Analysis of the Impact of the New Crown Epidemic on FDI in Flows to the Guangdong Region as an Example

Bangjie Li

Sun Yat-sen University of Nanfang College, Guangzhou Guangdong 510970, P.R.China

Corresponding author Email: bangjieli@163.com

Abstract. The epidemic has become a huge obstacle to globalisation in terms of investment and trade flows between countries，the impact on FDI even surpassed the global financial crisis in 2008. This paper would like to study the impact of the New Crown epidemic on FDI inflows through theoretical path analysis and empirical regression analysis, and propose feasible suggestions for the recovery of FDI inflows in the context of the normalisation of the epidemic combined with the empirical results.

Keywords: New crown epidemic, foreign direct investment, import and export, economic recovery

1 Introduction

FDI (foreign direct investment) has become an important driving force for China's economic development, and is of great significance to China in raising employment rates, accelerating economic growth, boosting import and export trade growth and improving industrial structure. Global FDI fell sharply in 2020 to just US$859 billion, down 42% from US$1.5 trillion in 2019. The decline was concentrated in developed countries, where FDI flows to developed countries fell by 69% to just US$229 billion, the lowest level in the last 25 years. Meanwhile, China has bucked the trend, attracting a 4% increase in FDI in 2020 to a total of US$163 billion, making it the world's largest FDI investor. It seems that in the introduction of foreign investment in China is still at a rapid pace of continuous development, and the epidemic had a greater impact on the inflow of FDI. It is particularly important to examine the impact of the recession on foreign direct investment in the context of the epidemic.

2 Literature review

The study points out that FDI can promote high-quality economic development in each region, and the formulation of foreign investment introduction policies in line with economic development can effectively increase FDI inflows and thus achieve high-quality economic development. It is not only FDI that has an impact on the economy, but the

H. Mallick et al. (Eds.): ICEMCI 2022, AEBMR 231, pp. 181–186, 2023.
https://doi.org/10.2991/978-94-6463-098-5_22

economy also has an impact on FDI[1-2]. When foreign companies have difficulties in financing themselves, further investment will be reduced.

In the latest study in 2021, it is pointed out that after China's economy has entered the new normal stage, FDI has shown a long-term counter-cyclical growth phenomenon. This is mainly reflected in two aspects, one of which is that FDI has continued to grow instead of decreasing in a downward trend of economic market contraction. The second is that the growth rate of OFDI is significantly faster than that of IFDI. [3] After proving that FDI does have a relationship with economic development, the study also suggests that the introduction of large amounts of foreign capital can stimulate our economic growth, increase our capital accumulation and bring certain spillover effects for our domestic enterprises. [2]

The epidemic has intensified the trend of trade protectionism and your globalisation, and that the policies introduced by developed countries to tighten foreign investment will not stop in the short term with the end of the epidemic. The overseas investment of our enterprises brings more resistance, while the timely adjustment and repositioning of our government will bring new development opportunities for our foreign investment and acceptance of foreign investment. [5]

3 Path analysis of the impact of the epidemic on FDI inflows

3.1 Practical impact

The sudden onset of the epidemic caught the government off guard and the measures of sealing off cities, stopping work and production brought most industries, including manufacturing, to a halt, while coupled with the complete cessation of import and export operations in some provinces and the suspension of import and export of goods with China by the countries concerned. This will certainly have an impact on FDI inflows, and the loss of some of these trade flows will mean a reduction or even the loss of investment from the host country. Despite the rapid resumption of work and production in our country within a few months, some economic and trade relations were restored. However, the normal management of the epidemic and the adjustment of related import and export policies also affected the overall investment environment resulting in a greater impact on FDI.

3.2 Expected impact

The low expectations of investors in the market also had a significant impact on FDI. Because of the closure of the city, and other measures, companies are unable to operate normally and investors' expectations of the market will become even more negative. Foreign investors may reduce further investment or even withdraw their capital. The low expectations of investors in the market due to the epidemic exacerbated the trend of trade protectionism and anti-globalisation, which has had a huge impact on both foreign investment and foreign investment in China. Expectation shocks are the most important driver of economic fluctuations in China, which has led to greater volatility in FDI in the short term. [7-8]

4 Empirical study on the impact of the epidemic on FDI inflows

4.1 Data sources and selection of variables

According research, the New Crown epidemic is not a decisive factor affecting FDI inflows, and FDI inflows are affected by the epidemic differently in different regions. [6]This paper uses sample data from Guangdong Province to conduct an empirical study based on the path analysis in the previous section. The data in this article is derived from the Wind database, the website of the Guangdong Provincial Bureau of Statistics and the Guangdong Provincial Statistical Yearbook.

The main factors influencing the attraction of FDI are the country's total population, the market size represented by total GDP, the level of urbanisation represented by the proportion of population in cities with more than one million inhabitants to the total population, profit opportunities and the ability to repay foreign debt. [8] The paper pre-selects representative influencing factors of gross domestic product (GDP), average wage, secondary sector GDP, total exports and imports (TMX) and total population for regression analysis. The number of confirmed cases (NCP) is the most direct indicator of the severity of the epidemic, so NCP was chosen to measure the severity of the epidemic. During the analysis, it was found that the average wage level data had a lag and the most up-to-date data was not available, and the total population was difficult to obtain quarterly data due to the availability of data. Therefore, four representative variables were finally selected: GDP, NCP, secondary sector GDP, TMX, and total retail sales of consumer goods.

