

An Empirical Study on the Interaction between Chinese Marketing and Trade System and Investment and Financing of Foreign Science and Technology Industry

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Abstract-With the rapid development of national economy, we are more and more aware of the importance of high-tech industries. China is constantly improving its marketing and trade system to better serve the investment and financing activities of foreign science and technology industries. At the same time, the business activities of foreign enterprises also have an important impact on Chinese relevant systems. This paper analyses the current situation at home and abroad, points out the significance of the interaction between marketing and trade system and investment and financing of foreign science and technology industry, and finally puts forward relevant suggestions, with a view to playing a reference role in the decision-making of relevant departments in China.

Keywords-marketing and trade system, science and technology industry, investment and financing

I. REVIEW OF RESEARCH STATUS ABROAD

The theories of marketing and trade system and foreign investment and financing have been deeply studied abroad. In the field of international trade, they have experienced a series of developments from classical trade theory, neoclassical trade theory, new trade theory to new new trade theory. At each stage, there are some representative authoritative economists. In the research of these scholars, the emergence of system theory, foreign investment theory and so on has played a tremendous role in guiding and promoting the development of international trade. The emergence of the theory of institutional economy makes firms pay more attention to the impact of the institutional environment of the host country on investment and operation in transnational trade and investment activities, which promotes the further development of the theory of institutional economics. Transaction cost theory, property right theory and institutional change theory in new institutional economics provide theoretical support for economic development, and have a great impact on theory and practice. Foreign investment theory also plays an important role in promoting the development of national economy and trade, and self-monopoly advantage theory has become the pioneer of international investment theory. Then

internalization theory, location advantage theory, product life cycle theory, comparative advantage theory and international production compromise theory came into being, which provide theoretical support for enterprises to carry out overseas investment activities. Kaufmann and Zoido-Lobaton (1999) believe that the institutional environment of a country has a great impact on attracting foreign investment. Foreign investment has an impact on all aspects of a country's system and policies, and promotes its institutional change and improvement. Therefore, institutional change and the development of FDI are mutually influential and complementary; North (1990), Barro (1991) and Scully (1998) believe that institutional change and the development of FDI are mutually reinforcing. The improvement of the host country's system is beneficial to the economic development of the country. If the system is not perfect or the system is absent, it will lead to the difficulty of coordinated development of the political and legal system and the allocation of market resources, and then it will be difficult to attract FDI. At the same time, without the introduction of foreign capital, the change and development of the country's system will be further delayed. Therefore, it explains why the system of the economically backward country has not been developed. Developed countries are not as attractive to FDI as developed countries are; STEIN (2001) analyzed various indicators of institutional variables in this paper, and found that institutional arrangements are highly correlated with FDI, and there is a strong positive correlation between them; Gliberman and Shapiro (2015) found that if a country institutional arrangements are high, they can be effective. Attracting more foreign investment from the United States is also conducive to improving the efficiency of the trade system, and the trade system is proportional to attracting foreign investment. These foreign scholars have done a lot of research in this field, which plays an important role in promoting the development of international marketing and trade theory and practice.

II. A REVIEW OF DOMESTIC RESEARCH

Based on the actual situation of our country, Chinese scholars have made active research and exploration on marketing and trade theory, institutional economics theory and foreign investment and financing theory, and on the basis of absorbing and drawing lessons from foreign scholars research results. Liu Yuesheng used the law of international value to analyze and explain the law of international investment and the theory of international direct investment; Zhang Erzhen and Ma Yeqing put forward the theory of integration of trade and investment, and considered that integration of trade and investment is a highly integrated and integrated international economic phenomenon of contemporary international trade and international direct investment. Some scholars have also analyzed and elaborated the theory and practice of international direct investment in their published articles, such as Huang Hanmin (2003) when discussing the adjustment of Chinese trade policy in the new era, talking about the impact of trade policy on transnational investment; Zhang Huarong (2006) reflected on the theory of enterprise internationalization and discussed its value understanding; Zhang Xiangwen (2010) and so on. The problems of FDI and export centralization in China; Pan Zhenchun and Pan Zhechun (2004) used empirical evidence from different regions of China to analyze the influencing factors of system and policy as well as the location distribution of FDI; Pan Zhenchun and Pan Zhechun (2004) analyzed various indicators of trade system factors, and empirically analyzed the degree of marketization and the degree of government thrift. The study finds that the trade system of a country has an important influence on foreign investment and its regional flow. It also finds that trade preferential policies play an obvious role in attracting foreign investment and can be more conducive to the introduction of foreign investment. However, preferential policies attract foreign investment. With the passage of time, foreign investment activities also affect the formulation of the national system and the implementation of trade policies. Li Yaling (2010) found that foreign investment has a two-way interactive relationship with Chinese regional system. Introducing foreign-funded enterprises into production and operation activities, bringing technology and management experience, etc., can greatly promote the change of Chinese regional system. At the same time, Chinese trade system environment and relevant foreign investment policies also play an important role in foreign investment, guiding foreign-funded enterprises to invest in different regions and industries in China; Zhao Bing (2016) believes that trade system factors play an important role in attracting foreign investment, and the host country should optimize the trade system to attract foreign investment; and foreign investment should be introduced into China. Deng Ming (2017) analyzed the impact of the trade system on the foreign investment absorption of developing countries from the aspects of the quality of the host country's system and the institutional distance between countries. With the development of World Trade and the expansion of foreign investment by international capital, it is believed that in the

