

The Impact of the Epidemic on China's Real Estate Industry in 2020

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ABSTRACT

With the spread of the novel Coronavirus, 2020 is destined to be an extraordinary year. From January to May, Chinese people prevented themselves from virus infection through home isolation. Therefore, almost all industries except the Internet industry have suffered losses. With the decrease in the number of infected cases, people began to go back to schools and work. Recently, the author noticed that there has been a significant increase in the number of houses for sale advertisements, so the author decided to explore the impact of novel Coronavirus on the development of the real estate industry. Based on the life cycle of big data, the author used the data from the National Bureau of Statistics [1] to analyze it.

The final conclusion is that the epidemic has a negative impact on China's real estate industry. The epidemic caused the sales of real estate to decrease a lot from January to March, but start from April, the epidemic was almost under control and the real estate economy steadily picked up.

Keywords: *The real estate, the impact of novel coronavirus, data analysis, China, market economy*

1. INTRODUCTION

The impact of the epidemic on various industries is asymmetric, which is almost catastrophic for catering, tourism and other industries. Take the restaurant industry for example, 78% of catering enterprises lost more than 100% of their operating income; 9% of enterprises lost more than 90% of their revenue; 7% lost between 70% and 90% of their revenues; Only 5% lost less than 70% of revenues [2].

The impact on the real state is not so big but still negative, because the plan of buying houses is not urgent, the demand for real estate is only delayed but does not disappear. Therefore, the author aims to study how much the epidemic has affected the real estate industry. The author studied three types of housing, namely commercial housing, office building and commercial business housing, as well as two ways of selling existing and future housing. The specific research method is to make a regression forecast of the data in 2018 and 2019,

and then compare them with the actual data in 2020. According to the deviation between the actual value and the predicted value, the research will give some suggestions on the rapid development of the real estate industry after the epidemic.

2. ANALYSIS

2.1. The impact of the epidemic on commercial housing

The commodity housing refers to the house specifically approved by the relevant government departments, developed by real estate development company, used in the market after the completion of the sale of rental housing, including residential, commercial, and other buildings, while self-built, cooperated-building, commissioning, and self-use residence does not belong to commodity house or other building.

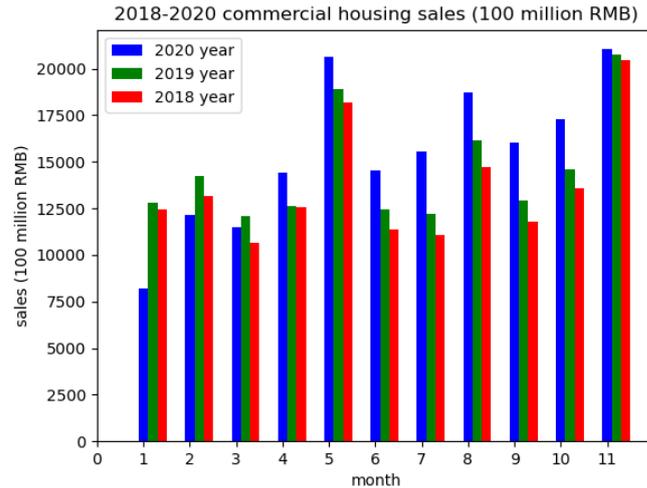


Figure 1. 2018-2020 commercial housing sales (100 million RMB)

First, the author compared to the same period in 2018-2020 data, through the histogram can be seen clearly, in the same period in 2019, sales were more than 2018. With the increasingly rapid development of China's urbanization trend, many large-scale urbanization constructions have developed rapidly. Nowadays, a large number of rural populations has been transferred to the urban population, leading to a continuous increase in the demand for housing [3]. If the development was normal, sales of the same period in 2020 should be more than in 2019. However, the image shows that between January 2020 and March the sales were less than that in 2019, and

even lower than that in 2018, while it quickly rebounded since April 2020, and reached 1440.639 billion RMB. And then the sales from April to the end of 2020 were more than the same period in 2018 and 2019. Because the worst period of the epidemic was from January to March 2020, in these months the sales of commercial housing was under a bad influence. But the epidemic basically had no impact on the real estate industry since April 2020. Even the backlash of retaliatory consumption also shows that the demand for real estate will not shrink at present, but is only a matter of period of purchase.

