

China's Outward FDI: A Study of Push and Pull Factors in Selected Asian Countries



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CHULALONGKORN UNIVERSITY

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วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาศิลปศาสตรมหาบัณฑิต

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งานวิจัยฉบับนี้มุ่งเน้นในการวิเคราะห์ถึงปัจจัยที่ส่งผลกระทบต่อการลงทุนโดยตรงไปยังต่างประเทศของประเทศจีน โดยปัจจัยที่ส่งผลกระทบต่อการลงทุนโดยตรงสามารถแบ่งออกเป็นปัจจัยดึง (Pull Factors) และปัจจัยผลัก (Push Factors) จากการวิเคราะห์ข้อมูลลักษณะ Panel Data โดยใช้สมการถดถอย เพื่อหาปัจจัยดึงพบว่า การส่งออกสินค้าพื้นฐาน และรายได้ต่อหัว ของประเทศผู้รับทุนส่งผลกระทบต่อการลงทุนโดยตรงไปยังต่างประเทศของจีน ในขณะที่กฎระเบียบต่าง ๆ ส่งผลกระทบต่อการลงทุนดังกล่าว สำหรับปัจจัยผลลัคนั้น เมื่อใช้กระบวนการวิเคราะห์แบบ Co-integration พบว่า เงินสำรองของจีน อัตราแลกเปลี่ยน จำนวนสิทธิบัตร และ ค่าจ้าง เป็นปัจจัยผลลัคนสำคัญสำหรับการลงทุนโดยตรงขาออกจากจีน โดยส่งผลกระทบต่อการลงทุน และเมื่อวิเคราะห์ผ่าน Error Correction Model แล้วพบว่าจำนวนสิทธิบัตรของจีนเป็นปัจจัยผลลัคนี่ส่งผลกระทบต่อออกไปลงทุนทางตรงในต่างประเทศของจีน อย่างไรก็ตาม เมื่อวิเคราะห์ถึงภาพรวมแล้วจะเห็นได้ว่า ปัจจัยผลลัคนี่สำคัญที่สุดคือนโยบายส่งเสริมการลงทุนโดยตรงขาออกของจีน ซึ่งเริ่มใช้เมื่อปี ค.ศ. 2000 ทำให้การลงทุนโดยตรงขาออกของจีนเพิ่มขึ้นอย่างมากตั้งแต่นั้นเป็นต้นมา

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This study is an attempt to identify China's outward FDI (OFDI). The factors have been separated into push and pull factors. The pull factors are studied through panel OLS, while the co-integration method and Error Correction Model (ECM) are used to identify the push factors. Internalization Theory is the main conceptual framework. This result shows Asian exports of fundamental products and GDP per person employed are positively associated the OFDI. However, regulatory quality is negative. For the push factors, China's foreign reserves, exchange rate, patents and wage are found to positively impact outward FDI. Nonetheless, China's export and saving rate are negatively associated with China's OFDI. Then the ECM shows that China's patent has positively associated with China's OFDI at 15% significance. When Chinese's policies supported its OFDI since 2000, its OFDI increased rapidly.



Field of Study: International Economics and Finance      Student's Signature .....

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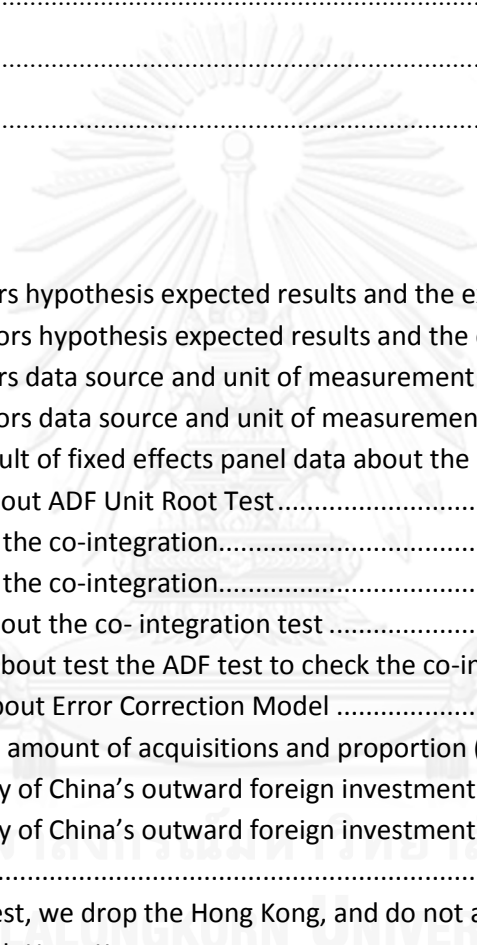
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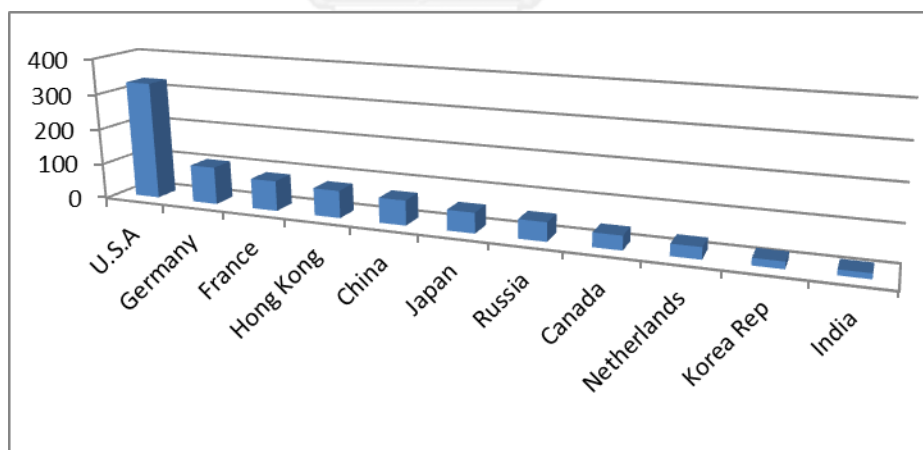
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## CHAPTER I INTRODUCTION

### 1.1 Background and Significance of the problem

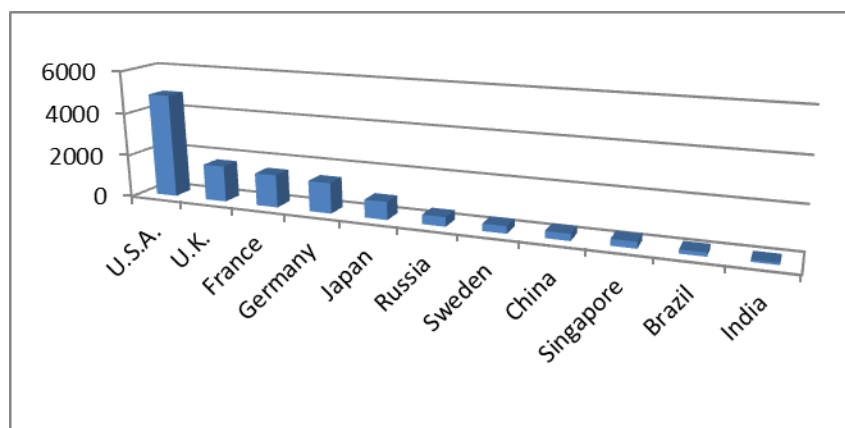
This paper investigates the determinants of outward FDI by separated into pull and push factors. The study focuses on location choices of Chinese multinational firms to 24 Asian countries. It is usually recognized that reform and opening policies have enhanced economic growth. As a consequence of the rapid economy growth, China attracted more and more foreign capital enterprises to enter. After 1978 China commences its economic reform and open-door policy, it has become one of most popular foreign direct investment destinations. The global foreign direct investment is the key to its growing of economic. China's GDP is over Japan's GDP in 2010, accounting for 9.3% in the world, fast-growing China is now the world's second-largest economy and behind USA. (Statistical bulletin of china's outward foreign direct investment 2011)

Figure 1: Outward FDI flows from China and other major home economic, 2010  
(Billions of USD)



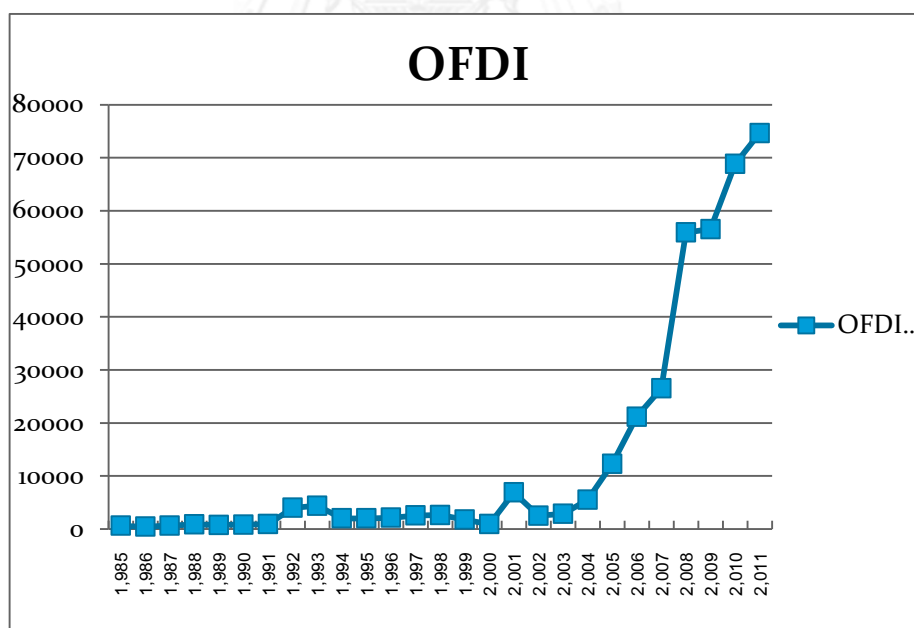
Source: 2010 Statistical Bulletin of China's Outward Foreign Direct Investment

Figure 2: Outward FDI stocks from China and other major home economic, 2010 (Billions of USD)



Source: 2010 Statistical Bulletin of China's Outward Foreign Direct Investment

Figure 3: Outward FDI flows from China to the world (1985-2011) (Millions of USD)

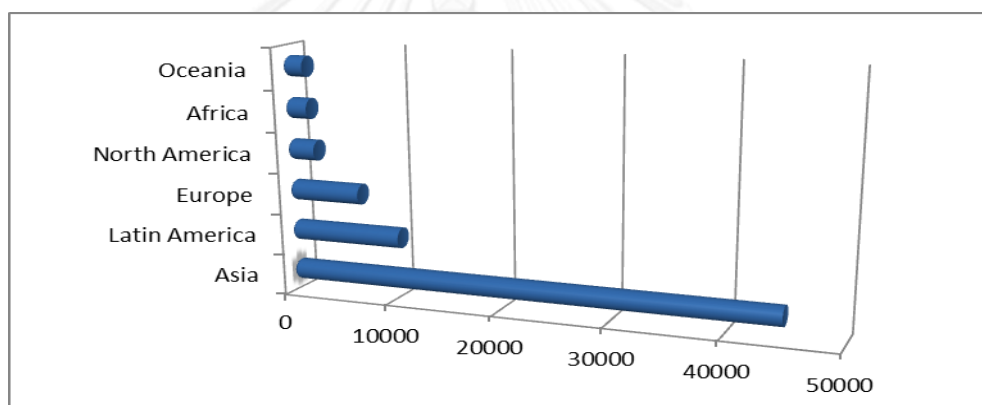


Source: 2010 Statistical Bulletin of China's Outward Foreign Direct Investment

The China's outward foreign direct investment is growing very fast since 2003 (Figure 3). There are 13,500 domestic investors that make up for 18,000 foreign direct investment enterprises, spreading across 177 countries and regions. China's foreign direct investment accounts for 4.4% capital outward flows and 2% capital stock in

2010, which is number 5 (Figure 1) and number 8 (Figure 2) in the world. The flows have more new characteristic, such as merging enterprises become increasingly concentrated in the developing countries. It distributes widely and majorities of OFDI are in service industry, financial industry, mining, wholesale and retail trade, manufacturing, and transportation (Figure 5). About 70% of capital out flow from China goes to Asian countries (Figure 4). The state-owned enterprises accounted for 55.1% non-financial foreign direct investment flows. Private enterprises are encouraged to participate increasingly in “go global” campaign. (Statistical bulletin of china's outward foreign direct investment 2010)