near future, new theories and important documents on trade system and foreign investment in science and technology industry will continue to emerge, which will continue to promote further research on trade system and investment and financing of foreign investment in science and technology industry in the field of international trade.

III. ANALYSIS OF THE THEORETICAL SIGNIFICANCE

With the rapid development of the world economy, great changes have taken place in the theories and models of marketing and trade. International marketing and trade activities are inseparable. The related system construction and trade theory research are also constantly advancing. They have experienced a series of development processes from classical trade theory, neoclassical trade theory, new trade theory to new trade theory. There are some representative authoritative economists in every stage. The emergence of system theory and foreign investment and financing theory plays a great role in guiding and promoting the development of international trade. Combining with the research of this project, we focus on the theories of system and trade system, foreign direct investment, international trade policy and theory, and economic growth. These theories are the cornerstone of this paper and play an important theoretical guiding role.

The emergence of the early theory of institutional economy makes firms pay more attention to the impact of the institutional environment of the host country on the investment and operation of science and technology industry in transnational trade and investment and financing activities, which promotes the further development of the theory of institutional economics. From the mid-1930s to the early 1950s, this is a transitional period between the old and the new institutional schools. During this period, economists developed Van Boers ethics on the way of studying institutional issues. They analyzed capitalist economic issues from the perspective of society and enterprises. They believed that technological progress was of great significance to the system, and analyzed the impact of property right separation on capitalism and post-industrialization era. The trend of development lays a foundation for the emergence of new institutional economics. Transaction cost theory, property right theory and institutional change theory in new institutional economics provide theoretical support for economic development, and have a great impact on theory and practice. Institutional change theory is an important theory, which holds that institutional change is a process of substitution of higher-income system for lower-income system. The design and perfection of the system has a very important impact on a country economic development and foreign trade exchanges. It not only has a direct impact on the development of the national economy, but also has an incentive or restrictive effect on the external economy, especially foreign investment. Therefore, we must pay attention to the institutional environment of the host country

in the activities of international trade and investment in surgical technology industry.

The theory of foreign investment and financing has positive theoretical significance for the development of national economy and foreign trade. Since Stephen Heimer put forward the theory of monopoly advantage in 1960 to explain American enterprises; FDI behavior, he demonstrated that foreign investment in science and technology industry is different from that of foreign financial assets in general sense, and has become the pioneer of international investment theory; then internalization theory, location advantage theory, product life cycle theory, comparative advantage theory, International Production Compromise theory, etc. Emerge as the times require. These theories provide a theoretical basis for enterprises to carry out overseas investment activities and greatly promote the investment and operation activities of transnational corporations in the international market. As any investment activities are inevitably affected by the environment of the host country trade system, only by a good understanding and familiarity with the host country relevant systems and policies related to trade, can appropriate investment be adopted. Capital and management methods, and as far as possible to adapt to the institutional environment of the country, in order to enable enterprises to better develop and grow in the country market.

Based on marketing and trade theory, new institutional economics theory, foreign direct investment theory and economic growth theory, this study explores the interaction between marketing and trade system, system construction and investment and financing of foreign science and technology industries, and the important role of their joint development in economic growth and foreign trade of host countries. From the perspective of the trade system environment, we analyze how the trade system environment of our country affects the foreign-funded enterprises that invest in the direct science and technology industry in our country, and how foreign investment promotes and benefits the trade system construction of our country, so as to serve the construction of our overall economy, thus helping us to further promote me. Chinese interaction effect between trade system construction and attracting foreign investment and how to coordinate its development to promote economic growth, and provide better theoretical support for Chinese marketing and trade system construction, development of foreign trade and trade system formulation and how to effectively attract foreign investment, which also highlights the theoretical significance of this study in this field.

