THE INFLUENCE OF CHINA'S FOREIGN DIRECT INVESTMENT ON THE ECONOMIC DEVELOPMENT OF THAILAND

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Thematic Certificate

To

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This Independent Study has been approved as a Partial Fulfillment of the Requirement of International Master of Business Administration in International Business Management.

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ABSTRACT

Title: The influence of China's foreign direct investment on the economic development of Thailand

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In the process of economic globalization, attracting foreign capital has been regarded as an important factor affecting economic development. Foreign direct investment (abb. FDI), which plays a direct role in promoting the economic growth of developing countries, is extremely important. Since the formal establishment of diplomatic relations between China and Thailand in 1975, the international direct investment and trade between the two countries have made rapid progress.

Starting with the relevant theories of international trade, this paper analyzes the current situation of China's investment in Thailand. It is found that since the 2007 international financial crisis, the industries of direct investment to Thailand mainly concentrated in metal products, machinery and service industries, especially in metal products and machinery, which developed rapidly in the past years. In the 2008-2014 years, Chinese enterprises invested more in the mechanical and electronic products in terms of both quantity and capital value, followed by agricultural products. The number and amount of Chinese enterprises investing in Thailand are increasing. At present, most Chinese enterprises investing in Thailand mainly invest in small and medium-sized enterprises.

Based on the theory of economic growth, this paper sets up a model. Using the data of the direct investment from China to Thailand from 2003-2014 years, the Granger causality test proves that China FDI has promoted the growth of Thailand GDP.

In view of the related theoretical analysis and empirical test, for the long-term economic development of Thailand, the Thailand government should make efforts in the following aspects: actively promote preferential policies. The government of Thailand should actively introduce some more preferential policies or eliminate some unfavorable polices that may bring negative effect to Chinese enterprises, such as simplifying the examination and approval procedure, shortening the time of examination and approval, and actively reducing the tax, so as to attract more Chinese enterprises to invest more in the industry in Thailand.

On the basis of continuous economic development, Thailand should further increase the economic openness of the country, reduce the business operation cost of foreign enterprises in Thailand, improve the establishment of some system of attracting foreign investment system, enhance its competitiveness in the main investment countries of ASEAN, and use foreign capital to better serve the economic development of the country, and promote the upgrading of domestic technology and the transformation of industrial structure. Pay attention to the adjustment of industrial structure. While emphasizing the development of industry, Thailand must also see the importance of the third industry and make the industry develop in a balanced way. The government of Thailand should enrich and diversify the fields and industries that attract foreign investment, and guide the direction of foreign direct investment through policies and regulations, for example, increase the threshold of heavy mechanical and metallurgical industries that waste too much natural resources and easy to cause pollution, and provide policy support to other industries like social services, education, research and development and so on. Thailand should promote the development of the second industry and the third industry, diversify and optimize the production structure and create a healthy industrial production chain.

Key words: Foreign direct investment, Economic growth, Theoretical analysis, Empirical analysis

摘 要

题目: 中国对外直接投资对泰国经济发展的影响

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在经济全球化的过程中，吸引外资被视为影响经济发展的重要因素。外商直接投资对发展中国家的经济增长起着直接的推动作用，是极其重要的。1975 年，中国与泰国正式建立外交关系，国际直接投资和两国之间的贸易有了迅猛的发展。

从国际贸易的有关理论出发，本文分析了当前中国在泰国的投资情况。研究发现，2007 年国际金融危机以来，中国对泰国直接投资产业主要集中在金属制品、机械和服务业，尤其是金属制品和机械行业。在 2008~2014 年，中国企业在数量和资本价值上都加大了机电产品的投资力度，其次是农产品。中国企业在泰国投资的数量和质量在不断增加。目前，在泰投资的中国企业主要投资于中小企业。

基于经济增长理论，本文建立了一个模型。利用 2003~2014 年的直接投资数据进行分析，结果表明，中国的 FDI 促进了泰国 GDP 的增长。

通过相关理论分析和实证检验，对于泰国的长期经济发展，泰国政府应在以下方面做出努力：积极推进优惠政策，泰国政府应积极推行一些优惠政策，或消除一些可能给中国企业带来负面影响的不利政策，如简化审批程序，缩短审批时间，积极主动减少税收，以吸引更多的中国企业在泰国投资更多的产业。

在经济持续发展的基础上，泰国应进一步增加国家经济开放度，降低泰国外资企业的经营成本，完善部分招商引资体系的建立，增强其竞争力，利用外资更好地为国家经济发展服务，促进国内技术升级和产业结构转型；重视产业结构调整，在强调产业发展的同时，泰国也必须看到第三产业的重要性，使产业均衡发展；泰国政府应丰富和多样化吸引外商投资的领域和产业，并通过政策法规引导外商直接投

资的方向，例如增加重型机械和冶金行业的门槛。泰国应促进第二产业和第三产业的发展，优化生产结构，创造健康的工业生产链。

关键词：对外直接投资，经济增长，理论分析，实证分析

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CHAPTER ONE
INTRODUCTION

1.1 Research background

The economic and trade cooperation between China and Thailand dates back to ancient times. After the Second World War ended, China and Thailand signed a friendship treaty, and there was a mutual exchange between the first diplomatic representative and the consular exchange. After the founding of New China, the trade between China and Thailand was not interrupted by ideological differences. Then the outbreak of the Korean War led Thailand to stop the economic and trade exchanges with China in accordance with UN resolutions. Until 1975, when China and Thailand established diplomatic relations again, the number of trade between the two countries continued to increase. At present, China is Thailand's second largest trading partner. The economic and trade cooperation between the two countries has shown a trend of diversification in recent years.

