasis on incentives and constraints.
Beijing	We have made steady progress in reducing carbon emissions, taken firm steps to become carbon neutral, and set an example for Beijing in addressing climate change.

The pilot reform of real estate tax under the background of common prosperity. After the COVID-19 outbreak, the way to quickly recover the economy and restore people's living standards is a priority for the country. The central government has formulated a large number of preferential policies centering on "people-centered" policies and made it clear that one will vigorously promote common prosperity, as the gap between the rich and the poor has become a key factor constraining economic

and social growth. For the real estate industry, leading the way is the pilot reform of housing tax, which was put forward under the historical conditions of common economic prosperity, because the reform of taxes and fees is one of the main means for the government to adjust social income distribution. As real estate has gradually become the main property of urban residents, the implementation of taxation on it has become an important measure for tax administration and development of real estate.

3.2 Impact on regional sales

Real estate in first-tier cities is hot, and sales are picking up. At the beginning of 2020, during the prevention and control of COVID-19, some communities proposed the regulation that "only those who have the property ownership certificate in their own community can enter the community", which stimulated some homeless people to speed up buying houses in the future so as to obtain the identity of the city. For example, in the first half of this year, the outbreak of COVID-19 broke out in Shanghai, but it relaxed its settlement policy last month. Recently, Shanghai explicitly stipulated that student from the world's top 50 or more universities who work full-time in Shanghai can directly get their settlement, and cancelled the social insurance payment base and payment time limit. Graduates from the top 51 to 100 universities in the world must work full-time in Shanghai and pay social security for six months before they can apply for settlement. In addition to easing the settlement policy for international students, Shanghai has relaxed the settlement policy for ordinary graduates several times before. To be specific, Shanghai has relaxed the settlement policy again, and some industry insiders predict that Shanghai's annual settlement population is likely to surge to more than 10 million. As a result, Shanghai property market will usher in massive demand.

Middle Finger Institute, in 21 sample cities under key monitoring, from February 24 to March 1, 2020, the transaction area of second-tier representative cities rose 49.7% month-on-month, but still fell 58.6% year on year. The real estate market in second-tier cities is gradually recovering as COVID-19 improves, benefiting from the reform of the household registration system and new policies for talent, as well as the attractiveness of regional centers. In Nanjing, for example, the number of new confirmed cases in the past 20 years has declined significantly since February 11, with the real estate market rapidly rebounding as the impact of COVID-19 continues to weaken. According to the middle School data, after the resumption of work (February 10) 14 days, Nanjing commercial housing transactions of 1,968 units, compared with last year after the start of work (February 11) 14 days of 824 units, a significant increase of 138.8 percent year-on-year.

The real estate market in third- and fourth-tier cities is cold and land sales are seriously divided. According to Wind data, in the four weeks after the Spring Festival holiday in 2020, the total land area traded in third-tier cities was 10.715 million square meters, down 52% from the four weeks after the Spring Festival last year. The four-week average land premium ratio is 0%, 14.4%, 5.4% and 9.6%, respectively, which is still in the long-term low stage. Nevertheless, property sales are under pressure in the short term. According to the statistics of the Middle Finger Institute, in the 21 sample cities observed, from February 24 to March 1, 2020, the land transaction area of the third and fourth tier cities decreased by 54.3% year on year. Specifically, the real estate market is divided, and the sales performance of third-tier cities in metropolitan areas is better than that of non-metropolitan areas. Driven by the radiation of the central urban agglomeration, third-tier and fourth-tier cities within the central city circle have stronger industrial synergy, better transportation infrastructure, and greater population aggregation capacity. After the end of the COVID-19 pandemic, the real estate market will also warm up quickly.