IV. ANALYSIS OF PRACTICAL SIGNIFICANCE

Under the environment of multinational foreign investment corporations, it is becoming more and more important to study Chinese marketing trade system and system construction and how to effectively attract foreign investment in science and technology industry. On the basis of actively establishing a good trade system, foreign-funded enterprises are also actively entering our market and looking for investment fields and places. The worldwide industrial

transfer has created a good external environment for attracting foreign investment and financing to our country. International capital investment is also the result of the development of international economy and industry globalization. Foreign-funded enterprises entering our country will develop national industries. Exhibition and industrial restructuring play an active role. Therefore, optimizing the trade system and attracting foreign investment are of great practical significance to Chinese economic growth. Mainly reflected in the following aspects:

A. Promoting the Transformation and Upgrading of Chinese Science and Technology Industrial Structure

Foreign investment and financing activities are conducive to the upgrading of the Chinese science and Technology Industrial structure, and the entry of foreign industries and funds plays an important role in the transfer of Chinese science and technology industry. Chinese introduction of foreign capital is based on the realistic needs of subordinating to the upgrading of its industrial structure and promoting social and economic development. By undertaking international industrial transfer, Chinese industry can be well integrated into its international division of labor. This system is conducive to providing new expansion space for the development of Chinese disadvantaged industries and promoting the continuous upgrading and upgrading of domestic industries. If the undertaking industry has not been fully developed, it may also lead to the marginalization of the industry, and eventually make the economic development space of the industry further shrink, or even be eliminated.

B. It is Conducive to the Optimal Allocation of Resources in China

With the entry of foreign capital, we can use the experience and technology of transnational corporations to merge and reorganize the enterprises in the receiving countries, and promote the transformation and production of some backward enterprises, so that the superior resources can continue to expand production, and the enterprises with backward production capacity can carry out transformation and upgrading or engage in other life and business activities, so as to optimize the allocation of resources reasonably. In addition, as a new industry recipient country, China can break the original resource balance and re-establish a new efficient resource allocation mechanism.

C. Effectively Enhance the Overall Competitiveness of Chinese Economy

The entry of foreign investment in science and technology industry will bring high-tech industry technology, sufficient funds and rich management experience to our country. The entry of these advantageous resources can bring fresh blood to our country, and make more resources invest in our Chinese emerging industries. The industrial advantages in this field can be effectively strengthened, so that our related industries have more competitive advantages. Moreover, foreign industrial investment and transfer into China can better optimize

Chinese industrial structure and promote local economic development. At the same time, the entry of foreign industry can bring advanced technology and management experience, improve the efficiency of resource allocation and utilization, and enhance the industrial innovation ability of our country, which is conducive to enhancing the overall competitiveness of our economy in the international market.

In the light of the above, studying the design and formulation of international marketing and trade system is conducive to the development of Chinese foreign trade and the creation of a good institutional environment for attracting foreign investment and financing in science and technology industries; at the same time, actively introducing foreign investment is conducive to further expanding Chinese foreign economic exchanges, promoting the construction of trade system and the perfection of trade policies, and guiding international industries to Chinese rational development. Flow and transfer, introduce foreign advanced technology and management experience, and then participate in international competition to expand our foreign exchange earnings. Therefore, it is of great theoretical and practical significance to actively strengthen the construction of trade system and actively introduce foreign investment in science and technology industries, and to study the relationship between the two, so that they can promote each other and jointly promote economic growth, which will promote the prosperity of Chinese foreign trade and enhance the overall national strength.

V. EMPIRICAL ANALYSIS

A. Variable Analysis

We analyze the influence of marketing and trade system on the investment and financing of foreign science and technology industry. There are many institutional factors in a country. There are many institutional factors affecting foreign investment, such as political, economic and cultural factors. As for the specific impact of trade system on foreign manufacturing investment, we make a concrete analysis of the institutional factors. First, we select the tariff level of China (TARI). The impact of IPRI, Exchange Rate (EXRA), Government Integrity (ADMI) and Bilateral Investment Agreement (BIPA) on FDI is analyzed. For the convenience of variable acquisition and calculation, we choose the above five institutional variables for the time being. In addition, the latter model needs to increase the GDP of the two countries and the distance between the two countries. We use seven variables to make an empirical analysis of the impact of foreign investment.

B. Modeling

In this paper, the gravity model is used for empirical analysis. The trade gravity model is based on Newton's law of universal gravitation, that is, the attraction of two objects is directly proportional to the product of their mass and inversely proportional to the square of their distance. Then this idea can be applied to the field of trade, that is, the volume of trade between the two countries is proportional to the product of economic scale, and inversely proportional to

the distance between the two countries. First, we analyze the trade gravity model, which is expressed by mathematical formulas as follows:

$$X_{ij} = A (Y_i Y_j) D_{ij} \quad (1)$$

Among them, X_{ij} denotes the trade flow between I and j; A denotes the constant term; Y_i and Y_j denote the respective national income levels of I and j; D_{ij} denotes the geographical distance between I and J. Because the model is a non-linear model, in order to facilitate empirical analysis and calculation, we take the logarithm of the model, so that the original model can be transformed into a linear logarithmic model expression:

$$\ln X_{ij} = \beta_0 + \beta_1 \ln(Y_i Y_j) + \beta_2 \ln D_{ij} + \mu_{ij} \quad (2)$$

