

CHAPTER FOUR

RESEARCH RESULTS AND ANALYSIS

4.1 China's FDI in Thailand

4.1.1 Progress and changes in China's FDI in Thailand

The analysis of China's investment in Thailand since the founding of New China in 1949 can be divided into three distinct periods:

Since the implementation of China's policy of reform and opening up, the diplomatic market has been fully opened. Between 1975 and 1991, China and Thailand signed a written agreement that announced that the two countries have officially resumed their foreign relations. Since then, the two peoples have lived in friendship. The formal signing of the diplomatic agreement not only means the resumption of diplomatic relations between the two countries, but also promotes the friendly development of the entire East Asia and South Asia region. With the signing of the diplomatic agreement, additional economic and trade investment agreements have also been finalized (Huang, 2003).

Since the end of the Cold War, under the correct guidance of the Chinese leaders, China has developed rapidly. The economic and trade development has gradually accelerated, and many domestic businessmen have gradually turned their attention to Thailand. It coincided with the government's strong support for foreign trade, omitting a lot of procedures and regulations, and relaxing restrictions on this block. Between 1992 and 1997, the number of investment registrations for Chinese companies in Thailand reached 45, two-thirds of the approvals were approved by the Thai Investment Promotion Commission, and the amount of investment exceeded 50 million THB. Despite the fact that China was not optimistic about Thailand's FDI situation during the last period of time, this did not stop Chinese companies from taking steps and the number of investments in Thailand continued to increase. These companies are in search of suitable development plans and good cooperative companies to establish a good development relationship. Therefore, in general, the purpose of enterprises at this stage is mainly in the aspect of experience accumulation. The main areas involved in investment and trading are chemicals and paper industry.

Since 1998, the trade between the two countries has increased significantly. This is due in large part to the Chinese government's implementation of the policy of going global, introducing, supporting and encouraging domestic enterprises to increase their foreign investment. Although Thailand was hit by the financial crisis during this

period, it did not affect the enthusiasm of Chinese companies for investment. In the industries of agriculture, electrical appliances, manufacturing, textiles, and machinery, the number of Chinese companies' investment continued to increase. According to official statistics, since 2009, the number of Chinese companies applying for investment promotion has been increasing, and the number of approved projects has also continued to grow. In 2015, the ASEAN Economic Community was formally established. It was jointly established by ASEAN as a country. Its establishment indicates that trade between member countries is more convenient, tax-free trade is basically implemented, and the tax rate of some special commodities is relatively low. The cost of trade has been greatly reduced, which is conducive to business investment. These reasons directly caused the continuous increase of China's FDI to Thailand.

4.1.2 Analysis of China's total FDI industry in Thailand

From the official statistics of the time series of Chinese enterprises applying for investment in Thailand, during the period 1987-2014, China's FDI development in Thailand was very rapid. In the beginning, Chinese companies applied for a loan in Thailand in 1987. The number of investments is small and has not been approved. Since 1988, the Thai Investment Promotion Committee has started to approve applications from Chinese companies. The number of projects approved this year was twelve, amounting to 1027.2 million baht. Since then, Chinese companies have begun to enter Thailand for trade and investment, and the number of projects approved for investment approval each year has continued to increase. This investment sustained development for less than a decade. With the outbreak of the Asian financial crisis, Thailand's economic situation has been greatly threatened. The financial crisis was caused by the change of the exchange rate system by the Thai government. The implementation of the floating exchange rate system led to a significant drop in the exchange rate of Thailand against the U.S. dollar and a dangerous situation in the financial market. This financial crisis directly affected the investment markets of other countries in Thailand. Chinese enterprises have reduced their investment projects in Thailand. They have only applied for two investment projects and only one project has been approved. The investment amount is 45 million baht. The economic crisis has brought about a certain appreciation of the RMB, and the principal of Chinese companies investing in Thailand has decreased, but most companies have not yet increased their investment in Thailand. In the next year after the outbreak of the financial crisis, the number of Chinese companies' investment projects still did not increase, or only two, and the amount of funds was 69.4 million baht. In the following years, Thailand's economy began to gradually recover. Because during the financial crisis, Thailand's economy was in a hurry and some debts accumulated. In order to

