

Influence of Foreign Direct Investment on Economic Growth in Fujian Province

Yang Yang

College of Economic and Management, Fuzhou University, Fuzhou City, China

ABSTRACT

This paper aims to study the influence of foreign direct investment on economic growth in Fujian Province, and explore its mechanism and effect. As a form of transnational capital flow, foreign direct investment not only brings capital and technology to Fujian Province, but also promotes the development of industrial structure upgrading, employment increase and international competitiveness improvement. In the context of global economic integration, exploring the contribution of FDI to Fujian's economic growth will help deepen the understanding of global economic interaction and provide references and suggestions for relevant policy making. The research method is mainly based on the analysis of the statistical data of FDI in Fujian Province, combined with relevant economic theories and empirical research, in order to comprehensively and systematically evaluate the impact of FDI on economic growth in Fujian Province. Through the research findings, we can provide valuable references for government departments, enterprises and academia to formulate and optimize policy measures to attract foreign direct investment and promote the sustainable development of Fujian Province's economy.

KEYWORDS

Foreign direct investment (FDI); Economic growth in Fujian; Economic growth

1. INTRODUCTION

In today's era of globalization, Foreign Direct Investment (FDI) has become one of the important driving forces of international economic development. There is a close relationship between economic growth, foreign investment and GDP. Foreign investment plays an important role in promoting economic growth and increasing GDP. By introducing foreign capital, technology and management experience, foreign investment can promote the development of domestic industries and improve production efficiency and quality levels. In addition, foreign investment can stimulate the increase of employment opportunities and raise the level of residents' income, thus promoting the growth of consumption and domestic demand. These factors, taken together, have a positive impact on economic growth and GDP growth. Therefore, attracting foreign investment has become an important goal for many countries and regions to formulate economic policies. In order to attract more foreign investment, the government needs to provide a good investment environment, including a stable legal and policy environment, sound infrastructure and efficient administrative services. In addition, strengthening ties with international economic cooperation and trade is also an important means to attract foreign investment. By actively guiding foreign investment, the country can achieve the goal of economic growth and increase GDP, thereby enhancing the country's overall competitiveness and development level.

2. LITERATURE REVIEW

In recent years, China's macroeconomic trends have attracted much attention. China is the second largest economy in the world, and its economic development has an important influence on the global economic pattern. In the past few years, China's macro economy has shown a series of positive trends and changes. From the perspective of the driving force of economic growth, first of all, mainly due to the impact of the epidemic, the contribution rate of final consumption to economic growth has weakened significantly, the growth rate of total retail sales of social consumer goods has become more volatile, the proportion of basic consumption of residents and online retail sales has continued to rise compared with the previous two years, and China's economic growth has maintained a relatively stable trend. Despite the global economic slowdown, China's gross domestic product (GDP) has maintained a high growth rate. Secondly, the decline rate of real estate investment continues to expand, and manufacturing investment has a certain degree of resilience under the rapid growth of exports and policy support. Together with infrastructure investment, it has driven the growth of fixed asset investment. China's consumer market has gradually become an important driving force for economic growth. With the advancement of China's urbanization process and the increase of residents' income, the purchasing power of Chinese consumers continues to increase, which promotes the rapid expansion of the consumer market. Third, net export has a strong driving effect on economic growth, but with the global economic growth rate slowing down and China's export share falling, the year-on-year growth rate of foreign trade imports and exports in the fourth quarter has turned from positive to negative, and China's investment environment is also improving. The government has adopted a series of policy measures to encourage domestic and foreign investment, which has promoted the increase of investment activities. However, China's macro economy also faces some challenges. One is structural. China's economy remains over-reliant on exports and investment, while growth in domestic demand is relatively weak. Therefore, the role of foreign investment in economic growth is very important.

Domestic scholars have made many researches on the influence of foreign investment on economic growth. Professor Yang Dingguang and Professor Cheng Zhongli of Tongji University in Shanghai believe that the import of foreign-invested enterprises is a negative factor for China's economic growth, but it directly promotes the export of foreign-invested enterprises, especially the import of capital goods and raw materials and parts of processing trade, and also greatly promotes the upgrading of China's industrial structure and the development of processing trade, thus indirectly promoting China's economic growth. Therefore, in the short term, the change of import and export trade of foreign-invested enterprises has a relatively obvious impact on the fluctuation of economic growth [1]. Zhang Jinhui, from the Eurasian International College of Henan University, studied the impact of foreign investment on economic growth by taking Beijing as an example, and also agreed with the view that for a long time, foreign investment has effectively made up for the shortage of capital factors in China's economic development, and is an important force to promote the orderly, efficient and sustainable development of China's economy [2].

