

China-ASEAN Location Investment Decisions-Analysis from Enterprise Level

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Abstract

Since the 21st century, with China's reform and opening up, China has welcomed the rapid development and growth brought by the opening up of its economy, and China's investment strategy has slowly shifted to the international market. The trade and foreign direct investment between China and ASEAN have also received much attention in academia, with rich academic achievements in recent years. However, few studies have studied the impact factors and investment performance of enterprise heterogeneity on the location selection of direct foreign investment of Chinese enterprises from the perspective of micro-level enterprise data, with even fewer academic research focused on China-ASEAN studies.

Based on the above background, this paper will focus on the discussion and analysis of enterprise location investment decisions by taking enterprise heterogeneity factors and host country factors as cross-factors. First of all, this paper analyzes the various characteristics using the published data of China's investment in ASEAN from 2004 to 2013. In the empirical regression part of the paper, it combines the enterprise heterogeneity factors and the host country location factors into the Logit model to explore how the host country factors affect the investment decisions of enterprises in ASEAN. Therefore, this paper tests the grouping regression and corporate regulatory effect of the ten ASEAN countries, and finds that the corporate factor and the host country factor offset each other to a certain extent. This paper further expands the feasibility of the research on ASEAN location investment based on the theory of enterprise heterogeneity, and also provides a supplementary perspective for the relationship between enterprise heterogeneity and location selection strategy.

Keywords: firm heterogeneity, ASEAN location choice, foreign direct investment

1. Introduction

1.1 Research Background

Since the reform and opening up, the global value chain system has gradually improved, and China has also actively participated in the division of labor system. Especially after the "Belt and Road Initiative" was put forward, a series of policies to promote investment and trade have been issued one after the other, bringing greater development opportunities and broader investment prospects to enterprises in China. The formal proposal of the "Belt and Road Initiative" has provided a new opportunity for China's enterprises to enter the international market. Therefore, it is particularly important to understand the reasons, impact and performance of enterprises in China choosing OFDI locations. In recent years, the overall economic development prospects of ASEAN countries are good-looking, and the number of foreign enterprises choosing to invest in ASEAN countries has also increased rapidly. The deepening economic cooperation between China and ASEAN shows that the long-term development potential of ASEAN in the future is considerable.

With the development of China's economy in recent years, the scale of China's OFDI (Outward Foreign Direct Investment) has increased rapidly. High-level investment in opening to the outside world is an important part of China's foreign trade policy. ASEAN, as an economy with a population of 600 million and vast resources, is geographically close to China. It is rich in natural resources, cheap and sufficient in labor. In recent years, it has significantly strengthened its support for foreign investment. These geographical advantages are very attractive to our enterprises. Understanding the universality and particularity of ASEAN's location selection from the micro-level of enterprises is helpful to understand the basic laws and characteristics of location selection under the current

international situation. Over the past decade, FDI from China has increased by 65%, from an average of US\$ 6.9 billion in 2011-2015 to an average of US\$ 11.5 billion in 2016-2020, accounting for 7.9% of the total FDI absorbed by ASEAN, up from 6.2%. The ten ASEAN countries increased its share of China's foreign investment flows from an average of 5.5% in 2009-2010 to an average of 9.0% in 2018-2019. Using enterprise-level data to examine the triple marginal expansion of OFDI in China is helpful in understanding the internal dynamic mechanism of OFDI location selection and performance. This creates conditions for further optimizing the overall structure and level of OFDI in China.

1.2 The Research Methods and Contents

The research objectives of this paper are mainly to explore the reasons why corporate heterogeneity affects foreign direct investment of enterprises in China, the impact of corporate heterogeneity on enterprises in China's choice of ASEAN location, the direction and results of this impact, and the overall performance of these factors on enterprises in China's investment in ASEAN. The realization method of these research objectives is mainly to use regression model to detect the significance and sign of different variables through the model to study the positive and negative relationship and closeness between each factor and the heterogeneity of the enterprise. This paper will also use the example of Chinese enterprises' investment in ASEAN as the research subject to analyze the characteristics and common points of Chinese investment in ASEAN. The innovation of this paper lies in narrowing the scope to the investment relationship between China and ASEAN, and using the micro-level data analysis of Chinese enterprises, which is different from the macro-level data and angle analysis in the traditional investment research. In addition, the standard research on enterprise heterogeneity theory is not limited to the regression model, but focuses on the causal relationship between enterprise heterogeneity and investment location selection, thus expanding the location research theory.

1.3 The Research Methods of This Paper

1. Literature research method

This paper summarizes the impact and reasons of corporate heterogeneity on OFDI by combing the existing theories about corporate heterogeneity and foreign direct investment, as well as analyzing and summarizing the research literature of China enterprises choosing to invest in the ten ASEAN countries for OFDI in recent years, which provides a sufficient theoretical basis and foreshadowing for the following empirical analysis.

2. Empirical analysis

This paper selects the enterprise-level data of China Industrial Enterprise Database from 2004 to 2013 to match with the list of foreign direct investment enterprises approved by the Ministry of Commerce in the same period (2004 to 2013), uses the model to conduct empirical test, and conducts regression analysis and significance test on the relationship between location factors and enterprise heterogeneity in ASEAN countries, as a basis for Chinese enterprises to invest in ASEAN OFDI.

2. Theoretical Basis and Literature Review

2.1 Definition

1. Outward Foreign Direct Investment

According to the definition of the State Administration of Foreign Exchange, foreign direct investment refers to an outflow of international investment from a country/region, or an economic activity in which an enterprise invests in foreign countries and Hong Kong, Macao and Taiwan regions in cash, in kind, in technology, intangible assets, etc., and mainly controls the right to operate enterprises outside the country (territory). Foreign direct investment is beneficial for enterprises to participate in the international division of labor and industrial chain, and achieve the goal of actively reducing trade barriers and increasing market share.

2. Firm Heterogeneity

Enterprise heterogeneity refers to the difference between enterprises, including the difference in scale, year of establishment, accumulation of capital, legal ownership, human capital, organization method, technology selection and other characteristics, which can reflect the difference in scale and production efficiency between enterprises. As mentioned above, the new and new trade theory is based on the concept of enterprise heterogeneity, which identifies different development needs for different enterprises' productivity. Enterprises can develop effective production and organization methods based on their own scale, such as assessing productivity and deciding whether to expand/invest overseas based on their own capabilities.

2.2 China's Investment Location Theory

The theory of international production compromise was proposed by Deng Ning (J.H. Dunning, 1977). The theory was one of the few important studies on the bilateral relationship between enterprises and host countries in the investment location theory of Europe and the United States at that time. The theory points out that location advantage can promote OFDI, and emphasizes the importance of host country factors to enterprise investment decisions. Location factors include natural resources, market size, distance from host country and other factors.

Domestic investment location theory started later than foreign literature, so at first it lacked sufficient representative data and in-depth research. However, based on the understanding of the Chinese economy, domestic relevant research results were more comprehensive and detailed. Cheung & Qian (2009) analyzed the location influencing factors of China's investment in developed and developing countries. China's direct investment in developing countries did not show the characteristics of market seeking, while China's requirements for developed countries included the characteristics of market seeking, low cost and rich resources. However, Zhang and Qian only used the approved investment data, which may be different from the actual situation. This is also one of the inadequacies in the author's article. However, at present, the representative data in China are limited, and there are many missing values in the micro-data of enterprises. Therefore, the author uses the enterprise investment directory approved by the Ministry of Commerce for data matching. Hu Bo and Li Ling (2008) found that the geographical advantage of developed countries lies in their high level of science and technology, while that of developing countries lies in their rich mineral energy endowment or potential domestic market.