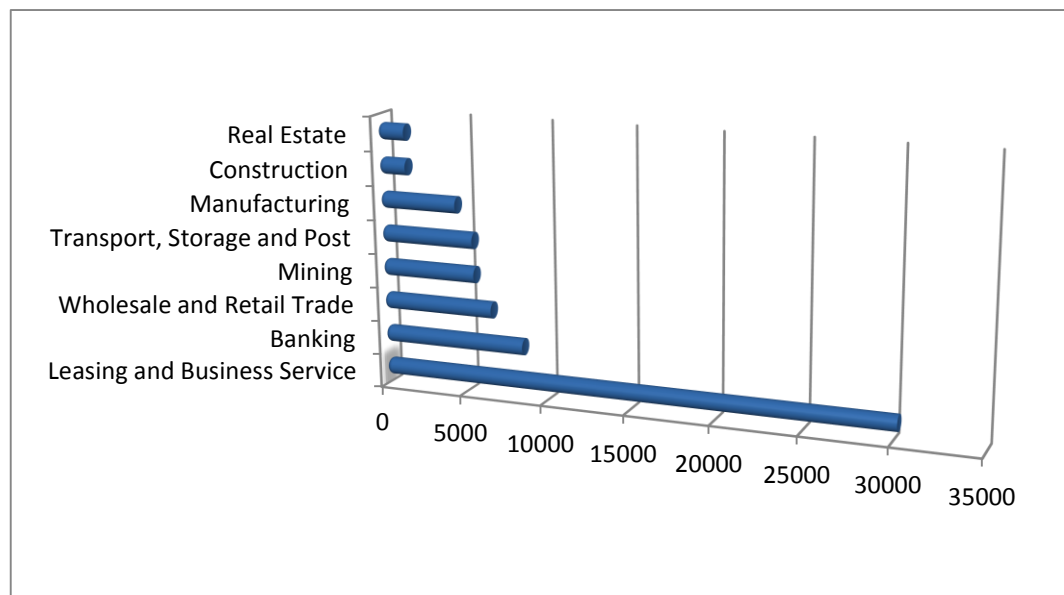
**Figure 4: Outward FDI flows from China in different parts of the world in 2011 (Millions of USD)**



Source: 2010 Statistical Bulletin of China's Outward Foreign Direct Investment

There are 5 main reasons for increasing China's outward FDI, includes resource-seeking, market-seeking, technology-seeking, diversification-seeking and strategy-seeking investment. (Randall 2008)

Figure 5: Outward FDI flows from China in different industries in 2010 (Millions of USD)



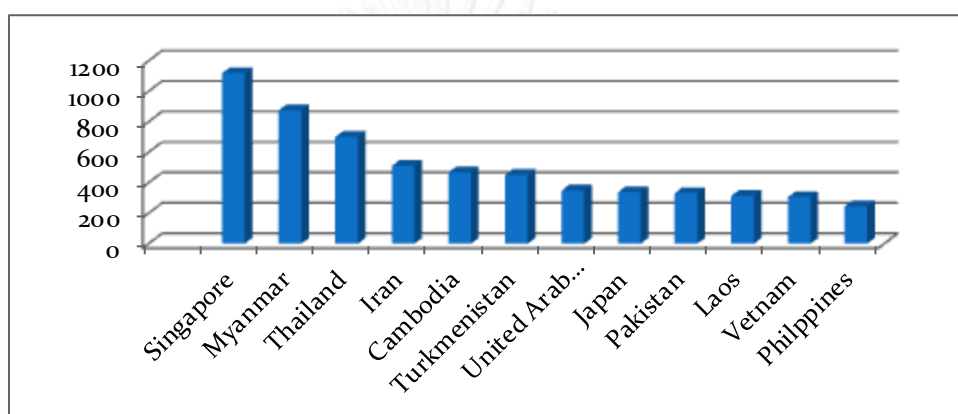
Source: 2010 Statistical Bulletin of China's Outward Foreign Direct Investment

China's foreign direct investment has been growing for ten years from 2002-2011. In 2012, 69 China's mainland enterprises were selected for the "Fortune" magazine Fortune 500 best companies. The majority of players in the outward FDI are state-owned enterprises before, while private-sector firms may well conduct some outward FDI. But the total amount is not significant. However, China's foreign direct investment of non-financial was 68.58 billion in 2011, private enterprises accounted for 14.6% in 2008 and it reached to 29.5% in 2011. Private enterprises are more than 44% of the non-financial flows of foreign direct investment. China's foreign direct investment covers all sectors of the national economy. The vast majority of investment flows to business services, financial services, wholesale and retail, mining, transport and manufacturing. These industries are accumulated investment stock of \$ 280.16 billion, accounting for 88.3% of the total stock of foreign direct investment in China. (Statistical bulletin of china's outward foreign direct investment 2010)

There are many other reasons for the continuous high growth China's outward FDI in these years. One reason is high savings rate, China's savings rate is the highest in the world, it reaches up to 51% of GDP in 2012. Export-oriented firms use the low labor cost to get cheaper good, Chinese exports and imports are imbalance. With China's trade surplus, China stores enormous foreign reserve. With China's

currency appreciating, China's companies have good opportunities to explore their business all over the world. Finally, the government policy encourages Chinese enterprises to expand to other nations. (Statistical bulletin of china's outward foreign direct investment 2010)

**Figure 6: Outward FDI stocks from China to Asian selected countries in 2010 (Millions of USD)**



\*The first favorite destination of China's outward FDI is Hong Kong, The number in this table is 38505.21, it is too big to set it in this table, but we should not forget it and in the following we check the pull factors within and without Hong Kong, the results are very different.

Source: 2010 Statistical Bulletin of China's Outward Foreign Direct Investment

The Association of Southeast Asian Nations, or ASEAN, was established on The eighth of August 1967 in Bangkok, Thailand, with the signing of the ASEAN Declaration by the Founding Fathers of ASEAN, namely Indonesia, Malaysia, Philippines, Singapore and Thailand. Brunei Darussalam then joined on January 7 1984, Vietnam on July 28 1995, Lao PDR and Myanmar on July 23 1997, and Cambodia on April 30 1999, making up what is today the ten Member States of ASEAN. The motto of ASEAN is "One Vision, One Identity, and One Community". To accelerate the economic growth, social progress and cultural development in the region and to promote regional peace and stability through abiding respect for justice and the rule of law in the relationship among countries of the region. (Randall 2008)

Owing to the 1997–99 Asian financial crises, this hit the ASEAN economies especially hard, deepening concerns about their ability to compete, especially against China. More than a decade after the crisis, things are looking very different for both sides. The financial crisis also offered China important opportunities to

demonstrate regional leadership and its commitment to the Southeast Asia, relative to that of other powers. The regional organization from the 1997 Asian Financial crisis provided a strong base for monetary and financial cooperation leading to ASEAN+3 monetary and financial cooperation initiatives for more regional stability.

The crisis provided China with opportunities to demonstrate its political and economic value as a partner, even as a regional leader. In notable contrast to the U.S. and Japan, China emerged favorably from the crisis. General consensus in ASEAN appears to be that China acted responsibly.

The model of economy in China and ASEAN is similar; it is the export-oriented economic and process-oriented economic model. From a different perspective, China and ASEAN relationship are both competition and cooperation at the same time. Historically, Southeast Asia countries fear of China stemming from geography and historical experience. China's sheer size and proximity and the presence of disproportionately wealthy ethnic Chinese communities had all contributed to fears of China dominating the region. With Asian economic rises, Asian became the most favorite destination of China's outward foreign direct investment. Because Geography and culture are similar, it is convenient to China's outward foreign direct investment to go to Asian countries (Figure 6).

In economic terms, there is more intense competition. USA, Japan and EU economies are not only important sources of capital inflows to China but also important markets for China's exports. About 50 percent of China's exported goods are sold to USA, Japan and EU. In 2010, China exports totaled \$1.194 trillion, down from \$1.429 trillion in 2008. Its main exports are electrical goods and other machinery, including data processing equipment, apparel, textiles, iron and steel, optical and medical equipment. In recent years, the exports of high tech products have been also growing and in 2012 accounted for 29 percent of total exports. China's main export partners are the United States (17%), European Union (16%), ASEAN (10%), Japan (7%) and South Korea (5%). (China Exports, Trading Economics)

As a low cost supplier of many intermediates of Southeast Asian countries products, China will fill an increasing number of the market niches upon which Southeast Asian firms rely. The prospects are better for the region's better-developed economies, but until wages in China raising enough to make Chinese goods less competitive, producers in the less developed ASEAN economies will suffer losses when the barriers to Chinese exports are lowered.



China's savings rate at up to half of its gross domestic product. are much higher than in other countries. Government savings rates, corporation savings rate and household savings rates made up of China's savings rates. It also can divide by two groups, financial savings and savings in kind. The savings rates rise rapidly due to government and corporation savings rates mainly, while household savings rates to GDP has remained at around 20%. This is a big problem that how to make use of the high savings rates efficiently. China's savings rates can support investment aboard and it is one of the ways to interest rate marketization. With developed financial markets, Chinese government forges the better market environment. (The People's Bank of China)

A major part of the China's foreign reserves is in the form of U.S. Treasury Securities. In 2006, China's foreign reserves outnumber that of Japan, and become the first place in the world. The dollar is international mean of payment and storage, about 2/3 of international trade have been done by the dollar. However, That United States continued to increase in net foreign debt and have a sharp deterioration in the financial situation threats to the safety of China's foreign exchange reserves. Besides China's government uses other countries' currency as foreign reserves, investing oversea is also a wise plan to solve the problems. Further, China's long-term goal is to make the RMB an international currency, but this will take time. If this come true, China will depend less on the US dollar and decline the currency risk. Then with the interest rate marketization and China's currency as international currency, the China's economic will be more stable. (State Administration of Foreign Exchange 2011)

The countries innovating power can indicates by the number of the patents, China's patents roars dramatically. The state gives aid to the development of the technology and science. The World Intellectual Property Organization reported that Chinese total number of patent applications at home and abroad is more than 520,000, the number of patent applications as the world's superpower. On the other hand China's patents quantity do not have good quality. In the global patents application and the influence of the patents, China's patents cannot catch some developed countries. If the patent is positive relationship with outward FDI from China, it is very issue element of the topic.

When wages goes up in China, some factories will go to the low wage countries to lower their labor costs. Overcapacity is not only the problem to China's

government but also a big problem to China's companies. As wages increase in China, its outward FDI decrease, there is a negative relationship.

## 1.2 Objectives

- (1) To find the pull factors of China's outward FDI to the Asian selected countries.
- (2) To find the push factors of China's outward FDI to the Asian selected countries
- (3) To survey policies that the Chinese government uses to support China's outward FDI.

## 1.3 Scope

The data come from World Bank Development Indicators and CEIC. The model for push factors started from 2003 to 2011 in yearly frequency, the model for pull factors started from 1985 to 2011 in yearly frequency. There countries and areas used were Bangladesh, Cambodia, Hong Kong, India, Indonesia, Japan, Kazakhstan, Korea, Kyrgyz Republic, Lao PDR, Malaysia, Mongolia, Pakistan, Philippines, Qatar, Saudi Arabia, Singapore, Tajikistan, Thailand, The United Arab Emirates, Turkey, Uzbekistan, Vietnam, and Yemen.

## 1.4 Research Hypothesis

We summarized the hypothesis in the Tables 1 and 2.

### 1.4.1 Market-seeking FDI

Market size is believed to be the very significant determinant of FDI flow. It is pointed out that FDI flow and market sizes are associated positively. As market of the host countries grow, it will attract more FDI flow. The theory suggests that market-oriented, FDI will be relative positively with growth in demand. The market growth hypotheses holds that growing economies present more chances for getting profits than those which are growing more slowly or not at all. The growth of GDP is significant to China's OFDI.

Hypothesis1: China's outward FDI is associated positively with Asian countries' GDP

### 1.4.2 Resource-seeking FDI

Companies set up foreign subsidiaries to exploit natural resources in order to have right to secure a continual supply of raw materials for their own industrial operations. Moreover, the home country can reduce the costs for its domestic manufacturing and export industries. Although China is well endowed with its own natural resources, its per capita of resource is very low. State-owned enterprises have duty to enhance the nation resource secure.

Hypothesis2: China's outward FDI is associated positively with host country endowments of natural resources.

### 1.4.3 The stability of the host countries' economy

When the inflation rates are volatile and unpredictable in a host country, it will discourage market-seeking FDI, especially in respect of price-seeking and profit expectations. High rates of inflation may make domestic currency devaluation, and then the real value of earnings in local currency is reducing. Also high inflation rates discourage export-oriented FDI by increasing the prices of the host sourced input, leading it more difficult to maintain a cost advantage in third markets. GDP per person employed means the consumption in the host countries. When the local people would like to spend money to consume, there will be more China's outward FDI in to the host countries.

Hypothesis3: China's outward FDI is associated negatively with host country inflation rates.

Hypothesis4: China's outward FDI is associated positively with GDP per person employed (constant 1990 PPP \$) in the host country.

### 1.4.4 The environment of the investment

As the country becomes more open to international investment, the more outward FDI will come. The openness is a very important factor to the outward FDI.

Hypothesis5: China's outward FDI is associated positively with the degree of openness of the economy to international investment.

Hypothesis6: China's outward FDI is positively related to inward foreign direct investment in the host countries.

#### 1.4.5 The institutions of the host countries

Many studies of Chinese FDI suggest that China's organizations have competitive advantages in countries with weak institution. China's firms face a lesser "liability of foreignness" than its developed countries. Such as China's state-owned multinationals focus on political expediency of investments, and the economic and political backing of the government, leading to excessive risk and unprofitable investments. Addition, the weak institution and resource have very intimate relationship.