All of them have established econometric models to study the impact of foreign investment on economic growth, and the results are not surprising. Foreign investment is a potential stock to promote the economy, and we need to constantly formulate innovative policies to tap the potential of foreign investment. However, when we read the literature, we did not see relevant literature taking Fujian Province as an example, which is one of the most dynamic and open regions in China. Fujian Province has been attracting a large number of foreign direct investment with its superior geographical location, good investment environment and strong economic strength. The scale and quality of foreign direct investment in Fujian Province has had a profound impact on its economic growth and also provided new opportunities for its economic transformation and sustainable development. Therefore, this paper takes Fujian Province as an example to study and discuss.

3. MODEL INTRODUCTION

3.1. Estimation of VAR Model

The general expression of VAR model is: vector autoregressive model (VAR model for short) is a non-structural equations model, proposed by Sims in 1980. This model is not based on economic theory, but adopts the form of multiple equations. In each equation of the model, endogenous variables regression the lag term of all endogenous independent variables of the model, and then estimate the dynamic relationship of all endogenous variables. It is often used to predict the interrelated time series system and analyze the dynamic impact of random perturbations on the variable system.

3.2. Index Selection and Data Processing

In this paper, the actual use of foreign capital in the current period is selected as the variable of foreign investment, and the six variables of the current gross National product (GDP), the permanent population at the end of the current period (10,000 people), and the per capita consumption expenditure of urban residents (yuan) are selected as the influencing factors of economic growth. Monthly data from 2000 to 2021 were selected, with a total of 22 samples. The data came from Fujian Statistical Yearbook. The data used in this paper come from the Chinese Statistical Yearbook and are processed according to the analysis needs. Considering the timeliness of the study and the availability of data, the data used in this paper are relevant data from 2000 to 2021.

According to the results of descriptive statistical analysis, we can draw the following conclusions. First of all, the average value of the regional GDP of Fujian Province is 1972.4436 billion yuan, the median is 164.60105 million US dollars, the maximum is 144.82102 million yuan, and the minimum is 376.454 billion yuan. The standard deviation is 1,4482102 million yuan, which indicates that the regional GDP of Fujian Province has a certain volatility. The skewness is 0.639, and a value greater than 0 indicates that the data has a right-skewed distribution.

Secondly, the average value of actually used foreign capital is 527,5812,227 dollars, the median is 50,838 million dollars, the maximum is 857,6722 million dollars, and the minimum is 222,202 million dollars. Its standard deviation is \$171,567,46, and the data is relatively stable. Its skewness is 0.212, slightly to the left, indicating that foreign capital is used more evenly most of the time.

In addition, the average permanent resident population of Fujian Province at the end of the year was 37,799,550, the median was 37,06500, the maximum was 41,877,000, and the minimum was 3,410,000. Its standard deviation is 2,587,14 thousand, indicating relatively little volatility in the data. Its skewness of 0.215 is slightly to the right, indicating that most of the resident population is relatively average.

Finally, the average per capita consumption expenditure of urban residents in Fujian Province is 17,282.273 yuan, the median is 15,705.500 yuan, the maximum is 33942.000 yuan, and the minimum is 5638.000 yuan. Its standard deviation is 9092.829 yuan, indicating that the data is relatively volatile. Its skewness is 0.339, slightly to the right, indicating that the consumption expenditure of urban residents is relatively high for some time.

In summary, the comparison between the median and the average of the data shows that the per capita consumption expenditure of urban residents in Fujian Province presents a certain equilibrium. At the same time, it can be seen from the results of standard deviation and skewness that this equilibrium is relatively common and less volatile.

The data in table 2 shows that there is a * when rank=3, indicating the existence of a co-integration relationship. Therefore, it can be explained that there is a long-term stable relationship between GDP and foreign investment, permanent resident population at the end of the year and per capita consumption expenditure of urban residents.

4.3. Granger Causality Examination

Table 3. Granger causality examination

vargranger

Granger causality Wald tests

Equation	Excluded	chi2	df	Prob > chi2
y	x1	.03519	1	0.851
y	x2	1.3664	1	0.242
y	x3	3.5358	1	0.060
y	ALL	23.988	3	0.000
x1	y	7.3779	1	0.007
x1	x2	1.8309	1	0.176
x1	x3	9.5612	1	0.002
x1	ALL	16.376	3	0.001
x2	y	11.69	1	0.001
x2	x1	.48055	1	0.488
x2	x3	38.208	1	0.000
x2	ALL	48.274	3	0.000
x3	y	1.4898	1	0.222
x3	x1	.02991	1	0.863
x3	x2	.42207	1	0.516
x3	ALL	2.0869	3	0.555