After nearly 40 years of reform and opening up, China's economic construction has made great achievements. However, because of the rising labor cost in China in recent years, the rising prices of various production factors and the "go out strategy" proposed by the Chinese government actively encourage and support the further expansion of the investment in Thailand by the powerful Chinese enterprises on the basis of equality and mutual benefit. For example, due to the settlement of Thailand's infrastructure and frequent natural disasters in recent years, Chinese enterprises have taken an active part in Thailand's post disaster reconstruction and renovation of water conservancy system. Therefore, more Chinese enterprises choose to invest in Thailand. According to the statistics of the 2007 world financial crisis, the bilateral cooperation between China and the ASEAN free trade area is closer. The investment of Chinese enterprises to Thailand is very significant, and it is of great significance to the stable development of Thailand.

In addition, in 2014 the Chinese government advocated "One Belt and One Road", which also put Thailand into the Chinese "Belt and Road Construction", Chinese government organized to found the Asian infrastructure investment bank,

which is of great significance for Thailand's infrastructure construction, agriculture, manufacturing, processing and many other fields. In order to better attract Chinese enterprises to invest in Thailand, the Thailand Investment Promotion Committee attracts more and more Chinese enterprises to invest in Thailand through equity acquisition and green field investment.

1.2 Research purpose

As is known to many people that the economic development of a certain country is influenced by many factors, including the labor input, the capital input etc. It is believed by the academic field that the increase of savings rate or the foreign direct investment (abb. FDI) will have a positive impact on the economic development of a country. The paper therefore wants to use the data and the related theories to explore whether the FDI of China has such positive impact on the economic development of Thailand.

1.3 Research significance

The theory of economic growth holds that capital is an important factor affecting the economic growth of a country and region, and attracting foreign direct investment is a direct driving force for the economic growth of developing countries. In the process of economic globalization in twenty-first Century, the flow of international capital is faster. Both developed and developing countries have taken foreign investment as an important factor affecting the employment and economic growth. For the middle and low income developing countries such as Thailand, it is necessary to actively attract foreign investment to promote economic development. With the impetus of economic globalization and economic integration, the economic ties of all countries in the world are constantly strengthening, and the international competitiveness and opening to the outside world of a country have become an important symbol of the level of economic development, and actively attracting FDI has become an important way to actively integrate into the global economic activities.

After the international financial crisis in 2007, Thailand's economic and society encountered some difficulties, such as military coup, frequent natural disasters and so on, which, to some extent, affected the social and economic development of Thailand. For Thailand, there is a short time to attract a large amount of FDI inflow, to solve the shortage of economic development funds, to fill the shortage of domestic investment, to improve the economic development level of Thailand in a short time, on the other

hand, to provide a large number of jobs in direct foreign investment, to reduce the unemployment rate in Thailand and to make the situation in Thailand more difficult. More importantly, through foreign direct investment, Thailand may transform from an agricultural country to an industrial country and realize the miracle of China's reform and opening up. Therefore, the analysis of the current situation of China's direct investment in Thailand and the impact of China's direct investment in Thailand has a theoretical and practical significance for continuing to attract and promote the investment of Chinese enterprises in Thailand.

1.4 Research framework

The first chapter is introduction. Through the relevant background and knowledge introduction, the background and significance of the research chosen in this paper are derived, the content and methods are studied, the framework of the paper, as well as the innovations and deficiencies.

The second chapter is the literature review, which includes the relevant theory of foreign direct investment and the theoretical review of foreign direct investment on economic growth.

The third chapter is a description of the investment that China has in Thailand, which also includes the characteristics of the industries.

The fourth chapter is an empirical analysis of China's economic growth in Thailand. Through the causality test, this chapter finds that China’s FDI has a significant impact on Thai economic growth. After the empirical analysis, the paper finds that China's economic growth in Thailand has a lagged effect, which is in line with the economic laws.

Chapter five concludes the conclusion and policy recommendations through the results of this study.

CHAPTER TWO
LITERATURE REVIEW

2.1 Internalization theory

Compared with the monopoly superiority theory, the internalization theory differs in that its basic assumption is that the intermediate product market (especially the technology market) has incomplete competition (Casson, 2016). Internalization theory provides different research ideas from monopoly superiority theory. The major change is that it brings the theory of outward foreign direct investment (Meyer, 2016). The salient feature of the internalization theory is that it first introduces market transaction internalization principles into international direct investment research, and that the analysis of the fundamental causes of international direct investment from the perspective of the company's own development (Forsgren, 2017).

The internalization theory puts more emphasis on the important role of intellectual property protection, which also makes the dimension of theoretical research closer to the practical foundation of multinational corporations to carry out international direct investment.