Under the impact of the epidemic, Sino-US trade frictions and the Russian-Ukraine conflict, the global supply chain will shift to Southeast Asia and Central Asian countries and regions. The construction of Southeast Asia's industrial clusters will be significantly improved, and some labor-intensive industries and the production and processing of medium- and high-end manufacturing industries will be relocated from China to Southeast Asia. In the long term, Southeast Asia, which has the potential to undertake the industrial chain of China, is of great benefit to the domestic economic development. The simultaneous iteration of China and Southeast Asia will help promote the economic development of the whole Asia and build a common economy with regional integration, which is especially important in the G2 era.

2.3 Relevant International Research

At present, it is common at the domestic level and abroad to study the impact of corporate heterogeneity on foreign direct investment behavior from the macro level (state, industry), so there is a lack of research on foreign investment behavior from the micro level. However, there is a general heterogeneity among enterprises, which has a profound impact on China's foreign direct investment. Although the theory in recent years has laid a certain foundation for the research of enterprise heterogeneity on foreign direct investment, the research at domestic level and abroad is more focused on productivity, with a lack of micro-level analysis of investment status, location research and performance analysis of OFDI ASEAN countries in China, and little empirical research on enterprise heterogeneity.

The traditional international trade theory did not take into account the heterogeneity of enterprises with the assumption of complete competition, homogeneous enterprises and products and no transaction cost, and the fact that the globalization at that time had not extended to the entire globe. With the new globalization of trade division of labor, comparative advantages are not limited to industries, and corporate differentiation is increasingly obvious. At the beginning of the 21st century, New-New Trade Theory, which is represented by the heterogeneous enterprise trade model and the enterprise endogenous boundary model, brings heterogeneity into the micro-analysis framework of the enterprise, and gives sufficient explanatory power to the OFDI decision-making choices and the international trade structure of the enterprise, thus becoming a new hot spot in the current international trade theory research. Melitz (2003) opened up a new trade theory by explaining that enterprise export decisions are determined by enterprise productivity through enterprise heterogeneity. Later Helpman et al. (2004) linked the heterogeneity of enterprises to the foreign direct investment policy. The main conclusion is that low-productivity enterprises can only trade in the domestic market, while medium-productivity enterprises are only limited to exporting to foreign markets. High-productivity enterprises can make foreign direct investment and participate in the international division of labor system. Yeaple (2005) established a general equilibrium model for the Melitz (2003) model, which attributed the three factors of competitive technology, international trade cost and workers with heterogeneous technological skills to the heterogeneity of the enterprise. Baldwin and Okubo (2006) added enterprise migration to the model of enterprise heterogeneity, which introduced that enterprises would gradually migrate to large countries, either in the form of FDI or outsourcing of products or services. Big countries get extra dividends, while small ones are squeezed out of the market.

2.4 Relationship between Enterprise Heterogeneity and Enterprise FDI Location Selection

In recent years, a new globalization trend has made the heterogeneity of enterprises much more prominent. Bernard, Jensen(2007) and Mayor, Ottaviano(2007) analyze the internationalization behavior of enterprises by using the data of enterprises in the United States and the European Union respectively. The conclusion supports the HMY model, that is, the productivity level of enterprises that invest abroad is much higher than that of enterprises that produce domestically or export only. In addition, the research on the correlation between firm heterogeneity and firms' FDI location choice has also produced a large number of research literature.

Tian Wei and Yu Miaojie (2012) matched the "China Industrial Enterprise Database" with the FDI data of large industrial enterprises in Zhejiang Province, proving that there is a positive relationship between enterprise productivity and their investment behavior. However, the existing foreign research focuses on the developed countries, so the relevant theories of developed countries may not be suitable for emerging economies such as China and some ASEAN countries. Therefore, domestic scholars have developed the applicability of heterogeneous enterprise trade theory in China based on the market characteristics of China (Zhao Junli and Yan Yuanyuan, 2018). Yang Zinan (2020) collates the geographical advantages of ASEAN countries through four representative factors and proves that there is a certain degree of offsetting effect between enterprise productivity and enterprise size and the geographical factors of ASEAN countries, i.e. enterprises with higher productivity are more likely to make direct investment in regions where geographical advantages are not obvious. Wang Fangfang and Zhao Yongliang (2012) proved that the impact of productivity on enterprises' OFDI activities changes with the change of location through the analysis of Guangdong enterprises' foreign investment data from 2002 to 2009, among which productivity has the most significant impact on the Asian region.

2.5 The Current Situation of China's Foreign Investment and Trade in Southeast Asia

With the epidemic in recent years and the impact of the conflict between Russia and Ukraine on the global economy, the global strategic alliance will reshape and change the regional flow of international trade. Therefore, new flows of international trade and investment may emerge in the next decade. As the United States has been actively promoting energy cooperation with Europe recently, trade flows between Europe and the United States will increase significantly. In addition, the EU will also expand trade flows with ASEAN countries, the Middle East and other Asian countries and regions; It is estimated that the related new trade volume with China, Japan, the United States and the European Union will reach 1 trillion US dollars; ASEAN's trade with China will grow by \$438 billion, the largest increase in interregional trade. For China's enterprises which are developing large-scale industrial layout around Asia, although China's position as the global leader in manufacturing industry will not change for a long time, it is undeniable that the demographic dividend and labor cost are rising continuously, and the profit reduction of many labor-intensive products has brought pressure to local enterprises. In recent years, the cooperation among the ten ASEAN countries and China has surfaced tremendous opportunities, covering a wide range of fields and with strong long-term growth potential. From January to October 2022, the bilateral import and export of goods between China and the ASEAN Nations amounted to US\$ 798,482,965,000, representing an increase of US\$ 9,514,970,000 as compared with the corresponding period of 2021, representing a year-on-year increase of 13.8%.



Figure 1. Bilateral import and export between China and ASEAN

Source. Data Consolidation of China Economic and Technological Research Institute.

As can be seen from Figures 1 and 2, the overall trend of bilateral import and export flows between China and Southeast Asian countries has been increasing in recent years. Apart from the small drop between 2015 and 2016 and 2021 and 2022, bilateral import and export flows and total commodity value continued to grow with good prospects. From January to October 2022, the total value of China's exports to ASEAN was US\$ 463,815 million,

representing an increase of US\$ 776,326.03 million as compared with the corresponding period of 2021, representing a year-on-year increase of 20.5%. From January to October 2022, the trade balance between China and ASEAN was US\$ 12,935,335.45 million, and from January to October 2021, the trade balance between China and ASEAN was US\$ 6,923,477.45 million.

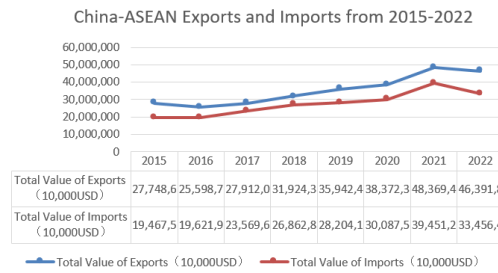


Figure 2. International imports and exports between China and Southeast Asian countries

Source. Data Consolidation of China Economic and Technological Research Institute.