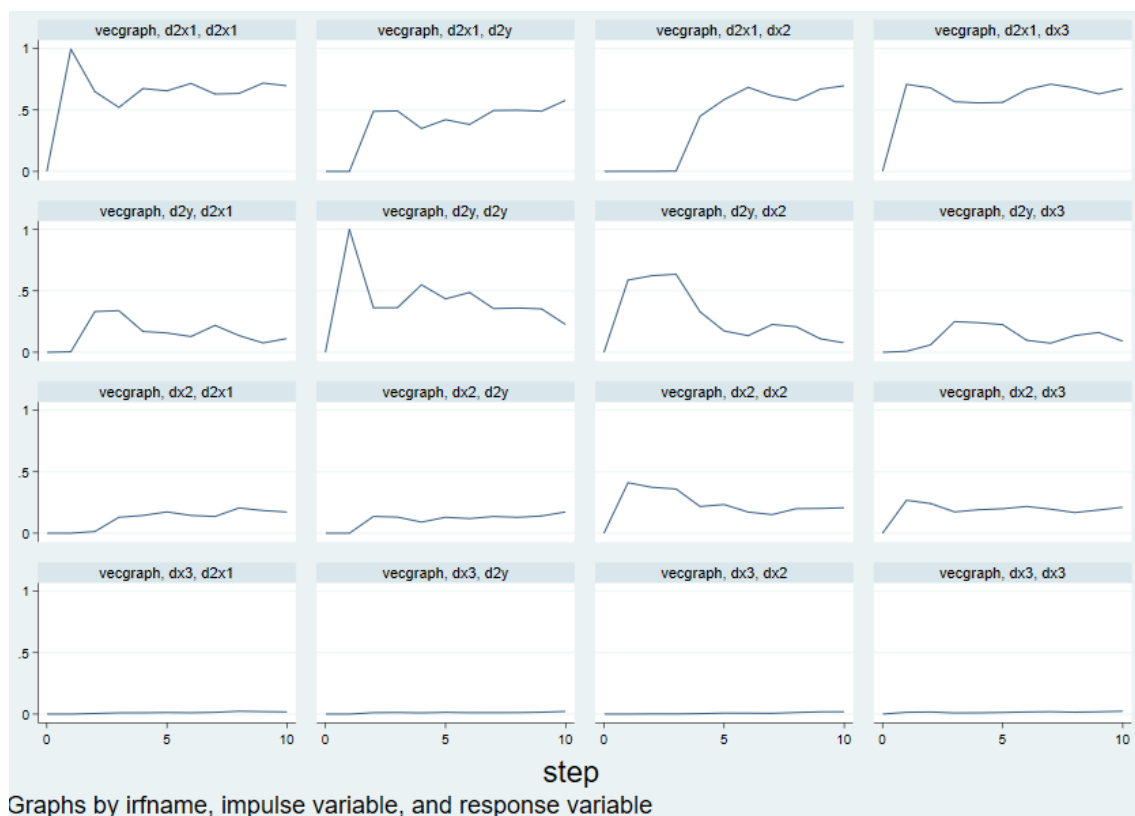
Cointegration test has proved that there is a long-term stable relationship between variables. Here, Granger causality test is used to determine whether there is a causal relationship between variables. Granger test shows that the actual use of foreign capital and the year-end resident population have a significant positive impact on the GNP index, while the per capita consumption expenditure of urban residents does not pass the significance test, so it has no significant impact on the national economic growth. Since this causal relationship is only a causal relationship in the statistical sense, failure to pass this test does not mean that there must be no causal relationship between variables. Therefore, we cannot completely rely on this test, but also use the dynamic VAR model for further analysis.

In the above cointegration test, it has been determined that the lag order of VAR model is second order. First of all, the decision coefficient of this equation is 0.993, the revised decision coefficient is 0.7885, and the F statistic value is 758.579, indicating that the VAR model is generally significant, and the goodness-of-fit is good, and the results are satisfactory. By observing the coefficient of the equation, it can be seen that the GDP index of the first phase lag has a greater impact on itself, while the GDP index of the second phase lag has no positive impact on itself, indicating that the GDP index level of the current period is mainly affected by the index of the first phase lag, and the increase of the GDP index of the second phase lag will lead to the decrease of the GDP index of the next phase. This led to an increase in the current GDP index. The significance level of RPI at the end of the year is the highest, and the RPI index coefficient of the two lagging periods is more than 2.1, indicating that the year-end permanent population index of the previous period has a great impact on the current GDP level.