repay debts, Thailand began to actively attract investment from other countries' enterprises. This precisely caters to the Chinese government's opening up policy during the same period. Therefore, China has increased its investment in foreign countries, many of which are affiliated with Thailand. It is not ruled out that Thailand had developed a number of favorable investment regimes in order to attract foreign investment. In 1999, the number of Chinese investments in Thailand increased by 5, and the amount of investment increased several times from the previous year to more than 560 million baht. During the entire time period, China's investment funds in Thailand peaked in 2010, reaching 1.7 billion baht, and the approved 28 projects were all relatively large. From the perspective of the number of investment projects, 2012 was the peak period of the number of investment projects, the number of approved projects reached 38, and the amount of funds was 7.9 billion baht. During this period of time, the reason why China's investment in Thailand continues to increase depends on two factors. On the one hand, the two countries have had good relations since ancient times, and many Chinese have settled in the area and have good social relations. On the other hand, in seeking for economic development, enterprises need to combine "going out" and "bringing in".

At this stage, China's major industries involved in Thailand's FDI include agriculture, metal, light industry, machinery, electrical appliances, manufacturing and service. The service industry includes catering, accommodation, medical care and beauty. The main purpose of Chinese corporate investment is to use Thailand's market to achieve market expansion in other ASEAN member countries, and to reduce the cost of trade and transportation costs to other countries based on Thailand's low-cost advantages. According to the data, during this time period, the number of Chinese companies investing in different industries has a large difference. The largest investments is in agriculture, and the total number of projects reached 86.

Although the investment in the fields of agriculture and light industry accounted for a large number of China's FDI projects to Thailand, from the perspective of the total amount of Chinese companies investing in Thailand during the 26 years, the amount of investment in the metal and machinery industry accounted for a relatively large percentage. At present, the total investment in the metal and machinery industry is 2 9506.2 million baht, ranking first, and the amount of funds in the agricultural sector is second only to it, reaching 24919.2 million baht. The amount of investment funds in the mining industry was 18163 million baht, ranking third among all industries. The investment amounts in the chemical industry and service industries were 16079.2 million baht and 13123.3 million baht, respectively, which ranked fourth and fifth. At the same time, in the process of investing in different industries,

the amount of investment in the light industry and electrical fields is relatively small, the amount of funds in the light industry is 1,045.3 million baht, and the amount in the field of electrical appliances is also less than 5000 million baht.

4.1.3 Analysis of China's FDI structure in Thailand

(1) Scale structure of China's direct investment in Thailand. From table 1, we can see that the scale of China's direct investment in Thailand has been expanding since the international financial crisis in 2007, in which the number of project with amount of less than 50 million baht is 69, and the next is the investment project with scale between 100 and 499 million baht, the number is 49: then, the number of projects with 500 to 999 million baht scale is 15, and the number of project over 1 billion baht is 10. According to the statistics of the Thailand Investment Promotion Committee, it is obvious that from the 2008-2014 year, the amount of Chinese enterprises to invest in Thailand constantly increased. At present, most Chinese enterprises who invest in Thailand mainly concentrate on small and medium enterprises whose investment amount does not exceed 500 million baht.