In addition, the internalization theory explains direct investment, export trade, and licensing arrangements. Export trade is vulnerable to trade protection restrictions, while foreign direct investment avoids host country discrimination policies and bypasses trade barriers (Farrell, 2015). The licensing arrangement is likely to cause technological leakage and impede its monopoly status for knowledge products. Besides, the success of the internalization theory over the monopoly superiority theory lies in its rational interpretation of why developing countries will also experience direct foreign investment, as well as the huge amount of investment in R&D funds of multinational corporations after World War II. If the theory of monopolistic superiority is based more on the analysis of the external development environment of the enterprise, then the theory of internalization is turning to the internal reasons of the multinational corporations' subjectivity and internal research to conduct international direct investment. However, this also determines that only considering the internal factors and ignoring the analysis of changes in the market environment will cause the theory to lose its objective perspective and create one-sided and limited problems. In fact, the internalization of the enterprise has become an objective reality since the emergence of the commodity economy, and the international direct investment is a product of the market development to a certain extent. Therefore, the internalization advantage is not the fundamental cause of

international direct investment. But, this theory does not illustrate well the location choice of international direct investment (Buckley, 2009).

2.2 Theories of technology upgrading and innovation

The researchers co-founded the theory of technological innovation industry upgrading in the early 90s of the last century (Cantwell et al, 1990). This theory carried out the trend of the growth of foreign direct investment in developing economies analysis. In the study, Canterwell and Tolentino raised two basic issues: First, the upgrading of the industrial structure of developing economies is the result of the improvement of the technological R&D capabilities of local companies. This ability is not improved overnight. But there is a process of gradual development and accumulation. Secondly, there is a positive correlation between the development of active technological level and the extent of development of foreign direct investment of local enterprises. The theory proposes that foreign direct investment in developing economies, regardless of their industrial structure or geographical distribution, is constantly changing. Moreover, this process is predictable. In addition, the theory also focuses on the analysis of the industrial characteristics and geographical characteristics of foreign direct investment by enterprises in developing economies.

From the perspective of regional characteristics, developing countries follow the rules that of investing directly in neighboring countries, then expanding direct investment in other developing countries, and gradually developing direct investment into developed countries (Luo, 2007). The theory of upgrading the technological innovation industry believes that the development process of Chinese companies in Taiwan, Singapore, and South Korea is a good demonstration of this theory: these areas have unique advantages in areas such as corporate chemistry, computer science, biotechnology, genetic engineering, semiconductors, and software development. Similarly, foreign direct investment in these regions is also relatively competitive.

The theory of upgrading the technological innovation industry puts forward a dynamic process in which developing country companies improve their technology based on technological innovation and accumulation, and in the mutual promotion of industrial structure and foreign investment (Porter, 2000). However, this theory ignores the fact that foreign investment by transnational corporates in developing countries is both a result of domestic technological advancement and industrial upgrading, and also an economic reality that shows domestic technological progress and industrial upgrading.

2.3 Integrated international investment development theory

The theory of integrated international investment development was proposed by Japanese scholar (Ozawa, 1992). The theory holds that from the national perspective, foreign direct investment in developing economies will go through four phases: first, attract foreign investment; second, transition from imported foreign investment to direct foreign investment; and the third phase Foreign direct investment based on low-cost labor forces is developing toward technology-oriented and trade-supported foreign direct investment; the latter stage is the symbiotic phase of the input of capital-intensive and capital-output-type inputs and foreign investment. The theory emphasizes that the upgrading of foreign direct investment in developing countries should be based on the enhancement of comparative advantages and on the basis of export-oriented strategies, combining the optimization and upgrading of the country's industrial structure with the advantages of developing foreign direct investment, and jointly implementing outward investment. In the study, we can comprehensively analyze the dynamics of the economic development process, the changes in comparative advantage, and the dynamics of foreign direct investment. The theory is that economic development will change factor endowments and comparative advantages, promote the transnational growth of enterprises, and overseas operations will in turn enhance industrial competitiveness and allow companies to grow into leading international companies. The theory is mainly analyzed from the macro perspective and fully complies with the dynamic comparative advantage.

2.4 Savings gap theory

The savings gap theory was proposed by Rosenstein (Rosenstein, 1994). His theory is that when a country's internal savings capacity is insufficient, the method of introducing funds from abroad can maintain the country's economic growth rate to its natural level. The savings gap theory points out that foreign investment can effectively supplement the savings capacity of developing countries, and the use of foreign capital can effectively bridge the gap between domestic savings and the investment needed for the plan, thus realizing the goal of national economic growth. Foreign investment is an important part of the economic development strategy of developing countries. Again, the savings gap theory believes that the external imbalances in developing countries are due to the imbalance in their internal economic development. However, the use of foreign capital can change the imbalance of this internal savings and investment gap. The savings gap theory stands at the perspective of developing countries and proposes policy proposals at the national level. The theory holds that if developing countries want to fundamentally change the

weak state of domestic economic development, they must increase domestic labor productivity. The introduction of foreign capital can to make up for the gap in savings, it should be used in technological innovation and technological reforms to fundamentally improve labor productivity and capital utilization efficiency. This is an important measure to transform the poverty and backwardness of developing countries (Dollar, 1992).