4.2 Model setting

The following model was developed.

$$FDI_{it} = \beta_0 + \beta_1 gdp_{it} + \beta_2\, \mathrm{ncp}_{it} + \beta_3 tmx_{it} + \beta_4 \mathrm{trs}_{it} + \varepsilon_{it} \tag{1}$$

In equation (1), the FDI_{it} is the scale of actual utilization of foreign direct investment in Guangdong Province, andgdp_{it} is the gross domestic product of Guangdong Province, andtmx_{it} is the total import and export volume of Guangdong Province, andtrs_{it} is the total retail sales of social consumer goods.ε_{it} is the random error term.

4.3 Analysis of regression results

By running a multiple regression based on the model constructed above using the least squares method, the results are shown in the table above. The following conclusions were drawn from the above table.

Table 1. Parameter estimation results

Variables	Coefficient
C	268.39
NCP	-0.00678
GDP	0.03169
TMX	0.04530
TRS	1.57E-08
R2	0.530454
F-statistic	0.299468

(Self-drawn tables)

First, all indicators except NCP are positively correlated with the level of FDI inflows. In terms of the individual explanatory variables, the coefficient estimate for NCP is -0.0678, indicating that each increase in the number of confirmed cases of the epidemic reduces the inflow of FDI by RMB 0.00678 billion. This regression result indicates that the epidemic can have some impact on the level of FDI inflows, but the epidemic is not the most significant factor affecting the level of FDI inflows.

Secondly, the GDP of Guangdong Province has a significant positive impact on the FDI inflow to Guangdong Province. Every RMB 100 million increase in GDP will increase the FDI inflow to Guangdong Province by RMB 0.03169 billion. A higher GDP means that the region has a good business environment, this is why foreign investors prefer regions with larger GDP that are growing at a certain rate. In the event of an epidemic, GDP is bound to fluctuate, so foreign investors will consider the epidemic as an important consideration before entering the region.

Thirdly, the total import and export volume of Guangdong Province has a significant positive impact on the FDI inflow to Guangdong Province. Every US$100 million increase in the total import and export volume will increase the FDI inflow by RMB 0.0453 billion. A significant portion of the import and export trade volume originates from foreign institutions in the region, while the total import and export volume represents the prosperity of the relevant import and export companies in the region. A higher total import and export volume in a region indicates a better and more developed investment environment, which also means more investment opportunities and is used to gain foreign investment recognition.

Fourth, the correlation between total retail sales of consumer goods and FDI inflows in Guangdong Province is not significant, with FDI inflows increasing by only 1.57*10^(-8) billion yuan for every 100 million yuan increase in total retail sales of consumer goods, other things being equal. This suggests that changes in consumption have a relatively small impact on FDI inflows in the broader economic environment. The main reason for this is that foreign investors do not prioritise the consumer market for investment when entering the country against the backdrop of the epidemic when the consumer market is depressed.

5 Conclusions

The epidemic can have a certain short-term influence on the level of FDI inflow. GDP and total imports and exports have a greater correlation with FDI inflows, while the impact of total retail sales of consumer goods on FDI is not significant. This paper argues that with a better investment environment and regions that have already accumulated some investment being more likely to receive new FDI inflows.

With the normalisation of the epidemic, the future of global foreign investment will continue to be weak, while China's overall control of the epidemic has ensured the stability of China's general investment environment. For the post-epidemic era, China should maintain the stability of the overall economy and thus guide the gradual recovery of FDI inflows. The region should be encouraged to expand its import and export trade to increase the openness of the region and thus attract foreign investment. In the production of foreign-funded enterprises whether it is products or raw materials, it is only done in combination with import and export. Therefore, the state should maintain the amount of imports and exports through the coordination of policies, and reasonably regulate the adjustments made by enterprises in imports and exports. According to the different countries of capital, the role of the different regions to develop more targeted strategies, give full play to the advantages of China's manufacturing power, to promote the development of FDI inflows.

References

1. Li Nana (2019) Can FDI promote high-quality economic development in China. Statistics & Information Forum, Vol.34 No.9:37-42[J].
2. Wu Jing (2012) Study on the impact of FDI on China's economic growth:17-24[J].
3. Yang Yang (2021) The "transformation" of China's FDI development path... ...I counter-cyclical growth of the inner logic of analysis,13-21(1) [J].
4. Qu Xia. (2021) The new FDI policy and its impact on China's outbound investment under the epidemic[J]. China Foreign Investment, (19): 34-37.
5. Chen Guojin (2014) Rare disaster risks and macroeconomic volatility in China, Economic research, 2014, 49(08): 54-66. [J].
6. Zhai, Chaoying, Wang, Leiqun. (2022) Has the epidemic changed the influencing factors of FDI inflows in China? [J]. Contemporary Financial Studies, 5(2): 38-52.
7. Zhuangzi jar (2012) Expectations and Economic Volatility - Expectation Shocks... Are the main forces of economic volatility in China. Economic research (06),46-59. [J].
8. Zhuang Z. J., Cui S. Y., Gong L. T., (2012) et al. Expectations and economic volatility - Are expectations shocks the main force driving economic volatility in China? [J]. Economic Research, 47(6): 46-59.