Table 1: Number of registered and approved applications in Thailand (million baht)

year	2009	2010	2011	2012	2013	2014	total
Scale	Number of registered applications						
<=50	11	12	13	18	13	20	87
50-99	5	9	5	7	11	20	57
100-499	3	6	7	13	16	19	64
500-999	1	1	10	4	1	4	21
>=1000	5	3	1	2	4	11	26
total	25	31	36	44	45	74	255
Scale	Number of approved applications						
<=50	9	10	13	16	9	12	69
50-99	3	7	5	7	7	10	39
100-499	1	4	8	9	13	14	49
500-999	1	2	7	5	0	0	15
>=1000	1	5	3	1	1	4	15
Total	15	28	36	38	30	40	187

(2) The regional structure of China's direct investment in Thailand. Thailand has

three main areas to attract foreign investment. These areas are different in the regional characteristics, such as natural resources, rich labor resources, human capital, transportation facilities and so on, and these differences lead to the foreign investors to take different options. Foreign direct investors choose which area to invest in Thailand according to their production status. According to the statistics of the Thailand Investment Promotion Committee, the Thailand government divides Thailand into three investment areas: the first area is in the middle, and the second regions are mainly in the west as well as some central and eastern parts, including the Phuket Island in the south of Thailand. The third area is in the north, northeast and south.

The first area is Bangkok, the capital of Thailand, and the surrounding cities. From the data of last few years, a minority of Chinese companies have chosen to invest in this area. In Bangkok, the economic development of the region is concentrated with high GDP, the level of urbanization is high, and the purchasing power is strong. So many tourists come from all over the world every year, and there are many foreign tourists coming and going. The first area is more suitable for investment in the service industry, such as restaurants and hotels, and so on. In addition, in Bangkok, the land price is high, the cost of labor is expensive and the natural resources are limited. The first area is not suitable for the development of metal products and machinery, chemical industry and paper making and other resources industries. These problems and less investment preferential policies are the main reasons why seldom Chinese enterprises choose to invest in the first area. At present, there are 54 investment projects invested in this area, and the amount of investment is 9167.4 million baht. The most industries that choose to invest are service industries, electronics and electrical appliances.

The second area is mainly in the west and some central and eastern parts, including Phuket Island in the south of Thailand and so on. Most of the industrial parks are concentrated in the second area, which is also the area that the Chinese enterprises invest most, because of the preferential policies of the Thailand government in this area, such as tax reduction, reduction of examination and approval procedures, and the superior geographical location and environment of the second districts. In addition, the labor force in the second area is relatively cheap, which is the main factor to consider by many foreign investors. Also, the area has rich and perfect fundamental and natural resources, such as: close to the wharf and the airport. The second area is suitable for manufacturing and industries requiring import and export, such as light and textile, chemical products, paper and plastics, metal products, as well as machinery and transportation equipment industry. There were 113 Chinese

enterprises invested in the region in the 7 years of 2008-2014, and the amount of the amount was 76117.3 million baht.

Through the National Bureau of Statistics of Thailand's data, it can be found that the economic development of the third area is backward compared with the first and second areas; the location of the region is near the border, the infrastructure is backward, the traffic is not developed, and the transportation is inconvenient, all these reasons causes many Chinese enterprises to choose to invest less in this area. But it is rich in natural resources, and has good agricultural production conditions with better preferential policies than in other areas: In the north, the region is suitable for agricultural products, such as vegetable and fruit. In the northeast, the region mainly produces food, oil, frozen seafood, natural rubber and so on; especially, natural rubber is an important economic plant in Thailand, and it is also a huge production base for China.

Table 2: FDI regional distribution (million baht)

Year	Registered					
	1 st area		2 nd area		3 rd area	
	number	scale	number	scale	number	scale
2008	10	877.7	6	536.3	5	146
2009	5	218.7	11	41531.6	9	1438.9
2010	4	6160.1	15	2913.2	12	1625.1
2011	8	991.3	18	24355.6	10	3148.1
2012	4	111.4	29	9468.3	11	3249.3
2013	6	376.1	29	36988.6	10	5165.9
2014	20	2211.9	36	25627.4	18	5867.7
total	57	10892.2	144	141421	75	20641
Year	Approved					
	1 st area		2 nd area		3 rd area	
	number	scale	number	scale	number	scale
2008	7	440.3	11	2392.7	9	640.8
2009	5	148.2	3	5611.9	7	1248.6
2010	6	6875	16	9179.5	6	1257.0
2011	8	292.8	16	13609.3	12	3020.0
2012	8	1920.7	22	4241.1	8	1739.3
2013	6	447.1	20	3874.0	4	669.7
2014	7	446.7	25	37208.8	8	582
total	47	10571	113	76117.3	54	9167.4