2.5 Classical economic growth theory and its development

2.5.1 Adam smith's theory

Adam Smith is the founder of the theory of economic development. In the mid-century book "The Wealth of Nations", he described how to increase the wealth of the people. That is, he systematically elaborated the theory of economic development. Adam Smith's research shows that the two ways the country promotes economic growth can be obtained first by increasing labor efficiency, and by increasing the amount of productive labor (Smith, 2005). He believes that increasing labor efficiency is more effective in promoting economic growth in these two ways. Adam Smith divides labor into productive labor that can create value and unproductive labor that cannot create value. Productive labor creates wealth, but unproductive labor consumes wealth. Therefore, the mass input of productive labor in labor can be effective Smith's research shows that the improvement of labor efficiency mainly depends on the amount of capital accumulation and the degree of division of labor. Division of labor can improve the proficiency of laborers and reduce the losses caused by the conversion of secondary operations. The accumulation of capital can increase the stock of capital and increase the number of labor, which directly promotes economic growth. David Ricardo further improved economic development theory on the basis of Adam Smith's theory of economic development. His viewpoint became an important theoretical source and pillar of modern economic development. Ricardo proposed that the long-term development of a country's economy must be kept open to the outside world and the country's The continuous integration of the economies of the world can bring about the sustainable development of the national economy; social wealth is the source of economic accumulation; conversely, economic development leads to the growth of social wealth; economic growth is the process of interest transfer, and economic growth and interest distribution are interrelated. Ricardo's theory of economic development has become an important source of research on economic development in the later period (Eltis, 2000).

2.5.2 Harold-Dorma economic growth theory

Harold (1939), a British economist, and Domar (1945), an American economist, proposed two very similar economic growth models. These two models were proposed during the dynamic study of Keynes's economic theory. The theory is known as the Harrod-Dorma economic growth model. Harold divided the economic growth rate into three types: real growth rate, balanced growth rate, and natural growth rate. The actual growth rate is the actual economic growth rate achieved by the society. It is noteworthy that, under normal circumstances, the actual growth rate cannot be calculated using the basic formula of the Harrod model. This is because the actual economic situation does not satisfy Harold's. Assumptions. Harold believes that when the actual growth rate deviates from the equilibrium growth rate, it will cause short-term economic fluctuations. When the equilibrium growth rate deviates from the natural growth rate, it will lead to long-term economic fluctuations, and if there is a deviation, there will be self-enhancement. Therefore, it is almost impossible to achieve long-term equilibrium growth with an actual growth rate equal to the equilibrium growth rate and equal to the natural growth rate, and it is often vividly called the "blade-style" economic growth.

2.5.3 Solow- Swann economic growth theory

The general equilibrium economic growth model established by Solow and Swan laid the foundation for neoclassical economic growth theory (Aghion, 1998). The general equilibrium economic growth model is mainly studied from the perspective of the variability of capital coefficients, and seeks to ensure the main conditions for balanced economic growth between the constant saving rate and the economic growth rate. This model divides economic growth into two sources. This is the economic growth brought about by the increase in the number of factors, and the economic growth brought about by the increase in the factor technology level. The theory holds that without increasing the input of factors, technological progress can shift the production function upwards by changing the production function, thus achieving the purpose of economic growth, and emphasizing the role of technological progress in promoting economic growth. Solow and Swan think that by adjusting the combined ratio of capital and labor in production through the role of capitalist market mechanisms, economic activity can achieve a balanced growth of full employment as Harold said. This model of economic growth has improved the interpretation of the effects of technological progress on capital accumulation in the course of economic growth, reversed the pessimism in the economic theory circle, and was used by most governments as the theoretical basis for formulating economic growth policies

(Knight, 1993).

The favorable factors of FDI to the host country are mainly reflected in the following four aspects:

(1) Resource transfer effect. International direct investment has a positive contribution to the economy of the host country and can provide resources that the host country lacks, such as capital, technology and management skills, thereby increasing the country's economic growth rate.

Capital: Many multinational companies have huge scale and financial strength, and thus have financing channels that host country companies cannot obtain. These sources of funds may be their domestic companies, or they may be multinational companies that, with their good reputation, are more likely to raise capital from the capital market than host-country companies. Therefore, international direct investment is an important way to use foreign capital.

Technology: The key role played by technological progress in economic growth has been widely accepted. However, many countries, especially developing countries, lack the resources and skills necessary for research and development necessary to develop their own products and develop production technologies. Through international direct investment, necessary technologies can be introduced for these countries.

Management skills: Obtaining foreign management skills through international direct investment can also bring benefits to the host country. A local company that once trained in a foreign multinational company's subsidiary and has held a management, finance, or technical position would leave the company and help establish a local company, which would have a beneficial spin-off effect. Similarly, the advanced management techniques of foreign multinationals can stimulate local suppliers, distributors, and competitors to improve their own management techniques, which will also have similar effects.

