Impact of Novel Coronavirus Pneumonia on Linyi Real Estate Economy and Countermeasures

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ABSTRACT
The novel coronavirus pneumonia has brought many uncertainties and challenges to China's macro-economy and real estate industry, and also contains tremendous opportunities. The novel coronavirus pneumonia epidemic situation has been analyzed by collecting data and comparing with SARS in 2003. It has also analyzed the impact of the new crown pneumonia epidemic on Chinese economy and Linyi’s economy. It has learned from the five aspects of the real estate development stage, positioning, development trend, debt level and leverage ratio, and residents; purchasing power. The results show that investment, construction, sales, house price and land market have been restrained in the short term, and recovered slowly after returning to work and production. The medium and short-term effects are limited. In the medium and long term, the land market, property market and financing in the future are mainly stable. The epidemic situation has stimulated people’s demand for a better life and put forward higher requirements for real estate products and services. Finally, based on the perspective of real estate enterprises, house buyers and the government, this paper puts forward the corresponding strategies, with a view to the steady development of the real estate industry in Linyi city. The exhibition provides reference.

Keywords: Novel Coronavirus Pneumonia Epidemic, Real Estate, Economy, Influence, Strategy, Linyi City

1. ANALYSIS OF NOVEL CORONAVIRUS PNEUMONIA EPIDEMIC IMPACT ON ECONOMY

2019A novel coronavirus pneumonia outbreak in the end of the year has affected the lives of people throughout the country and even the whole world. The off-line sales offices of real estate projects are closed, and the turnover of real estate enterprises is difficult due to the slow return of sales funds and the slow return to work. With the joint efforts of governments and people at all levels, China has entered the stage of normalization of epidemic prevention and control, and the economic and social order has been fully restored to normal. External input and internal non-proliferation are the current prevention and control strategies. The novel coronavirus pneumonia has brought many uncertainties and challenges to Chinese macro-economy and real estate industry, and it also contains tremendous opportunities.

1.1. A Comparison of China National Economy

When it comes to novel coronavirus pneumonia, many people will think of SARS in 2003, both of which are similar to coronavirus, transmission routes, pathogenic mechanism, and socio-economic effects. SARS began in November 2002 and ended in August 2013. The data of 2003 represent the economic situation of China during the period of SARS. Novel coronavirus pneumonia was selected as the representative data of 2019 for the data released in 2020. Compared with the data of 2003, the tertiary industry is booming, which is 1.7 times, GDP is 9 times, the total retail sales of consumer goods is nearly 9 times, the investment in fixed assets is more than 10 times, the investment in real estate is 13 times, and the total import and export of goods in the whole year is 5.3 times. The importance of real estate to the national economy can be seen [1-4].The data performance of Linyi city is basically consistent with the national data trend (table 1).
**Table 1** 2003 novel coronavirus pneumonia in 2019 and the comparison of Chinese economic situation

<table>
<thead>
<tr>
<th>Category</th>
<th>2003 year</th>
<th>2019 year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of three industries</td>
<td>14.8:52.9 : 32.3</td>
<td>7.139 : 53.9</td>
</tr>
<tr>
<td>GDP</td>
<td>11.66 RMBtn</td>
<td>99.08 RMBtn</td>
</tr>
<tr>
<td>GDP growth</td>
<td>9.1%</td>
<td>6.1%</td>
</tr>
<tr>
<td>Total retail sales of consumer goods in</td>
<td>4.58 RMBtn</td>
<td>41.1 RMBtn</td>
</tr>
<tr>
<td>the whole year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed assets investment</td>
<td>5.51 RMBtn</td>
<td>56.08 RMBtn</td>
</tr>
<tr>
<td>Real estate investment</td>
<td>1.01 RMBtn</td>
<td>13.2 RMBtn</td>
</tr>
<tr>
<td>The contribution of consumption to the</td>
<td>37%</td>
<td>57.8%</td>
</tr>
<tr>
<td>economy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total import and export of goods in the</td>
<td>5.95 RMBtn</td>
<td>31.5 RMBtn</td>
</tr>
<tr>
<td>whole year</td>
<td></td>
<td></td>
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</tbody>
</table>

(source: China Statistical Yearbook)

Some experts describe the novel coronavirus pneumonia as a "young man’s fall" in 2003. The new crown pneumonia epidemic in 2019 was a "middle-aged car accident”. It was very intuitive.