From table 2, we can see that there are more projects in second regions where Chinese enterprises apply for investment promotion projects in Thailand, whether it is before the application of the investment or after the approval. In terms of the amount of investment, in the years between 2008 and 2014, Chinese enterprises have applied for 144 registration, and 113 was approved in the second area, which accounts for more than half of the country. In terms of the amount, the investment of the second districts is the overwhelming majority of the national investment.

4.2 Descriptive statistics

The theory of economic growth and development economics both believe that capital is an important factor in the economic development of a country. Investment can be divided into domestic investment and foreign investment. FDI is an important form of foreign investment. Different forms of investment directly affect the form of economic development and the scale of development. FDI makes a large amount of capital inflows into the country, and it contributes greatly to the host country's enterprises and the domestic economy. It builds factories, purchases machines, and increasingly increases infrastructure and so on. The inflow of FDI solves the problem of insufficient funds for enterprises. More capital and funds are used for resource development. Resources are developed and explored to increase the productivity of enterprises and increase the profitability. FDI inflows affect the indirect impact of host countries, and foreign investors invest funds. The host country can expand the production scale of enterprises, accelerate the formation of host country's economic capital, increase the domestic capital stock of the host country, and at the same time, it has the leading effect, that is, the linkage effect of industrial economics leading the industry theory, driving other related industries to develop at the same time.

The total capital formation in Thailand showed an increasing trend year by year. Among them, foreign direct investment accounted for about 15% of the capital formation. The foreign direct investment accounted for about 17% in 2010. After 2010, due to the turmoil in Thailand, foreign direct investment also had a great impact. At the same time, China's FDI in Thailand has increased year by year, reaching 16.86% in 2014. Even in the economic crisis of 2007, China's investment in Thailand kept increasing. On the whole, the proportion of China's FDI to Thailand varies with the country's investment.

Technological progress is important to economic development for a country. To achieve technological progress, two important factors are necessary, which are technology introduction and technology research and development. As R&D and development have the characteristics of large capital investment, high capital intensity and high risk, they are usually adopted by developed countries.

Table 3: Thailand's 2003-2014 capital formation percentage (US\$1 billion)

Year	Total investment	FDI	FDI /Total investment	Total FDI of China	FDI of China percentage
2003	36.3	5.3	14.60%	0.024	0.45%
2004	44.5	5.7	12.81%	0.057	0.98%
2005	57.6	8.1	14.06%	0.048	0.07%
2006	59.9	8.9	14.86%	0.016	0.18%
2007	68.1	8.6	12.63%	0.076	0.90%
2008	82.1	8.7	10.60%	0.045	0.52%
2009	58.2	6.5	11.17%	0.051	0.78%
2010	86.5	14.7	16.99%	0.69	4.75%
2011	99.1	12.4	12.51%	0.23	9.30%
2012	111.4	12.8	11.49%	0.47	3.71%
2013	115.6	15.9	13.75%	0.75	4.74%
2014	97.7	4.9	5.13%	0.84	16.86%

The developing countries, due to their large differences in capital intensity and technological level from the developed countries, are not suitable for high capital investment and high-risk research and development, while the introduction of technology with low cost and risk becomes clear. Therefore, developing countries with intermediate technologies usually achieve technological advancement through the introduction of technology. Technological progress has played an important role in promoting economic development. This is our common recognition of the impact of technological progress on economic growth. The following is the data obtained from the census of Thai industrial enterprises from 2003 to 2014. It can be said that non-residents and residents of Thailand have patents. The number of applications has been increasing.