3.3 Impact on real estate enterprises

The decline in sales was obvious, but as the COVID-19 pandemic became more and more severe, in January 2020, the China Real Estate Association proposed that "real estate developers temporarily suspend sales office activities until the COVID-19 epidemic is over." Major housing enterprises have responded, but the sales office, business exhibition area, etc., remain closed. Transaction volume has

declined rapidly. According to the statistics of Creridi's ranking of production and sales, in the first quarter of 2020, the overall performance scale of China's top 100 real estate enterprises will decline by about 20.8% compared with the same period last year. Since the second quarter, the sales offices have opened their doors, but they are still empty, and the number of visitors has decreased significantly. On the one hand, citizens responded to the local government's call to reduce travel, and on the other hand, the market recession caused by COVID-19 has greatly changed citizens' concept of life. Having stable savings or assets that can be quickly realized is the best way to cope with any possible COVID-19 outbreak. Thus, they are not willing to invest in real estate in the short term.

Unable to resume work or production on time is resulting in serious delay of the project schedule. The epidemic also caused a large number of construction workers unable to return to their posts on time, and the project could not be successfully constructed, resulting in a delay in the construction period. For new projects, it not only affects the reputation of the project, but also delays the payment collection time of sales, thus increasing the cost of capital occupation. With regard to the old project, if not on time, will cause the dissatisfaction of the people who buy the house, inevitably appear liquidated damages and other huge costs.

Financing is difficult and the risk of capital flow rupture is high. Real estate development enterprises are capital-intensive enterprises with huge investment amount and relatively little self-owned capital. Most of their funds come from bank loans. Among the top ten real estate enterprises, the asset-liability ratio is even over 90%. Capital security is particularly important. However, on account of the impact of COVID-19, the sales center is closed, the sales decrease speed is slow, and the payment collection cannot be guaranteed. On the other hand, the progress of the project is delayed, and the key supervision funds that can be extracted only when the progress node is reached cannot be extracted in time. In addition, financial institutions lack confidence in the solvency of enterprises in the real estate market, and loans have been tightened. Open source cannot be achieved, and reducing costs is equally difficult. The construction of the site has been delayed due to COVID-19, but the project payment must be paid as required by the contract. Although there is room for negotiation, the contract is also subject to the risk of contract limitation.