### 1.2. Impact on Macro-economy

2003 The duration of SARS in was short, and Chinese economy was in a period of rapid growth at that time, and the scope of influence was limited. During the epidemic period, the total retail sales of consumer goods were mainly affected, and the impact on investment and export was small. At that time, the real estate industry was in the "golden age" of rapid and vigorous development after the housing reform, and the volume and turnover of commercial housing increased by 26% and 32% [5].

2019 GDP growth slowed down, and the macroeconomic situation was more severe than that in 2003. Our wills unite like a fortress. Novel coronavirus pneumonia has been a major victory in the outbreak of the disease. In June 2020, the production and living order of the whole country will return to normal. By the third quarter of 2020, Chinese economic operation has continued to recover, the cumulative growth rate has turned from negative to positive, and the overall economy has maintained a steady upward trend. The GDP growth rate of Linyi city is eye-catching, surpassing the national growth rate. The economic operation of Linyi presents the development trend of "comprehensive recovery, steady recovery and sustained improvement" (figure 1). It can be seen that the impact of the new epidemic on GDP in the short term is limited in the medium and long term, and will not change the macro-economic development trend in the medium and long term.

![Figure 1 GDP and three industries of Linyi in recent four quarters](source: Linyi Bureau of Statistics)

### 1.3. Industries Greatly Affected by the Epidemic Situation

2003 At that time, Chinese economy was in an upward cycle. The impact on Chinese economy was limited and soon returned to normal. In terms of industries, the primary industry has a smaller impact, the secondary industry has a greater impact, and the tertiary industry is most seriously affected [6].

The novel coronavirus pneumonia virus is more spread and spread worldwide, which has a serious adverse impact on the world economy. All of them had a significant impact on export. In terms of the three industries, similar to the SARS epidemic, the three industries in Linyi hit the bottom in the first quarter of 2020, and quickly recovered in the second quarter, reaching a cumulative positive growth in the third quarter (Figure 1). In terms of specific industries, the impact of the epidemic is mainly concentrated in wholesale and retail, accommodation and catering, logistics and transportation, cultural tourism, foreign trade and other industries. After the domestic epidemic...
situation entered the normalization of prevention and control, the resumption of work and production was smooth. In addition, novel coronavirus pneumonia has brought many opportunities for new industries, and cloud computing, online education and telemedicine have been developed by [11].

2. THE CURRENT SITUATION OF NOVEL CORONAVIRUS PNEUMONIA EPIDEMIC AND THE DIFFERENT PERIODS OF SARS

The novel coronavirus pneumonia epidemic situation has similar effects with the SARS epidemic in 2003, but 17 years later, the real estate industry’s economic environment, status, policy and development trend are quite different now. It is mainly reflected in the following five aspects [12].

First, the development stages of the real estate industry are different. In 2003, the supply and demand of Chinese real estate market is booming, which is in the “golden stage” of vigorous development. In 2019, the real estate market has entered the stage of long-term standardized development.

Second, the positioning of the real estate industry is different. In August after the SARS epidemic ended in 2003, the real estate industry was positioned as a “pillar industry”. In 2019, the central government’s policy was not to speculate on real estate, implement policies according to the city and “three stabilities”. A long-term regulatory mechanism was established, and real estate was not used as a short-term means to stimulate the economy. Real estate is regarded as an important livelihood industry.

Third, the development trend of the real estate market is different. In 2003, Chinese real estate development investment and sales showed a rapid upward trend. The real estate development investment, sales and sales area increased by 20-30% year on year. In 2019, they are all at a relatively low level for more than ten years.

Fourth, the debt level and leverage ratio of real estate enterprises are different. The debt burden of real estate enterprises in 2019 is significantly higher than that in 2003, and the dependence on financing is higher than before.

Fifth, the housing purchasing power of residents is different. In 2003, the leverage ratio of resident sector in China was 16.2%, while that in 2019 was 55.8%, which was still on the rise. The real estate loan was the main reason for the rise of the leverage ratio. The growth rate of per capita disposable income of urban residents in China is slowing down.