Table 1. Proportion of non-state owned enterprises and total factor productivity value

Country	Proportion of non-state-owned enterprises	Average TFP value
Singapore	0.702	5.14
Malaysia	0.75	4.82
Indonesia	0.686	5.08
Thailand	0.7	4.64
the Philippines	0.25	5.32
Comodia	0.85	4.57
Laos	0.75	4.92
Viet Nam	0.796	4.83
Myanmar	0.714	4.90
Brunei	1	4.44

Source. Yang Zinan (China Industrial Enterprise Database).

Thus, total factor productivity (TFP) of an enterprise is positively correlated with the social and economic production of the host country, but some developing countries with development potential also have higher TFP values, such as Indonesia, the Philippines, Laos and other countries with low productivity and single industrial structure. At the same time, the above table can be seen that in recent years, the proportion of international investment has gradually shifted from monopoly of state-owned enterprises to non-state-owned enterprises and private enterprises. With the scale of China's foreign investment getting larger and larger, the scale and number of non-state-owned enterprises are also growing rapidly. In recent years, non-state-owned enterprises have become the theme of China's investment in ASEAN, with Brunei accounting for as much as 100%. Therefore, it is concluded that enterprise scale and production have significant impact on investment location; The attraction of ASEAN to China's non-state-owned enterprises is higher than that of state-owned enterprises. This shows that China's enterprises are more risk-resistant and China's policies to encourage foreign investment are very effective.

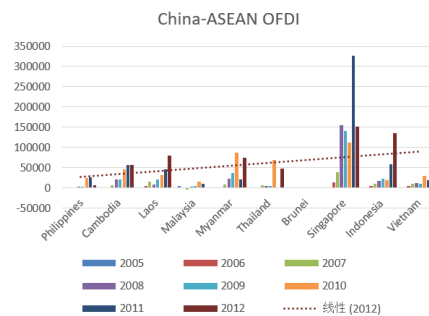


Figure 3. Status of China's direct investment flows to Southeast Asian countries

Source. China OFDI Statistics Bulletin 2012.

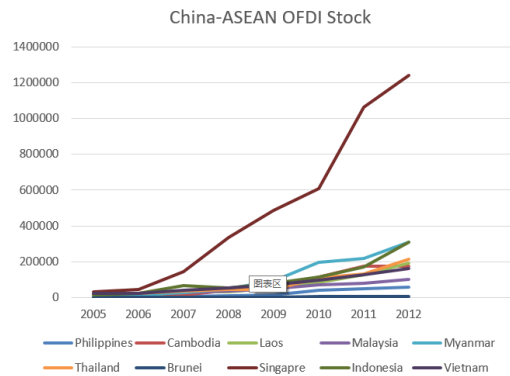


Figure 4. Status of China's FDI stock in Southeast Asian countries

Source. China OFDI Statistics Bulletin 2012.

UNCTAD's "World Investment Report 2014" shows that due to the continuous impact of the world financial crisis, foreign investment of developed countries decreased significantly in 2009 and 2012. Therefore, it can be seen that Singapore investment stock also experienced a significant increase in the ASEAN countries in these years, while the overall trend of other developing countries increased from 2005 to 2012. Among the 10 ASEAN countries, only Philippines, Myanmar, Thailand, Singapore and Vietnam experienced a decrease in investment flows from 2011 to 2012. However, the situation of China's direct investment flows to Southeast Asian countries is still quite different from country to country in terms of total value and trend. This paper speculates this is due to the difference in investment audience between developed and developing countries and the difference in industries and industries of the investee. In terms of total investment flows, Singapore, Indonesia and Laos have higher growth rates. It can be seen that the overall trend of China's direct investment flows to the ASEAN is on the rise from 2005 to 2012, while the direct investment stock of the ASEAN in China continues to grow, with no downward trend from 2005 to 2012. It can be seen that the OFDI stock in China-Southeast Asia has a significant upward trend. Among them, Singapore, Myanmar and Indonesia are the most obvious. Although Brunei's stock of direct investment increased from US\$ 1.9 million in 2005 to US\$ 66.35 million, its total value is the lowest among the 10 ASEAN countries, so the growth trend is not obvious in the chart. The total stock of ASEAN increased from 125,615 in 2005 to US\$ 28,237.54 million in 2012, with an average annual growth rate of 56%. In 2003, the total stock of China's foreign direct investment amounted to US\$ 33.4 billion, accounting for only 0.45% and 0.48% of the global foreign direct investment flows and stock respectively for that year. However, after ten years of rapid development, China has set up nearly 30,000 foreign direct investment enterprises in 184 countries and regions around the world, showing a rapid upward trend of development.

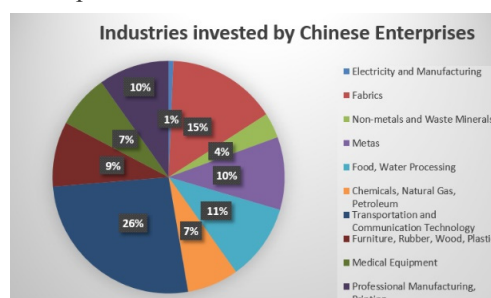


Figure 5. China's direct investment in Southeast Asian countries

Source. China Industrial Enterprise Database Consolidation from 2004 to 2013.

As can be seen from Figure 5, manufacturing (transportation and communication equipment, power supply, food processing, specialized equipment, metals, etc.) is the major industry for China to invest in ASEAN, followed by mining/natural resource relevant industries. At the same time, the investment in this period is concentrated on the low-end and labor-intensive manufacturing industries, such as textile industry, communication equipment, metals, printing industry, etc., indicating that domestic enterprises are inclined to transfer the labor-intensive/low-tech industries/production stage to ASEAN. According to the data of China's investment in ASEAN from 2013 to 2018

on the website of the ASEAN Secretariat, China's investment in ASEAN is very broad. The major investment industries are power, heating, mining, manufacturing, construction, retail, and leasing and business services. In 2018, manufacturing, wholesale and retail and leasing services also occupied the top three places in China's investment in ASEAN. However, as the data in this paper are from the China Industrial Enterprise Database and the approved investment data from Ministry of Commerce's Foreign Investment Directory, it does not cover the data of the tertiary industry and only represents the data of the primary and secondary industries.

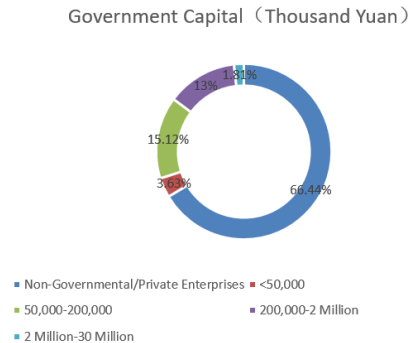


Figure 6. Capital Concentration of China's Direct Investment Countries in Southeast Asian Countries

Source. China Industrial Enterprise Database Consolidation from 2004 to 2013.

As a result of China's reform and opening-up policy and international investment incentives in recent years, from 2004 to 2013, we can see that the concentration of state-owned capital in ASEAN investment events has decreased significantly; China's foreign direct investment enterprises are mainly non-state-owned enterprises, and state-owned enterprises are mainly industrial enterprises of medium to upper scale. With the reform and opening up of China in recent decades, the trend of international investment in China has changed from being dominated by state-owned enterprises to being dominated by private enterprises and private enterprises.