Hypothesis7: China's OFDI is attracted by countries with poor institutions.

#### 1.4.6 The national circumstance of the host countries

Political stability appears to be a critical condition for rising household consumption. Most of the countries that saw their consumption rates rise are stable developing countries. Good government effectiveness makes the progress of OFDI into the host countries easier and convenience. Rule of law is the system in which the powers of government and of state officials are limited by law. Now the rule of law also constitutes a fundamental element of any thriving society. The ability of government controls the macroeconomic is regulatory quality. Control of corruption can identify the possibility of abuse of public government seeks personal to gain profit.

Hypothesis8: China's outward FDI is associated positively with political stability in the host countries.

Hypothesis9: China's outward FDI is associated positively with government effectiveness in the host countries.

Hypothesis10: China's outward FDI is associated positively with rule of law in the host countries.

Hypothesis11: China's outward FDI is associated positively with control of corruption in the host countries.

#### 1.4.7 The wage of the host countries

The low wages cost was one of the advantages of China, which attracted foreign investment. However, with Chinese economic rising fast, the wages will eventually increase and China will loss the advantage, Multinational enterprise will look for countries with lower wages than China.

Hypothesis12: China's OFDI is attracted by countries with low wage.

#### 1.4.8 The China's economic background

With China's Gross Domestic Product accelerated fast, some China's big transnational corporations need a bigger market to sell the products. Not only the strength of Chinese government but that of China's transnational corporations becomes more and more competitiveness.

Hypothesis13: Bigger China's GDP encourages OFDI to Asian countries

#### 1.4.9 Trade relationship

Many OFDI will choose a local support function for domestic exporters and the local support function helps them to increase their hard currency earning. And the local subsidiaries provide information, international transportation, and financial services to their organizations. China's outward FDI is still in its infancy, so multinationals need to be familiar and understand the foreign market and environment. The multinational enterprises from China have some experience about the countries which they are always exporting, so it is nature that they would like to invest to these countries and areas. On the contrary, there is negative relationship between OFDI and export in the developed countries.

Hypotheses14: China's outward FDI is associated positively with China's exports to the Asian countries.

#### 1.4.10 Finance condition

Saving money is a traditional custom in Asian countries. Chinese also get this habit for hundreds years. Saving composes of government saving, corporation saving and household saving. Chinese household face very difficult condition, since the

social security system, retirement system, social care system, education system are developing and imperfect, they have to save more money for the future and to prepare for unpredictable situation. Recently government and corporations are saving more money than before since the globe economic crisis and instability. In summary, China has a high saving rate. Then in close economic, saving equal to investment. In the globe economic, saving has a high relative with the investment, no matter whether the investment is in the domestic or in the outward countries.

Hypothesis15: China's saving rate provides a strong backing for China's outward FDI.

As China's reform and opening policy was carried on for 34 years, there are lots of achievements in China's society. But amounts of problems exist nowadays. The structure of China's economic is imbalance, the growth of GDP depends seriously on the export and investment, while consumption attribute too little to GDP. More and more surplus leads to China get enormous foreign reserves. Additional, China's interest rate and exchange rate are fixed, so almost all the foreign reserves in the government control. China considers the composition of its reserves to be a state secret.

Hypothesis16: China's foreign reserves provide a strong backing for China's outward FDI.

As international balance of payment is imbalance in China, national income is roaring quickly. And the inflation and interest rate are stable, China's currency appreciating fast. This is one of advantages for transnational corporations to invest outward countries. They buy the same products or rent the lands at a low price because of the China's appreciated currency.

Hypothesis17: China's appreciated currency give support to the transnational corporations to invest other countries.

#### **1.4.11 The science and technology situation**

Asian countries households are emphasis on the education as custom, Chinese government invested lots of money to the education system to reserve personnel. They build many colleges and universities to get further power. Science institution and research department are developing quickly. When the science and technology of one country have some advantages, the multinational corporations

can invest to outside countries. And this is also following the vertical theory in international trade.

Hypothesis18: the number of patents is positive with the China's outward FDI.

#### 1.4.12 The employee factor

As the national income is increases, the prices of China's domestic goods are also going up. The wage of the China's employee is roaring very fast. The processing industry is most important manufacturing industries, the foreign corporation and China's domestic companies plan to decline the produce cost. So they transfer the relative industries to the lower wage countries.

Hypothesis19: increasing wage has a positive impact on China's outward FDI.

**Table 1: The pull factors hypothesis expected results and the explanations.**

Variable	Expected sign	Reasons for expected sign
GDP	+	Larger GDP means larger market, larger market means more profit, so outward FDI is attracted.
CPI	-	The inflation means the prices of the host countries' increase, relating with the GDP of host countries, it will lead more China' outward FDI to these countries.
TRA	+	When the host countries are more opening, the more FDI will come.
IFDI	+	The more inward FDI in to the host countries, the more China's FDI into the host countries.

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OM	+	The more resources in host countries, the more outward FDI from China will come.
GDPPE	-	The higher wage in the host countries, the less China's OFDI is coming.
PS	+	The host countries have good political stability and absence of violence, the more China's OFDI is coming.
GE	-	If the host countries have good government effectiveness, it is attracted to less China's OFDI.
RL	-	The better of rule of law in host countries, the less China's OFDI is coming.
RQ	-	The better of Regulatory quality in the host countries, the less China's OFDI will come.
CC	+	The better of control of corruption in the host countries, the more China's OFDI is coming.

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**Table 2: The push factors hypothesis expected results and the explanations.**

Variable	Expected sign	Reasons for expected sign
GDP	+	GDP represents one country's comprehensive national strength, more strength transnational corporation need to invest outward to explore market, resource, technology, labor and so on.
SR	+	The saving rate in China, the more outward FDI will go to Asian countries
FR	+	The foreign reserve in China, the more outward FDI will go to Asian countries
EX	+	More export means many companies are familiar with the local situation, the more outward FDI are attracted
EXC	+	When the currency in China appreciated, the outward FDI from China will increase.
PA	+	The number of patents in one country indicates that the level of education science and high technology.
WAGE	+	The growing wage in China makes the low wage countries be more attracted for China's multinational corporation.

## CHAPTER II

### LITERATURE REVIEW

#### 2.1 Concept and Theory

##### 2.1.1 Theory of Multinational Corporations

According to (Hymer 1960) the existence of imperfect competition, foreign direct investment from United States can own and maintain a variety of monopolistic advantages making monopoly profits higher than local companies. Foreign direct investment was oligopolistic enterprises has a certain advantage to pursue a form of behavior control of incomplete markets. Monopolistic advantage is in the market, such as product performance differences, special sales skills, and the ability to control market prices. The monopolistic advantages are in the production, such as management skills, the ability to allocate funds and master technology patents and proprietary technology. Advantages of economies of scale are also important, through horizontal integration and vertical integration, in all sectors of the supply, production and sales on the convergence of improving efficiency. The government of taxation, tariffs and other trade restricting measures of market entry or exit barriers, leads to using of its monopolistic advantages of direct foreign investment of transnational corporations. Multinational corporation have information and network edge.

##### Limitations of theory of Multinational Corporation

It hardly explains the enterprise must have technical advantages for foreign investment. It cannot explain the geography of multinationals' foreign direct investment in the layout and location choice questions. Foreign direct investment in developing countries cannot be interpreted, in particular direct investment in developing countries to developed economies.

##### 2.1.2 Theory of Product Life Cycle

(Vernon 1966) developed it in response to the failure of the Huckster-Ohlin model to explain the observed pattern of international trade. He divided the industries by four stages; growth, maturity, standardization, and decline. Growth stage has three features. Firstly new product can corner the market, and enterprises would like to attract the customers, ignore the cost and price. Then because technique is not perfect, customers, manufacturers, suppliers should communicate with each

other with useful information. Last the processing and manufacturing are in the domestic.

Second stage is mature stage, the technique is completed and sales volume and profit are increasing fast. Some companies commence to imitate the products and the competitive is not very fierce. To secure the market, multinationals start to explore abroad markets in developed countries, which are similar with the home countries. Developing countries become the net export countries and developed countries become the net import countries.

Standardization is the third stage, they produce enormous quantities. And monopoly advantages are lost, developed and developing countries get the technique. Produce cost and price will be the most important factors in the production.

In the fourth stage, developing countries is the only market about this product. Developed countries innovate new products. The cycle begins again and again.

Limitation theory product life cycle

This theory focuses on the developed countries and manufacturing industries. And it divides products innovation, marketing management, and market competition measures. That is not suitable for the true market situation.

### 2.1.3 Theory of Comparative Advantage

*Foreign direct investment: A Japanese model of multinational business operations* wrote by (Kojima 1978) find that foreign direct investment should come from domestic investment has been or is about to industry might be called the marginal industries at a comparative disadvantage in turn. According to the comparison of international trade principles, product has a comparative advantage in domestic production should be exported, on the other hand, products which loss of comparative advantage shall be imported. Marginal theory of industrial expansion by the domestic industry or marginal industry has lost its comparative advantages foreign investment in the order. The original comparative disadvantage in the country through foreign direct investment industry to other countries later converted into the host country's comparative advantage industry, host country expand production and exports using the comparative advantages and exports, In marginal industry in order for foreign direct investment while retaining its comparative advantage industry to

expand exports, it promotes industrial international transfers and the development of trade, so it is called it - oriented investment.

#### Limitations of theory of Comparative Advantage

Firstly, it is only an explanation of investment that are between developed countries and developing countries based on the vertical division. However it is hardly explained the investment between developed countries and developing countries based on horizontal division. Secondly, the theory is subject to investor and not as a transnational corporations as the main body. In fact the assumption that all multinational companies have the same motivation and motivation country, it is difficult to explain foreign direct investment behavior in complex international environment. Thirdly, it underestimates the capacity of developing countries to accept high-technical, guiding less importance to the developing countries. According to this theory, developing countries can only accept theory of comparative advantages, never catching up with developed countries.

#### 2.1.4 Internalization Theory

*The future of multinational corporations* written by (Buckley 1976) is made by the theory of internalization advantages on the basis of Glacis' theory of property rights, to move the perspective of FDI theory to microeconomic area. Enterprises are engaged in production and management activities in incomplete market competition are to get maximum profits. Imperfect product in the middle markets makes enterprises through outward foreign direct investment, to create market in the organization to overcome the defects of the external market. Multinational Corporation is a product of markets across national borders within the process. As the market is imperfect, if the company has the technology and marketing knowledge of intermediate products by external market to organize a trade, it is difficult to ensure companies achieve maximum profits target. If the establishment of the internal market, they can use enterprise management coordination of resources within the enterprise configuration, to avoid incomplete on the operating efficiency of enterprises in the market.

Foreign direct investment of companies is essentially based on ownership of enterprise management and control of the expansion, rather than transfer of the capital. The result is replaced by the enterprise internal management mechanism of

external market mechanisms, in order to reduce transaction costs and internalization advantages with multinational operations.

Imperfect competition is not by economies of scale, due to the oligopoly behavior, trade protectionism and government intervention, but because of certain market failures, leading to the increased transaction costs in the enterprise market and companies are delivered its products to protect its interests in the middle market, nor rational allocation of its resources through the market, in order to ensure maximum economic benefits of enterprise scenarios.

Internalization condition is the marginal revenue equal to marginal cost. Internalization brings the benefit of multinational corporations in many ways, includes it eliminates the uncertainty of buyers and sellers and adverse impact on the market by investment or through the before and after the merger, making full use of the intermediate product of market forces to form a monopolistic advantage. Through the transfer price of tangible and intangible products, multinational corporations avoid government intervention, transfer of funds and evade taxes, and so on.

#### 2.1.5 Ownership-Location-Internalization (OLI) Theory

(Dunning 2001) proposed theories of location advantages, and the first reference to "compromise" is a term in his book *Trade, The location of economic activity, and the multinational enterprise: a quest Eclectic theory*. Later, in 1981 the production of international and multinational enterprises, he fully elaborated in the international production theory of compromise.

##### Ownership-Location-Internalization (OLI)

International Production compromise theory from the perspective of international production of transnational corporations discusses the internalization of ownership advantages, advantages and location advantages of three sets of variables on the role of foreign direct investment.

Ownership advantages that the monopolistic advantages mainly refer to a state companies have or be able to get the other countries' enterprises do not have or cannot get assets and advantages of economies of scale. Asset ownership advantages to the value of assets owned or exclusively of raw materials, such as advanced production technology. Trading of ownership advantages are an enterprise

with intangible assets technology, information, management, marketing, brand, reputation, and so on.

Internalization advantages is an enterprise in order to avoid external market incompleteness of adverse effects on businesses remain within the enterprise and enterprise advantage, external market incompleteness would cause the loss of ownership advantages of the Enterprise.

Location advantage is that multinationals have the advantage in the location selection of investment: including the host country's geographical location, relative prices of production factors, actual and potential market demand, transportation and communication costs, infrastructure, degree of development of the market system, degree of government regulation and intervention, preferential policies, cultural differences, and so on.

Limitations of theory of Eclectic Theory

Overlap or conflict between the FDI three - dimensional variables. To expand the theory is mainly at the micro-perspective analysis, ignored under different relations of difference in nature and characteristics of foreign direct investment.