(2) Employment effect. International direct investment can increase employment in host countries. Foreign MNCs employ a certain number of host country residents. This has a direct effect. As a result of this investment, the jobs created by local suppliers and employees of multinational companies in local consumption are indirect effects. Even if the indirect effect is not greater than the direct effect, it is at least equivalent to the direct effect. However, not all international direct investment can

increase employment. For example, some international direct investment projects will cause the same competition in the host country to shrink, and as a result, new jobs may not be enough to offset the lost jobs. The net increase in the number of jobs has thus become the main point of negotiations between multinational corporations and host countries.

(3) International balance of payments effect. For most of the host countries, the impact of international direct investment on a country's balance of payments is an important policy issue. International direct investment has three potential impacts on the balance of payments. First, when a multinational company establishes an overseas subsidiary, the capital project of the host country will benefit from the initial capital inflow. For the home country, it will be capital outflow. Therefore, it should be credited to the debit of the capital project of the home country. However, this is only a one-time effect. Contrary to this, the return of such investment profits to foreign parent companies will also result in the outflow of funds, which is debited in the host country's current account. Second, if international direct investment becomes a substitute for the import of goods and services, it can improve the current account of the host country's balance of payments. Third, when multinational corporations use their foreign subsidiaries to export goods and services to other countries, the host country's state revenue and expenditure have improved (Thirlwall, 2004).

(4) Competition effect. By increasing consumers' choices, international direct investment can help increase the level of competition in the domestic market, thereby lowering prices and improving consumer economic welfare. The intensification of competition can often stimulate companies to increase capital investment in equipment, equipment and research and development, in order to occupy a dominant position in the competition with their opponents. The resulting long-term results include an increase in labor productivity, product and production process innovation, and a higher rate of economic growth. The impact of international direct investment on domestic market competition is particularly important in the service industry.

The disadvantages of international direct investment on the host country are mainly manifested in the following three aspects:

The negative effects of competition: If the foreign multinational company's subsidiary is far stronger than the host country's domestic enterprise, or if the multinational company subsidizes the cost of the subsidiary, the host country's own company will be eliminated from the competition. Once a foreign company gains a monopoly in the market, it will raise prices and adversely affect the economic welfare

of the host country. This phenomenon is even more serious for those countries where there are fewer major domestic companies (generally less developed countries). In addition, if a particular industry in a country is a so-called Infant Industry that has a potential comparative advantage, then allowing international direct investment to enter the industry means that it deprives domestic companies of development opportunities. However, some inefficient domestic competitors often use the above arguments as a basis to lobby the government to limit the direct investment of foreign multinational corporations.

The negative effect of the balance of payments: If the international direct investment project generates profits, and the subsidiary company remits profits to the foreign parent company, this profit outflow will be credited to the borrower of the labor revenue and expenditure in the host country's current account of international payments. The measures taken by some countries for such capital outflows are to limit the amount of foreign subsidiaries' profits flowing to their home countries. In addition, if a foreign subsidiary imports a large amount of products for input from abroad, the result must be recorded as a borrower for trade balances in the host country's current account of international payments. In order to avoid this adverse impact on the balance of payments, some countries have established localization rate indicators for foreign direct investment projects and require that they use a certain amount of domestically produced spare parts.

The negative effects on national sovereignty: Many host governments fear that foreign direct investment will lose some of their economic independence. Major decisions made by foreign parent companies will affect the host country's economy, while the host government has no actual control over this.

The benefits of international direct investment are in the three aspects: The current account of the home country's balance of payments will be improved due to the inflow of foreign investment income. The increase in home country exports will have a favorable employment effect. Multinational corporations in home countries can also learn valuable skills from foreign markets and transfer such skills back to their home countries. This is equivalent to the reversed resource transfer effect. Through contact with foreign markets, multinational companies can learn more advanced management techniques and more advanced products and processes.

2.6 Theories related to FDI

2.6.1 Investment and trade substitution theory

After the Second World War II, economists combined the international theory and the industrial organization theory to analyze the FDI. The Canadian economics Mundell is one of the representatives. From the perspective of international trade, Mundell uses comparative static analysis to point out that because of the inevitable various forms of trade barriers in international trade, in order to occupy the international market, investment is a form of trade or a substitute. Mundell believes that international trade leads to international direct investment, and that in the absence of trade barriers, both sides can gain benefits (Mundell, 1957).

2.6.2 The theory of marginal industry expansion

Aiming at the expansion of international capital in 1970s, Japanese economist KoJima put forward the theory of marginal industry expansion. If the host country lacks capital support and corresponding technical support, the host country becomes a disadvantaged industry. Taking into account the theory of comparative advantage in international trade, the host country should import products that are relatively inferior and export products that are of relative national superiority. The theory holds that it is necessary to improve the trade but also transfer the international industry by investing in the domestic inferior industries, transferring these disadvantages to other countries, and expanding their production exports to the dominant industries(Dunning, 1973).

2.6.3 International production compromise theory

Denning systematically summarized structural market factors and the incomplete natural market factors to analyze the formation of multinational corporations and their foreign investment behaviors (Denning, 1977). The international production compromise theory is known as the general theory of international direct investment with a high degree of generality, wide coverage and adaptability. The theory of international production compromise holds that ownership advantage, internalization advantage and location advantage are the basic factors to determine the behavior of multinational corporations and foreign direct investment. At the same time, the different combinations of these basic elements also determine the main forms of enterprise participation in international economic activities, namely license trade, commodity export and foreign direct investment.

