

# Comparison Among the Impact of Epidemic Situations on China and Other Countries

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## ABSTRACT

This paper takes the recent outbreak of the COVID-19 as the main introduction and analyzes its impact on the economy. Then the impact of the COVID-19 on the economy is divided into two aspects: the impact of the COVID-19 on China and other countries, and the impact of historical major epidemic events on the economy. Through the analysis of the data, the impact of the COVID-19 on the economy of China and other countries is obtained. This article lists the major epidemics in history and the economic impact, and draws the conclusion of the article.

**Keywords:** COVID-19, epidemic diseases, GDP, impact on economy

## 1. INTRODUCTION

A global outbreak with the COVID-19 spreading in the community in different parts of the world in February 2020. By the end of July 22, over 100,000 confirmed cases have been reported in 12 countries, and the United States was as high as 4028733[1]. (Just as shown in the Figure 1) The COVID-19 not only brought an enormous disaster to public health but also affected the economy and public life. Because of COVID-19, China's GDP growth rate is expected to drop to 4.5% - 5.7% [2] in 2020. According to a report released by the Oxford Economic Research Institute, the new epidemic may cause a loss of more than 1.1 trillion dollars [3] in world GDP. Therefore, the impact of the COVID-19 on the economy is obvious and cannot be ignored.

## 2. IMPACT OF EPIDEMIC DISEASES ON THE ECONOMY

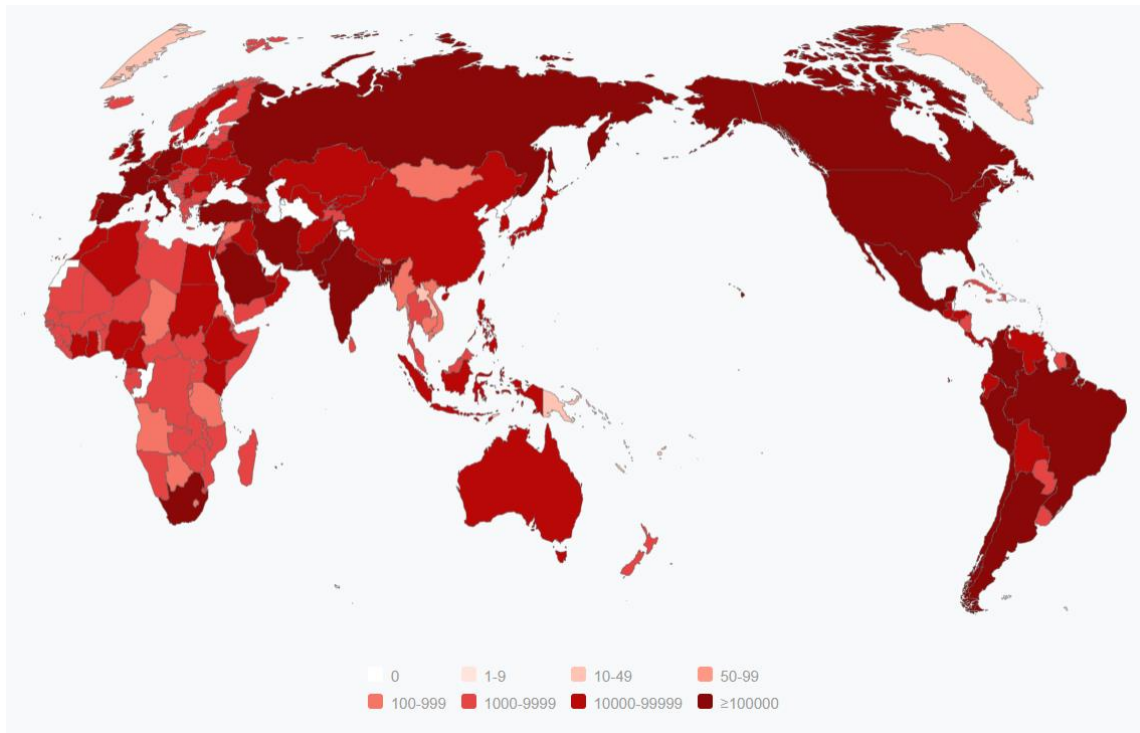
### 2.1. The Impact of the COVID-19 Epidemic Diseases on the Economies of China and Other Countries

Since the COVID-19 first appeared in China, the government quickly took effective measures, such as travel control, big data monitoring of mobile population, city and nation blocked, and flights canceled, which prevented the spread of the COVID-19 to a certain extent. At the same time, the COVID-19 has inevitably caused the economic impact. In China, the COVID-19 caused a 6.8% drop in GDP in the first quarter compared with the same period last year. However, with the control of the COVID-19, China's economy is recovering well, the main indicators are gradually rising, the employment prices are

generally stable, the emerging areas are more dynamic, and the market expectations are generally better. On a quarterly basis, the GDP in the second quarter increased by 3.2% year-on-year, and the decrease in fixed asset investment in the first half of the year was 13.0 percentage points [4] lower than that in the first quarter.

The impact on the economies of other countries besides China is still continuing and recovering slowly. For example, in March, the economy of the United States showed a cliff-like decline. In recent months, the COVID-19 situation in the United States has rebounded. Although the recovery of economic activities in the United States has not slowed down [5] due to the rebound of the COVID-19 situation, the US economy has begun to show signs of marginal slowdown recently, and the COVID-19 situation has dragged on or begun to emerge. For other countries, the extent to which the economy is affected by the COVID-19 situation is also quite different due to the different degree of national development.