### **2.1.6 The Internationalization of Firms from Developing Countries**

(Wells 1977) wrote the enterprises in Developing Countries. International markets are diverse, multi-level, even for the low-technology, business scope and scale of production companies large enough, he finds the comparative advantage of the multinational enterprises in developing countries includes it provides services to the small market of small scale production technology. On national products overseas production has an advantage in developing countries. It can use low priced products marketing strategy.

In 1983, the British Rao, an economist at the new Transnational Corporations *The Third World Enterprise Development*, refers that the technical characteristics of transnational corporations in developing countries is small in scale, using standardized technologies and labor intensive technologies. In different environment than in developed countries, developing countries will introduce technical knowledge combined with elements of prices in the country and its localization quality making their products in local or neighboring countries have competitive advantages. The competitive advantage of firms in developing countries is not only

from their production processes and in close connection with local conditions of supply and demand conditions, but also from the technical innovation activities in small-scale production conditions have higher economic benefits. From the perspective of product features, Enterprises in developing countries tend to develop consumer goods and brand name products, especially when larger market of the host country, the consumer's ability to taste and buy when there's a big difference. Competitiveness of products from developing countries there is still this formation contains Technical Innovation of Enterprise internal activities.

## **2.2 Relevant researches**

### **2.2.1 The pull factor of China's outward FDI to selected countries**

The analysis (Wiiig 2009) study independent variable is Chinese outward FDI flows, has data for the years 2003-2006 for 142 host countries. The authors think Chinese investors may respond differently to host country factors than other investors, at least with respect to institutions. The conclusions of this paper imply that natural resources and institutions have an interactive effect on China's outward foreign direct investment. The worse the institutional environment of a host country, the more is Chinese FDI attracted by the country's natural resources.

(Peter J Buckley 2007) study used forty nine countries are host to China OFDI in the dataset and divided the period into the two phases: 1984-1991 and 1992-2001. They find that cultural proximity is found to be a significant factor, indicating that reduced transaction costs and network effects are important in attracting. It is arguable that Chinese firms seek foreign investment opportunities in environments that resemble their home environment.

(Lien Donald 2012) reported that the data divided into two dependent variables, which are (1) China's exports to 131 countries between 1996 and 2008; and (2) China's net outward FDI flows to 115 countries between 1996 and 2008. There are few research has analyzed the capacity of CIs or similar institutes, such as Germany's Goethe Institutes, France's Alliances Frances and the UK's British Council, to promote economic relations. To the best knowledge of the authors, this paper is the first to examine how CIs affect trade and FDI between China and her international partners. The results shed some lights on the soft power issue. The network of CIs has grown rapidly since the project was initiated in 2004 by Henbane. With 322 CIs and 369

Confucius Classrooms in 96 countries and regions by year end 2010, the effects of CIs on China's reputation and soft power have been much discussed.

(Bale Ramsey 2012) studied the location choice and firm ownership of China's FDI, the found that in high risk countries, state-owned firms are more inclined to seek natural resource. In low risk countries, state-owned firms are more inclined to be technology or strategic asset seeking. Private Chinese firms are market seeking. Private Chinese firms are risk averse in location choice. They divided Chinese firms by the ownership: stated-owned firms and private Chinese firms.

According to (Kang 2012) regression model was adopted for empirical estimation of FDI location choice by Chinese firms and the panel data estimation method was adopted, pooling together the cross-section data of eight Asian economies over the period 1995–2007. This study reveals that FDI location choice of MNEs from China as an emerging economy is determined by a joint influence of both economic and institutional factors, and thus managers should not view these factors in isolation from each other when making FDI location decisions. Addition Chinese MNEs are targeting FDI location where it has political and economic institutions more or less similar to those found in their home country—with relatively market-oriented economic institutions and more restrained political institutions.

(Qian 2009) find that (i) the presence of market-seeking and resource-seeking motives; (ii) that Chinese exports to developing countries tend to induce China's ODI; (iii) that the recent surge in the Chinese holding of foreign exchange reserves promotes its ODI in developed countries; and (iv) that Chinese capital displays different types of agglomeration behavior across developed and developing countries. The global economy is feeling the impact of China's re-emergence. Besides its production and trade prowess, China is strengthening its outward investment activity.

(Daly 2011) find that China's outward FDI is attracted to countries with high volumes of exports from China, large GDP per capital and rapid GDP growth. Also, China's outward investment is promoted by open economic regimes and resources-rich countries. The above explanatory variables suggest that there are clear differences between China's OFDI and that of developed economies.

In the case of Chinese FDI, most investments do follow successful, established export streams, and destinations might be neighboring countries as well as markets overseas. Most scholars agree that given the low production costs in



China, efficiency-seeking motivations do not play the prime role for Chinese MNEs going global (Peter J Buckley 2007)

However, a few examples may point to growing role of efficiency motivated Chinese FDI in the years to come. Chinese companies have thus developed enormous activities in resource-seeking. FDI in natural resources are not driven by regional proximity, but simply by the availability of assets. The active acquisition of natural resources stands out amongst Chinese investments abroad, and destinations for Chinese outward FDI are resource-rich countries around the globe, such as African and Central Asian countries, along with Australia, Russia and Canada. (Peter J Buckley 2007). Some researchers believe that openness to the global economy is a necessary condition for sustained growth. According to (Kobrin 2005) developing nations have increasingly recognized that FDI provides a stable form of capital investment, and are therefore attempting to follow the developed nations in attracting flows of FDI through both liberalizing regulations and providing incentives to investors.

### **2.2.2 The push factor of China's outward FDI to selected Asian countries**

The analysis (Schüler-Zhou 2013) is based on the institutional push factors of Chinese OFDI in the EU, particularly the Countries and Industries for Overseas Investment Guidance Catalogue published by the Chinese government. The results are diaspora still matters. The success of Chinese migrant entrepreneurs in Germany is an important source of motivation for companies in mainland China. On the other hand, we can observe that many overseas Chinese do not establish or enter into traditional Chinese diaspora networks.

(Rashid 1998) uses the panel data, and data is from 1980 to 2002. The result shows that home market, import, trade and IFDI have positive relationship with the OFDI and they are significant. Additionally low availability of infrastructure, high cost of skilled labor, rigid labor laws and high tax rates, all contribute in driving outward FDI.

## CHAPTER III

### METHODOLOGY

We use the panel model to find the pull factors of China's outward FDI to selected Asian countries. Then find the push factors of China's outward FDI using co-integration and Error Correction Model (ECM). In order to identify the pull factor, we use panel data and OLS estimations, because we just have 9 years of yearly data. Using panel data make estimations more reliable. On the other hand, the push factors will be identified by co-integration and ECM model. We divide it in the long run and short run. In the long run we use the co-integration test and in the short run we use the error correction model. After that we try to identify effective China's outward foreign direct investment policies, we list them to get the whole picture the progress of the China's outward foreign direct investment.

#### 3.1 The pull factors of China's outward FDI to selected Asian countries

To estimate the model, we use panel data to find the determinants of China's outward FDI to different countries and make regression by using ordinary least squares (OLS).

$$OFDI_{i,t} = \alpha + \beta_1 GDP_{i,t} + \beta_2 IN_{i,t} + \beta_3 TRA_{i,t} + \beta_4 IFDI_{i,t} + \beta_5 OM_{i,t} + \beta_6 GDPPE_{i,t} + \beta_7 PS_{i,t} + \beta_8 GE_{i,t} + \beta_9 RQ_{i,t} + \beta_{10} RL_{i,t} + \beta_{11} CC_{i,t} + \varepsilon_{i,t}$$

Where  $i=1,2,3...N$   $t=1,2,3...T$

- OFDI = Outward Foreign Direct Investment from China to Asian countries
- GDP = Asian countries' GDP
- CPI = Inflation of Asian countries
- TRA = Merchandise trade (% of GDP)
- IFDI = Foreign direct investment, net inflows (% of GDP)
- OM = Asian countries' fuel, ores and metals exports as share of GDP
- GDPPE = GDP per person employed (constant 1990 PPP \$)
- PS = Political Stability and Absence of Violence
- GE = Government Effectiveness
- RQ = Regulatory Quality

- RL = Rule of Law  
 CC = Control of Corruption

### 3.2 The push factors of China's outward FDI to selected Asian countries

Second, we use the unit root tests and Dickey-Fuller test to examine whether FDI and its determinants are non-stationary. Then we use the co-integration test to examine if exist a long run relation between the FDI and its determinants. If there is a long-run equilibrium between FDI and its determinants, the static regression equations can be estimated by OLS following.

$$\begin{aligned} \text{Log(OFDI}_t) &= \alpha + \beta_1 \text{logGDP}_t + \beta_2 \text{logEX}_t + \beta_3 \text{logSR}_t + \beta_4 \text{logFR}_t + \beta_5 \text{logEXC}_t + \\ &\quad \beta_6 \text{logPA}_t + \beta_7 \text{logWAGE}_t + \varepsilon_t \quad t=1,2,3\dots T \\ \varepsilon_t &= \text{logFDI}_t - \alpha - \beta_1 \text{logGDP}_t - \beta_2 \text{logEX}_t - \beta_3 \text{logSR}_t - \beta_4 \text{logFR}_t - \beta_5 \text{logEXC}_t - \\ &\quad \beta_6 \text{logPA}_t - \beta_7 \text{logWAGE}_t \end{aligned}$$

Then, if the explanatory variables and explained variable has co-integration relationship, we use error-correction model (ECM) to estimate in order to capture the short-run effects of the determinants on FDI from China.

$$\begin{aligned} \Delta \text{logOFDI}_t &= \alpha + \beta_1 \Delta \text{logGDP}_t + \beta_2 \Delta \text{logEX}_t + \beta_3 \Delta \text{logSR}_t + \beta_4 \Delta \text{logFR}_t \\ &\quad + \beta_5 \Delta \text{logEXC}_t + \beta_6 \Delta \text{logPA}_t + \beta_7 \Delta \text{logWAGE}_t + \beta_8 \varepsilon_{t-1} + u_t \end{aligned}$$

$$\begin{aligned} \text{Where } \varepsilon_{t-1} &= \text{logFDI}_{t-1} - \alpha - \beta_1 \text{logGDP}_{t-1} - \beta_2 \text{logEX}_{t-1} - \beta_3 \text{logSR}_{t-1} - \beta_4 \text{logFR}_{t-1} - \\ &\quad \beta_5 \text{logEXC}_{t-1} - \beta_6 \text{logPA}_{t-1} - \beta_7 \text{logWAGE}_{t-1} \end{aligned}$$

- GDP = China's Gross Domestic Product  
 EX = Export from China to Asian countries  
 SR = China's saving rate  
 FR = China's foreign reserves  
 EXC = China's RMB to US dollar exchange rates  
 PA = China's patent numbers  
 WAGE = China's average wage yearly

### 3.3 Data of measurement

China's outward foreign direct investment, Asian countries' GDP, Asian countries' growth of GDP, host country endowments of natural resources, host country inflation rates, the degree of openness of the economy to international investment, inward foreign direct investment in the host countries, countries with poor institutions, countries with low wage, China's GDP, China's exports to the Asian countries, China's saving rate, China's foreign reserves, China's appreciated currency, the number of patents, and China's wage, these data come from World Bank Development Indicators and CEIC . The push factor analysis started from 2003 to 2011 in yearly, the second model started from 1985 to 2011 in yearly. The countries used are Bangladesh, Cambodia, Hong Kong, India, Indonesia, Japan, Kazakhstan, Korea, Kyrgyz Republic, Lao PDR, Malaysia, Mongolia, Pakistan, Philippines, Qatar, Saudi Arabia, Singapore, Tajikistan, Thailand, The United Arab Emirates, Turkey, Uzbekistan, Vietnam, and Yemen. The description and source of the data are shown below.

**Table 3: The pull factors data source and unit of measurement**

Variable	Measurement of Variable	Unit of Measurement	Data Source
OFDI	Outward Foreign Direct Investment form China to Asian countries	Yearly 2003-2011	Ministry of Commerce of the People's Republic of China
GDP	Asian countries' GDP	Yearly 2003-2011	World Bank Development Indicators
CPI	The inflation of Asian countries	Yearly 2003-2011	World Bank Development Indicators

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TRA	Merchandise trade(% of GDP)	Yearly	2003-2011	World Bank Development Indicators
IFDI	Foreign direct investment, net inflows (% of GDP)	Yearly	2003-2011	World Bank Development Indicators
OM	Asian countries' fuel, ores and metals exports as share of GDP	Yearly	2003-2011	World Bank Development Indicators
GDPPE	GDP per person employed (constant 1990 PPP \$)	Yearly	2003-2011	World Bank Development Indicators
PS	Political Stability and Absence of Violence	Yearly	2003-2011	Worldwide Governance Indicators
GE	Government Effectiveness	Yearly	2003-2011	Worldwide Governance Indicators
RL	Rule of Law	Yearly	2003-2011	Worldwide Governance Indicators
RQ	Regulatory Quality	Yearly	2003-2011	Worldwide Governance Indicators
CC	Control of Corruption	Yearly	2003-2011	Worldwide Governance Indicators

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**Table 4: The push factors data source and unit of measurement**

GDP	China's gross domestic product	Yearly	1985-2011	CEIC
EX	Export from China to Asian countries	Yearly	1985-2011	CEIC
SR	The saving rate in China	Yearly	1985-2011	World Bank
FR	The foreign rate in China	Yearly	1985-2011	CEIC
EXC	China's currency to US dollar	Yearly	1985-2011	CEIC
PA	The number of China's patents	Yearly	1985-2011	Ministry of Commerce of the People's Republic of China
WAGE	The average of China's wage	Yearly	1985-2011	CEIC

The extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence .

## CHAPTER IV

## RESULTS

## 4 Analysis results

## 4.1 The pull factors determinants of China's outward foreign direct investment.

Because we find that China's OFDI went through Hong Kong to later reach the target, we can calculate rates of Hong Kong OFDI to Asian countries. The destinations of Hong Kong OFDI are Japan, Singapore, Malaysia, and Thailand. Since Hong Kong is special administrative region, from "Hong Kong SAR basic law", the Central People's Government has responsible for all foreign affairs. Hong Kong can be individually manage their foreign affair with other countries, regions and relevant international organizations to maintain, develop, conclude, and implement agreements in the economic, trade, finance, shipping, communications, tourism, culture, sports and other areas. First we treat Hong Kong as province of China, so we drop Hong Kong from destination of China's outward foreign direct investment. Then we get the result as you can see in (APPENDIX A, B, and C). If we drop Hong Kong, the result is not valid. We can find that R-square is just 23.84%.

In the second test, we add the Hong Kong, and add the China's OFDI to other Asian countries through Hong Kong, we can see the result (Table 5).

Secondly, we use the fixed effects to test the regression how different countries influence China's outward foreign direct investment (Table 6).

**Table 5: The Eview result of fixed effects panel data about the pull factors**

Variable	Coefficient	Std. Error	Prob.	Fixed Effects (Cross)	Coe.
C	-654603.30*	485722.60	0.1798	BANGLADESH--C	631610.3
	(-1.3476)			CAMBODIA—C	452644.4
GDP	-7.40E-07**	3.94E-0	0.0625	HONGKONG—C	-1139846.0
	(-1.8771)			INDIA—C	628951.8
CPI	-3461.69	3811.01	0.3652	INDONESIA—C	-452646.9

	(0.9083)			JAPAN--C	2567898.0
TRA	3283.76**	1817.32	0.0728	KAZAKHSTAN--C	-1931998.0
	(1.8069)			KOREA--C	-216252.1
IFDI	14822.09	9209.28	0.1096	KYRGYZREPUBLIC--C	238501.3
	(1.6094)			MALAYSIA--C	-296413.1
OM	145556.60*	22669.78	0.0000	PAKISTAN--C	522261.4
	(6.4207)			PHILIPPINES—C	239393.8
GDPPE	49.99*	4.64	0.0008	QATAR--C	309669.7
	(3.4151)			SAUDIARABIA—C	98834.9
PS	8.56	-216252.10	0.9984	SINGAPORE—C	-1788433.0
	(0.0019)			THAILAND--C	237486.4
GE	405.55	7230.90	0.9553	UNITEDARABEMIRAT ES—C	118759.0
	(0.0561)			TURKEY--C	-103931.7
RQ	-14342.72*	6539.77	0.0298	VIETNAM--C	232769.0
	(-2.1931)			YEMEN--C	127743.0
RL	-2208.07	7393.76	0.7656		
	(-0.2986)			R-squared	0.7907
CC	2827.37	6083.07	0.6428	Adjusted R-squared	0.7486
	(0.4647)			Obs.	180
				Log likelihood	-2495.89

\*Indicates significance at 5% level. \*\*Indicates significance at 10% level.



### Equation 1: Result of fixed effects panel data about the pull factors

$$\begin{aligned}
 OFDI_{i,t} = & 145556.6OM_{i,t} + 49.99GDPPE_{i,t} - 14342.72RQ \\
 & (6.4207) \quad (3.4151) \quad (-2.1931) \\
 & 631610.3D_1 + 452644.4D_2 - 1139846D_3 + 628951.8D_4 - 452646.9D_5 - \\
 & 25646.9D_6 - 1931998D_7 - 216252.1D_8 - 238501.3D_9 - 296413.1D_{11} + 522261.4D_{13} + \\
 & 239393.8D_{14} + 309669.7D_{15} + 98834.94D_{16} - 1788433D_{17} + 237486.4D_{19} - \\
 & 118759D_{20} - 103931.7D_{21} + 232769D_{23} + 127743D_{24} \\
 D_i = & \begin{cases} 1, & \text{that country, } i = \text{Bangladesh, Cambodia, Hong Kong ...} \\ 0, & \text{Other} \end{cases} \\
 R^2 = & 0.79
 \end{aligned}$$

From the equation 1, we use the fixed cross-section effects to test the regression. Asian countries' fuel, ores and metals exports as share of GDP, GDP per person employed (constant 1990 PPP \$), regulatory quality are significant and have signs according to our hypothesis. without GDP per person employed. The host market size (GDP), inflation (CPI), merchandise trade (% of GDP) (TRA), foreign direct investment, net inflows (% of GDP)(IFDI), political stability and absence of violence, government effectiveness, rule of law, control of corruption are not significant to determine China's outward foreign direct investment.

Thirdly, we fixed the period in the model to show how the period influence China's outward foreign direct investment.

Now we discuss each of these findings in detail. From the equation 1, the host market size (GDP) is not significant with a sign contrary to expectation as predicted in the Hypothesis 1. The host market size variable is retained to get the market-seeking motive (Hypothesis1). We find the inflation (CPI), merchandise trade (% of GDP) (TRA), foreign direct investment, net inflows (% of GDP) (IFDI) are all not significant at 5% level. These findings do not support Hypothesis 3, 4, and 5. Host market size (GDP) has negative influence on China's OFDI. That influence is negative and unimportant was a surprised finding, the coefficient is  $-7.40E-07$ . In the hypothesis we consider that will be the positive. From the result we conclude that the international multinationals just took some region situation consideration. They just focus on the local markets a lot. It is shown that market seeking was unimportant motive for China's OFDI in the period (Hypothesis 1). The merchandise

trade (% of GDP)(TRA) is not significant and positive. At 10% significant level, the results support the argument that when there is more merchandise trade in the host countries, the host market is more open and foreign companies were more familiar with the host markets and customers. Concerning hypothesis 5: the products and services adapted to the local needs, a major finding is that the coefficient on the index of inward FDI (IFDI) increasing relationship with China's OFDI (Hypothesis 6). Although some Asian countries have some advantages in attracting foreign investment, the governments prohibit or discourage the foreign investment. Multinationals also cannot invest the fund to the attractive items. another very important variable is Asian countries' fuel, ores and metals exports as share of GDP(OM), we get that a 1% increase in the Asian countries' fuel, ores and metals exports is associated with an increase in China's OFDI of 145556.6. Our finding about GDP per person employed (constant 1990 PPP \$) is same to the hypothesis (Hypothesis 4). At first, GDPPE represents the wage level of the host countries, because we consider that low labor cost is the vital reason for the China's OFDI. However, now with the increase of host countries' wage level, consumption power will improve and product will sale quickly. From the regression, OFDI will go up to 49.99221 with GDP per person employed increasing 1%. Regulatory Quality does meet the hypothesis, and it is significant and negative. (Hypothesis 7) China's OFDI goes to the host countries with the low regulatory quality; they can use their soft power to convenient on the business. China's low law execution level and intense competition make the local companies create many methods to solve the problems. These abilities sometimes are advantages for them to go abroad. Of the main variables we examine, we find no support for the Hypothesis 3, the CPI variable in the regression is insignificant at 5% significant level, which suggest that China's firms have not been motivated to care the host countries' CPI. Additionally, political stability and absence of violence, government effectiveness, rule of law, control of corruption play unimportant role to the China's OFDI.

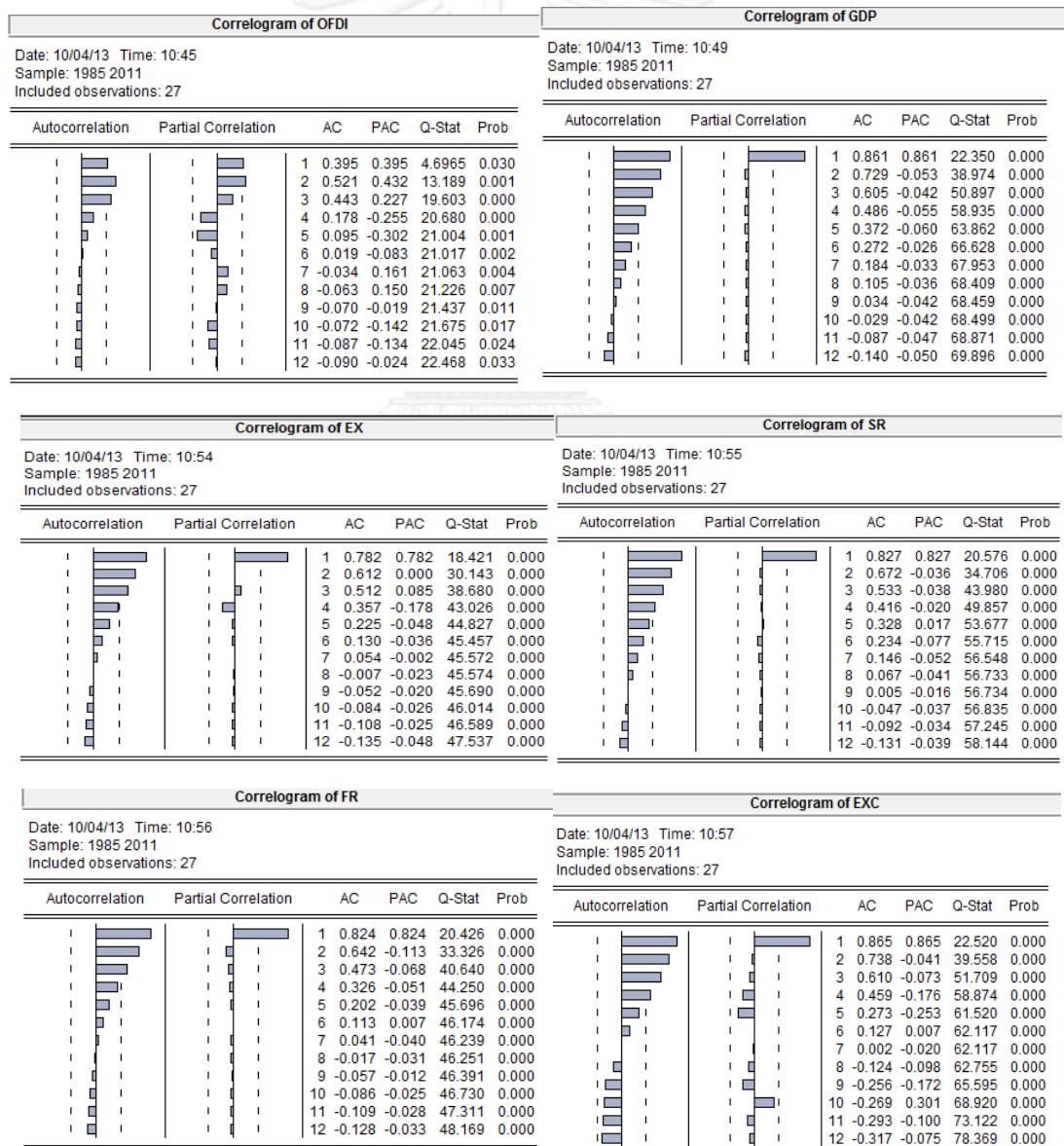
Now we discuss the results for our three control variables in mixture regression. The findings for Asian countries' fuel, ores and metals exports, GDP per person employed (constant 1990 PPP \$), Regulatory Quality (RQ) are significant and according to my hypothesis, supporting Hypothesis. Asian countries' GDP, the inflation of Asian countries, foreign direct investment net inflows, political stability and absence of violence, government effectiveness, rule of law, and control of corruption are all insignificant, the results are no support on Hypothesis. The two Asian countries' fuel, ores and metals exports and Regulatory Quality variables, when

we viewed them together, it supports the resource-seeking motive. Other variables such as ores and metals exports and foreign direct investment net inflows, when we views together then we can find that the host countries policies are vital to the foreign direct investment. China's multinationals took it consideration a lot.

#### 4.2 The push factors of China's outward FDI to the Asian selected countries.

First we estimate the data is stationary or not. Then we can use co-integration model.