3. IMPACT OF NOVEL CORONAVIRUS PNEUMONIA ON LINYI REAL ESTATE ECONOMY

Affected by the novel coronavirus pneumonia, people close to home and offline sales offices have made sales of real estate difficult, cash flow is tight, and some housing companies have difficulty in capital turnover. After reopening and resuming production, real estate investment, construction and sales have slowly recovered. In the short term, there are more adverse effects, but also bring a lot of opportunities. The epidemic situation is only a short-term event, in the long run, the impact will be significantly less than the short-term impact [13].

3.1. Short Term Impact

According to the monthly data collected from the website of Linyi real estate bureau, the growth rate of investment in real estate development, construction area, sales area of commercial housing and sales volume of commercial housing (Fig. 2) can be seen that the growth rate of investment in real estate development and construction area has turned positive in May 2002, which indicates that after the real estate development bottomed out in March, with the promotion of resumption of work and production, real estate enterprises have made great progress. Regain confidence, production continued to improve after recovery. The sales growth rate of commercial housing changed from negative to positive in May, and the sales area ushered in positive growth in July, indicating that after the "golden three silver four" small spring, the market is also recovering. The biggest increase in sales of commercial housing shows that the market has basically returned to normal order. Specifically, the adverse effects are from the following aspects.

![Figure 2](data source: Linyi Bureau of Statistics)
3.1.1. Impact on the Demand for Commercial Housing

Affected by the novel coronavirus pneumonia, sales offices closed down and volume fell off. In particular, sales volume of Linyi real estate fell from January to February. March to April is the traditional sales peak season. The recovery of sales volume is mainly compensatory demand. Although the peak season is not booming, the sales volume began to stabilize. From May to July, both sales volume and sales area turned to positive growth. After the production and living order in June was fully restored, some real estate enterprises were forced by the pressure of cash flow from July to September, and various marketing activities became more and more intensive, which showed that compensatory demand rose and the situation continued to improve.

3.1.2. Impact on the Supply of Commercial Housing

From the aspect of real estate market supply, real estate development investment and newly started area of development enterprises are also restrained. The growth rate of development investment in Linyi city turned positive in March, but it has been a slow growth state, reaching the maximum in September. It is expected that with the recovery of commercial housing market transactions in the fourth quarter, the cash flow of real estate enterprises will be good, and the supply of commercial housing will increase in the fourth quarter. The newly started area decreased by -31.4% from January to February, and the epidemic situation was the biggest factor besides seasonal factors. In the third quarter, the newly started area showed repeated positive and negative growth, reaching 7% in September, and is expected to continue to turn positive from October to December.

3.1.3. Average Transaction Price of Commercial Housing

From the perspective of transaction price of commercial housing, December 2019 is the annual performance stage of real estate enterprises. The market supply exceeds demand and the average transaction price is low. Affected by the epidemic situation, it is in a low ebb in January, and rises slightly in February. In March and April, the impact of the epidemic situation is gradually reduced, and the market transaction is picking up. Due to the opening of Beicheng high-speed rail project in June, the average transaction price drops. In July and August, due to the opening of some projects in Beicheng new area, all transactions are completed. Prices have picked up. September is the traditional peak season, the real estate enterprises are preparing for the "gold, silver and ten", the pace of returning goods is accelerated, but the quality is slightly insufficient, and the speed of going out is relatively slow. Under the "three stability" policy, it is expected that the market will maintain a stable trend and gradually return to rationality.

3.1.4. Land Supply and Demand

2019 December is the recent peak of Linyi land turnover, according to relevant data shows that it is also the peak in 2019. In March - December, the land supply of developers was high, and the market turnover was not affected. From April to July, with the economic restart, supply and demand are basically balanced. In the second half of the year, in order to stabilize the land market and ease the financial pressure, the government increased the land supply in August. In September, the shortage of funds for developers eased, and the land acquisition was active, and the transaction volume increased greatly (figure 4). It is expected that by the end of the year, land supply will be moderately increased, and developers, especially large enterprises, will be more active in getting land in the market.
3.2. Medium and Long Term Impact

Since the end of 2016, China has established the regulatory keynote of housing without speculation, and has been written into the 14th five year plan, which means that in the next five years, the positioning will not be shaken, and it will become a medium and long-term national policy. Xinguan epidemic prevention and control has won victory in China, and the prevention and Control Bureau has rebounded. The international epidemic has reached the second peak. Therefore, on the one hand, we should guard against the import of international epidemic to China, on the other hand, we should prevent the negative feedback effect of international economy on Chinese economy through the supply chain and industrial chain, from the impact on the economy to the impact on the real estate industry.