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Table 4: Number of patent applications in Thailand, 2003-2014

Year	Applicant of none residents	Applicant of residents	Total
2003	4329	802	5131
2004	4554	819	5373
2005	5449	891	6340
2006	5221	1040	6261
2007	5873	945	6818
2008	5839	902	6741
2009	4832	1025	5857
2010	723	1214	1937
2011	2997	927	3924
2012	5726	1020	6746
2013	5832	1572	7404
2014	6924	1006	7930

Table 5: The overall GDP and employment constitution of the three industries

Year	The gdp percentage of the industry			The employment constitution		
	The 1st industry	The 2nd industry	The 3rd industry	The 1st industry	The 2nd industry	The 3rd industry
2003	9.5	38.2	52.3	44.8	19.6	35.6
2004	9.2	37.9	52.9	42.2	20.4	37.4
2005	9.1	38.5	52.4	42.5	20.1	37.4
2006	9.3	39.2	51.5	42.0	20.5	37.5
2007	9.3	39.5	51.3	41.6	20.6	37.8
2008	10.0	39.5	50.5	42.4	19.5	38.1
2009	9.7	38.6	51.7	38.9	20.7	40.4
2010	10.4	39.9	49.6	38.1	20.5	41.4
2011	11.5	38.0	50.5	40.9	19.3	39.8
2012	11.4	37.4	51.2	39.5	20.8	39.7
2013	11.3	36.9	51.8	41.8	20.2	38.0
2014	10.1	36.7	53.2			

Nunnenkamp and Spatz (2003) pointed out that foreign direct investment can

stimulate economic development, and the role of economic growth in growth needs to be generated through the interaction of the host country's economy, industrial structure, and industry characteristics. Industrial structure theory is an important part of general industrial economics. Since the economic crisis in 2007, the general requirements and basic requirements for Thailand's economic growth have been maintained in a time-sequential dynamic equilibrium among various industrial sectors. U.S. economists believe that shifting the labor and capital elements from sectors with lower productivity to higher productivity sectors will certainly accelerate economic growth. Foreign investors' direct investment in Thailand can influence Thailand's industrial structure and determine the international division of labor in Thailand's economy through FDI's technology diffusion effects, industry-related effects, and competition and demonstration effects. From Table 5, it can be found that Thailand is a country with developed third industry.

Thailand is in the stage of labor development with abundant resources and lack of capital investment, which makes part of the labor force unable to be fully utilized. It is an important way for Thailand to attract foreign investment to set up factories in the country to solve employment problems. Through FDI's technology diffusion effect, industry-related effects, and competition and demonstration effects, it can affect Thailand's industrial structure, and thus affect the employment structure. In addition to providing much-needed funds for Thai socio-economic development, FDI can also provide a large number of jobs. To a certain extent, it helps Thailand solve employment problems, foreign direct investment, and the construction of industrial parks, infrastructure and other production processes can speed up Thai urbanization and provide Thai employees with a large number of jobs. According to World Bank statistics, the unemployment rate in Thailand has been around 1.7%. Thailand as an emerging investment market, foreign direct investment plays a crucial role in promoting the development of Thai economy. Foreign direct investment promotes the adjustment of Thailand's economic structure, drives the transformation of Thailand's industrial structure and employment structure, changes the mode of production and operation, raises Thailand's labor productivity level, and foreign direct investment in equipment, technology, and management experience promote the traditional production of Thailand's mad economy enterprises. The transformation of business methods to modernization has enabled Thai society to develop and excavate resources such as human capital and land capital, and to increase Thailand's international economic competitiveness. In addition, foreign direct investment can also promote Thailand's business and tourism development, making Thailand a world-renowned business and tourism power. From Table 6, it can be seen that foreign direct investment has an effect on the domestic economy in Thailand.

