Impact of Novel Coronavirus Pneumonia on China’s Economy and the World Economy

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Abstract. Purpose: The purpose of this article is to illustrate China’s influence on global economy through data comparative analysis of national interdependence and its relation to especially the economic impact in time of a major event such as a new coronavirus.

Design/methodology/approach: The author analyzes the impact of the epidemic on the Chinese economy and how it can be transmitted to other countries through the global industrial chain according to the proportion of China in the world economy. In this study, the author used literature analysis, statistical methods, inductive methods, and descriptive research methods.

Findings: The author found through research that in the era of globalization, each country’s economic operations and people’s lives are inseparable from other countries. The role of different countries in the international division of labor is becoming clearer. In the face of global disasters, such as this epidemic, when a country’s economy is affected, it will be transmitted to other countries through the global value chain in different ways. The method and the results of transmission will be affected by the different policies of each country.

Originality/value: Globalization has both positive and negative effects on human beings. Overall, the author considers that positive effects are greater than negative. The author proposes that a mechanism for efficient collaboration and communication should be established between countries. This mechanism requires the country to be transparent in information disclosure and highly coordinated policy formulation. Through coordinated and joint efforts of all countries, we can minimize the impact of global supply chain disruptions.

Keywords: Novel coronavirus · Wuhan · Economic impact · Economic interdependence · Chinese economy

JEL Code: F15 · F62

1 Introduction

As of this essay was written, more than 4 million confirmed cases of novel coronavirus pneumonia and a total of 278,892 deaths have been reported by the World Health Organization. This epidemic poses a severe test for China, as the year 2020, important for the strategic development of China, marks the end of the 13th five-year plan. China, as the second largest economy in the world, plays a key role in the international world,
whose setback by the pandemic will cause heave on countries across the world. All of this draws widespread attention and concerns.

2 Materials and Method

In this chapter, author consulted a large amount of literature and uses a comparative analysis of data. The main sources of data are “China Statistical Yearbook”, the World Bank Database, etc.

3 Results and Discussion

The degree of interdependence between countries and their mutual influence are becoming increasingly important with the development of globalization, which stimulates export and import of goods, capital and services. Furthermore, globalization allows companies to distribute their production lines in different regions across the world, while joining hands with other companies through global value chains. In the global value chains, problems in one country may affect the global cooperation in varying degrees, with especially obvious influence on world economy. During the pandemic, the world has witnessed a series of chain events, which slows both the socio-economic development of certain countries and the global economy, which is especially true for countries who work closely with China.

Fig. 1. GDP growth of China and World (annual %) (Data sources: The World Bank)
One of the main domestic factors driving economic growth in China is the implementation of “reforms and open-up” policy carried out since the late 1970s. Figure 1 shows the dynamics of China’s GDP growth and global GDP from 1978 to 2018. Over these 40 years, China’s GDP has grown by 9.47% on average per year, much higher than the average annual growth rate of world GDP, amounting to 3%. Nowadays, China takes up about 16% of world GDP, with its contribution to world economic growth exceeding 30%. Another important factor that has contributed to China’s economic growth is cheap labor. This factor, along with ongoing economic reforms in the country, is continuously attracting foreign investment.

![Fig. 2. Number of FDI projects & Amount of FDI (million dollar) in China in 1983–2018 period. (Data sources: National Bureau of Statistics of China)](image)

Figure 2 shows the number of projects involving foreign direct investment from 1983 to 2017, in which we can see more and more goods produced and assembled in China, in this way China turns into a “world factory” gradually. While the number of projects with foreign direct investment has decreased since 1993, the volume has increased significantly, indicating that over the past 10 years, projects involving foreign direct investment in China promises higher quality in a larger scale. A wave of global direct investment has allowed China to overcome its shortage of national capital and foreign exchange with the help of foreign capital. Against this background, China is able to achieve outstanding achievements in the field of economic growth, relying on an export-oriented development model.
From the data in Fig. 3, it is found that China’s foreign trade turnover is constantly growing. China now exports not only consumer goods, but also high-tech products for most developed countries. In 2018, mechanical and electrical products accounted for 59% of China’s total export value, and high-tech products - 30%. Some countries have a high degree of dependence on Chinese mechanical and electrical products. For example, in 2018 the United States has imported mechanical and electrical products amounted 20% of the total exports of such products of China, which cause a conflict that eventually spilled over into the China-US trade war.