2.6.4 Monopolistic advantage theory

Stephan, an American economist, first studied the theory of foreign direct investment, and put forward the theory of monopolistic advantage in his doctoral thesis. He believes that the motivation of direct investment of multinational corporations is caused by market adjustment defects. He divides the monopolistic advantages into two categories: one is the knowledge asset advantage including all intangible assets such as production technology, management and organizational skills and sales skills, and the other is the scale economic advantage caused by the large scale of the enterprise (Hymer& Stephen, 1976).

CHAPTER THREE
RESEARCH METHOD

3.1 Research hypothesis

According to the relevant theories and the reality of China's investment in Thailand, this paper proposes two hypotheses.

The theory of economics puts forward that human resources have a decisive role in the development of a market economy. It is an intrinsic growth factor. The cultivation of talents is a way to increase the level of human resources. China's FDI in Thailand can promote the optimization of labor resources, mainly because foreign companies bring together a lot of high-quality talents. At the same time, it also causes the government to train and attach high-tech personnel (Xuan, 2008).

Injecting investment into labor capital is an important way to bring about the accumulation of labor capital. Foreign investment can bring high technology and raw capital accumulation to the country, inject new vitality into the market, and promote local economic development. Chinese companies have introduced high-tech to FDI in Thailand on the basis of increasing the original capital, optimized the market structure, improved the adjustment of human resources structure and improved the overall production efficiency. By increasing the salary of advanced technology owners, the gap between them and low-level manpower increases. Therefore, China’s investment in Thailand stimulated Thailand’s increase in manpower input costs. Moreover, Chinese enterprises have invested in Thailand and have formed a certain regional concentration effect, attracting many high-level talents. In the earlier period, there was a serious outflow of talent in Thailand, and China’s FDI in Thailand eased this trend to a certain degree and optimized the composition of Thailand’s workforce.

Business investment in different countries can inject new vitality into the domestic market, increase the room for enterprise's promotion in market management, and promote the optimization of the labor force structure. Chinese enterprises stationed in Thailand provided jobs to the local labor force and raised the level of manpower in the region. At the same time, the added value of human input has stimulated Thailand’s investment in previous education and manpower training, and strengthened the awareness of high-tech workforce development. At the same time as the training of the labor force, the Thai government has also adopted policy advantages to encourage high-tech talents to employ and start businesses in their own country and reduce intellectual outflows, thus optimizing the country’s human

resources structure to some extent.

China's FDI to Thailand has a positive effect on its economic development. It not only increases the accumulation of original capital, but also provides various jobs, slows employment pressure in the region, and is conducive to optimizing the structure of human resources in Thailand. Therefore, China's FDI to Thailand is also conducive to the stability and development of Thai society. Chinese companies choose to invest and build factories in Thailand, mainly to take advantage of Thailand's geographical resources and low labor costs. While providing jobs to Thailand, foreign businesses can also train local workers, improve their quality, and strengthen local human resources. From the data analysis results, China's FDI to Thailand continues to increase, and the number of foreign investment projects continues to increase. The processing service jobs in these foreign investment projects are provided to local Thais, which greatly eases the local employment pressure.

Chinese enterprises' investment in Thailand has increased capital accumulation in the region, changed Thailand's industry distribution and changes, strengthened the adjustment of market structure, and accelerated industrial optimization. In general, the industrial upgrading adjustment is conducive to the coordinated progress of various industries and the balanced development of the entire market system. The main purpose of industrial structure adjustment is to make the distribution of industries more reasonable and products upgrade and upgrade. On the one hand, the presence of Chinese investors in Thailand has promoted the development of Thailand's high-tech industry, led to the development of linkage industries, and promoted overall industry adjustment and optimization. China's FDI to Thailand can provide capital assistance for the supply of intermediate products, and at the same time assist the follow-up sales, agency and service cost consumption, and optimize the market structure. On the other hand, Chinese companies entering the Thai market are conducive to changing the original industrial structure of the market, optimizing traditional manufacturing industries, improving market competitiveness, and upgrading products. Therefore, this paper proposes

Hypothesis 1: China's FDI has a positive impact on Thailand's GDP growth (Buckley et al, 2007).

According to the employment theory, the increased savings rate and the increased FDI will bring more opportunities to the local country and accelerate the economic development. This means that more people who were not fully occupied will have job now. Therefore, the paper introduces hypothesis 2.

Hypothesis 2: China's FDI causes Thailand's employment to grow.

3.2 Research design

According to the mechanism of the influence of FDI on economic growth, the paper establishes the economic growth model based on the Solow Growth Model. According to the Solow Growth model, the saving rate will increase the capital acceleration, which will in turn promote the economic growth. The Solow economic growth model has the following equation:

Y=zF(K, L), in the model, Y is the total economic output, K is the capital acceleration, while L is labor. However, when the economy of a certain country is open to the outside, for the domestic country, FDI will play a similar role as the increase of the savings rate, because the capital per son will increase. As such, the Solow Growth model will be changed to the following equation: Y=zF(K,F,L), in this equation, a new variable F is added. In this model, the economic condition of a certain country will be influenced by the external investment FDI.