Table 6: The GDP growth rate of Thailand, the FDI of China, and growth rates

Year	GDP (billion dollars)	FDI(billion dollars)	FDI/GDP	The GDP growth rate	The FDI growth rate
2003	143.1	0.024	0.02%	-	-
2004	162.4	0.057	0.04%	13.49%	109.27%
2005	176.4	0.048	0.03%	8.62%	-22.47%
2006	207.1	0.016	0.01%	17.40%	-71.61%
2007	247	0.076	0.03%	19.26%	298.27%
2008	272.6	0.045	0.02%	10.36%	-46.35%
2009	263.5	0.051	0.02%	-3.33%	17.25%
2010	318.9	0.69	0.22%	21.02%	1017.91%
2011	345.6	0.23	0.07%	8.37%	-69.24%
2012	366.1	0.47	0.13%	5.93%	92.91%
2013	387.3	0.75	0.19%	5.79%	50.84%
2014	373.8	0.84	0.22%	-3.48%	16.04%

4.3 Stationary test

The first problem in time series analysis of econometrics is the stationary of time series data. There are two methods to test the stationary of time series data, the autocorrelation function method and the unit root method. This paper adopts unit root method, unit root is another way to express non-stationary, and unit root method transforms the test of non-stationary to unit root. The test of unit root includes AEG method and ADF method. In this paper, ADF test method is adopted. The steps of ADF test for unit roots are as follows: first, according to the nature of economic variables, the test equation is selected. The ADF test assumes that the sequence of variables is I (d) in advance. The ADF test takes into account the following three

forms of regression:

$$\text{Model 1: } \Delta X_t = \delta X_{t-1} + \sum_{i=1}^m \beta_i \Delta X_{t-i} + \varepsilon_t$$

$$\text{Model 2: } \Delta X_t = \alpha + \delta X_{t-1} + \sum_{i=1}^m \beta_i \Delta X_{t-i} + \varepsilon_t$$

$$\text{Model 3: } \Delta X_t = \alpha + \beta t + \delta X_{t-1} + \sum_{i=1}^m \beta_i \Delta X_{t-i} + \varepsilon_t$$

The t in model 3 is a time variable, representing a trend (if any) of time series changing over time. The null hypothesis is $H_0: \delta=0$, that is, there is a unit root. The difference between model 1 and the other two models is whether they contain constant terms and trend items. The actual test starts from model 3, then model 2, and finally model 1. When the test rejects the null hypothesis, that is, the original sequence does not have the unit root, indicating a stationary sequence and then the test can be stopped. Otherwise, it is necessary to continue testing until the model 1 is finished. The test principle is the same as that of DF test. Only when testing the model 1, model 2 and model 3, there is a corresponding critical value table.

Table 7: Thailand GDP, employment, total fixed capital formation and FDI

Year	GDP (billion dollar)	FDI(billion dollars)	Employment number (Million people)	The capital formed by the fixed capital (billion dollar)
2003	143.1	0.024	34.9	36.29
2004	162.4	0.057	36.1	44.41
2005	176.4	0.048	36.3	57.60
2006	207.1	0.016	36.9	59.91
2007	247	0.076	37.7	67.04
2008	272.6	0.045	38.5	82.25
2009	263.5	0.051	38.7	58.14
2010	318.9	0.69	39.1	86.48
2011	345.6	0.23	39.3	99.35
2012	366.1	0.47	39.7	111.40
2013	387.3	0.75	39.9	115.47
2014	373.8	0.84	40.1	97.34

Table 8: ADF test result

Sequence	ADF statistics	1% critical value	5% critical value	10% critical value	P value	Test results (significant level)
<i>Lngdp</i>	-2.03	-4.20	-3.18	-2.73	0.27	Non-stationary (1%, 5%, 10%)
<i>D.Lngdp</i>	-2.50	-4.30	-3.21	-2.47	0.04	Stationary (10%)
<i>lnfdi</i>	-0.17	-4.42	-3.26	-2.77	0.91	Non-stationary (1%, 5%, 10%)
<i>D.lnfdi</i>	-6.08	-4.42	-3.26	-2.77	0.23	Stationary (1%, 5%, 10%)

Note: in the test form, c stands for the constant term, t represents the time trend, 0 or 1 represents the lag order, and D represents the first order difference.

