

## Comparing the Economic Management of the Local Government in the Covid-19 Era and the Sars Period

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**Abstract:** in order to explore the ability of local and enterprises to deal with and prevent sudden public health crisis, this paper takes Guangzhou as an example to compare and analyze the impact of similar huge public health crisis on China's economy and finance in the SARS period in 2003 and the new coronary pneumonia epidemic period in 2020. In the period of SARS, the tertiary industries, such as accommodation, which are related to the flow of people, are the most impacted by the crisis, and the industries related to necessities are growing against the trend. However, due to the short time of SARS, it does not bring too much uncertainty to economic activities, and due to the moderate regulation of monetary policy, its impact on the stock market is relatively temporary and unsustainable. During the period of COVID-19, although the industry that struck was almost the same, but the impact of the epidemic has been greatly alleviated by more advanced policy regulation and online shopping penetration. Meanwhile, China's control measures are more obvious, and the RMB currencies have more growth power in the foreign exchange market.

### 1. Introduction

#### 1.1 General Review of Sars

According to the time line combing, the SARS outbreak is relatively slow compared with that of New COVID-19 in 2020. At the corresponding geographical map, New COVID-19 is more severe than SARS. The first SARS case was found in Foshan, Guangdong Province on November 16, 2002. Due to the lack of market awareness, the impact on the economy was not significant at the initial stage. Until March 12, 2003, who issued a global warning and recommended isolation of suspected SARS cases. On April 16, 2003, who officially announced that SARS virus was a new type of virus and named it SARS virus. At the same time, the market panic gradually began to spread. On May 1 of the same year, Beijing Xiaotangshan Hospital began to treat patients, and the number of new patients decreased significantly. In late May, the who lifted the travel warning to all parts of China, and China's market economy slowly recovered. On July 13, the number of SARS patients and suspected cases in the world no longer increased, and the SARS epidemic basically ended. Compared with the Spanish flu (three shocks), the impact of SARS was much simpler, with only one shock. Although China's market price fluctuates obviously, due to the institutional system with Chinese characteristics, the current exchange rate has not been greatly impacted.

#### 1.2 Review of Covid-19 Development

In 2020, COVID-19 appeared to be more aggressive than the SARS seventeen years ago. Whether it is the scope of dissemination or the way of transmission, the new crown is far more extensive than SARS. All this is based on the premise of medical progress, people's stronger awareness of prevention and stronger preventive measures in the past seventeen years. According to the review of the new crown time line, the first new crown case was found on December 1, 2019. Wuhan's first new crown case occurred on the same day, and there was no economic impact in the past two months from the beginning of the case to the confirmation of human to human transmission of the virus. Until January 20, 2020, officials confirmed that the new COVID-19 could spread from person to person. In January 23rd of that year, the National Health Council announced

the revised New COVID-19 infection plan (trial version third). The 10 airports in Wuhan, the train station and other Han channels closed on the forenoon of the same day. On May 7, 2020, with months of active prevention, control and treatment by the state and local governments, all counties in the country were adjusted to low-risk areas, and the medium and high-risk areas were cleared. After that, most of the infections were imported from abroad, and the prevention and control measures gradually slowed down, and the goal gradually changed to prevent overseas import.

## 2. Financial Analysis

### 2.1 Theoretical Background

At the beginning of the 20th century, the serious imbalance of local revenue and expenditure made the global imbalance become a hot financial topic. Large scale account imbalance often occurs, and more and more related results emerge. For China, whose economic system is gradually improving, from a long-term point of view, some emergencies will have an impact on its economic system. If we only look for the reasons from the institutional system of that year, the problems we can see will have certain limitations. Therefore, in order to better study and compare the impact of SARS and COVID-19 on China's economic system, I hope to analyze the historical data of the past years to analyze the impact of China's "three carriages" on investment, consumption and exports by China and SARS.