With the growth of China’s GDP and the growth of per capita income and the continuous improvement of infrastructure and the level of industrial production in China, demand for raw materials is growing. From 1978 to 2018, China’s import demand increased sharply from US $ 10.89 billion to US $ 2135.73 billion, enabling export countries to obtain huge economic benefits. In terms of the trade in services, the High-tech service trade has grown steadily: In 2018, China’s high-tech service imports and exports reached US $ 11.22 trillion, an 20.7% increase compared with the same period last year. For a long period of time, developed countries have been the main subject of international cross-border investment, but with the acceleration of globalization and the development of emerging economies, developing countries have gradually made their way through cross-border business activities. China is a good example among them, in 2018, foreign direct investment flows have steadily made into the top three in the world. The rapid development of Chinese economy makes a positive impact on the global economy.

The Blue Book of Economics: Analysis and Forecast of China’s Economic Situation in 2020, published by the Chinese Academy of Sciences at the end of 2019, states

![Fig. 3. Total exports and imports of China in 1978–2018 period (100 million dollar) (Data sources: National Bureau of Statistics of China)](image)
that China’s economic growth is expected to reach around 6.0% in 2020. However, due to the impact of the epidemic, in the first three months of 2020, China’s total import and export value of goods reached US $ 943.22 billion, a year-on-year decrease of 8.4%. Among them, exports fell by 13.3%; imports dropped by of 2.9%. Due to the ongoing epidemic, many reputable organizations are pessimistic about the economic growth of China and the world in 2020.

Chinese economists, divided into two groups, made two forecasts of the economic situation. The first group forecasts that experts, based on data from SARS in 2003, concluded that the 2003 SARS epidemic did not have a major impact on the PRC economy. However, the epidemic in 2020 will seriously drag down the economy of China and the world. The reason is that compared with 2003, the contribution rate of the primary industry, the secondary industry, especially the tertiary industry to China’s GDP growth has increased significantly, with the rate being 3.8%, 36.8%, and 59.4% respectively. Besides, China’s GDP accounts for 19.24% of global GDP in 2019. Novel coronavirus was first found during the Chinese New Year in 2020, a time that is considered the peak of consumption of goods and services. Measures were immediately taken by the Chinese government and widely approved by the public. Citizens consciously began to be at home; shopping centers, restaurants and movie theaters were temporarily closed. The economic damage on services sector was, however, great, which greatly affects Chinese economy in 2020. Another group of economists, such as Wang Yiming, former deputy director of the Development Research Center of the State Council, believes that after the outbreak of the coronavirus, the Chinese government has taken many decisive measures to control and reduce the impact of the epidemic as soon as possible, buying enough time to stabilize its economy. As China embraces broad consumer groups and domestic demand potential, the momentum for economic growth after the epidemic is believed to be huge.¹

In the current situation, it is important to identity the impact of the epidemic on agriculture, industry and service sectors in China:

1. Impact on agriculture sector

The main problem in agriculture sector is that spring plowing is greatly delayed. Normally, spring ploughing in the South begins in mid-February. Due to road blockage, agricultural production materials are hard to purchase. The executives of Beifeng Agricole Group, a large fertilizer distribution company, reported a shortage of 1.3 million tons of phosphate fertilizers in the three northeastern provinces where most of the grain in China was produced. If this cannot be solved within 30 days, grain output will fail to meet the demands.² Besides that, many large producers need a lot of labor for spring farming, but because of this epidemic, it is difficult to find workers, making the burden of spring ploughing very high.