It can be seen from table 6 that the time series *Lngdp* and *lnfdi* themselves are non-stationary sequences, and after the first order difference, they become stationary sequences.

4.4 Granger test

In the case of time series, the Grainger causality between two economic variables, X and Y, is defined as: On condition that the past information of X and Y are included, if the predictive effect of the variable Y is better than the prediction effect of Y only by the past information of Y alone, that is, the variable X helps to explain the future variation of the variable Y, then the variable X is the Grainger cause of the resulting variable Y. Grainger proposed a simple test procedure, commonly known as Granger test causality. For the two variable X and Y, Grainger test causality requires that the following regression be estimated:

$$Y_t = \beta_0 + \sum_{i=1}^m \beta_i Y_{t-i} + \sum_{i=1}^m \alpha_i X_{t-i} \quad (1)$$

$$X_t = \delta_0 + \sum_{i=1}^m \delta_i X_{t-i} + \sum_{i=1}^m \lambda_i Y_{t-i} \quad (2)$$

There may be four kinds of test results:

1. X has a one-way effect on Y, which is shown by that all the parameters before each lag item of X are zero, but not all the parameters before each lag items of Y are zero.

2. Y has a one-way effect on X, which is shown by that all the parameters before each lag item of Y are zero, but not all the parameters before each lag items of X are zero.

3. There is a two-way effect between Y and X, which is shown by that not all the parameters before each lag items of X and Y are zero.

4. There is no effect between Y and X, which is shown by that all the parameters before each lag items of X and Y are zero.

In order to verify whether China's FDI has a positive effect on Thailand's economic growth, first of all, it is necessary to conduct Granger causality test on the two time series data of China's FDI and Thailand GDP. The Granger test results of variable *lnfdi* and variable *lngdp* are as shown in table 9. It can be confirmed that variable FDI is the Granger causality of variable GDP (Thailand economic scale).

Table 9: Granger test result

The original hypothesis	samples	F statistics	P value	conclusion
<i>lnfdi</i> is not Grainger reason for <i>lngdp</i>	10	1.01038	0.428	Reject the original hypothesis
<i>lngdp</i> is not Grainger reason for <i>lnfdi</i>	10	14.8018	0.0079	Accept the original hypothesis

In order to continue to confirm the effect of China's foreign direct investment on

Thailand's economic growth, the economic growth model of two time series data of China's FDI and Thailand GDP is built on the basis of economic growth model.

$$\text{Lngdp} = \alpha + \beta_1 \text{lnfdi} + \beta_2 \text{lnlab} + \beta_3 \text{lnicap} + \varepsilon$$

In which *fdi* represents China's direct investment in Thailand, *lab* is the number of employed persons in Thailand, and *cap* is the total annual investment in fixed assets in Thailand.

Table 10: Regression result

variable	Coefficient	Std.error	t-Statistic	Prob.
α	-5.48	1.89	-2.9	0.02
β_1	0.02	0.01	2.07	0.07
β_2	5.02	0.82	6.09	0.00
β_3	0.26	0.09	2.87	0.02

The determination coefficients and the adjusted coefficients are 0.991 and 0.988 respectively, the maximum likelihood estimation is 24.72492, the statistic is 307.1923, AIC and the SC are -3.45415 and -3.29252 respectively, and the D.W is 2.146109 obvious. In other words, if China's direct investment in Thailand increases by 1%, then Thailand's GDP will increase by 0.023498%.

Also, the FDI of China increases the number of employment and the total annual investment in fixed assets.