3. Data Source and Variable Selection

3.1 Data Source

This paper uses the 2004-2013 China Industrial Enterprise Database and the approved list of investment data published by the Ministry of Commerce as the micro-level data sources of enterprises, and the World Bank and the French Center for International Prediction and Research (CEPII) database as the macro-level data sources of the ten ASEAN countries. The China Industrial Enterprise Database has information of state-owned enterprises and large-scale private/private enterprises (with total yearly income higher than 5 million) nationwide. Its various enterprise information includes business income, personnel statistics, fixed assets value, current assets value, industrial output value and other indicators. The business directory of the Ministry of Commerce only contains simple basic information such as the name of the business, the place of investment and the year. The World Bank database contains economic and social indicators such as infrastructure, market size, technological level and natural resources of the ten ASEAN countries, while the CEPII contains geographical distance data between countries.

The paper standardized the data of enterprises and the number of host countries, deleted data with significant missing values (net fixed assets, business income, industrial output value), deleted the samples with fewer than 20 employees and the samples with negative investment income/profit. According to the enterprise's choice of whether to invest in ASEAN, the model creates a dummy corresponding to the ten ASEAN countries. If the enterprise chooses to invest in this location, it will be recorded as 1, and if it does not choose to invest, it will be recorded as 0.

3.2 Dependent Variable

This paper sorts out the sample structure into "firm-year-investment location-whether to invest" and analyzes the decisions made by firms facing different host countries and micro-factors, so "whether to invest" is set as the dependent variable.

3.3 Independent Variable

In the selection of variables, based on the relevant literature review, this paper selects 6 variables as explanatory variables to be included in the model: market size, infrastructure, natural resources, technological level,

geographical distance and education level of the host country.

3.4 Market Size/Potential

The expansion of the market scale of the countries along the "the belt and road initiative" has a positive impact on the inflow of OFDI from China, which reflects a certain degree of market orientation. In general, the larger the market in the host country, the higher the purchasing power level of consumers and the higher the operating income of the enterprise. Therefore, the market size/potential can attract the enterprise OFDI. In this paper, the gross domestic product (GDP) is used as an indicator to measure the size of the host market. The data are derived from the World Bank database.

3.5 Basic Infrastructure

Long-term investment in infrastructure will make it easier for companies to find the resources they need and will also reduce operating costs. The improvement of infrastructure will also help to improve production efficiency and refresh the production capacity of enterprises. Good education and living conditions and other social infrastructure are conducive to the introduction of new technological talents and to the enhancement of regional innovation capabilities of enterprises. Advanced infrastructure is the foundation of innovation and the research and these have great impact on economic growth. For enterprises, relatively complete infrastructure conditions can effectively reduce the initial investment of enterprises, reduce transportation costs, improve the efficiency of logistics and transportation, and improve the efficiency of internet communication, which is beneficial to the formation of the industrial chain. This paper uses the number of Internet servers per million people in the 10 ASEAN countries to measure the infrastructure level of the host countries, and the data are from the World Bank database.

3.6 Natural Resources

Scholars studying classical economics believe that having abundant natural resources is helpful to stimulate the economic growth of a region, because these resources will provide many opportunities for rapid development. However, recent research shows that this is not always the case—countries with natural resource advantages in exports tend to experience slower economic growth over time, which reduces the attractiveness of investing in these countries; China's natural resources are relatively scarce compared with those of Southeast Asia, especially in energy. Therefore, the energy reserves of the ten ASEAN countries should be more attractive to Chinese enterprises. However, research shows that in recent years, the OFDI structure in China has reduced its focus on natural energy, so the investment motivation of Chinese enterprises seeking natural energy is not generally strong. This paper uses natural resources to reflect the host country's natural resources endowment level by using the proportion of fuel oil exports to total exports. The data is collected from the World Bank.

3.7 Technical Level

Foreign investment in manufacturing is important because it can help improve a country's technological innovation capability, talent pool and infrastructure. A country's technological innovation ability can also reflect its talent cultivation and infrastructure perfection. In addition, the growth of foreign capital utilization in high-tech manufacturing industry is in line with the adjustment of industrial structure, which reflects the continuous upgrading of the structure of foreign capital utilization in manufacturing industry. Technology level is an important variable for domestic enterprises to consider whether the host country is suitable for investment. It is related to the motivation of domestic enterprises to invest in the host country and the choice of industries. Therefore, it is very important to make location selection based on the investment incentives of enterprises. This paper uses HIT (Highly Integrated Technology), which measures the proportion of host country's high-tech exports in finished products. The data are from the World Bank website.

3.8 Geographical Distance

The geographical distance between the enterprise and the host country directly affects the operation cost and the trade cost. The farther the distance between the enterprise and the investment site is, the higher the transportation cost, management cost and communication cost will be borne, which will reduce the willingness of the enterprise to invest. When the geographical distance is too far away and the trade cost is too high, the enterprise may directly invest in the investment site to set up a factory. Therefore, an appropriate consideration of geographical distance is an important part of an enterprise's consideration of where to invest. This paper uses the straight-line distance between our country and the capital of the host country, and the data are from the database of the French Nationality Prediction Research Center (CEPII).

3.9 Educational Level

Successful education is the foundation of sustainable economic development and investment attraction. Education

is responsible for personnel training, scientific and technological innovation, social services and other functions. However, in the study of location investment, education level is a host country factor that is often ignored, because it does not fall within the scope of macroeconomic indicators and natural environment indicators, but it is an important social factor that enterprises should consider in this paper. A country's education level can reflect its overall economic development level, labor cost, technological level, infrastructure and other economic indicators. Therefore, enterprises should consider the required labor education level of the host country according to the investment incentives. Therefore, enterprises that develop high-tech products and services need to make certain investment and personnel training. This paper uses the enrollment rate of host country's universities and colleges, and the data are from the World Bank database.

3.10 Total Assets of the Enterprise

Total assets of an enterprise refer to all assets owned by the enterprise (totaling several thousand yuan), including current assets, fixed assets, intangible assets, other long-term investment projects, etc., which is the overall calculation of assets in the enterprise's balance sheet. Total assets determine the profitability and scale of an enterprise to a large extent. Therefore, enterprises with larger total assets are often able to make foreign direct investment and take risks. The data are from China Industrial Enterprise Database.

3.11 Gross Industrial Output Value of Enterprises

Gross industrial output value refers to the value of total amount of industrial products produced by industrial enterprises in a certain period of time, including the value of finished products, processing, self-made semi-finished products and other values, which reflects the total scale and quality of industrial production. Therefore, the higher the total industrial output value, the better the production trend of the enterprise, and the more active the foreign direct investment activity. The data are from China Industrial Enterprise Database.

Before continuing, this paper has standardized all sample data to avoid statistical problems.

4. Empirical Results and Analysis

4.1 Description of Sample

The following table describes the data statistics of all independent variables. It can be seen that the economic conditions and social conditions among the ten ASEAN countries are still quite different, especially the market size, GDP per capita, education level and technology level. Therefore, domestic enterprises have diversified investment choices in the ASEAN region. However, on the whole, the average level of education and science and technology in ASEAN is relatively low. The average enrollment rate in institutions of higher learning and the average share of hi-tech exports were only 30.81% and 26.79% respectively. On the other hand, statistics at the enterprise level also show that there are large differences in scale, fixed assets and industrial output value among individual enterprises.