¹ China News Network “Wang Yiming: New Coronavirus Pneumonia Epidemic Will Not Undermine China’s Potential Economic Growth” https://tech.sina.com.cn/roll/2020-02-13/doc-imxxtf1144238.shtml.
² FTChinese “China’s farmers fear food shortages after coronavirus restrictions” https://m.ftchinese.com/story/001086823.
In addition to spring ploughing, agricultural turnover also faces difficulties. The miss of the best time to enter the market results in increased storage costs, decreased product freshness and value, and economic losses, all directly leading to the rise in food prices in many provinces and cities in China. During the epidemic, farmers face a serious shortage of feed used to feed livestock and poultry, so the economic losses caused directly to farmers are huge. The epidemic will also affect the import and export of Chinese agricultural products. Currently, about 18 countries have imposed restrictions on imports of certain types of agricultural products from China or have requested certification showing the products contain no virus. China plays an important role in the global agricultural production chain, but due to the outbreak of the epidemic, the short-term export of Chinese agricultural products will decline. From January to March 2020, the export value of agricultural products dropped to US $ 17.003 billion, a year-on-year decrease of 5.6%. It also will make a negative influence on prices of agricultural products for importer’s domestic market. In addition, China itself is a major importer of agricultural products. But the epidemic caused difficulties in the transportation of these goods, resulting in a sharp fall in their price abroad. For example, China is the largest market for Vietnamese mango exports, in 2018 accounting for 84.6% of mango exports. After the outbreak, the provincial governments of Guangxi and Yunnan decided to extend the suspension of trading hours in the border areas, posing a significant impact on Vietnamese agricultural exports.

2. Impact on industry sector

The impact of the epidemic on industry is not optimistic, as the flow of labor is blocked. After the Spring Festival holiday, all the cities may face the problem of labor shortage, especially in Hubei, Guangdong, Zhejiang, and Shanghai, which are more severely affected. The latest data from the National Bureau of Statistics of China showed that industrial production in January and February 2020 fell by 13.5%. February 10th is the first reopening day in China, with the condition that all employees must undergo home isolation for 7–14 days before resuming work. The role of China in the global production chain is important: delaying the start of work will not only affect the Chinese economy, but also the global economy. Hubei the most seriously hit province is the center for the production of auto parts and components in China. The suspension of production and logistics has led to the suspension of production of several international automakers. At the same time, many Chinese auto parts exporting companies, unable to resume production, are also under great pressure: inability to timely deliver orders by foreign customers not only causes default, but also poses difficulty in payments to workers, factories, etc. In January-March 2020, the export value of electromechanical products amounted to 323110.3 million US dollars, a 13.4% decrease compared with the same period last year, and the cost of high-tech products from January to March amounted to 162632.1 million US dollars, compared with the same period last year, a 12.2% fall. The electronics and pharmaceutical manufacturing chains are heavily dependent on Chinese manufacturers. For example, Am Cham South China said that while factories in China have gradually resumed

3 National Bureau of Statistics https://www.stats.gov.cn/tjsj/zxfb/202003/t20200316_1732235.html.
operation, it is expected that a significant portion of the companies will face a shortage of parts and raw materials in the coming months. According to the survey, 15% of affected enterprises ran out of stocks.\(^4\) Materials are difficult to refill in a short period of time. The epidemic has impeded the normal operation of the production chains, which will get even worse as the epidemic continues. As the epidemic spreads quickly in the Middle East and Europe, and the situation in the United States becomes even more acute, measures to prevent and control the pandemic in various countries are also gradually improving. Slow economic growth in Europe, the United States and other regions of the world, in turn, will cause havoc on Chinese exports and foreign investment. The negative impact on China’s exports in the first half of this year will gradually manifest itself. Foreign investment projects face long-term risks of policy uncertainty and supply shocks, which, in turn, may slow the growth of Chinese companies in the global industrial chain. A negative impact on China’s external demand and global investment is inevitable.