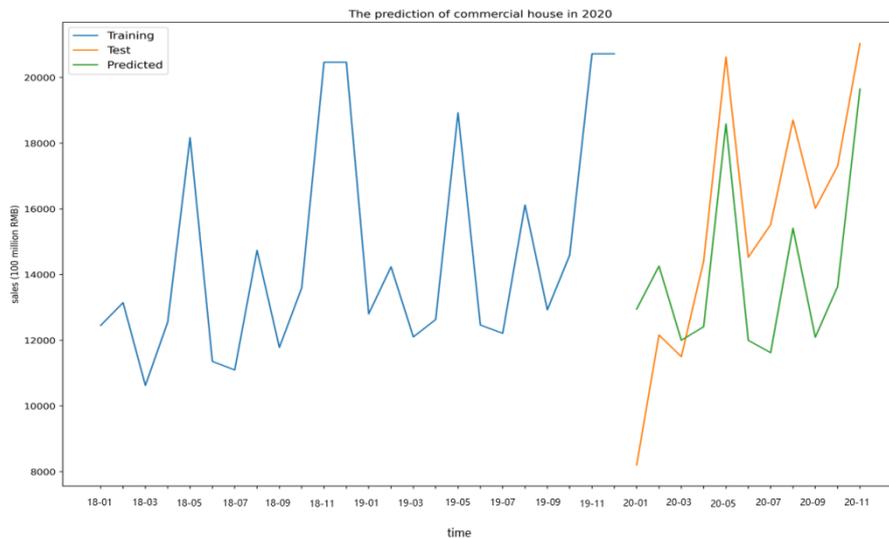


Figure 2. The prediction of commercial house in 2020

Secondly the author used time series analysis. The data from 2018-2019 were used as the train data set to predict 2018 figures. Here the author used ARIMA method to forecast. In Figure 2, the orange line is the actual sales data in 2020 and the green line is the predicted sales data in 2020. Compared with two lines, from January 2020 to March 2020, the actual data were more than the forecast data, whereas from April 2020 till

now, the actual data were less than the forecast data. Analysis shows that there were few people buying commercial house from January to March, and in this period the situation of epidemic was very severe, while starting from April the outbreak was under control, so the purchasing power of the commercial house increased a lot, which suggests that the demand of commercial house

will continue to grow. This conclusion is the same as the analysis through the bar chart.

2.2. The impact of the epidemic on houses for business use

The houses for business use include all kinds of shops, sales departments, food and beverage stores, grain

and oil stores, vegetable farms, barbershops, photo shops, bathrooms, hotels, guesthouses and other houses engaged in commerce and used for residents' life services, as well as office housing, such as office buildings, including garages.

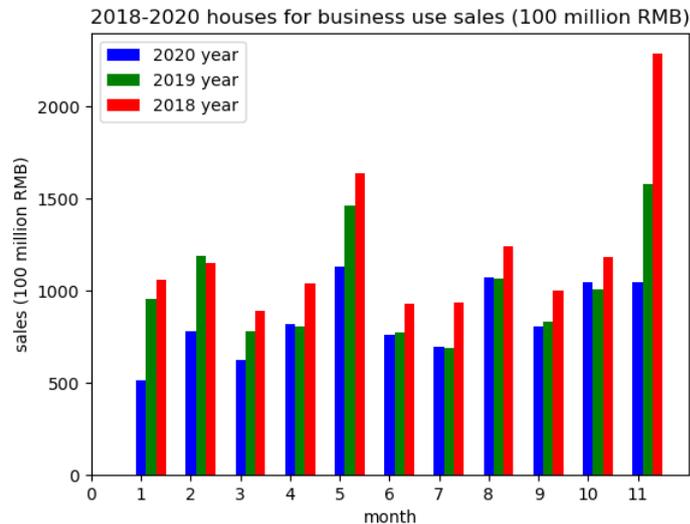


Figure 3. 2018-2020 houses for business use sales (100 million RMB)

First, the author compared to the same period in 2018-2020 data, through Figure 3 it can be seen clearly, in addition to the sales in February 2019, the sales of houses for business use were slightly higher than that in February 2018. In the same period in 2018 the sales were more than that in 2019, The development of shopping centers in developed countries started from small towns in rural areas and then copied to cities, following the "road of surrounding cities in rural areas". On the contrary, the development of shopping centers in China takes the lead in the development of big cities, and then infiltrates into suburban areas and rural areas. Therefore, in recent years, China's first - and second-tier city center business districts were nearly saturated [4], so the demand for business using housing gradually reduced. Figure 3 also shows a huge gap between the sales in January and May 2020 and in 2019. In January 2019 the sales were 9.42% lower than that the same period in 2018. Meanwhile the sales in January 2020 were 46.03% lower than that in the same period in 2019. Also, in February 2019 they were 3.69% more than that in the same period in 2018, and February 2020 were 34.81% lower than that the same period in 2019. Compared with commercial housing, the epidemic has a greater impact on business using housing, as most residents are confined to their homes. Therefore, large shopping malls and some restaurants have to close