Figure 7: The Eview result about the Correlogram of pull factors



Correlogram of PA						Correlogram of WAGE					
Date: 10/04/13 Time: 10:57 Sample: 1985 2011 Included observations: 27						Date: 10/04/13 Time: 10:58 Sample: 1985 2011 Included observations: 27					
Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob	Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob
		1 0.797	0.797	19.120	0.000			1 0.843	0.843	21.406	0.000
		2 0.623	-0.032	31.288	0.000			2 0.702	-0.031	36.836	0.000
		3 0.542	0.150	40.868	0.000			3 0.572	-0.042	47.503	0.000
		4 0.422	-0.136	46.943	0.000			4 0.447	-0.061	54.310	0.000
		5 0.302	-0.045	50.189	0.000			5 0.338	-0.029	58.381	0.000
		6 0.179	-0.135	51.379	0.000			6 0.246	-0.019	60.637	0.000
		7 0.103	0.045	51.797	0.000			7 0.162	-0.040	61.668	0.000
		8 0.046	-0.032	51.885	0.000			8 0.087	-0.043	61.977	0.000
		9 -0.030	-0.059	51.924	0.000			9 0.018	-0.043	61.992	0.000
		10 -0.106	-0.093	52.446	0.000			10 -0.042	-0.042	62.075	0.000
		11 -0.153	-0.019	53.597	0.000			11 -0.096	-0.042	62.529	0.000
		12 -0.192	-0.056	55.513	0.000			12 -0.143	-0.040	63.594	0.000

From Figure 7, the Autocorrelation declines step by step and it is very slow. Then we can conclude that the variables are non-stationary, because the autocorrelations decline slowly. However we cannot use GDP, because it is stationary. Then the sequence is random walk, and there are not drift and trend. We should choose the model has no drift and trend.

We set the model, we use the ADF Unit Root Test (Table 8).

$$\Delta X_t = aX_{t-1} + \sum_{i=1}^p \Delta X_{t-i} + u_t \quad \text{Assume } H_0: a=0, H_1: a < 0.$$

**Table 6: The results about ADF Unit Root Test**

Available	ADF t-Statistic	Critical values(0.05)	result
OFDI	-2.33	-2.99	No stationary
D(FDI,2)	-18.37	-3.00	stationary
EX	5.66	-2.98	no stationary
D(EX,2)	-8.24	-2.99	stationary
SR	12.89	-2.98	no stationary
D(SR,2)	-6.61	-2.99	stationary
FR	-1.45	-2.98	no stationary
D(FR,2)	-4.32	-2.99	stationary
EXC	-2.17	-2.98	no stationary
D(EXC,1)	-4.41	-2.99	stationary
PA	-1.67	-2.98	no stationary
D(PA,1)	-5.09	-2.98	Stationary

Note: "D(x,1)" is the 1st Difference for Each Variable.

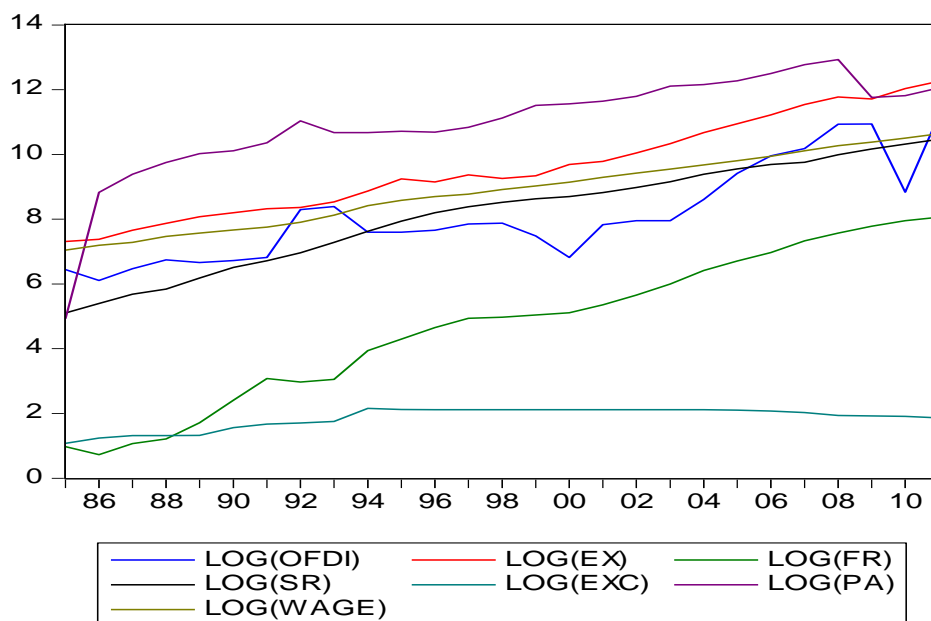
Available	ADF t-Statistic	Critical values(0.05)	result
Log(OFDI)	-0.8246	-2.9810	No stationary
D(log(FDI),1)	-5.9422	-2.9862	stationary

Log(EX)	0.7565	-2.6299	no stationary
D(log(EX),1)	-5.1099	-2.6326	stationary
Log(SR)	-2.0258	-2.6326	no stationary
D(log(SR),2)	-5.9151	-2.8819	stationary
Log(FR)	-0.6556	-2.6299	no stationary
D(log(FR),1)	-4.3200	-2.9900	stationary
Log(EXC)	-2.9199	-2.9810	no stationary
D(log(EXC),1)	-4.2203	-2.9862	stationary
Log(PA)	-6.9069	-6.9069	-2.9810
WAGE	-0.6488	-2.9918	no stationary
D(log(WAGE),1)	-3.4286	-2.9918	stationary

Note: "D(x,1)" is the 1st Difference for Each Variable.

In the figure, we fix the which model we can use in the Eview.

Figure 8: About the trend and intercept of factors.



From the Figure 8, we can find that the co-integration has intercept, but the trend is clear. So we choose allow for liner deterministic trend (Intercept (no trend)) in CE and test.

**Table 7: The results of the co-integration**

Unrestricted Cointegration Rank Test (Trace)

Hypothesized	Trace	Statistic	Critical Value	Prob.**
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.9468	236.11	125.62	0.0000
At most 1 *	0.9241	162.76	95.75	0.0000
At most 2 *	0.8263	98.31	69.82	0.0001
At most 3 *	0.6434	54.55	47.86	0.0103
At most 4	0.4402	28.77	29.80	0.0653
At most 5	0.4062	14.27	15.50	0.0758
At most 6	0.0484	1.24	3.84	0.2656

Trace test indicates 4 cointegrating eqn(s) at the 0.05 level

\* denotes rejection of the hypothesis at the 0.05 level

\*\*MacKinnon-Haug-Michelis (1999) p-values

**Table 8: The results of the co-integration**

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized	Max-Eigen	Statistic	Critical Value	Prob.**
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.9468	73.34	46.23	0.0000
At most 1 *	0.9241	64.46	40.08	0.0000
At most 2 *	0.8263	43.76	33.88	0.0024
At most 3	0.6434	25.78	27.59	0.0836
At most 4	0.4402	14.52	21.13	0.3253
At most 5	0.4062	13.03	14.26	0.0776
At most 6	0.0484	1.239	3.84	0.2656

Max-eigenvalue test indicates 3 cointegrating eqn(s) at the 0.05 level

\* denotes rejection of the hypothesis at the 0.05 level

\*\*MacKinnon-Haug-Michelis (1999) p-values

#### 4.3 Co-integration test

After we get the information from the above, we can use the Eview 6 to get the regression result of OFDI, EX, SR, FR, EXC, PA, and WAGE. The results are in the following table (Table 9 and 10).

**Table 9: The results about the co- integration test**

1 Cointegrating		Log				
Equation(s):		likelihood 186.7206				
Normalized cointegrating coefficients (standard error in parentheses)						
LOG(OFDI)	LOG(EX)	LOG(FR)	LOG(SR)	LOG(EXC)	LOG(PA)	LOG(WAGE)
1.000000	-3.2178	0.5006	-1.9156	0.2224	0.0105	4.7684
	(0.34201)	(0.25723)	(0.50458)	(0.47582)	(0.08722)	(0.50291)
Adjustment coefficients (standard error in parentheses)						
D(LOG(OFDI))	-1.5291	D(LOG(EX))	0.0777	D(LOG(FR))	-0.0974	
	(0.3324)		(0.1080)		(0.1604)	
D(LOG(SR))	-0.0385	D(LOG(EXC))	-0.0047	D(LOG(PA))	-0.1057	
	(0.0509)		(0.0665)		(0.2360)	
D(LOG(WAGE))	0.0259					
	(0.0285)					
*Indicates significance at 5% level. **Indicates significance at 10% level.						

**Equation 2: Results about the co- integration test**

$$\begin{aligned} \log(\text{OFDI}_t) = & -3.2178\log(\text{EX}_t) + 0.5505\log(\text{FR}_t) - 1.9156\log(\text{SR}_t) + 0.2223\log(\text{EXC}_t) + \\ & 0.0011\log(\text{PA}_t) + 4.7684\log(\text{WAGE}_t) - 1.5291D_1 + 0.0777D_2 - 0.097D_3 - \\ & 0.0385D_4 - 0.0047D_5 - 0.1057D_6 + 0.026D_8 \end{aligned}$$

From Table 11, we can find at 5% significant, there are 2 co-integration relationships in the regression. Then we test the unit root test.

**Table 10: The results about test the ADF test to check the co-integration**

Group unit root test: Summary				
Series: LOG(OFDI), LOG(EX), LOG(FR), LOG(SR), LOG(EXC), LOG(PA), LOG(WAGE)				
Automatic lag length selection based on SIC: 0 to 3 and Bartlett kernel				
Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-1.49456	0.0675	7	178

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Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-0.86435	0.1937	7	178
ADF - Fisher Chi-square	33.8178	0.0022	7	178
PP - Fisher Chi-square	33.8750	0.0022	7	182

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\*\* Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

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From the Table 8, we can find at 5% significance, there are 3 co-integration relationships in the regression. Then we test the unit root test. From the Table 12, we find that ADF test is  $0.0022 < 0.05$ . We can conclude that the regression is statistical significant..

From the Table 11, we can find that in the long run there is co-integration relationship between dependents and independents. This equation reveals that foreign reserves, exchange rate, patent and wage level have positive relationship with outward foreign direct investment, while export, saving rate have negative relationship with the China's outward foreign direct investment. Saving rate has negative associate with China's outward foreign direct investment. China's saving rate comprises government savings, companies' savings, and household savings. They account for about 30%, 30%, and 40% of the China's saving rate respectively. Private fund is not allowed to invest abroad for 20 years since 1978. In addition, private companies are encouraged to "go abroad" since 2000. Actually, China's government got more and more savings from budget, non-tax revenue, and land transfer income. We can find that with China's saving rate growing, China's OFDI has negative relationship with it. The Hypothesis 14 is not according to the result; in the long run the export has negative relationship with the outward foreign direct investment. The theory about international trade reveals that there is substitution between OFDI and export in the countries. So we can find China's OFDI follow the Internalization theory, since China is a developing country. Then the Hypothesis 16 accords with the regression. But the significant is very small, just about 0.764. China has the highest stock foreign reserves all over the world. There are three important reasons why China's foreign reserves increase quickly. 1): China's double surplus of balance of payment existed from 1999 to 2011; 2): China's total foreign debt is a growing trend. It increased from \$92.81 billion to \$695 billion; the period is from 1994 to 2011. In order to maintain adequate international liquidity, China's foreign reserves increase quickly; 3): (I) Though China's government relaxes enterprises and household hold of foreign currency, it does not relax the ways to make use of foreign currency. Foreign



currency outflows are strictly controlled. (II) The foreign direct investment of enterprises and individuals still has many limitations. For example, households cannot invest abroad directly. (III) Expectations of China's exchange rate appreciation make holders of foreign currency earnings well below the gains to hold the China's currency. But the effect on the OFDI is not very important. China's foreign reserves are the first one in the world. Most of them are US bonds. Administration of Exchange Control manage these fund, they also invest them to different places and countries. Recently China surplus raises quickly, they get more and more fund. It is a good idea to invest in both domestic and abroad market. It is easy to understand that foreign reserves and China's outward foreign direct investment have the same direction to move in the long term. The exchange rate is positive with the China's outward direct investment. (Hypothesis 17) we can explain the reason is that when China's exchange rate is appreciated, they can afford the equipment and labor cost in the low price. From the data, we can find that from 1985 to 1992 China's government make the exchange rate appreciate, on the other hand from 1993 to 2011 they make exchange rate more market style. And China's exchange rate is appreciating year by year. The patent (Hypothesis 18) does meet the hypothesis, it has positive sign. Multinationals would like not divulge the science and technology to other countries. And now China has technology and science power country. China becomes the number one patent application countries. The coefficient about the wage is positive and meets the Hypothesis 19. The labor cost the always the most consideration for the companies, with China's average wage increasing quickly, it is attracting to the China's multinationals to invest into the low labor cost countries.