3. Impact on the service sector

The service sector was hardest hit, impact on the services sector is irreparable compared with the epidemic in 2003. Data shows that the box office for the Spring Festival in 2020 (from 1th to 6th days) is only 15 million yuan, much lower than 5.7 billion yuan in 2019. In addition, on the first day of New Year according to the lunar calendar, the total volume of traffic within the framework of the Spring Festival decreased by 28.8%, and the volume of traffic by rail, road and civil aviation dropped by 41.5%, 25% and 41.6%.\(^5\) During the Spring Festival in 2019, national retailers and catering companies reached 105 billion yuan, the total number of national tourist receptions topped 415 million, and tourism revenue arrived at 513.9 billion yuan.\(^6\) In addition, on January 24, the Ministry of Culture and Tourism of the State Council of China required national travel agencies to suspend domestic group trips and cancel all foreign trips after January 27th. Outbound tourism will have a major impact on tourism in Southeast Asia and Europe. Take Thailand trips as an example: in 2019, it welcomed 40 million foreign tourists, of which more than a quarter came from China. The economy of Thailand, however, is highly dependent on tourism, accounting for one fifth of its gross domestic product (GDP).\(^7\) Relevant data from France shows that Chinese tourists canceled more than 80% of their hotel bookings in January and almost all of them were canceled in February. According to experts, the losses amounted to 1 billion euros. Italy expected to host 40,000 Chinese tourists in February. The epidemic

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\(^4\) [FTChinese《中国工厂面临零部件短缺》“Chinese factories face components shortage: business association”](https://m.ftchinese.com/story/001086820).

\(^5\) [全球外汇《投行最新预测：冠状病毒疫情对全球和中国GDP影响会有多大?》 (“Investment Bank’s Latest Forecast: How Much Will the Coronavirus Outbreak Affect Global and China’s GDP?”)](https://baijiahao.baidu.com/s?id=1657572636672164050&wfr=spider&for=pc).

\(^6\) [清华金融评论《新型冠状病毒肺炎疫情对中国经济金融的影响及政策建议》 (Impact of New Coronavirus Pneumonia on China’s Economy and Finance and Policy Suggestions)](https://baijiahao.baidu.com/s?id=165838318742164050&wfr=spider&for=pc).

\(^7\) [《冠状病毒肺炎对旅游业的影响》 (“Impact of Coronavirus Pneumonia on Tourism”)](https://www.mijwed.com/baike/1047746.html).
also forced Chinese tourists to cancel all bookings. The Milan Hotel Association announced an 8 million loss of euros in just a half a month. Other tourism-related industries, such as the purchase of luxury goods, have suffered even more. The Russian tourism administration said it was planning to receive 100,000 tourists from China in February and March, but in fact lost 100 million rubles.

4 Conclusion

We can say that in today’s globalized economy, culture and life, problems in one country more or less affect other countries around the world. The measures taken by China to combat the epidemic this time compared with 2003, to my mind’s eye, are commendable. Attention should be paid to how countries, which play a key role in global economic and industrial policies, should behave in time of emergency, which is important both for the leading countries of globalization processes and for outsider countries, given the close interconnection of national economies.

In the situation that has arisen due to coronavirus, close and effective cooperation between countries is needed, aimed to accelerate the elimination of the pandemic and the reduction of its negative consequences both for the global economy and for individual national economies. How nations that play important roles in the global value chain can minimize the negative impacts on other nations during emergencies is an important future topic. Epidemics have existed since ancient times, and this large-scale epidemic, unfortunately, is not the last. How to deal with major incidents in the future is a question that all humans should think about. The interdependence of national economies is increasing, and the growing responsibility of the leading countries to come up with measures to prevent incidents and inventories on a global scale is growing. For China, it is necessary to consider a situation that could be replaced in the global production chain in the future. Although the transfer of the production chain and supply chain cannot be realized in the short term, the possibility in the future is not ruled out. Ultimately, the call for a more decentralized supply chain will undoubtedly be an important option that should be seriously considered by economic decision-makers in various countries. If the form of participation in the international division of labor changes, then China’s domestic political and economic policies must follow suit quickly.

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8 “随着新型肺炎疫情的扩散，将沉重打击欧洲经济及旅游业” “With the spread of the new coronavirus pneumonia epidemic, it will severely hit the European economy and tourism” https://www.sohu.com/a/376618925_99898145.

9 “Как коронавирус повлияет на туризм в 2020 году: наш турбизнес потерял уже 100 миллионов, а в Таиланде дешевые отели” (How coronavirus will affect tourism in 2020: our travel industry has already lost 100 million, and hotels are getting cheaper in Thailand) https://www.orel.kp.ru/daily/27088.4/4160608/.
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