down, or even go out of business directly due to insufficient funds. Since May 2020, sales gradually recovered and were basically flat with the same period in 2019. This is because after the outbreak, people began retaliating for spending, and shopping malls and restaurants are booming business. In August 2020, the sales volume of commercial housing was again lower than that of the same period in 2019. Combined with the comparison between 2019 and 2018, it can be inferred that the sales volume of commercial housing in the second half of 2020 will still decline, and the turnover in the same period will be lower than that of 2019. It is the worst period of the epidemic was January to March 2020, which was a cold winter for any commercial industry. Although there was a slight improvement after the epidemic, the outlook was still not optimistic.

3. THE IMPACT OF THE EPIDEMIC ON OFFICE BUILDING

Office building refers to the organs, enterprises, institutions, administrative personnel, business technical personnel and other office business housing, modern office building is moving towards integration, integration direction.

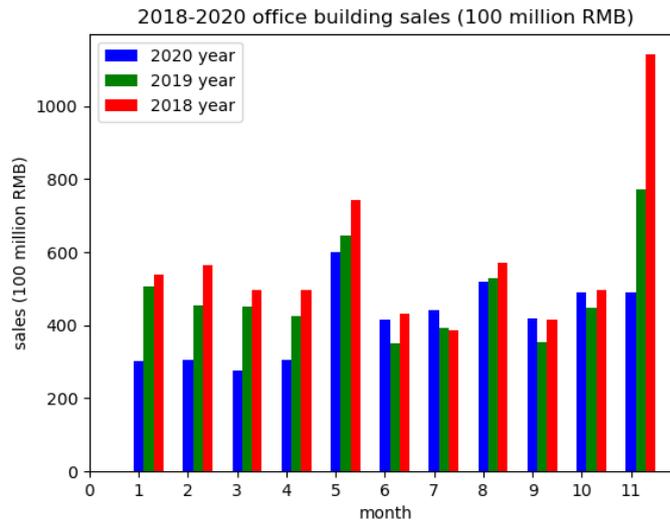


Figure 4. 2018-2020 office building sales (100 million RMB)

First, compared to the same period in 2018-2020 data, through the histogram can be seen clearly, the same period in 2018 sales of more than in 2019, the police indicate All rectification tasks must be completed as soon as possible. Any serious violation of discipline will be investigated and dealt with. Any rectification that fails to take place will be held accountable and dealt with strictly [5]. Therefore, the country for business unit in recent years the office space for the rectification, cancelled many unnecessary offices, to increase the work efficiency. As a result, the demand for office building also gradually reduced. However, the reduction amplitude is not particularly big. Figure 4 shows a huge gap between January and May 2020 and sales in 2019, but June and July rebounded quickly, with July even surpassing the same period in 2018. It is worth noting that in June 2020 July the sales of offices even surpassed that of this time, it is because the disease has been basically under control at this time, in order to prevent the epidemic spread and broke out again, from big city to the rural county, many departments have begun to gradually establish Epidemic Control Teams, so these months, the demand for office buildings will be very great. It can be seen that the sales of office buildings are mainly affected by the government's national policies. However, the impact of the epidemic on office buildings does exist, but compared with the policies, the impact is not particularly large.

4. CONCLUSION

Through the in-depth analysis of the above data, it can be seen that the overall trend of commercial housing should rise gradually with the development of society. This is because the government's policy of "no speculation on housing" enables more people to have the ability and ideas to buy houses. Therefore, at the beginning of the epidemic, the purchasing power of commercial housing declined to a certain extent, but it

recovered quickly and the development pattern was still very good. Commercial business premises, on the other hand, as the market is saturated, would drop has been in a form. At the same time, the influence of the epidemic outbreak is very big, this also shows the catering entertainment received blow is very big also. In addition, the downward trend of the commercial business premises may be in the later, this is because China's economy is slowly sinking, and develops toward more lines to three four cities, while the city's main shopping mall basically is saturated, while the demand of the small cities will still be very big. Office buildings mainly rely on government's demand and the national policy, the epidemic outbreak disorganize the demand of office building, but after epidemic will return to normal development track. The sales of office building will remain declining trend but drop speed will be slow because of government macroeconomic regulation and control, not like a slump in the commercial business premises directly.

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