Among them, X_{ij} , Y_i , Y_j and D_{ij} have the same meanings as above. $\ln X_{ij}$, $\ln(Y_i Y_j)$ and $\ln D_{ij}$ Represented as X_{ij} , $Y_i Y_j$ and D_{ij} The natural logarithm, β_0 , β_1 and β_2 It is expressed as regression coefficient. μ_{ij} It represents standard random error. Based on the above model, we can introduce different variables for substitution analysis and add other relevant variables according to the needs of empirical research. Based on formula (2), we establish a new econometric model as follows:

$$\begin{aligned} \ln FDI_{(it)} = & \beta_0 + \beta_1 \ln TGDP_t + \beta_2 \ln DIST_{it} + \beta_3 \\ & \ln TARI_t + \beta_4 \ln IPRI_t + \beta_5 \ln EXRA_t + \\ & \beta_6 \ln ADMI_t + \beta_7 \ln BIPA_t + \mu_{it} \quad (3) \end{aligned}$$

C. Data Analysis Results

In this paper, panel data and trade gravity model are used to empirically analyze the impact of Chinese trade system on manufacturing investment in China by major investors or regions. The reference data are from 1998 to 2017. The main investment countries and regions are Japan, Korea, Thailand, Philippines, Singapore, the United States and the European Union, as well as Hong Kong, Macao and Taiwan in China. Relevant data during this period came from International Statistical Yearbook, Foreign Economic Statistical Yearbook and China Statistical Yearbook of each year. Distance data were calculated by WinGlobe V2.1 software.

Based on the analysis of the results, model L1 and model L7 test the effects of Chinese total economic volume, geographical distance and main trade system variables on attracting foreign investment. Among them, Model 7 incorporates Chinese trade system and all relevant variables, and has a good fit. It can explain comprehensively the impact of Chinese marketing and trade system factors on attracting foreign investment and financing inflows in science and technology industries.

VI. RELEVANT SUGGESTIONS

On the basis of marketing theory, trade system theory, foreign investment and financing theory and economic growth theory, and combined with relevant knowledge of regional economics, political economics, statistics, econometrics and game theory, this paper makes a theoretical analysis of the interaction between Chinese trade system and foreign investment in China, and on the basis of theoretical analysis, through the analysis of China 1. The relevant data collected during the period from 1979 to 2017 are sorted out, and empirical analysis is carried out by using quantitative models and general econometric methods, in order to solve the problem of how to promote the coordinated development of Chinese marketing and trade system and investment and financing of foreign science and technology industries in order to promote economic growth.

A. Promoting Chinese Effective Utilization of Foreign Investment in Science and Technology Industry through the Construction of Marketing and Trade System

Through the study of Chinese marketing and trade system, we can better understand the importance of trade system construction for attracting foreign investment, especially the importance of improving the trade system for attracting foreign investment in science and technology industries and expanding foreign trade. We can also better understand that the optimization of the trade system can absorb foreign investment and foreign capital, and increase our economic strength and comprehensive national strength. We must attach importance to system construction, break down all kinds of barriers hindering economic development, actively attract foreign investment and financing in science and technology industry through system improvement, promote the upgrading of industrial structure, and promote the development of national economy.

B. Exerting the Great Promoting Effect of Investment and Financing of Foreign Science and Technology Industry on the Construction of Chinese Marketing and Trade System

Since the reform and opening up, China has made great achievements, and has become one of the world's major trading powers. Our country has different sources of foreign investment and regional differences of investment. We must find out the institutional reasons leading to the differences so as to rationally design the system and promote the construction of the trade system. To make better use of

foreign investment and prevent the damage to the ecological environment caused by foreign pollution, we must make a reasonable choice between foreign investment in science and technology industry. We must attract foreign investment in the sunrise science and technology industry and promote the sound development of Chinese economy.

C. Promoting the Coordinated Development of Marketing and Trade System and Investment and Financing of Foreign Science and Technology Industries to Promote Chinese Economic Growth

Through the analysis of this paper, we find that strengthening the construction of trade system and attracting foreign investment in science and technology industry are an organic unity, which promote and influence each other. In policy-making, foreign trade needs to find better measures to optimize the trade system to attract foreign investment in science and technology industries, to give play to each other's strengths and advantages, and to promote each other, so that the coordinated development of the two can better promote Chinese economic growth. We must actively formulate effective measures to promote the synergistic development effect of the two, so as to better serve Chinese economic construction.

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