

# Financial Openness Supports the Development of Double Cycle Structure

## -- An Empirical Analysis based on the Yangtze River Delta

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### Abstract

**The Yangtze River Delta is the most economically developed region in China, and it is also the most competitive region in China. However, in China's economy, but looking at the world, the actual level of relevant competitiveness is constantly low. The core lies in the continuous prominence of the role of relevant financial development. It can be said that it is very important for the development of the financial industry to maintain a rapid economic growth in the Yangtze River Delta. Based on financial development and relevant theories, this paper analyzes the current situation of financial development in the Yangtze River Delta, and further investigates the impact of relevant financial development on the economic development of the Yangtze River Delta by combining practical theory and relevant empirical analysis, It also puts forward relevant suggestions and strategies to promote the financial development of the Yangtze River Delta.**

### Keywords

**Financial Development; Cointegration; Financial Related Ratio.**

## 1. Research Background

China's better economy belongs to the Yangtze River Delta, and this place belongs to China's economically developed provinces. Among them, the economy is in the forefront in China, but compared with economically developed countries, the actual comprehensive economic level is still relatively low. Especially in the context of the increasingly obvious impact of financial development on economic growth, it is very important for the development of relevant financial industry to maintain stable economic growth in the Yangtze River Delta. From the practical and theoretical levels, this paper needs to expand and extend the relationship between finance and economic growth, and further adopt relevant quantitative analysis. On this basis, combined with relevant qualitative analysis, this paper establishes the model of financial development on economic growth, and needs to construct relevant financial indicators on the basis of this model, Using the relevant unit root test, Granger test and various econometric methods, the main core is to solve the relationship between financial development and economic growth. Especially based on the empirical analysis of financial development and economic growth in the Yangtze River Delta, this paper gives reasonable suggestions and Countermeasures to promote the healthy development of the market and sustainable economic development in the Yangtze River Delta.

## 2. Research Meaning

According to the spirit conveyed by the central meeting of China, the main core of China's future economic development is the main idea of the two-track circular system. The main core of the

conference is to develop the domestic economic cycle and foreign economic development, and further form a two track cycle.

Promote the transformation of old and new kinetic energy, and financial opening is an important support for the "double cycle". The total economy of the Yangtze River delta accounts for 20% of China's total. The free trade zone in this region has always played a "leader" role in the opening of financial markets. Here, we plan to build a set of financial market opening effect index based on multi factor analysis to study the impact of financial opening on the construction of double cycle system.

### 3. Research Status

From the current situation of China's development, China's main economic development model adopts double cycle development, in which the large cycle is domestic and foreign is the main small cycle. China's economy needs continuous transformation and upgrading in the future, so it needs better support for this process, and the supporting industry is the degree of openness to relevant finance.

(1) In the domestic cycle, the main needs generally need to run smoothly through various links such as production and circulation, but at the same time, it also needs to open up all links. Expanding the degree of openness will effectively improve the quality of financial services, increase the number of China's financial institutions and promote product innovation. We need to be very stable for the circulation between various links and China Unicom. Play a greater role.

(2) While improving the openness of the financial market, it will further liberalize the relevant circulation of capital. This is to let more foreign capital directly enter China for relevant material and financial investment, so that a lot of foreign capital can join the internal cycle of China's economy. The new development pattern of "double cycle" needs a more open financial market. It will be an inevitable trend to timely observe the impact of financial opening on the double cycle and establish an index of the effectiveness of financial opening to promote the "double cycle".

### 4. Journals Reviewed

China's opening of relevant finance, various capital accounts and various financial services are mainly in these two aspects. For the former, in order to prevent relevant financial risks, China restricts cross-border capital in China, which belongs to the era of relevant financial liberalization. For the latter, due to the establishment of relevant financial institutions in China, Financial business can only be carried out after joint venture or capital injection. Based on this, the following documents are sorted out:

Sheng Songcheng and others played a very important role in the research and judgment of China's financial opening situation and Discussion on risk early warning. In his relevant research, they strongly supported some new financial thinking and various open cycle countermeasures necessary for future new development and new pattern.