3.3 Research tools

The tools used in the research are mainly the regression models and the related economic theories.

3.4 Data collection method

The paper uses the following variables. First is “gdp”, which measures the total economic output of Thailand, second is “FDI”, which is the direct investment of China on Thailand, and the paper analyses these variables with the data from the world bank, the IMF and other resources.

Taking into account the availability of data, this article uses Thailand's domestic gross domestic product GDP to represent the level of Thai economic development. The data comes from the World Bank database. The data on China’s direct investment in Thailand’s FDI, Thailand’s employment, and total fixed-asset investment are derived from China’s historical direct overseas investment data (Boonlua, 2011). The data on Thai employment and total fixed-asset investment comes from the World Bank database.

In order to facilitate comparison of data, the two variables of the gross domestic product and the direct investment amount of the Chinese team Thailand are taken in

logarithmic form. From Figure 4-1, it can be seen that the measurement of Thailand's economic level has shown a certain degree of growth since 2003. The lnfdi, a measure of foreign direct investment, has shown large fluctuations, trend trends fluctuate, and within a short period of time, the volatility is large. The long-term growth trend is obvious (because the logarithm reduces the data volatility).

3.5 Data analysis method

When doing the data analysis, the paper uses a variety of methods, including descriptive statistics, regression analysis etc.

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 withe 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. There 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					
	1st area		2nd area		3rd 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					
	1st area		2nd area		3rd 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.

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.

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:

Model 1: $\Delta Xt = \delta Xt\text{-}1 + \sum_{i=1}^{m} \beta i \ \Delta Xt - i + \varepsilon t$

Model 2: $\Delta Xt = \alpha + \delta Xt\text{-}1 + \sum_{i=1}^{m} \beta i \ \Delta Xt - i + \varepsilon t$

Model 3: $\Delta Xt = \alpha + \beta t + \delta Xt\text{-}1 + \sum_{i=1}^{m} \beta i \ \Delta Xt - i + \varepsilon t$

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)
Ln*gdp*	-2.03	-4.20	-3.18	-2.73	0.27	Non-stationary (1%, 5%, 10%)
D.ln*gdp*	-2.50	-4.30	-3.21	-2.47	0.04	Stationary (10%)
ln*fdi*	-0.17	-4.42	-3.26	-2.77	0.91	Non-stationary (1%, 5%, 10%)
D.ln*fdi*	-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 ln*gdp* and ln*fdi* 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:

$$Yt = \beta_0 + \sum_{i=1}^{m} \beta i \, Yt - i \; + \; \sum_{i=1}^{m} \alpha i \, Xt - i \qquad (1)$$

$$Xt = \delta_0 + \sum_{i=1}^{m} \delta i \, Xt - i + \sum_{i=1}^{m} \lambda i \, Yt - i \qquad (2)$$

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 ln*fdi* and variable ln*gdp* 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
ln*fdi* is not Grainger reason for ln*gdp*	10	1.01038	0.428	Reject the original hypothesis
ln*gdp* is not Grainger reason for ln*fdi*	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.

$$\ln gdp = \alpha + \beta_1 \ln fdi + \beta_2 \ln lab + \beta_3 \ln cap + \varepsilon$$

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.

CHAPTER FIVE
CONCLUSION AND RECOMMENDATION

5.1 Conclusion

This article focuses on the development of China's foreign investment in Thailand. Since the late 1980s, China's investment in Thailand has continued to increase. According to statistics, since the beginning of 1987, there have been 347 investment projects by Chinese investors in Thailand with a total amount of 116,724 million baht. Judging from the scope of industries covered by the project, Chinese investors invest more in agriculture, followed by machinery manufacturing, followed by chemical industry, textile industry and electrical industry. The total number of projects involving minerals and services investment is relatively small. However, when the amount of investment is used as a measure, the amount of investment in the mineral industry is the largest, followed by the investment in agriculture, and the investment in several major industries has changed. Overall, Chinese investors tend to invest in agriculture in Thailand because Thailand has regional natural conditions and labor advantages that can provide better development for agriculture.

Since the international financial crisis in 2007, the industries in which Chinese companies invest directly in Thailand have mainly concentrated on metal products, machinery and service industries, especially in metal products and machinery, which have developed rapidly in recent years. Due to the diversity and dispersion of FDI industry in Thailand, especially in 2008-2014, Chinese companies invested more in metal products in machinery, electrical and electronic products, in terms of the number of projects and the amount of money, followed by agricultural products. . The number and amount of Chinese companies investing in Thailand are constantly increasing. Currently, most of the Chinese companies investing in Thailand are mainly concentrated in SMEs that do not exceed 500 million baht in investment.

This paper uses the Granger causality test of China's direct investment in Thailand from 2003 to 2014 to prove that China's FDI has significantly promoted the growth of Thailand's GDP, and that a 1% increase in China's direct investment in Thailand will lead to a 0.023498% increase in Thailand's GDP.