On the whole, the COVID-19 has had a great impact on the economy of China and developed countries, resulting in the shutdown of production and the decline of a series of indicators such as GDP and work index. However, for some developing and emerging countries, the COVID-19 did not cause economic activities to stagnate and was affected. After a short shutdown during the surge in COVID-19 cases, they resumed work and production. The impact of the COVID-19 on economic activities largely depends on the development degree and economic strength of the country. At the same time, the degree of economic recovery after the COVID-19 has been basically controlled is also different. The impact of the COVID-19 on the economy is short-term and controllable. For China, the long-term economic fundamentals have not changed [6], and policy guidance will become an important determinant of economic recovery.



(Source: Baidu implements epidemic surveillance)

**Figure 1** Number of COVID-19 infections worldwide in 2020.07.20

## 2.2. The Impacts of Historical Major Epidemic Events on Economy

The historical major epidemic diseases of the past 20 years, including their outbreak times, outbreak places and their impacts on the economy are summarized in Table 1.

(1) Pneumonic plague outbreak in India in 1994.08. The index of industrial production dropped from 10% at the beginning of the year to 2% in September, and then increased. In 1995, the index of industrial production rebounded again after reaching a double bottom.

(2) Severe acute respiratory syndrome (SARS) occurred in China in 2003.02. The real growth rate of GDP in the quarter fell to 9.1% from 11.1% in the first quarter, and the economic growth rate gradually recovered after a brief decline.

(3) Avian influenza appeared in China in 2006.02. The real growth rate of GDP in that quarter dropped 13.7% and dropped 12.2% in the second quarter. After a brief decline, the economic growth rate gradually recovered.

(4) Influenza A (H1N1) outbreak in America in 2009.04. It coincides with the recovery period of the financial crisis. The year-on-year growth rate of constant price of US GDP declined in the first two quarters of 2009, which were -3.29% and 3.92% gradually rose in second and third quarters respectively.

(5) Middle East Respiratory Syndrome (MERS) appeared in Saudi Arabia, initially in 2012.06. The GDP growth in 2013 decreased by 2.71% compared with that in 2012, and the GDP growth rate in 2014 decreased by 1.75% compared with that in 2012, which was higher than that in 2013.

(6) In 2015.05, an unnamed epidemic disease was found in South Korea. The GDP growth rate of that year dropped by 0.55%, and the GDP of the next year slowly recovered, but it was still lower than the growth rate of 2014.

(7) Ebola virus outbreak in Guinea and other West African countries in 2014. After the outbreak of the epidemic, the economy declined by about 0.24 percentage points in the same year. Although the economic growth rate in 2015 still declined, it has gradually stabilized. In 2016, the economy developed rapidly and got rid of the impact of this epidemic event.

(8) Zika virus emerged in Brazil in 2015.05. Even though the epidemic situation was alleviated in 2016, the economic growth rate still did not recover significantly, and it was not changed until 2017 that Brazil's economic growth turned negative to positive again.

(9) Cholera appeared in Tasmania in 2015.08. The economic growth rate of that year decreased by 6.16% from 6.73%. After the epidemic situation was controlled in 2016, the economic growth rate gradually stabilized and even exceeded 2014 level and reached 6.86%. The impact of the epidemic on the overall economy is limited.

**Table 1** Summary of historical major epidemic events

No.	Name of the epidemic disease	Country/Region	Outbreak Time
1	Pneumonic plague	India	1994.08
2	Severe acute respiratory syndrome (SARS)	China	2003.02
3	Avian-human influenza	China	2006.02
4	H1N1 Flu	America	2009.04
5	Middle East Respiratory Syndrome(MERS)	Saudi Arabia	2012.06
6	Middle East Respiratory Syndrome(MERS)	South Korea	2015.05
7	Ebola virus	Guinea and other West African countries	2014.03
8	Zika virus	Brazil	2015.05
9	Cholera	Tasmania	2015.08
10	Ebola virus	Congo (DRC)	2018.08
11	Measles	Brazil	2018.02

Source: Guotai Junan Securities Research Report (Author arranged)

(10) In 2018.08, the Ebola virus appeared again but in Congo (DRC). The massive outbreak of the epidemic disease has further dampened the economic boost. Although 2018 is better than before, it has not changed too much.

(11) Measles outbreak in Brazil in 2018.02. The economic recovery rate has been constrained. The economy in 2017 has been significantly improved compared with that in 2016. However, the epidemic situation in 2018 made the economic recovery speed of that year slower than that in previous years, only 0.05 percentage points higher.

Through the analysis of the economic situation during the epidemic period at home and abroad, it can be seen that most of the outbreaks have a great negative impact on the economy in the short term, but the long-term impact is limited. The reason is that with the gradual control of the epidemic situation, the previously suppressed demand for consumption and investment has accelerated to release, bringing about an economic rebound. The Table 1 shows the economic impact of the global epidemic in the past 20 [7] years.

It can be seen from the table that the overall impact of the epidemic on the economy will not exceed two years, and then the economy will still tend to its long-term development trend. However, on the whole, the impact of the epidemic on the economy varies with the area of the epidemic, the affected object and the length of time.

### 3. CONCLUSION

Generally speaking, the impact of the epidemic on the economy is obvious. Although the degree of economic impact varies with the epidemic and the countries affected

by the epidemic, the negative economic impact in the year of the epidemic can not be ignored. The impact of the epidemic on the economy is often short-term, and it still tends to its original development trend in the long term. The economic recovery after the outbreak is also related to the development of various countries. The COVID-19 has caused a lot of negative effects on the global economy, which is still recovering slowly. Judging from the current situation, the expectation of economic development is considerable, and the subsequent impact of the epidemic rebound on the economy needs to be observed.

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