#### 4.4 Error Correction Model (ECM)

As of above section, there is the long term relationship between the dependents and independent. Then we can analyze it in the short run, using the error correction model to show in this part. (Table 14)

Table 11: The result about Error Correction Model

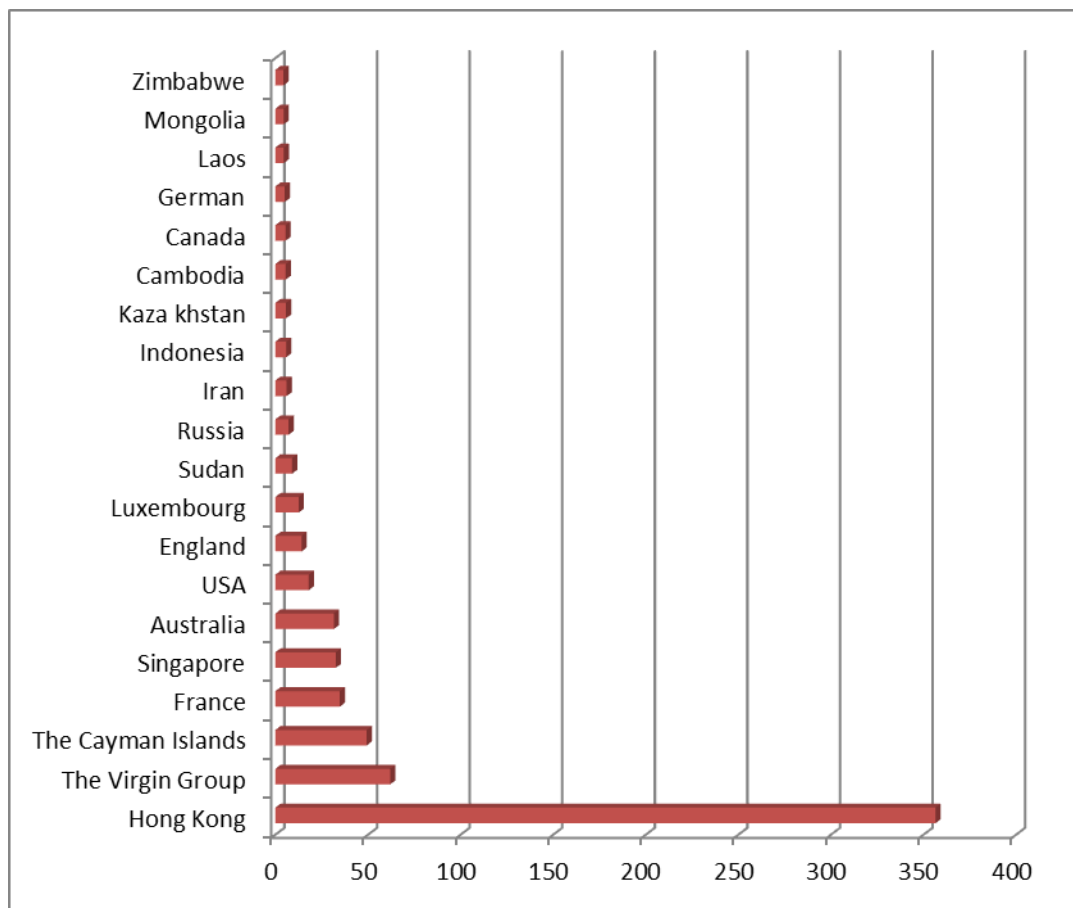
Dependent Variable: DLOG(OFDI)			
Included observations: 26 after adjustments			
Variable	Coefficient	Std. Error	Prob.
C	-1.2021 (-0.6601)	1.8211	0.5180
DLOG(EX,1)	-1.9077 (-1.2683)	1.5041	0.2218
DLOG(FR,1)	0.3626 (0.2908)	1.2468	0.7747
DLOG(SR,2)	1.4816 (0.6191)	2.3931	0.5440
DLOG(EXC,1)	-4.7500 (-0.6698)	3.3059	0.5119
DLOG(PA)	0.8874 (1.4919)	0.5948	0.1541
DLOG(WAGE,1)	2.6006 (0.5407)	4.8093	0.5957
Ecm(-1)	-0.0249 (-0.7287)	0.0342	0.4761
R-squared	0.229387	Mean dependent var	0.204455
Adjusted R-squared	-0.087924	S.D. dependent var	0.810451
S.E. of regression	0.845329	Akaike info criterion	2.756157
Sum squared resid	12.14789	Schwarz criterion	3.146197
Log likelihood	-26.45196	Hannan-Quinn criter.	2.864337
F-statistic	0.722909	Durbin-Watson stat	2.363852
Prob(F-statistic)	0.654864	Mean dependent var	0.204455

\*Indicates significance at 5% level. \*\*Indicates significance at 10% level.

From Table 11, error correction term is negative, it accords with reverse correction mechanism. We get at 15% level significant that only the number of China's patents is significant, whereas others are not significant. Last we have the short term regression. We summarize the long term and short term relationship about the variables by using co-integration test and Error Correction Model.

#### 4.5 the analysis of China OFDI in case of Hong Kong.

Figure 9: China's foreign direct investment flows to the top twenty countries at the end of 2011 (\$ 100million)



Source: 2011 Statistical Bulletin of China's Outward Foreign Direct Investment

From the Figure 9, we can find that Hong Kong is the number one first investment destination from China. However it is obvious that Hong Kong is like The Virgin Group and The Cayman Islands, it is not China's OFDI final destination. In the British Virgin Islands, nearly 50% of government revenue comes directly from license fees for offshore companies. As the Cayman political stability, no foreign exchange restrictions, no income tax receipts, foreign companies have come to the island in the financial business. Sinochem Group acquire Statoil Brazil Pegg Reno 40% stake in oil fields; Sinopec acquire Canada Daylight Energy 100% stake; China National Bluestar (Group) Company acquired 100% stake in the Norwegian company Elkem. Major overseas acquisitions are through the reinvestment of Hong Kong subsidiary.

Offshore company has three advantages: high level of confidentiality, tax reduction, and no exchange controls. 1): Offshore company listed in the U.S., Hong Kong or Singapore, and the United Kingdom by private equity. 2): China's outward foreign direct investment evades foreign trade restrictive by offshore company. 3): Offshore company establishes holding companies to make capital operation.

The acquisitions of China's outward foreign direct investment are \$ 27.2 billion, accounting for 36.4% of total flow in 2011 and they are all non-financial investment acquisitions. The fields are in the mining industry, manufacturing industry, electricity production industry and supply-based.

**Table 12: China's OFDI amount of acquisitions and proportion (\$100 Million)**

year	Amount of acquisitions	proportion
2004	30	54.50%
2005	65	53.00%
2006	82.5	39.00%
2007	63	23.80%
2008	302	54.00%
2009	192	34.00%
2010	297	43.20%
2011	272	36.45%

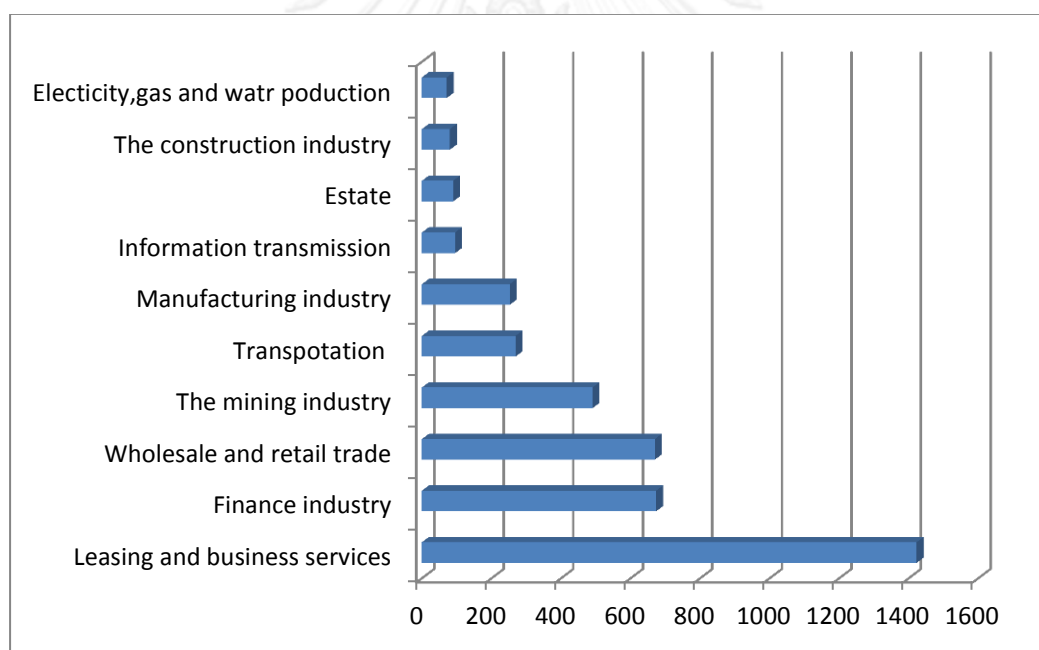
Source: 2011 Statistical Bulletin of China's Outward Foreign Direct Investment

China's OFDI are attracted by the advantages of the acquisition. Such as: 1) Economies of scale: the combined company can reduce the repeated functional departments, and adjusts the mode of operation to reduce the company's fixed costs to increase profits. 2) Economies of scope: the acquisition changes the demand side efficiency, such as increased or decreased range of different products and marketing channels. 3) The increase in turnover or market share: buyers will incorporate a major competitor to increase its market share and pricing. 4) Tax: a profitable company can buy poor business companies to take advantage of its tax. 5) Diversification: it is a way of a smooth performance of the company by diversification, while making the company a long-term share price becomes smooth. 6) Resource transfers: the acquisition of the company and the target company by allocating resources among the company overcome the scarcity of information asymmetry and combine resources to create value. 7) Vertical integration: tighter vertical integration of the supply chain makes the product more competitive in the production and sales

of the product can be sold at lower prices, thereby increasing market share and profits.

At the end of 2011, the stock of non-financial state-owned enterprises accounted for 62.7%; limited liability companies accounted for 24.9%; limited company(Ltd.)7.6%; private sector accounted for 17%; joint-stock cooperative enterprises accounted for 1.6 percent; foreign-invested enterprises accounted for 0.9 percent; collective enterprises accounted for 0.2 percent; Hong Kong, Macao and Taiwan-funded enterprises accounted for 0.2 percent; other is 0.2%. It is shown that SOE are still majority of China's outward foreign investment.

**Figure 10: China's foreign direct investment to Hong Kong in different industries at the end of 2011. (\$ 100million)**



Source: 2011 Statistical Bulletin of China's Outward Foreign Direct Investment

China's outward foreign direct investment stock in Hong Kong is \$261.519 billion, accounting for 61.6% of outward foreign direct investment from China. In the main investment industries, leasing and business service industry \$93.25, accounting for 35.7%; the financial industry \$53.48, accounting for 20.4%; wholesale and retail is \$40.85, accounting for 15.6%; the mining industry \$29.08, accounting for 11.1%; transportation, warehousing industry is \$19.85, accounting for 7.6%; The manufacturing sector accounted for 4.1%; the real estate industry accounted for

2.8%; water conservancy, environment and public facilities management industry accounted for 0.9%.

From figures 9 and 10, we can find that Hong Kong inward foreign investment from China as focusing on the leasing and business services, finance industry, wholesale and retail trade, the mining industry and transportation, storage and postal industry. Connecting to our result the push factors of China's OFDI, foreign reserves is positive and its coefficient is 0.5505. With China's foreign reserves growing fast, they would like to invest abroad. From July 2009, with cross-border RMB trade found, RMB internationalization has been for four years. RMB cross-border trade settlement expands in different countries year by year. And offshore centers and return channels formed quickly. ASEAN, as the first leg of the internationalization of RMB, in this process played an important role. From 2009 -2013 in June, the RMB settlement of cross-border volume between China and ASEAN reached more than 1120 billion yuan, the settlement amount increases year by year. Central bank governor Zhou Xiaochuan said deposit rates will eventually have to marketization, which is the interest rate market in the last step.

Leasing and business services increase very fast, we can connect the China's average wage to view. The result of push factors about China's average wage has positive with China's OFDI and coefficient is 4.7684. It is the most important factor for China's OFDI. With labor cost increasing, China's multinationals invest abroad. We can find that Leasing and business services is the number one place in China's OFDI. And it is almost two times than the finance industry. Further the patent is positive with China's OFDI, as China's technology and science developing, they have ability to serve and do business with other countries, though the coefficient is 0.0011.

From the "External Direct Investment Statistics of Hong Kong 2012" The Mainland and the British Virgin Islands (BVI) were both the major sources as well as the major destinations of Hong Kong's DI.