From the geographical classification analysis, Chinese investors tend to invest in Thailand's second region. This is related to the geographical advantage of the region. The region's natural environment is relatively good, its geographical advantages are obvious, its infrastructure is relatively complete, and its convenient transportation is

conducive to trade and transportation. The area that is least welcomed by Chinese investors is the first area. The basic cost of this area is high, and the manpower cost is relatively high. Compared with the other two regions, the political preference is less, so the attraction of foreigners is relatively small. Considering the basic cost, human resources, and various institutional advantages, Chinese investors have more choices for investing in enterprises in the second and third regions.

Using the Granger causality test, we concluded that Chinese companies' investment in Thailand has led to the development of Thailand's economy. China's FDI to Thailand has important economic significance. It has not only promoted GDP growth in Thailand, but also solved local employment pressures to a certain extent, enhanced overall asset inventory, stabilized its international trade market, and promoted the progress and market of Thai technology. Changes in the system.

5.2 Recommendation

For investment in China, before entering the Thai market for investment, it is necessary to strengthen understanding of the market conditions, relevant policies, cultural customs, and social habits of the region. On the basis of familiarity, conduct judgments and analysis to determine the investment plan. For example: invest in Thailand by choosing a locally suitable industry for development.

In the management of Chinese investor-invested enterprises, Thailand needs to strengthen its institutional and policy standards, address problems arising in the course of trade, promptly contain it, and reasonably safeguard the common interests of both parties. China's FDI in Thailand can promote Thailand's economy. The Thai government should also encourage preferential policies to encourage Chinese companies to invest.

The Thai government needs to combine its own market conditions and scientifically use foreign investment to achieve product optimization and market structure optimization and enhance market competitiveness. In the competition and cooperation with foreign companies, we will continue to give play to our own strengths and learn from advanced technologies and management skills from abroad to enhance our own vitality. For foreign companies with advanced industries and advanced industries, the government needs to increase policy encouragement, attract foreign investment, actively study international examples, and make more reasonable use of foreign capital. In the process of utilizing foreign capital, the government needs

to strengthen its control capabilities, while safeguarding benefits of both sides, achieving a win-win situation, and reasonably absorbing the beneficial aspects brought about by foreign investment and avoiding its impact on the ecological environment.

Actively introduce preferential policies. The industries in which Chinese companies invest directly in Thailand are mainly concentrated in metal products, machinery and service industries, especially in metal products and machinery. This may be because production in Thailand is more advantageous than China. Secondly, Thailand is a developed service industry and tourism industry. The country has a large number of tourist visits each year. Chinese companies invest in Thailand to invest more in the service industry. Therefore, the Thai government should actively launch some more preferential policies or cancel some factors that may bring disadvantage to the Chinese business, such as: Simplification The examination and approval procedures, the shortening of the examination and approval time, and the active tax cuts have increased the investment in the industry in order to attract more Chinese companies to Thailand. In particular, manufacturing companies and industries that need to import and export, such as light industry and textile industries, Chinese companies in the chemical products/papermaking and plastics industries, and metal products/machinery and transportation equipment, etc., have comparative advantages. Currently, in these areas, the competitiveness of the industry in Thailand is not yet very large. Coupled with Thailand's superior geographical location and the important transportation routes linking multiple regions and countries, Chinese companies that choose to invest in Thailand can enjoy better incentives than other ASEAN countries to promote investment. Policies, production of cheap products, and exports to other ASEAN countries, but also save time to transport, but also can save costs, for Chinese companies to obtain more profits.

Improve the investment environment. The first district is the capital city of Bangkok and its neighboring cities. Due to the high rents in the first district, high labor costs, lack of natural resources, and less favorable investment policies, Chinese companies are relatively less likely to invest in the first district. Therefore, in these areas, the Thai government should add some preferential policies, such as relaxing some of the import tariffs on machinery and equipment and import tariffs on raw materials, etc., to attract more Chinese companies to invest in Thailand's first district. In addition, Thailand should further increase its economic openness on the basis of continuous economic development, reduce the cost of business operations of foreign companies in Thailand, improve the establishment of some systems for attracting foreign investment, and upgrade their investment in ASEAN countries. With regard to

its competitiveness, it will use foreign capital to better serve its own economic development, promote its own technological level and transform its industrial structure.

Pay Attention to Industrial Structure Adjustment. After FDI inflows into Thailand, most of them flowed into the industrial and construction industries, and they flowed into the service industry and agriculture. There was little related to Thailand's policy to actively develop industries and make up for the weaknesses of its industrial base. On the other hand, it related to Thailand. Restrictions on foreign investment in the open sector are relevant. From the above analysis, we can also see that the impact of foreign direct investment on Thailand's agriculture and service industries is also obvious, but the impact on the tertiary industry is not obvious, although the development status of this stage is The upgrading of Thailand's industrial structure has had a significant effect, but the adverse impact of the excessively rapid industrial development on the Thai environment is also reflected. While Thailand's emphasis on the development of industry, it must also see the importance of the tertiary industry, making inter-industry relations. Get balanced development. The Thai government must enrich and diversify the fields and industries that attract foreign investment, and guide the direction of foreign direct investment through policies, such as heavy industries, machinery, metallurgical industries, use of natural resources, and industries that are prone to polluting the environment. We will give policy support to the social services, education, R&D and other industries, promote the development of the secondary industry together with the tertiary industry, diversify and optimize the industrial structure, and create a healthy industrial production chain.

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