Luan Jing and others further observed and analyzed some more actual data of Shandong Province in the empirical analysis of financial openness of Shandong Free Trade Zone, and further concluded that financial openness can be said to have a certain impact on the economic growth of Shandong Province.

Liu Xiangdong's main research object in Shanghai Free Trade Zone: actively exploring a new path of financial opening together with commercial banks is the free trade area of Shanghai in China. He has relatively innovative research on the development of offshore economy in Shanghai in this process, It can be said to serve as a bridge for the relevant real economy and the relevant domestic and foreign economic markets.

This paper summarizes and integrates the existing achievements in financial opening, and puts forward the financial opening index for the "double cycle" system combined with some of our own ideas.

## 5. Analysis on the Impact of Financial Opening on Economic Growth in the Yangtze River Delta

### 5.1. Establish Index Evaluation System

Among the actual relevant indicators, it can be said that there are many indicators related to financial openness. In the process of this research, we mainly select several representative indicators as the object and core of our research, including the total import trade (IM), total export trade (Ex) of the customs in the Yangtze River Delta, the actual amount of foreign investment received (FI), the balance of foreign exchange deposits and loans (FE), and the approved amount of domestic qualified investors (QDII).

The main method used in this paper is factor analysis. The core of this method is to analyze the internal relationship of each factor, the composition of each relationship and whether the correlation between their composition is very high. The specific analysis includes the following analysis.

The first is to standardize the data of the research object, the second is to calculate the proof R between the relevant data, and the second is to calculate the matrix eigenvector and the relevant eigenvalue. The cumulative contribution rate and the number of relevant determining factors are calculated according to the overall requirements of the relevant system, and various factor loads and common factor variances are calculated. Finally, the system is analyzed and described according to the above relevant calculations.

### 5.2. Factor Extraction

**Table 1.** Variance of original variables explained by each factor

| assembly   | characteristic value | Variance ratio | Cumulative variance ratio |
|--|----------------------|----------------|---------------------------|
| Total import trade volume of Customs in Yangtze River Delta (IM) | 3.025489             | 0.6051         | 0.6051                    |
| Total customs export trade (Ex)                                  | 1.101847             | 0.2204         | 0.8255                    |
| Actual amount of foreign investment (FI)                         | 0.665567             | 0.1331         | 0.9586                    |
| Foreign exchange deposit and loan balance (FE)                   | 0.147355             | 0.0295         | 0.9881                    |
| Approved quota of domestic qualified investors (QDII)            | 0.059741             | 0.0119         | 1.000                     |

Table 1 our main core is to explain the variance of the relevant original variables. We can know from the first series of relevant data. According to the above calculations and various correlation matrices, our research objects are five values, of which the first component accounts for 60.51% and the second is 22.04%. We explain the original variables for these two related common factors, of which 52.55%, so the interpretation ability of the original variables related to two common factors is extracted on the basis.

### 5.3. Factor Interpretation

During the relevant principal component analysis, the main core is the relevant table 2 obtained through the convergence of the relevant 6th degree. Therefore, in the relevant table 2 load distribution and relevant matrix, we can clearly see the relationship and proportion of various factors. Among them, the factors with large load coefficient are QDII, FI and Fe, the relationship

between these three factors and F1 is relatively concentrated and intensive, but the variables with two factors IM and ex are closely related to F2. The main core is the relevant explanatory variables for F2. The specific F1 and F2 can be further shown as follows:

**Table 2.** Factor load matrix

| assembly   | Factor F1 | Factor F2 |
|--|-----------|-----------|
| Total import trade volume of Customs in Yangtze River Delta (IM) | 0.490039  | 0.772245  |
| Total customs export trade (Ex)                                  | 0.587402  | 0.718820  |
| Actual amount of foreign investment (FI)                         | -0.095516 | 0.251641  |
| Foreign exchange deposit and loan balance (FE)                   | -0.933838 | -0.121534 |
| Approved quota of domestic qualified investors (QDII)            | 1.0000    | 0.0000    |

$$\begin{aligned}
 Im &= 0.490039 f_1 + 0.772245 f_2 + \varepsilon_1 \\
 Ex &= 0.587402 f_1 + 0.772245 f_2 + \varepsilon_2 \\
 Fi &= -0.095516 f_1 + 0.251641 f_2 + \varepsilon_3 \\
 Fe &= -0.933838 f_1 + (-0.121534) f_2 + \varepsilon_4 \\
 QDII &= 1.000000 f_1 + 0.00000000 f_2 + \varepsilon_5
 \end{aligned}$$

#### 5.4. Calculate Factor Score

According to the factor score matrix in Table 3, the common factors F1 and F2 can be expressed as a linear combination of each factor as follows:

**Table 3.** Factor score coefficient matrix

| assembly   | Factor F1 | Factor F2 |
|--|-----------|-----------|
| Total import trade volume of Customs in Yangtze River Delta (IM) | 0.283845  | 0.869443  |
| Total customs export trade (Ex)                                  | 0.391396  | 0.841756  |
| Actual amount of foreign investment (FI)                         | -0.154779 | 0.220204  |
| Foreign exchange deposit and loan balance (FE)                   | -0.874779 | -0.348694 |
| Approved quota of domestic qualified investors (QDII)            | 0.968940  | 0.247296  |

$$f_1 = 0.2838451 Im + 0.391396 Ex - 0.154779 Fi - 0.874779 Fe + 0.9689400 QDII$$

$$f_2 = 0.869443 Im + 0.841756 Ex + 0.220204 Fi - 0.348694 Fe + 0.247296 QDII$$

According to the above formula, the extracted common factors  $f_1$  and  $f_2$  can be calculated by substituting the values of each factor.

#### 5.5. Calculate the Comprehensive Factor of Financial Openness

The common factor is weighted average, and the weight is the value of characteristic root in Table 1. The calculation formula is:

$$F = \frac{\lambda_1}{\lambda_1 + \lambda_2} f_1 + \frac{\lambda_2}{\lambda_1 + \lambda_2} f_2$$

Among them,  $\lambda_1=3.025489$ ,  $\lambda_2=1.101847$

By regression analysis of common factor F and GDP of the Yangtze River Delta, it is obtained that  $y = 21263.63 - 0.268601f$ .

Figure 1 shows the results of Eviews analysis. Our continuous tests on the relevant amount openness index and various t tests are not significant, and the relevant R after specific adjustment is also very insignificant. Therefore, we need to further study that there is no obvious relationship between China's financial opening and the economic relationship of the Pearl River delta at this time.

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.    |
|--------------------|-------------|-----------------------|-------------|----------|
| C                  | 21263.63    | 4374.422              | 4.860900    | 0.0007   |
| F                  | -0.268601   | 0.392638              | -0.684093   | 0.5095   |
| R-squared          | 0.044706    | Mean dependent var    |             | 18351.28 |
| Adjusted R-squared | -0.050823   | S.D. dependent var    |             | 3398.622 |
| S.E. of regression | 3483.916    | Akaike info criterion |             | 19.30071 |
| Sum squared resid  | 1.21E+08    | Schwarz criterion     |             | 19.38153 |
| Log likelihood     | -113.8043   | Hannan-Quinn criter.  |             | 19.27079 |
| F-statistic        | 0.467983    | Durbin-Watson stat    |             | 1.429197 |
| Prob(F-statistic)  | 0.509458    |                       |             |          |

**Figure 1.** The results of Eviews analysis

## 6. Conclusion

At present, the financial openness of the Yangtze River Delta in China is not obvious, and has no great impact on economic development. With the continuous increase of the financial openness of the Pearl River Delta in recent years, China will continue to accelerate the speed of relevant financial development and provide better services with the help of Shanghai free trade zone.

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