3.2.1. Land Market

In order to stabilize the land price, housing price and expectation, the local government will timely adjust the pace, structure and area of land supply. When the land price is high and the financial pressure is large, the supply will be increased [13]. From September to October, Linyi Municipal government launched a number of “land price, housing price and public bidding” plots. The land prices were all completed at the highest price plus the highest public facilities supporting fee. This will become the trend of land market in the next year or two.

3.2.2. Real Estate Market

The real estate market will continue to maintain a stable and healthy development, and there will be no big ups and downs in house prices. In a third tier city like Linyi, there is a great possibility of a year or two in the future. Even if house prices rise, they are hot regional plates. Consumers will be more rational in buying houses, and purchase houses rationally according to their personal needs.

3.2.3. Finance

Affected by the epidemic situation, the purchase and loan restriction policies in some areas have been slightly relaxed, but the main keynote of the long-term mechanism can not be bypassed. In the general trend of deleveraging and risk reduction, the Ministry of housing and urban rural development and the people’s Bank of China put forward three red lines of real estate enterprise financing in August 2020. Most of the real estate enterprises are limited in future financing, and the possibility of operating on high leverage and high turnover is almost zero.

3.2.4. Real Estate Products and Services

During the period of home segregation, people worked, studied, shopping and interrogated online, and the digital economy and Internet plus changed traditional industries. The real estate industry and construction industry should also actively transform the digital economy and lead the new way of human settlement in the future. Based on the yearning for a better life, people put forward higher requirements for the upgrading of real estate products - green housing, healthy housing, intelligent housing and so on have become the future development trend. Real estate enterprises with a strong R & D team and timely iterative upgrading of products will get the first chance.

The epidemic has accelerated the development of e-commerce. For commercial real estate, it will continue to be impacted by e-commerce, and will be in a state of sluggish development for a long time, especially in the past two years or so, offline commerce is still dominated by experience. Linyi office market is now in a saturated state, and the market prospect is worrying [14].

Real estate service is mainly property management. During the epidemic period, the property management actively participated in the fight against the epidemic, killed and measured temperature, sent vegetables and bought medicine, assisted in isolation, donated money and provided many services. Many real estate enterprises integrate resources, improve property service brand, strive for listing, and improve the core competitiveness of enterprises [15].

4. COPING STRATEGIES OF REAL ESTATE ECONOMY IN LINYI CITY

The impact of epidemic situation on economy and real estate economy depends on the judgment of epidemic situation. China has won the battle against epidemic situation, and foreign countries have entered the second wave of outbreak. According to experts’ prediction, there may continue to be new epidemic situation in this winter and next spring, and there will be sporadic spots in our country this winter. Several vaccines have entered phase III, and their safety and effectiveness need to be further evaluated. It is still a long way to go before all susceptible populations can be vaccinated. The following from the perspective of participants in the real estate economy gives some coping strategies, hoping to help organizations or individuals in Linyi city.

4.1. From the Perspective of Real Estate Enterprises

First, the real estate enterprises in Linyi should change their development concept and develop more ecological, green, healthy and intelligent houses to meet
the market demand. Provide housing products with more reasonable function, better quality and more comfortable environment. In terms of product design, all Ming design, North-South transparent, smart home, whole house purification, public activity space and disinfection space more comfortable are more popular with customers. In the residential area design, low density housing, full age landscape design and smart community can enhance the product value and empower the product. In addition to meeting the residential functions, residential quarters should also have complete supporting facilities and convenient life.[16]

Second, grasp the rhythm and invest accurately. Real estate enterprises should study the market, customers, land, policies, etc., choose the right time, step on the rhythm of land acquisition. Especially in recent years, under the background of deleveraging, the leading real estate enterprises in Linyi are less affected, and many small and medium-sized real estate enterprises have difficulties in survival and even go bankrupt. At present, when the cost of land acquisition is often several billion yuan, large real estate enterprises such as country garden and Vanke are the main ones. Small and medium-sized real estate enterprises in Linyi should change their concepts and develop flexibly through cooperative development, merger and acquisition, etc. In addition, there will be more development opportunities for the transformation of old urban areas and healthy housing.