Table 2. Sample statistics summary

Variable	Number of Observations	Mean	Standard Deviation
Education(%)	5,240	30.81	14.43
Technology(%)	5,240	26.79	22.31
Institution	5,240	7.12	9.20
Resources(%)	5,240	15.25	12.70
Distance	5,240	3,1656.801	1,002.65
Market(USD 100m)	5,240	2,490.63	2,293.50
Log_Total Assets	5,240	13.39	2.01
Log_Total Industrial Output Value	5,240	13.65	1.80

4.2 Setting up of Empirical Model

In this paper, the panel data fixed effect model is used for general regression, and the logarithm of enterprise level control variables and host country control variables are included in the model respectively. The specific model settings are as follows:

$$Cv_{investment_{ikt}} = \beta_0 + \beta_1 \ln Y_{it} + \gamma' X_{kt} + \sigma_t + \theta_i + \partial_k + \varepsilon_{ikt}$$

Among them, $Cv_{investment_{ikt}}$ is the investment decision whether an enterprise should choose a location in the

host country, $\ln Y_{it}$ is the logarithm of the individual control variables of the enterprise, and X_{kt} is the host country control variables, including social and economic variables. β_0 is the intercept term, β_1 is the regression coefficient which represents the marginal effect, σ_t is the year fixed effect, θ_i is the individual fixed effect, ∂_k is a national fixed effect and ε is an unobservable random disturbance term.

4.3 Multicollinearity Test

Before the regression and fixed effect analysis, we first carry out the multicollinearity test VIF (Variance Inflation Factor) on the host country variables and the enterprise variables. The data results show that the VIF values of internal factors of host countries, internal factors of enterprises, and variables of host countries and enterprises are all less than 10, and the overall average value of VIF is 3.53. Therefore, it is certain that there is no severe multicollinearity among the variables.

Table 3. VIF Multicollinearity test

Variable	VIF	1/VIF
Education	4.08	0.244863
Institution	3.71	0.269855
Market	2.96	0.338099
Distance	2.66	0.375338
Technology	2.36	0.424164
Resources	1.50	0.666250
ln_total assets	5.47	0.182
ln_total value of industrial output	5.47	0.183
Mean VIF	3.53	

4.3.1 Results of the Effect Test of Host Country Factors

Table 4. Effects of host country factors on firm OFDI decision

VARIABLES	(1) OLS	(2) Enterprise FE+ Year FE	(3) Logit
Institution	-0.13*** (0.0027)	-0.918*** (0.06)	-0.473*** (0.003)
Education	0.116*** (0.018)	0.44*** (0.04)	0.03*** (0.002)
Technology	0.0136*** (0.0018)	0.034*** (0.014)	0.259*** (0.001)
Resources	0.26** (0.013)	0.25*** (0.032)	0.463*** (0.001)
Distance	-0.001*** (0.002)	0.0028*** (0.00467)	0.006*** (0.0002)
Market	-0.0005*** (0.01)	-0.0156*** (0.00165)	-0.004*** (0.001)
Constant	0.1*** (0.11)	0.1*** (0.08)	-1.58*** (0.32)
Observations	5,240	5,240	5,240

Note. ***, **, * represent 1%, 5%, 10% significance level respectively.

The regression result (Appendix A) indicates that each independent variable has passed the significance test of 1%, and the coefficient is consistent with the test result of the former. Education level, technology level and natural resources as a whole have significant positive correlation with domestic enterprises' investment enthusiasm, while geographical distance, infrastructure, market size as a whole have negative correlation with enterprise investment.

The regression coefficient of the infrastructure is negative, which indicates that there is no obvious investment motivation for infrastructure construction in China. This may be due to the fact that the sample of enterprises selected in this paper are all large-scale enterprises with main business income of more than 5 million, which have

strong risk resistance capability, and the Chinese enterprises do not necessarily seek perfect infrastructure in the host country. In addition, the relatively backward investment environment and lack of basic infrastructure in many developing countries has provided multinational enterprises in China with opportunities to develop their markets, which leads to relatively lower infrastructure requirements.

The regression coefficient of Education is positive, which indicates that the host country's higher education personnel training has a positive impact on China's investment choices. This result is basically consistent with the conclusion of traditional location-selection theories. The reason may be that a higher level of education means a higher level of personnel training and staff skills, which is beneficial to the investment income and profit of Chinese enterprises.

The regression coefficient of Technology is positive, which indicates that the technology level of the host country has a positive impact on the investment choices of Chinese enterprises. The level of high-tech development is beneficial to the investment in medium and high-end industries of industrial enterprises. Among the ten ASEAN countries, Singapore, Malaysia and the Philippines all export high-tech products such as mechanical and electrical products, semiconductors, chemical products and mechanical equipment.

The regression coefficient of Resources is positive, which indicates that the rich natural resource endowments of the host countries are generally in line with the investment motives of domestic enterprises. The results of the comprehensive sample indicate that natural resources are still attractive to Chinese enterprises, and the investment intention to invest in the ten ASEAN countries is high, which results in a positive regression coefficient.

Distance's OLS regression coefficient is negative, and FE's and Logit's regression coefficients are positive, which indicates that the geographical distance between China and ASEAN is negative without considering the effect of fixed enterprise and time, because the farther distance often represents higher transportation, logistics and management costs, so domestic enterprises may prefer to invest in neighboring countries/regions, which can reduce costs. However, after considering the factors of enterprise heterogeneity, time and country, domestic enterprises can accept to invest in distant ASEAN countries. This may be because firms can reduce the additional cost of geographical distance at higher productivity, and because transportation technology is developing rapidly in recent years, thus reducing the geographical cost.

The regression coefficient of Market is negative, but the size of the variable is small, which indicates that domestic enterprises are not necessarily inclined to invest in ASEAN countries with larger market size and economies. This may reflect a weak motivation for enterprises to invest in big consumer markets and focus on smaller markets with long-run potential.

In conclusion, it can be seen that among all the host country factors in this paper, the influence of the variables is relatively significant. However, based on the differences in export trade structure, economic indicators and social indicators among the ten ASEAN countries, the intention and motivation of enterprises to invest in each country are also different. Therefore, in the following part of this paper, specific regression analysis is carried out for the variables of various countries and the moderating effect of enterprises.

4.3.2 Industry and State-Owned Grouping Test Results

Table 5. Effects of differentiated industries and enterprises on impact of host country factors

Choice of OFDI (Yes/No)	Manufacturing	Mining	Electricity, Water, Thermal	Non-government owned	Government-owned
Education	0.685***(0.04)	-0.058***(0.0133)	-0.548***(0.05)	0.0387***(0.02)	-0.007***(0.07)
Technology	-0.159***(0.014)	-	0.0347***(0.08)	-0.00687***(0.05)	0.003***(0.05)
Institution	-0.872***(0.058)	-0.158***(0.014)	0.411***(0.015)	-0.04***(0.03)	0.034***(0.028)
Resources	-0.0319***(0.032)	0.943***(0.023)	0.00268***(0.033)	-0.0022***(0.04)	0.042***(0.049)
Distance	-0.0112***(0.032)	0.261***(0.0516)	-0.52***(0.058)	0.0006***(0.04)	0.0005***(0.059)
Market	-	0.0639***(0.0145)	0.45***(0.033)	-	-0.0003***(0.0058)
	0.00446***(0.00471)			0.0007***(0.0051)	
Constant	0.16***(0.018)	0.1876***(0.0009)	0.32686***(0.001)	-0.66***(0.028)	-0.286***(0.016)

Note. ***, **, * represent 1%, 5%, 10% significance level respectively.