4.4. Pulse Response Analysis

Impulse response function is used to analyze the dynamic influence relationship between variables. It adds an impact to the random error term of the VAR model to make it change, observes the changing trend of the current and future values of endogenous variables in the model, and describes the dynamic process of the influence trajectory [3]. In order to study the impact of changes in GDP and its influencing factors on the other side, this paper uses impulse response function to describe the impact trajectory. The premise of impulse response function analysis is that the VAR model is stable, which has been confirmed by the unit circle test above. Therefore, the impulse response analysis of GDP and its influencing factors can be carried out.

Table 4. Pulse response analysis



After an impact is applied to GDP, the change trend of influencing factors is observed, and the image result of impulse response function is obtained.

5. CONCLUSION

This study takes the influential factors of inflation as the starting point, constructs a dynamic VAR model, uses cointegration test, Granger causality test, impulse response analysis and other methods to study the impact of variables in the lag period on GDP index, and draws the following conclusions: According to the results of ADF unit root test, the logarithmic GNP and actually used foreign investment sequence is second-order single integer, and other sequences are first-order single integer. The results of cointegration test show that the change of GDP index in Fujian Province has a long-term stable equilibrium relationship with the actual use of foreign investment, permanent resident population at the end of the year and urban residents' human settlement consumption index. The Granger causality test shows that there is a causal relationship between the actual use of foreign investment in Fujian Province and the year-end resident population index on the DGP index of Fujian Province. The lag order of the VAR model constructed is the second order. Moreover, through the unit circle test, it is concluded that the GDP index with a lag of one phase has a greater impact on

itself, while the GDP index with a lag of two phase has a negative impact on itself. The significance level of the year-end permanent population index (RPI) is the highest, and the year-end permanent population index of the last two periods has a great impact on the economic growth level of the current period.

In order to promote the healthy and balanced growth of the national economy, it is necessary to adjust the economic development model in a timely manner, maintain steady and rapid economic growth, and properly handle the relationship between investment development and economic growth. The government can avoid over-dependence on foreign investment by formulating reasonable foreign trade policies. The actual use of foreign capital and the number of permanent residents at the end of the year are important factors to promote the growth of regional GDP in Fujian Province. The government can promote the economic growth of Fujian province by attracting foreign investment and expanding the population. In addition, the government should also pay attention to changes in the macroeconomic environment, such as domestic and foreign trade situation, market competition, industrial restructuring and other factors, as well as strengthen support for innovation and scientific and technological development, to promote the transformation and upgrading of Fujian Province to a higher quality and more sustainable development direction.

It is worth mentioning that in addition to the active guidance and support of the government, Fujian Province itself also has many advantages. First of all, Fujian Province is located in the southeastern coastal area of China, with convenient transportation, which is convenient for economic and trade exchanges with other provinces and cities. Secondly, Fujian Province has relatively rich resources and industrial foundation in both manufacturing and service industries, especially in the fields of automobile, shipbuilding, chemical industry, electronic information, etc., with strong competitiveness and innovation ability. In addition, Fujian Province also has a large number of high-quality talents, providing strong support for economic development.

However, Fujian still faces some challenges in promoting economic growth. For example, the products in some traditional manufacturing fields are too homogenous and lack differentiated competitiveness; Some emerging industries are still in their infancy and need more policy support and investment. Some enterprises have encountered difficulties in capital, technology and personnel in the process of transformation and upgrading. There are also some problems such as environmental pollution and resource waste that need to be better solved.

Therefore, in order to achieve higher quality and more sustainable development, the Fujian provincial government should take a series of measures. First of all, strengthen support for emerging industries, encourage enterprises to carry out technological innovation and product innovation, and enhance their core competitiveness. Second, strengthen environmental protection and resource conservation work, promote green development, and promote industrial restructuring. In addition, the government should also increase the introduction and training of talents, cultivate more high-quality talents, and inject new impetus into the economic development of Fujian Province. To sum up, the economic development of Fujian Province has strong vitality and potential, and the government and enterprises should make joint efforts to constantly innovate and reform in order to adapt to the new situation of market competition and economic development, and promote the economic development of Fujian province in a more high-quality and sustainable direction.

REFERENCES

- [1] Yang Dingguang, Cheng Zhongli. An empirical analysis of Import and export trade of foreign-invested enterprises and China's economic growth [J]. *Economic Forum*, 2006, (20):32-34.
- [2] Zhang Jinhui. Study on the impact of Foreign Investment on economic growth -- A case study of Suzhou [J]. *Housing and Real Estate*, 2016(21):249.
- [3] SHA Aosen. Research on Influencing Factors of Inflation based on Dynamic VAR Model [J]. *Era of economic and trade*, 2023, 20 (09): 21-24. The DOI: 10.19463 / j.carol carroll nki SDJM. 2023.09.019.