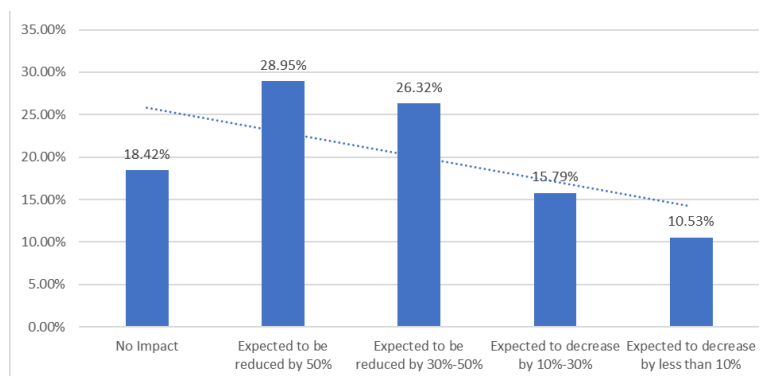


Fig. 1 Impact of COVID-19 on personal income

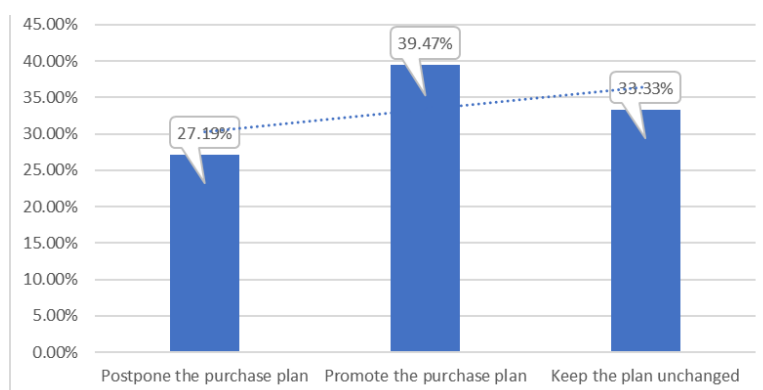


Fig. 2 Impact of COVID-19 on house purchase plan

3.4 Impact on consumers

The concept of housing demand, housing demand and other changes. Another reason for the rapid spread of COVID-19 is the high density of families. During the period of COVID-19, the closed management of various cities and regions made it difficult for renters to return to their homes, which also made many renters in foreign places realize the importance of buying property in new cities. However, according to the questionnaire survey, the COVID-19 epidemic has an impact on the income of most people. In this case, most people are expected to reduce by nearly half as illustrated in Figure 1, while affecting the purchase plan of most people as depicted in Fig.2. There is also a change in the way people invest and manage their money. Public health emergencies have made people more worried about speculative and risky investments and more willing to invest money in visible fixed assets. Therefore, the consumer group in the real estate market still exists.

4. Policy suggestions

4.1 Regulation at the national level

China will further adopt a proactive fiscal policy and a stable monetary policy to ensure necessary support for macroeconomic recovery. Local governments should be more precise and effective in their policies and operations, and refrain from making rash and abrupt changes. At the loan level, credit policies will be relaxed, and companies with due repayment difficulties ascribed to COVID-19 can be conditionally extended or renewed for a corresponding period of time. In terms of taxation, taxes and fees should be reduced or exempted, and the payment period should be adjusted as appropriate [9].

4.2 Regional measures shall be adjusted to local conditions

In terms of the resumption of work and production, all regions will adopt policies tailored to cities and enterprises to promote the revitalization and recovery of the real estate industry in the post-COVID-19 era with policies and systems suitable for local development.

In the recent housing market, New Deal coverage, housing speculation and supporting reasonable housing demand is in accordance with the policy tone including local policies for the release of demand end support policies. In this year, the support policy regulation frequency is more than 210 times, covering more than 120 cities and control times has reached 93 times.

4.3 Innovative development of real estate enterprises

According to the questionnaire, most of the people who buy houses in the future want to live in an intelligent, all-age community, as presented in Fig.3. In the era of digital economy, the traditional real estate industry is still in its infancy in the process of digital transformation. The way to build intelligent development community, smart city, smart community and smart home is the key consideration for the future development of real estate enterprises. Enterprises should seize the opportunity, do a good job in the intelligent transformation of products and services, build a new way of housing, innovation of future people's new life style and concept.

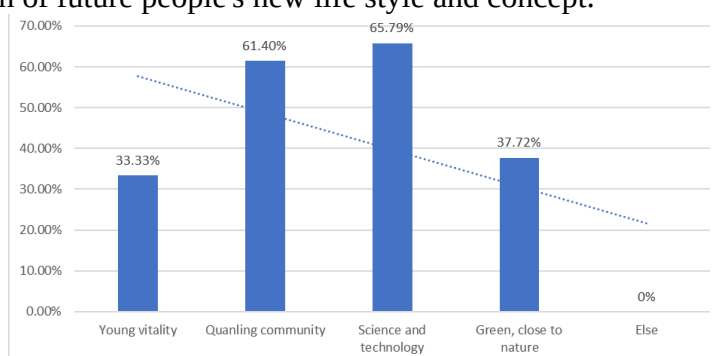


Fig. 3 The Impact of COVID-19 on the direction of house purchase

4.4 Impact on consumers

At the moment of COVID-19, enterprises should have a good competitive relationship, continuously expand cooperation and cooperate, learn from each other's excellence, sum up failure experience together, and find their own positioning in the current real estate market. On this basis, it can explore a right path for their own development.

5. Limitation & Future outlooks

It should be noted that the results in this study have some shortcomings and drawbacks. The data and literature in this paper are limited, including limited access to data, limited timeliness of data, insufficient sample size, and lack of previous studies for reference. There is also a lack of depth in methods and design. The method of data collection and statistics is relatively simple, and the research duration is short.