According to the results of investment events (Table 2), large-scale industrial enterprises in China do not have

obvious investment preference for infrastructure, which is inconsistent with the traditional theories. The reason may be that large-scale enterprises do not need a very perfect system for infrastructure, and large-scale enterprises can make up for the location disadvantage to a certain extent. Due to the needs of the mining, electricity, water power, heating industries, a high resource endowment is needed. Therefore, ASEAN countries with rich natural resources will be more favored by China enterprises. Domestic industrial enterprises do not seem to need high-end technology in the manufacturing and mining production stages of their investment, so their investment preference for infrastructure and technology level is not significant. According to the traditional regional investment theory, the longer the geographical distance, the lower the investment preference of enterprises. However, since the sample does not include the investment event data of small and medium-sized industrial enterprises, it can be inferred that large enterprises have a strong ability to resist risks. Companies are not significantly affected by distance, and excessive distance instead encourages them to build factories directly in the countries where they invest and build their own productivity and supply chains. With the opening up of China's international investment policy and the rapid development of the Internet of Things since 2008, the competitiveness of non-state-owned enterprises has been rapidly improved and the cost of logistics and transportation has been reduced. Compared with state-owned enterprises, the resource coefficient of non-state-owned enterprises is negatively correlated, indicating that there is no significant investment preference for natural resource endowments. Most of the non-state-owned/private enterprises do not need high endowments of mineral resources to invest in business, or do not engage in mining business. This accords with the logic of traditional location-selection theories; The energy and mineral industries are mostly monopolized by state-owned enterprises. From 2007-2013, the development of non-state-owned enterprises has made rapid progress, accelerating the pace of international investment by private enterprises and private enterprises. In 2004-2013, domestic enterprises frequently invested in the secondary industry, primary industry, and the low-end and middle-end fragments of these industries included labor-intensive and low-tech industries. Here we can see a specific trend among industries: mining, manufacturing requires no significant infrastructure, with low preference for research and development/high-level technology.

State-owned enterprises are more risk-averse because they are supported by a large amount of state-owned capital, and they are more likely to strengthen the position and business of China's industry in the international market. Therefore, they need to strictly control their infrastructure, technological level and labor costs requirements. Non-state-owned enterprises are mainly profit-making. The strategy of state-owned enterprises includes helping China's industry to open up international markets. Therefore, they should choose locations with good infrastructure, developed information and logistics channels, potential market and abundant resources. From the data of non-state-owned enterprises and state-owned enterprises, a clear contrast can be seen. The regression coefficients for technology, infrastructure, natural resources, education, all conform to the theory of traditional location research. The regression coefficient for education level is -0.007, which may be because higher education level represents higher wages and labor costs. The most significant impact is on natural resources and infrastructure, which are 0.042 and 0.034 respectively, indicating that the state-owned enterprises have more infrastructure, completeness and resource endowments in the countries where they invest.

4.3.3 The Grouping Effect Test Results of Host Country Factors

Table 6a. Effect of host country factors on firm OFDI location choice

Variable	Singapore	Malaysia	Thailand	Indonesia	Philippines
Institution	0.12***(0.00)	0.13***(0.01)	-0.30***(0.00)	-0.05***(0.00)	-0.136***(0.00)
Education	0.17***(0.00)	0.01***(0.01)	0.36***(0.00)	0.16***(0.00)	0.0136***(0.00)
Technology	0.085***(0.00)	0.057***(0.00)	-0.05***(0.00)	-0.065***(0.01)	0.0696***(0.00)
Resources	0.0025***(0.00)	0.018***(0.01)	-0.043***(0.00)	0.033***(0.02)	-0.0236***(0.00)
Distance	0.015***(0.00)	0.067***(0.01)	-0.01***(0.00)	-0.032***(0.00)	-0.0496***(0.00)
Market	0.00116***(0.00)	0.01***(0.01)	-0.04***(0.00)	-0.000487***(0.00)	-0.011***(0.00)
Constant	0.21***(0.00)	0.08***(0.00)	0.13***(0.00)	0.14***(0.00)	0.03***(0.01)
Observations	5,240	5,240	5,240	5,240	5,240
R-squared	0.80	0.13	0.73	0.86	0.23
Adjust R-squared	0.749	-0.102	0.658	0.828	0.0345

Table 6b. Effect of host country factors on firm OFDI location choice

Variable	Cambodia	Laos	Vietnam	Myanmar	Brunei
Institution	0.05***(0.00)	0.03***(0.00)	0.13***(0.00)	-0.02***(0.00)	0.0007***(0.01)
Education	-0.13***(0.00)	-0.05***(0.01)	-0.17***(0.00)	-0.05***(0.00)	0.01***(0.00)
Technology	-0.10***(0.00)	-0.03***(0.00)	0.04***(0.01)	-0.002***(0.00)	-0.0022***(0.00)
Resources	-0.18***(0.00)	-0.08***(0.00)	-0.002***(0.00)	0.15***(0.00)	0.02***(0.00)
Distance	-0.014***(0.00)	-0.017***(0.00)	-0.36***(0.01)	-0.05***(0.00)	-0.00***(0.00)
Market	-0.01***(0.00)	0.00***(0.00)	0.10***(0.00)	-0.06***(0.01)	-0.01***(0.00)
Constant	10.08***(0.00)	0.07***(0.00)	0.21***(0.00)	0.04***(0.00)	0.01***(0.01)
Observations	5,240	5,240	5,240	5,240	5,240
R-squared	0.46	0.10	0.56	0.30	0.11

Note. ***, **, * represent 1%, 5%, 10% significance level respectively.

The regression results (Appendix C) show that there are certain differences in the significance and influence of variables among the ten ASEAN countries.

Compared with Group B, the overall education level of Group A is positive, which indicates that enterprises pay more attention to talent cultivation in Group A countries and are more willing to invest in countries with Higher Education level in Group A. The reason may be that the businesses invested by enterprises in more developed countries/regions belong to the middle and high end of the industry/service chain. Therefore, higher education talents are a necessary investment and training for enterprises, while most developing countries belong to the middle and low end of the industry, and enterprises pay more attention to the control of labor costs. The enterprise's pursuit of high-tech level is mainly reflected in Singapore, Malaysia, the Philippines and other countries with strong scientific research and innovation strength; As the export trade structure of these three countries includes high-tech products such as mechanical and electrical products, mechanical equipment and computers, the enterprise investment business needs a large number of skilled personnel and developed scientific and technological support. In contrast, the natural resources endowments of Indonesia, Myanmar, Brunei and other countries lead to a large number of natural resources and energy products such as minerals, petroleum gas, crude oil, natural gas, etc. in the products they export. Therefore, domestic enterprises will tend to the resources or energy industry in their investment business in these countries. In addition, this paper concludes that infrastructure and market size are mostly positively correlated: Singapore, Malaysia and other more developed countries have considerable market size and well-developed infrastructure, so the enthusiasm of enterprises for investment will increase. However, although the infrastructure and market scale of developing countries such as Laos and Vietnam are not as advanced as the former, they have great market potential in terms of total foreign trade and markets/industries that need to be developed urgently. Therefore, large industrial enterprises may tend to develop new projects or build factories in these countries. Similarly, the geographical distance regression coefficient of Singapore and Malaysia in Group A is positive, while that of other countries is negative, which indicates that domestic enterprises are more inclined to make long-distance investment in more developed countries, and investment in developing countries that are too far away will increase transportation costs and operation costs.

