The Impact of RMB Exchange Rate Expectation on China's Foreign Direct Investment

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Abstract: In 2005, after the change of exchange rate, the expectation of upward expectation was deepened because of the fluctuation of RMB exchange rate. For international companies, on a country's currency exchange rate volatility trend is expected to change its subjective leading on the investment strategy of the country, is expected to exchange rate in the adjustment of China's FDI entry with a total layout of the industry leading role is allow all doubt. China is in a special phase of economic growth and transformation, and the policy of improving the allocation ratio of manufacturing industries and service industries needs the help of a large number of foreign capital. Therefore, it is a significant time to explore the adjustment principle of the exchange rate expectation change to the domestic FDI entry quantity at this time.

1. Introduction

In recent years, the adjustment effect of exchange rate expectations on the allocation of resources in the market has become more and more obvious. Domestic and foreign scholars have done a lot of research on the mechanism of exchange rate expectations affecting FDI inflows. Some scholars support the exchange rate expected to have a decisive guiding ability for FDI and propose that the upward expectation can stimulate FDI entry, while the downside expectation is just the opposite. Krabarty and Solnik (2002) assume that the exchange rate has a characteristic of a meaningful return in the long run. If the exchange rate of the capital injecting countries is rapidly impaired, it will increase the possibility of future appreciation, resulting in an upward expectation of the value of the local currency. In order to reduce the operating costs of additional increases in value, foreign companies will try to expand the company's business scope during the period of impairment. Ke Mei and Li Tiandong (2004) pointed out that the upward trend of RMB has a strong correlation with the large-scale entry of contemporary FDI and explains the formation of the capital injection layout led by the processing export industry. He Fan and Wang Shihua (2007) also pointed out that the expected upward trend and the increase in spreads are the key reasons for determining the entry of FDI, and the adjustment of the appreciation expectation is more obvious. Ye Xin and Zhou Hua

(2011) proposed that the upward trend has an incentive effect on FDI entry. Every 1% increase in the expectation of the currency over a period of time will cause FDI to enter and rise by about 2.6%. Yan Fu (2012) believes that different motives of FDI are affected by exchange rate expectations. Therefore, FDI is divided into four types. The empirical research proves that the exchange rate expectation has less effect on the manufacturing industry than on the service construction industry.

The mechanism of the impact of exchange rate expectations on FDI is that when the expected value of the currency of the invested country rises, the foreign investor will purchase the local resources in the future at a higher price than the current purchase, while the future income will be greater than the profit in the currency of the investing country. The profit of the exchange difference. Under the influence of the FDI entry and appreciation expectations, another self-enhancing effect "expected exchange rate appreciation – increased capital entry – expected appreciation – capital increase entry" will also follow. The expected depreciation of the exchange rate is just the opposite. This paper focuses on the similarities and differences between FDIs with different motives in the expected changes in exchange rates. Referring to the predecessors' point of view, FDI is divided into export-oriented and market-oriented, and the two types of FDI are more carefully adjusted to analyze the role of exchange rate expectations in FDI industry distribution adjustment.

2. Distribution of China's FDI inflows

According to the various motivations of other countries to invest in FDI in China, this paper can classify FDI as export-oriented[1] and market-oriented[2] FDI. According to the characteristics of production and sales in various industries, most of the export-oriented motivation FDI is in the manufacturing industry, and most of the market-oriented motivation FDI can be summarized into the supply, construction and service industries.
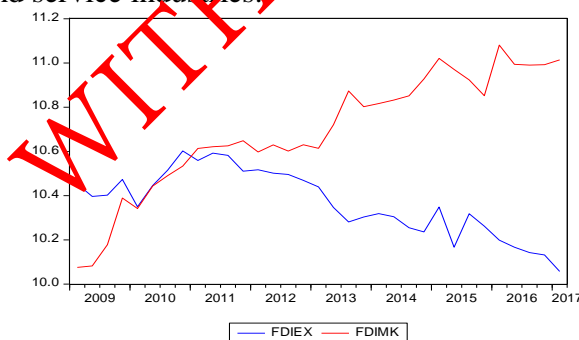

Figure 1: Comparison of the trend of two types of FDI over the years

This article, therefore, divides all industries into two categories, A[3]B[4]. According to Figure 1, it can be found that the foreign capital inflows of investment in Class A industries continue to

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[1] The basic feature of export-oriented is that the goods and services produced by foreign-invested projects are not sold locally, but instead are sold to the home country or third country.