### 2.2 Formula Optimization

Blanchard and milesi ferretili, a foreign scholar, proposed a formula to study the scale of imbalances in 2010.

$$GI_i = \frac{\sum_i |CA_i|}{\sum_i GDP} \quad (1)$$

In the original formula, it refers to the current account balance of the ith country, and GDP refers to the GDP of the i country. Blanchard proposed the formula to analyze the scale of global economic imbalances. The author puts forward the formula of regional economic imbalance.

$$GI_1 = \frac{\sum_i |CA_i^*|}{\sum_i GDP^*} \quad (2)$$

In formula (2), it represents the regional average per capita household account balance and the GDP of region I. Where, it indicates the concentration of current trade surplus and deficit, and the value range is. The smaller the value is, the smaller the trade surplus is. As the impact of local economic imbalances on trade surplus and trade deficit is different, the author uses Yang Panpan's (2019) method [1] to measure the scale dimension of global imbalances for reference. The following formula is the concentration ratio formula of favorable and unfavorable balance.

$$GI_i' = \frac{\sum_{\forall i, CA_i > 0} CA_i}{\sum_{\forall i, CA_i > 0} CDP_i} \quad (2)$$

$$GI_i'' = \frac{\sum_{\forall i, CA_i < 0} |CA_i|}{\sum_{\forall i, CA_i < 0} GDP_i} \quad (4)$$

To measure the market concentration, the author uses the Herfindahl Hirschman box I index for reference.

$$HHI = \sum_{i=1}^n (x_i | x)^2 = \sum_{i=1}^n s_i^2 \quad (5)$$

A two-dimensional formula is proposed:

$$GI_2 = \left[ 1 / \sum_i \left[ \frac{|CA_i|}{\sum_i |CA_i|} \right]^2 - 1 \right] / (N-1) \quad (6)$$

Similarly, the concentration of surplus and deficit is deduced:

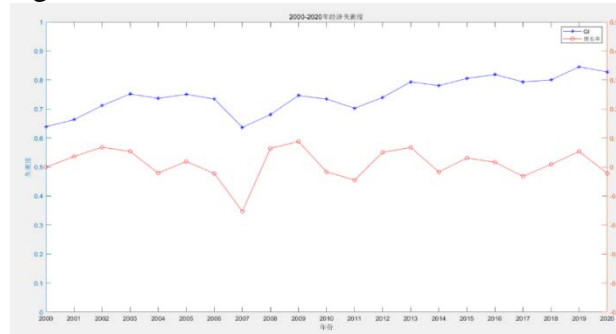
$$GI_{follow} = \left[ 1 / \sum_{\forall i, CA_i > 0} \left[ \frac{|CA_i|}{\sum_{\forall i, CA_i > 0} |CA_i|} \right]^2 - 1 \right] / (N-1) \quad (7)$$

$$GI_{against} = \left[ 1 / \sum_{\forall i, CA_i < 0} \left[ \frac{|CA_i|}{\sum_{\forall i, CA_i < 0} |CA_i|} \right]^2 - 1 \right] / (N-1) \quad (8)$$

Among them, GI surplus and GI inverse index respectively indicate the concentration degree of trade surplus and deficit. The value range of Gi2 is [0,1]. Both endpoints are special cases of account imbalance. If the value is 0, only one economy has account imbalance. If the value is 1, all accounts have account imbalance. The smaller the Gi2 is, the higher the concentration of economic individuals with imbalanced accounts is, and the smaller the proportion is.

### 2.3 Analysis of Domestic Imbalance

In addition, the author obtains and collates data from China's financial Yearbook [2], government work report [3], central bank statistics [4] and China Statistical Yearbook [5], and calculates the economic imbalance of Guangzhou from 2000 to 2020.