However, in the group B countries, the author noticed that Brunei is a special case: as a developing country, the regression coefficient of infrastructure and education is positive, while the regression coefficient of technology and market is negative. As Brunei's main export trade products are energy products such as oil and natural gas, with low productivity and simply defined industrial structure, the risk of investment in Brunei is high. However, Brunei ranks among the top ten in Asia in terms of GDP per capita, and has efficient education and infrastructure construction. Therefore, Brunei has considerable development prospects for talent cultivation and social construction.

4.4 Inspection of Enterprise Regulation

Table 7a. Effect of firm heterogeneity on firm OFDI location choice

VARIABLES	(1) Singapore	(2) Malaysia	(3) Thailand	(4) Indonesia	(5) Philippines
Institution	0.49*** (0.01)	-0.26*** (0.02)	-0.37*** (0.02)	-0.056*** (0.00)	-0.02*** (0.01)
Education	0.19*** (0.01)	0.15*** (0.02)	0.42*** (0.01)	-0.13*** (0.00)	0.009*** (0.01)
Technology	0.04*** (0.00)	0.02*** (0.01)	-0.05*** (0.00)	-0.034*** (0.00)	0.08*** (0.01)
Resources	0.01** (0.00)	0.01*** (0.01)	-0.04*** (0.01)	-0.0093*** (0.00)	-0.036*** (0.01)
Distance	0.01*** (0.01)	0.20*** (0.02)	0.02** (0.01)	0.22*** (0.00)	-0.075*** (0.01)
Market	-0.02*** (0.01) (0.00)	-0.31*** (0.03) (0.00)	-0.11*** (0.02) (0.00)	0.15*** (0.00) (0.00)	0.053*** (0.01) (0.00)
In_ Total Capital Assets	-0.02*** (0.01)	-0.06*** (0.03)	-0.04** (0.02)	-0.018*** (0.00)	0.0017*** (0.01)
In_ Total Industrial Value	-0.04*** (0.01) (0.01)	-0.05*** (0.03) (0.03)	-0.04*** (0.02) (0.02)	0.00351*** (0.00) (0.00)	0.0022*** (0.01) (0.01)
Constant	1.18*** (0.11)	-1.58*** (0.32)	1.13*** (0.20)	0.34*** (0.05)	-0.02***
Observations	5.240	5.240	5,240	5,240	5,240
R-squared	0.95	0.22	0.81	0.87	0.23
adjusted R-squared	0.922	-0.170	0.720	0.834	0.0298

Table 7b. Effect of firm heterogeneity on firm OFDI location choice

VARIABLES	(1) Cambodia	(2) Laos	(3) Vietnam	(4) Myanmar	(5) Brunei
Institution	-0.07*** (0.01)	-0.0065*** (0.02)	0.15*** (0.02)	-0.041*** (0.00)	-0.0038*** (0.01)
Education	-0.13*** (0.01)	-0.037*** (0.02)	-0.18*** (0.01)	0.024*** (0.00)	0.0053*** (0.01)
Technology	-0.095*** (0.00)	-0.027*** (0.01)	0.032*** (0.00)	-0.007*** (0.00)	-0.001*** (0.01)
Resources	-0.18** (0.00)	-0.074*** (0.01)	-0.096*** (0.01)	0.16*** (0.00)	0.014*** (0.01)
Distance	0.1*** (0.01)	0.21*** (0.02)	-0.38** (0.01)	-0.4*** (0.00)	-0.0017*** (0.01)
Market	-0.02*** (0.01) (0.00)	0.005*** (0.03) (0.00)	0.12*** (0.02) (0.00)	-0.083*** (0.00) (0.00)	-0.0066*** (0.01) (0.00)
In_ Total Capital Assets	0.017** (0.01)	0.06*** (0.03)	-0.03** (0.02)	0.044*** (0.00)	0.0028*** (0.01)
In_ Total Industrial Value	0.0014*** (0.01) (0.01)	0.05*** (0.03) (0.03)	0.003*** (0.02) (0.02)	0.0053*** (0.00) (0.00)	0.003*** (0.01) (0.01)
Constant	-0.16*** (0.11)	-1.58*** (0.32)	0.57*** (0.20)	-0.63*** (0.05)	-0.033*** (0.06)
Observations	5.240	5.240	5,240	5,240	5,240
R-squared	0.48	0.09	0.58	0.34	0.10

Note. ***, **, * represent 1%, 5%, 10% significance level respectively.

Next, this paper combines the factors of host country with the factors of enterprise heterogeneity, analyzes the moderating effect of enterprise factors on the research of location investment, and finds that the expansion of enterprise scale and location advantage will offset certain disadvantageous factors, resulting in enterprises more willing to invest in countries where location advantage is not obvious.

On the whole, the combination of corporate heterogeneity factors has not brought about a significant change in the regression results, but the overall trend reflects some changes in the investment motivation of domestic enterprises. For example, the coefficients of Fixed Broadband Subscriptions in Group A and Group B countries are mostly negative, with the difference being more obvious than the data in Appendix A. This shows that with the addition of micro-level enterprise heterogeneity factors, the expansion of enterprise scale increases its own risk resistance, so there is no strong investment motivation for advanced infrastructure construction; Companies are more willing to invest in markets that need to be developed. In addition, the regression results of some countries have changed greatly, for example, Indonesia's resources regression coefficient changed from 0.033 to -0.0093, and education coefficient decreased from 0.16 to -0.13; The education regression coefficient of Myanmar increased from -0.05 to 0.024, and the technology coefficient decreased from -0.002 to -0.007; This shows that the enthusiasm of large industrial enterprises to invest in the comparative advantages of natural resources in the host countries has decreased. Chinese enterprises have increased their demand for education in the less developed countries, but they do not require high-level technology. In addition, the market investment trend of Group A countries has obviously shifted from the more developed countries such as Singapore and Malaysia to the less productive countries such as Indonesia and the Philippines, which indicates that domestic enterprises believe that the market in developing countries has more development potential. Therefore, as long as reliable and long-term profit support can be obtained, even though the market size is small, the enterprise's enthusiasm for investment is relatively high. This conclusion is supported by the regression coefficient of total assets and gross industrial output value: except for Singapore, Malaysia and Thailand, which have lower investment enthusiasm, the regression coefficient of the other less developed countries is mostly positive. This shows that large industrial enterprises are more inclined to invest in developing countries. Finally, the regression coefficient of geographical distance in developing countries such as Thailand, Indonesia, Cambodia and Laos have changed from negative to positive, which indicates that despite the long geographical distance, the negative impact of geographical distance will be weakened under the condition of higher productivity and scale of enterprises. With the wide spread of the Internet and the rapid development of information technology since 2008, the communication between the home country and the host country is more convenient and the operation cost can be greatly reduced. From this, it can be seen that large industrial enterprises have a tendency and willingness to invest in areas where the geographical advantages are not obvious.