[2] The basic characteristic of market-oriented is that the goods and services produced by foreign-invested projects in China are usually sold locally.

[3] Class A is a manufacturing and manufacturing industry, mainly including: agriculture, forestry, animal husbandry and fishery, textile industry, mining industry, manufacturing industry

[4] Class B is the supply industry, and the construction and service industries mainly include: education, transportation, warehousing and postal services, real estate, information transportation, computer services and software, accommodation and catering, wholesale and retail, financial , electricity, gas and water production and supply, leasing and business services, scientific research, technical services and geological exploration.

decrease, and the amount of foreign capital inflows in investment in Class B industries continues to rise. As of the fourth quarter of 2016, the proportion of FDI in the service industry reached 70%, which was about 30% higher than that in 2009. This indicates that the distribution of China's asset introduction industry has become more optimized, replacing the traditional manufacturing industry and shifting its focus to the service industry. The research time range of this paper is mainly after the second quarter of 2009, the RMB has once again turned into an appreciation expectation in the foreign exchange market, and the amount of foreign investment has also turned sharply.

3. Model design

3.1 Data processing

This paper supports the size of foreign investment in China and the psychological expectations of investors on exchange rate expectations. The expansion of an economy generally leads to more FDI entering the country, so the size of the domestic market should be considered as one of the factors affecting FDI inflows. In addition, relatively low labor and raw material costs reduce the cost of foreign manufacturers in China. Therefore, in the measurement model, the economic development indicator GDP (gdp) and the total retail sales of social consumer goods (T) are selected, and the average wage level of the cost indicator (wage) and the industrial producer purchase price index (I) are used as control variables. lnFDI represents the total amount of domestic FDI absorption, and RF represents the RMB exchange rate expectation.

This paper argues that there are differences in the factors that cause FDI changes in various industries. For FDI flows to export-oriented industries, in addition to exchange rate expectations, the main attractive factors are the cost advantages of host country production and cheap or scarce labor resources. Regarding FDI flowing to market-oriented industries, the important factors that determine the total capital injection of foreign companies are mainly the size of the host country's market and the state of economic development.

3.2 Cointegration regression

This paper uses quarterly data as the research sample for the variables. The empirical time span is selected from the first quarter of 2009 to the first quarter of 2017, due to FDI, export-oriented industry FDI, market-oriented industry FDI, worker per capita wage level, The sample sequence of industrial producers purchasing price index, GDP and total retail sales has significant seasonality. Therefore, this paper first uses the Census X-12 method to make seasonal adjustments to eliminate seasonal factors. In addition, this paper adopts logarithmic processing on numerical variables such as FDI, export-oriented industry FDI, market-oriented industry FDI, GDP, total social retail goods and workers' per capita wage level to ensure the smoothness and effectiveness of the data. The unit root test is performed on the variables, and all variables are I(1) processes.

For the statistic GDP removal without T-test, the total equation is regressed, and it is found that China's FDI has a long-term regression relationship with exchange rate expectations, raw material input prices, per capita worker income levels, and market size. Regression of the export-oriented FDI model revealed a significant negative correlation between ln wage and lnFDIex, and a significant negative correlation between I and lnFDIex. Explain that cheap labor costs and lower input prices are the key drivers for improving foreign investment in manufacturing industries. Among them, the ability of labor to improve the entry and exit of FDI is greater than the ability to improve the price of input. Regression of the export-oriented FDI model shows that both ln gdp and lnT are significantly positively correlated with lnFDImk, indicating that the inflow of FDI in the service industry is affected by China's economic growth and market vitality.