Note: the per capital data of 2000-2012 are from China Financial Yearbook, and the per capital data after 2013 are from government work report and central bank statistics; the year-end balance of urban and rural residents' savings is from China Statistical Yearbook

As can be seen from the above figure, for China, it is mainly the trade surplus that has brought about the impact. From the overall trend, China's economic imbalance index has remained above 0.6 in the past 20 years, and shows an upward trend. On the macro level, the increase of net exports expands the domestic aggregate demand, which in turn promotes the growth of the national economy. The current account trade surplus mainly comes from the increase of net exports, which is the result of the rapid growth of China's foreign trade, especially exports. Net export growth has the multiplier effect of foreign trade, and the multiplier effect of net export expands the scale of economic growth. Under the multiplier effect of foreign trade, the scale of economic growth is several times of net exports, which is larger than the current account trade surplus. Secondly, capital account trade surplus can directly promote economic growth and increase aggregate demand. In addition, the trade surplus is conducive to stabilizing the RMB exchange rate and implementing relatively loose macro-control policies. The author here based on three points to elaborate. First of all, the trade surplus enables the country to fully intervene in the foreign exchange market in order to maintain the stability of the RMB exchange rate. Secondly, the state has enough foreign exchange to adjust the balance of payments and implement active foreign trade and economic policies. Finally, the trade surplus enhances the effect of positive fiscal policy. As local governments at all levels in China are vigorously attracting investment, China's capital liquidity is actually relatively large. In the case of strong capital mobility, trade surplus enhances the role of

positive fiscal policy in stimulating aggregate demand and promotes the rapid development of the national economy.

At the same time, the disadvantages of the huge economic surplus trend are obvious. Trade surplus weakens the function of monetary policy and reduces the utilization efficiency of social resources, resulting in a large amount of foreign exchange reserves of more than 400 billion US dollars. At the same time, domestic residents saved 11 trillion yuan, the sum of which is more than 14 trillion yuan. However, more than 14 trillion yuan of funds have not formed effective investment and become idle funds in the economic society. Corresponding to these idle funds are idle means of production and human resources, resulting in low efficiency of social resource utilization. Therefore, it also brings about the coexistence of economic growth and unemployment growth in China. Trade surplus increases the cost of foreign exchange reserves and capital outflow. In the international financial market, there are always risks in foreign exchange business, especially in the exchange rate risk.

### **3. Conclusion**

#### **3.1 Analysis of the Primary Industry**

In the first half of 2020, the primary industry will grow by 6.2% in the first half of the year. The city's agriculture, forestry, animal husbandry and fishery industry will reach 20.274 billion yuan, a year-on-year increase of 4.3%, 1.4 percentage points higher than that in the first quarter. The growth of planting industry is good, the city's vegetable output is 1.709 million tons, a year-on-year increase of 3.0%; the output of garden fruit is 13.9%, of which the output of litchi is 88.9%. According to the objective data, although the primary industry trade during the epidemic period has been affected, it still keeps increasing.

#### **3.2 Analysis of the Secondary Industry**

The added value of the secondary industry was 283.807 billion yuan, a year-on-year decrease of 7.0%. The overall production situation of the three pillar industries continued to pick up, and the total output value decreased by 9.4%, 15.0 percentage points lower than that in the first quarter. Among them, the automobile manufacturing industry decreased by 13.0%, 22.6% lower than that in the first quarter, showing a good recovery momentum; the electronic products manufacturing industry and petrochemical manufacturing industry decreased by 6.2% and 3.2% respectively, 5.6% and 7.0% lower than that in the first quarter. This is mainly due to the domestic epidemic in the first quarter of 2020 stimulating the production growth, and the rising demand for medical goods in foreign countries after the outbreak of the epidemic in the half of the first half of the year stimulating the rapid growth of medical related industrial manufacturing, with sufficient power source for the whole period of growth.

#### **3.3 Analysis of the Tertiary Industry**

The tertiary industry grew by 0.4%, 2.6 percentage points higher than that in the first quarter. Due to the impact of epidemic isolation, the demand for network operation means such as cloud office and online shopping is increasing rapidly. At the same time, in order to ensure the normal economic operation activities such as import and export and domestic online shopping, the city has given priority to the resumption of work and production of logistics industry, directly stimulating related industries, such as the Internet and related service industry, with a rapid growth of 19.6%, and the multimodal transport and transportation agent industry in modern logistics industry, with a growth of 17.6% .5%. This was mainly due to the city's support for the industries affected by the epidemic and the promotion of loans. In addition, due to the impact of the epidemic and the fluctuation of international oil prices at that time, the risk factors increased and deposits increased.

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