4.5 Regression Analysis of Probability Model

Table 8a. Logit Model of firm heterogeneity and host country factors

Variable	Singapore	Malaysia	Thailand	Indonesia	Philippines
Institution	0.55***(0.00)	-0.25***(0.00)	-0.37***(0.00)	-0.05***(0.00)	-0.018***(0.00)
Education	0.44***(0.00)	0.06***(0.00)	0.16***(0.00)	-0.076***(0.00)	-0.11***(0.00)
Technology	0.029***(0.00)	0.093***(0.01)	-0.01***(0.00)	-0.01***(0.00)	0.21***(0.00)
Resources	0.0086***(0.00)	0.044***(0.01)	-0.03***(0.00)	-0.01***(0.00)	-0.03***(0.00)
Distance	0.01***(0.00)	0.011***(0.00)	0.0065***(0.00)	0.22***(0.00)	-0.057***(0.00)
Market	-0.41***(0.00)	-0.27***(0.00)	0.013***(0.00)	0.014***(0.00)	0.35***(0.00)
In_ Total Capital Assets	-0.03***(0.00)	-0.15***(0.00)	0.048***(0.00)	0.015***(0.00)	0.006***(0.00)
In_ Total Industrial Value	-0.033***	-0.15***(0.00)	-0.059***(0.00)	0.0036***(0.00)	0.0056***(0.00)
Constant	-0.034***	-0.15***(0.00)	-0.15***(0.00)	0.14***(0.00)	-0.9***(0.00)
Observations	5,240	5,240	5,240	5,240	5,240

Table 8b. Logit model of firm heterogeneity and host country factors

Variable	Cambodia	Laos	Vietnam	Myanmar	Brunei
Institution	-0.03***(0.00)	-0.0086***(0.00)	0.04***(0.00)	-0.03***(0.00)	-0.002***(0.00)
Education	-0.014***(0.00)	-0.042***(0.00)	-0.94***(0.00)	0.025***(0.00)	0.015***(0.00)
Technology	-0.02***	-0.025***	0.018***	-0.035***	-0.002***
Resources	-0.154***	-0.095***	-0.083***	0.14***	0.05***
Distance	0.17***(0.00)	0.02***(0.00)(0.00)	-0.28***(0.00)	-0.31***(0.00)	-0.003***(0.00)
Market	-0.10***(0.00)	0.0034***(0.00)	0.1*** (0.00)	0.17***(0.00)	-0.13***(0.00)
ln_ Total Capital Assets	0.018***(0.00)	0.13***(0.00)	0.88***(0.00)	0.005***(0.00)	0.007***(0.00)
ln_ Industrial Value	0.0081***(0.00)	-0.17***(0.00)	0.0046***(0.00)	0.0028***(0.00)	0.006***(0.00)
Constant	0.15***(0.00)	-2.55***(0.00)	-0.16***(0.00)	-1.73***(0.00)	-0.15***(0.00)

Note. ***, **, * represent 1%, 5%, 10% significance level respectively.

4.6 China-ASEAN Logit Regression Model Results

Through Logit's regression model, it can be seen from the above that the regression results are not significantly different from the data in Table 5, which indicates that the former's empirical results are relatively reliable. Enterprises are still more active in investing in developing countries, and most of the regression coefficients are not significantly different from the former. In Group A countries, the regression coefficients of infrastructure, natural resources, geographical distance, total assets of enterprises and total industrial output value of enterprises are basically the same, which indicates that domestic large-scale industrial enterprises' investment motives in natural resources and infrastructure are not obvious, and the bigger the enterprise, the less obvious it is.

Similarly, there is no significant difference in the variables of Group B countries. The motivation of domestic enterprises to invest in the infrastructure, technological level and market scale of Cambodia, Laos, Myanmar, Brunei and other countries is not obvious, which indicates that the enterprise sample adopted in this paper has the ability to resist political, social and economic risks, so it is more willing to invest in high-risk areas than small and medium-sized enterprises. Only Brunei's education coefficient and natural resources coefficient are kept at 0.015 and 0.05, which shows the concentrated export structure of Brunei and guarantee of social welfare/education. Finally, this paper needs to emphasize that the overall institutional environment of ASEAN countries is relatively lacking compared to developed countries, from 2004 to 2013. Except for Singapore, Malaysia, Brunei and other countries, other countries have poor infrastructure, institutional environment and technical scores, which will affect the experimental results to a certain extent and cause negative impact on the coefficients. Moreover, most of the investments that can be developed in places with high risks are large industrial enterprises, ignoring the data of small and medium-sized enterprises. The above aspects have affected the experimental results, which may lead to some inconsistency between the results of the enterprise adjustment test and those of the OLS test.

5. Conclusions and Policy Recommendations

This paper uses the micro-level investment data of enterprises from 2004 to 2013 and the macro-factors of host countries as independent variables to study the decision-making of China enterprises' location selection in the ten ASEAN countries. Based on the existing location selection of foreign direct investment, the author introduces enterprise heterogeneity and target country factors to match and analyze the investment cases of Chinese enterprises in the ten ASEAN countries. This paper chose Logit model as the probability analysis method, and tests the regression results with the model, and concludes the following conclusions:

(1) After grouping and returning the ten ASEAN countries, the results show that the Chinese enterprises focus more on high education, natural endowment and technology level in the ten ASEAN countries. This has a significant business relationship with the state investment of the enterprise; Chinese enterprises' investment in developed countries, such as Singapore, mostly focus on the middle and high-end industries, while in developing countries they invest in the middle and low-end industries, thus reflecting the differential motivations.

(2) After the internal factors of the enterprise are added into the model, the adjustment test results show that the productivity or scale of the enterprise itself will offset the location disadvantage to a certain extent, resulting in the location selection becoming negatively correlated with some variables. Among them, infrastructure, market size, geographical distance, corporate assets and other factors have the most obvious moderating effect. After the model of Logit is introduced, the results obtained are basically consistent, thus proving that the above research results are reliable. This shows that the self-mechanism of high productivity and enterprise scale can significantly weaken the

effects of market size, geographical distance, technological level and other variables, and even encourage large industrial enterprises to have more significant investment enthusiasm in some developing countries with obvious geographical disadvantages.

Based on the above results, the following suggestions are made to domestic enterprises:

As the economic and social indicators of the ten ASEAN countries are quite different, enterprises should choose their investment targets based on their own scale and anti-risk ability. At the same time, they can make use of ASEAN's cheap labor resources to classify labor-intensive industries into countries with relatively backward development or low education level, so as to obtain higher investment returns. At the enterprise level, participation in international investment and supply chains can increase the international investment capacity of China and itself, and the corresponding social and political risks will be reduced in the long run. Therefore, enterprises should have an open and positive attitude towards investing in ASEAN and speed up the improvement of enterprise-related personnel training and management efficiency, so as to be able to resist external risks under the background of internationalization and give full play to the management excellence, scale and technology of the enterprises themselves.

However, there are some deficiencies in the selection of database in this paper:

1. Although the trade and foreign direct investment (OFDI) between China and ASEAN has become more frequent and the scale of investment has gradually expanded in recent years, on the whole there is not much data about OFDI in China, and most of them are based on macro-level or national-level data, with little data on micro-level of enterprises. Due to the difficulty in obtaining reliable data and the absence and unavailability of data in some years in the industrial enterprise database used in this paper, the data samples are small, which may lead to the deviation between the regression results and the actual situation and affect the accuracy of the results.

2. This paper lacks analysis and data on OFDI behavior and performance of small and medium-sized enterprises. The OFDI model and characteristics of large-scale enterprises and small and medium-sized enterprises are different. However, in recent years, the number and scale of China's small and medium-sized enterprises and ASEAN's OFDI have become larger and larger, which is worthy of in-depth analysis. However, due to data limitations, this paper cannot conduct in-depth analysis for SMEs.

For the problems mentioned above, I will strive to improve and solve in the future research.

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