3.2 Error Correction Model

To setting the error correction mechanism for the total FDI. Removing two variables, GDP and wage, which are significantly unrelated to FDI. The residuals of the improved general equation are extracted, and the first-order difference is set for each variable. The error correction model is as follows:

$$\Delta \ln fdi = 0.07 - 0.06\Delta RF + 0.003\Delta I + 0.14\Delta \ln T - 0.07\varepsilon_{t-1} \quad (1)$$
$$（-0.66） \quad （0.14） \quad （2.69） \quad （-3.86）$$

According to the regression results of the error correction mechanism, we can find that the coefficient of 0.14 in front of ΔlnT is statistically significant and the coefficient is positive, indicating that when the national consumption level rises in the short term, the inflow of foreign capital will also be in the short term. increase. ΔRF and ΔI are insignificant variables, indicating that the expected exchange rate and industrial purchase price in the short term can't have a strong impact on the domestic FDI entry. This paper believes that the reason for this situation is because the change in the inflow of FDI is slower than the expected change in the exchange rate, showing a lag.To examine the factors affecting the market and export-oriented FDI, the error correction models are set as follows:

$$\Delta \ln FDI_{ex} = -0.1 - 0.05\Delta RF - 0.003\Delta I - 0.03\Delta \ln wage - 0.558\varepsilon_{t-1} \quad (2)$$
$$（0.36） \quad （-0.99） \quad （0.05） \quad （-3.67）$$

$$\Delta \ln FDI_{mk} = -0.023 - 0.084\Delta RF + 1.67\Delta \ln gdp + 0.17\Delta \ln T - 0.68\varepsilon_{t-1} \quad (3)$$
$$（-0.55） \quad （1.57） \quad （2.69） \quad （-3.85）$$

It can be seen from the equation that the residual term of the lag phase is less corrective than the lnFDImk, indicating that the direct investment in the service industry is more flexible in the short-term, and the capital investment in the manufacturing industry. The change in the short term is slower. This paper believes that this is due to the high cost of sunk in the manufacturing industry and the generally long investment period, so it is less susceptible to short-term effects. It also indicates that the export-oriented FDI is not susceptible to short-term changes. In the market-oriented variable group, it can be found that the national consumption level has a short-term effect on the direct investment level of the market-oriented industry. Based on the above results, in the short term, the change in exchange rate expectations cannot change the capital injection status and direction of foreign investors, and the inflow of FDI has a lag effect; in the long run, the expected appreciation of the RMB exchange rate has an incentive effect on China's total FDI inflow. The expected appreciation of the RMB exchange rate will help China attract more foreign investors. In addition, the expected increase in the exchange rate will lead to a decline in the amount of investment in export-oriented industries, which will increase the amount of investment in market-oriented industries.

The empirical results show that the upward trend does cause large-scale foreign investment in China. Assuming that other variables are fixed and expected to rise in the same direction, multinational companies will be more inclined to use the labor and raw materials of the invested country in the domestic investment. The market-oriented foreign investment will be encouraged by the appreciation of the local currency. If the exchange rate is expected to decline, the foreign trade will tend to transfer funds to the export-oriented industry, indicating that both the upward and downward exchange rate will be accompanied by the large-scale entry of the corresponding capital.

The empirical test of the total FDI model and the two types of sub-industry models is sufficient to show that large market size and low labor and low input cost are the key factors to increase the amount of FDI entering; increasing market vitality and national consumption capacity can help the service type industry. Do the leading industrial structure evolution. For the prospects of China's

contemporary service industry, high-tech industry, and high-end processing industry growth, it is meaningful to continue to insist on the expected rise in the exchange rate of the RMB.

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