This paper mainly studies how to realize the revitalization and recovery of the real estate market in the post-COVID-19 era, and reflects four corresponding solutions through four impacts. The real estate market is picking up despite the COVID-19 pandemic. In the medium and long term, government supervision will gradually stabilize. In 2022, the overall supply of China's housing market will neither increase substantially nor decrease in a large area, and will tend to develop steadily [10]. From the perspective of the credit market, since October 2021, relevant departments have successively released signals to meet the reasonable financing needs of real estate, e.g., accelerating the issuance of bank credit, supporting domestic and foreign bond issuance, and loosening the bonds issued by ABS. In November, the People's Bank of China again referred to "maintaining the steady and healthy development of the real estate market". Therefore, the financing dilemma of real estate enterprises in 2022 May be alleviated to a certain extent, which is conducive to the completion of "guarantee delivery" and other work of the distressed real estate enterprises, and promote the transaction of the stock market. From the perspective of industry concentration, in 2021, China's real estate industry mergers and acquisitions market is active, mergers and acquisitions cases occur frequently, the industry concentration of the real estate industry will further improve, the survival of the fittest competition mode will lead to a tight capital chain, housing enterprises with many problems will gradually withdraw from the market and be taken over by high-quality housing enterprises. From the point of view of business model and operation mode, the real estate development mode of the current housing enterprises has changed, Shen rough development into quality, fine development mode. In the future, the group of house buyers will change from just buying houses to improvement and investment [11]. Therefore, the development of real estate will be more in line with the future demand for housing, quality development mode is the future trend. It is believed that with continuous policy regulation and stable COVID-19 prevention and control, the real estate market will soon recover and revitalize in the post-COVID-19 era.

6. Summary

In conclusion, this paper investigates the impact of COVID-19 on the real estate market based on questionnaire survey and data analysis. According to the analysis, policies for the real estate market have gradually produced results, market confidence have gradually improved, real estate sales will gradually pick up. As a matter of fact, any changes in the real estate industry and the market affect all levels of society. Corresponding measures should be taken timely according to the changes in the supply and demand of the real estate industry and the market, so as to ensure the healthy and orderly development of the national economy and the virtuous cycle of the industry ecology. At the same time, it is necessary to effectively address the needs of mankind for a better quality of life. Nevertheless, the data design method in this paper is limited and the research time is short. In the future, Real estate development is more in line with housing demand, quality development mode will become a trend, and the real estate market will soon recover and revitalize in the post-epidemic era.

Overall, these results offer a guideline for healthy and high-quality development of real estate in the future.

References

- [1] Xiaohan Zhou. The impact of COVID-19 on China's real estate industry and countermeasures. *The circulation economy*, 2020(32): 127-131.
- [2] Xin Fang. Research on the development status and impact of real estate market under the normal situation of epidemic. *Real Estate World*, 2022(04): 6-8.
- [3] Hongliang Shen, Zhige Xu. Discussion on coping strategies of real estate evaluation industry development in the post-epidemic era -- Based on Porter's Five Forces Model. *China Asset Appraisal*, 2021(10): 45-48.
- [4] Hoesli M, Malle R. Commercial Real Estate Prices and COVID-19. *Working Papers*, 2021.
- [5] Marzuki J, Newell G . The Impact of the COVID-19 Crisis on Global Real Estate Capital Flows. *ERES*, 2021.
- [6] Worzala E. COVID 19, real estate and uncertainty: examining this new "normal" through the quotes of Jim Graaskamp. *Journal of Property Investment & Finance*, 2020, 39.
- [7] Aveline-Dubach N. COVID-19 in China: the pandemic exacerbates the speculative mechanism in residential real estate. *Post-Print*, 2020.
- [8] Song D. Analysis on the trend and trend of China's real estate under the impact of the epidemic. *Song D Perspective*, 37-38.
- [9] Li Duyuan, Guo Chenxiao. Analysis on the development of real estate industry in the context of epidemic. *China Real Estate*, 2020, 23.
- [10] Yu Weina, Wang Yijie. Current situation and Future trend of real estat. *Science and Technology Wind*, 2010, 7: 44.
- [11] Yi N. Risks and opportunities of real estate industry under epidemic situation. *Wanfang Data, Features*, 2020: 8-9.