Third, continue to make good use of network marketing. New crown epidemic let developers and consumers appreciate the charm of network marketing, 5g, VR and other advanced technologies have injected new vitality into the network marketing. However, there are few enterprises and projects that can get through the whole process of online marketing like LiuQingXiYue. Most real estate enterprises use websites, live broadcast, short video, Wechat as marketing display and drainage platforms, and core processes such as house watching and house selection are completed offline.

Fourth, property management and other aspects of innovation. During the period of the epidemic, people were more aware of the importance of high-quality property services in the city. Property service enterprises improve service quality, expand service content, and improve better service experience for property value maintenance and appreciation [17].

4.2. From the Perspective of Buyers

Home isolation makes people’s demand for healthy and intelligent community, scientific and technological residence, health care real estate and high-quality property management increase. Renting has produced a demand for buying a house, and those who have a house have a firmer demand for improvement. During the epidemic period, the pent up demand for house purchase will slowly release, or even increase in compensation. Affected by the speed of market recovery and income, some buyers in Linyi will wait and see with money, which shows that the demand for houses purchased by rigid demand will be delayed and the demand for improvement will slowly recover. In addition, the 5-year LPR interest rate has been kept at the historical low of 4.65% since April 2020, which indirectly stimulates the release of house purchase demand and plays a positive role in stabilizing the property market. Although Linyi is a third tier city, its population has been in a positive growth. According to Ren Zeping’s long-term view of population, the future development of the property market is expected.

4.3. From the Perspective of the Government

In the early stage of the epidemic relief, some local governments issued "one-day tour" and "two-day tour" in their real estate rescue policies, which is a one-sided understanding of the national housing speculation and urban implementation. Therefore, the relevant departments of Linyi Municipal government should, under the background of national policies, carry out macro-control according to market analysis and prediction, give necessary and reasonable support to the real estate industry, ensure the healthy and stable development of the real estate market, and do not take real estate as a short-term means to stimulate the economy. Such as supporting the reasonable financing needs of enterprises, extending loans, optimizing the approval process, and delaying the payment of taxes and fees, etc., it can relieve the capital pressure of real estate enterprises and guarantee the stability of the economy, employment promotion and people’s livelihood [18].The government should continue to support rigid demand and improved housing demand, curb speculative investment demand, and ensure the healthy and stable development of the real estate market.

5. CONCLUSION

The novel coronavirus pneumonia has brought many uncertainties and challenges to Chinese macro-economy and real estate industry, and it also contains tremendous opportunities. From the current point of view, short-term sales are greatly affected, thus affecting the cash flow of enterprises, and the long-term impact is limited. Real estate enterprises, buyers and the government should take advantage of this opportunity to change their ideas and promote the long-term stable development of the real estate market.

AUTHORS’ CONTRIBUTIONS

The author makes a comparative analysis from the macro perspective of the impact of COVID-19 and
SARS in 2003. It selects three city lines such as Linyi, analyses the impact of COVID-19 on the city real estate market, and puts forward countermeasures from the perspective of developers, buyers and government.

ACKNOWLEDGMENTS

The novel coronavirus pneumonia project in Linyi is a research topic on the impact of the new crown pneumonia epidemic on the real estate economy in Linyi, and the strategy for the development of Linyi's real estate economy. The research on the collaborative development of the public health emergency supplies repository network in Shandong is also proposed.

REFERENCES


[9] Qian Zhigong, Liu Siyuan. Analysis of the superiority of the basic economic system of socialism with Chinese characteristics under the epidemic situation [J]. Contemporary economic management, 2020,42 (06): 1-5 The novel coronavirus pneumonia,