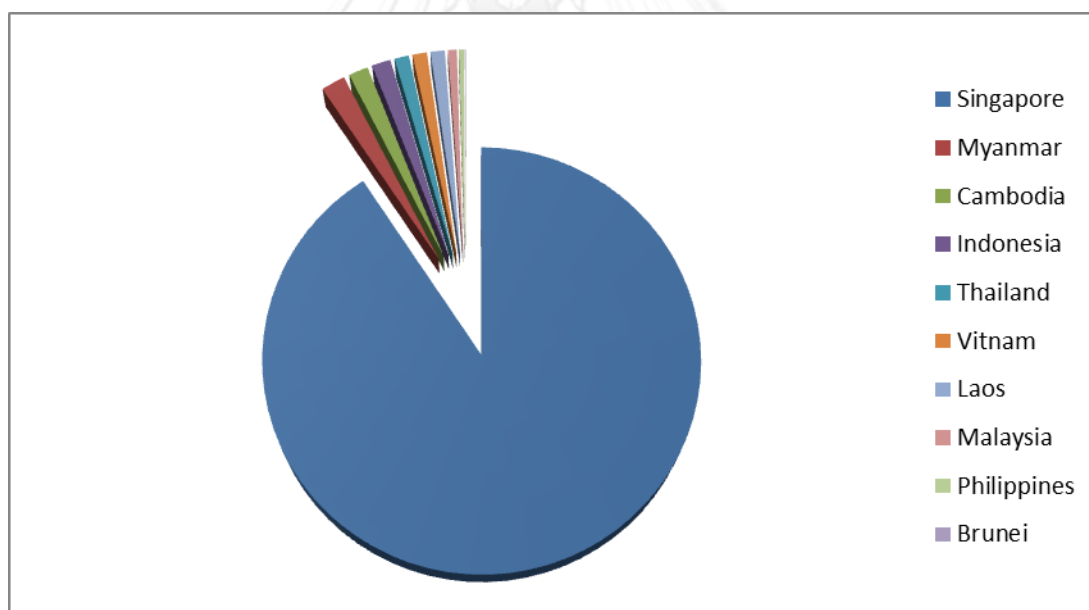
Excluding offshore financial centers, the Mainland was the most important destination for Hong Kong's outward DI, with a share of 40.7% of the total position of outward DI at end 2012, reflecting the close economic links between the two places. Guangdong Province was all along a popular location for Hong Kong's outward DI in the Mainland, accounting for 32.4% of Hong Kong's position of outward DI in the Mainland.

Analyzed by major economic activity of HKEGs which had made outward DI, those engaged in investment and holding, real estate, professional and business services took up the largest share, at 78.0% of the total position at end 2012. This

was followed by import/export, wholesale and retail trades, at 6.0%; and banking, at 3.8%. The Mainland is an important destination of Hong Kong's outward DI. It is thus very useful to analyze the economic activities undertaken by Hong Kong enterprises in the Mainland.

Hong Kong's investment in the Mainland covered a wide range of economic activities. Analyzed by major economic activity of Hong Kong's direct investment enterprise groups in the Mainland, information and communications sector accounted for 41.8% of the total position at end 2012. It was followed by investment and holding, real estate, professional and business services (21.7%) and manufacturing (14.0%). Most of the people in Hong Kong and Singapore use Chinese language. It is convenient for China's multinationals to invest there to exploit their careers.

**Figure 11: China's foreign direct investment stock in ASEAN countries at the end of 2011**



Source: 2011 Statistical Bulletin of China's Outward Foreign Direct Investment

China's outward foreign direct investment flows on ASEAN countries are \$5.905 billion, growing by 34.1%. It accounts for 13% of Asian inward foreign direct investment from China. The stock is 21.462 billion US, accounting for 7.1% stock in Asian countries. At the end of 2011, there 2,400 China's multinationals have been in ASEAN countries and they employ 0.1175 million people in local places.

From figure 10, it is shown that the most favorite destination country in ASEAN is Singapore. Singapore does not have rich resources and the regulations are very strict. It is contrary to our result about pull factors about China's OFDI will be attracted to rich resources and poor regulations. It meets the result about growing GDP per person in host countries. We study the next figure to discuss.

2011, China's outward foreign direct investment stock to ASEAN countries distribute in the different industries. Electricity, gas, and water production and supply industry is \$3.80 billion, accounting for 17.7%, mainly distributed in Singapore, Myanmar, Cambodia, Laos, and Indonesia; leasing and business service industry is \$2.76 billion, accounting for 12.9%, mainly distributed in Singapore, Malaysia, Laos, Vietnam, and Philippines; wholesale and retail is \$2.70, accounting for 12.6%, mainly distributed in Singapore, Vietnam, Indonesia, and Thailand; the manufacturing industry is \$2.57, accounting for 12%, mainly distributed in Thailand, Vietnam, Cambodia, Singapore, Malaysia, Indonesia, Laos and other countries; the mining industry accounted for 11.1%, mainly distributed in Myanmar Indonesia, Laos, Singapore; the construction industry accounted for 7.6%, mainly distributed in Cambodia, Singapore, Thailand, Malaysia, Burma and other countries; agricultural, forest, animal husbandry, fishery accounted for 3.3%, mainly distributed in Laos, Indonesia, Vietnam, Myanmar, Cambodia, Thailand, Philippines and other countries; scientific research, technical services and geological prospecting industry accounted for 1.9%; the real estate industry accounted for 0.7%; residents services and other service industries accounted for 0.2%. The mining industry connects to the pull factors about rich resources and poor regulations.

#### **4.6 The role of China's government policy on China's outward foreign investment**

One of the most important of these is the China's government's policy of encouraging its companies to expand overseas. The policies have different stages of development. Before 1979 China's FDI were economic assistance to developing countries, there are not policies to encourage domestic enterprises to invest overseas. Period from 1979 to 1991 is second stage, in 1979; the State Council promulgated the policy about set up the companies in the foreign countries. In 1989 it promulgated Overseas Investment Foreign Exchange Management Approach and Offshore Financial Institutions Management Approach. These lay the foundation for the multinational enterprises to go abroad. The third stage is from 1999 to 2000, Chairman Jiang Ze Min said that "We should be positive to expand the FDI overseas



and multinational enterprises” and “We should encourage our companies to invest more, take advantage of the two markets and two resources, which are foreign and domestic. Stage forth is from 2002 to now, in 2001 China join World Trade Organization, Chairman Jiang Ze Min said that “ensure better coordination in pursuing the “bring in” and “go global” strategies” and “Encourage and support the multinational enterprises which have comparative advantages to invest to foreign countries”. Chairman Hu Jing Tao said that “Innovating new ways for foreign investment and cooperation, supporting enterprises in international management development, production, sales, accelerating the fostering China's multinational corporations and international brands”. In 2011, the 12th Five-Year project said that “Innovating new ways for foreign investment and cooperation, supporting enterprises in international management development, production, sales, accelerating the fostering China's multinational corporations and international brands”. (Ministry of Commerce of the People’s Republic of China 2011)

Nowadays, company investment projects have to be approved by the National Development and Reform Commission, which reports to the State Council, or the Ministry of Commerce, and by the State Administration of Foreign Exchange. The processes of application for investing abroad are taken less days (RBS, 2009). The Government of China exerts control over FDI through state ownership of the main transnational corporations. Currently, there are 122 non-financial companies owned by the State, and the responsibility of the State-owned Assets Supervision and Administration Commission.

Steps to encourage outward FDI include tax reduction, more significantly, public financing of FDI. Several State-owned banks provided back China’s transnational corporations in Africa China Development Bank CDB, established in 1994, provides loans to Chinese firms and has launched the China-Africa Development Fund to support China’s FDI in Africa. China Export-Import Bank was also found in 1994 to improve Chinese exports and FDI specifically in the infrastructure sector: roads, power plants, pipelines, telecommunications, etc. This bank has a less risk-sensitive profile compared to private banks. China Export and Credit Insurance Corporation since 2001 provided insurance against the risks involved in Chinese exports and FDI. China’s presence in Africa also involves abroad range of private-sector actors. (National Development and Reform Commission 2011)

China Development Bank, have played a significant role in supporting the China’s OFDI. In 2005, the Chinese State-owned company Min-metals signed a US\$

550 million agreement with the Chilean State-owned company CODELCO to purchase a long-term supply of copper ore. In 2009, the bank lent US\$ 10 billion to the Brazilian company Petrobras, in exchange for 200,000 barrels a day. It also lent the Government of Venezuela US\$ 10 billion in 2010. This loan will be repaid in the form of oil exports of between 200,000 and 300,000 barrels the country's current oil exports. (The People's Bank of China 2011)

From figure 3, we can find that China's outward direct investment increases dramatically from 2000. Indeed, it is not accidental event. China's government encourages China's multinationals "going out" begin from 2000. In 2000, the 15th plan firstly proposed the implementation of "going out" strategy, and the implementation of "going out" strategy is opening up a new phase of major initiatives. In 2001 "Go Abroad" strategy means the government encourages the multinational with comparative advantages to go abroad and expand the field of international economic and technological cooperation. In 2004, it issued "about the state encourages foreign investment in key projects to give credit support policy notice". And at the same year, Department of Commerce issued "About Mainland enterprises to Hong Kong and Macao Special Administrative Region of investment companies set up regulations" and "Regulations on overseas investment approval to start a business matter".

In the March 2009, Ministry of Commerce issued "Foreign Direct Investment Management Approach". The State Planning Commission submitted to the State Council "About the Strengthening of Overseas Investment Projects Management Advice". It put that "China does not have the conditions for large-scale overseas investment" and multinationals should "focus on the use of foreign technology, resources and markets in order to supplement domestic shortage". In the early 1990s, the policy system seriously hampered China's foreign direct investment's size and number. In October 2000, the Fifth Plenary Session of the 15th Party Congress, the 15th plan firstly proposed the implementation of "going out" strategy, and the implementation of "going out" strategy is opening up a new phase of major initiatives. In fifth plan in 2001 "Go Abroad" strategy means the government encourages the multinational with comparative advantages to go abroad and expand the field of international economic and technological cooperation. The government encourages companies to continue development of foreign construction projects and labor cooperation and to the processing trade to export more products, services, and technology. It supports searching the resource which domestic do not have, and it improves industrial restructuring and resource substitution. Transnational corporation

can take advantage of overseas intelligence resource to build research and development institutions and design center. International companies can do business abroad to international developing. In these fields: finance, insurance, foreign exchange, taxation, human resources, legal, information services, immigration and others can create convenient conditions. It is very important that improving the corporate governance structure, then to regulate and supervise the China's outward direct investment. "Stimulating exports", "Getting resources" and "Progressing technology" are main reasons and purposes of "going broad" strategy. There are two means of implementation: strengthen service system and regulate foreign direct investment systems.

In the October 2004, it issued "about the state encourages foreign investment in key projects to give credit support policy notice". National Development and Reform Commission and the China Export-Import Bank have jointly established overseas investment credit support mechanisms. Ministry of Commerce standardized the Chinese government in overseas investment aspects of supervision and service work.

Then in the October 2004, Department of Commerce issued "About Mainland enterprises to Hong Kong and Macao Special Administrative Region of investment companies set up regulations" and "Regulations on overseas investment approval to start a business matter". They regulate that central enterprises approved by the Ministry of Commerce and local enterprises approved by the provincial commerce department.

In the March 2009, Ministry of Commerce issued "Foreign Direct Investment Management Approach". The projects of amount above \$100 million foreign direct investment approved by Ministry of Commerce. The projects between \$10 million and \$100 million foreign direct investment approved by the local governments. Others just register in the "Overseas investment management systems", and then the transnational companies can go abroad.

The convenience measures include that 1.) To the below the \$10 million non-resource foreign direct investment, the Ministry of Commerce and local governments departments short the work days from 20 to 3 days. 2.) For the most investment projects, they bypass foreign embassies' economic and trade office advices. 3.) Investment environment and the countries' security situations, countries' distribution and investment or other investment-oriented policies are not took consideration.

As soon as government establishes the bill on the China's outward foreign direct investment to replace the policy document legal documents. Different departments better to work together. The government built foreign investment guarantee to cover the China's outward foreign direct investment.

The Ministry of Commerce is not just administration; foreign investment activities provide "escort" services. It issued that "Foreign Investment and Cooperation Country (Region) Guide", "Helping companies understand the host country (region) investment environment", "Foreign Investment Industrial Guidance Catalogue", "Guiding enterprises go to the host country (region) to develop overseas investment", "Helping enterprises to solve difficulties and problems through intergovernmental cooperation in bilateral and multilateral trade and investment mechanisms", "Establishment of foreign investment and cooperation information service system for enterprises to develop overseas investment to provide statistics, investment opportunities and investment barriers, warning and other information services." These unknown obstacles and traps may be mainly due to Chinese companies do not understand foreign political, cultural, legal and economic backgrounds. Although China has a lot of capital, Chinese companies do not understand where investment demands. Such as China needs foreign resources and energy, but may face foreign security investigation. China needs foreign technology, but may be due to cultural differences and their digestion and absorption capacity; China cannot be invested in these technologies. China hopes the restructuring of the production chain, adjusts the production layout, but could face strong pressure from foreign unions.

State Administration of Foreign Exchange in July 2009 issued that "Foreign direct investment by domestic institutions of foreign exchange regulations." Domestic institutions may use their own foreign exchange funds, in line with the provisions of the domestic foreign exchange loans, RMB to purchase foreign exchange or in kind, intangible assets and other sources of foreign exchange assets will be approved by the foreign direct investment. Domestic Institutions Foreign direct investment can be retained profits overseas for its foreign direct investment. From the foreign reserves, China has a large current account surplus. It means the net increase in foreign direct investment. However, in China it does not reflected in the increase of foreign direct investment enterprises and residents. It transferred to increase the country's foreign reserves. The results are too fastly increase in the foreign reserves and appreciation in the RMB, additionally low yield foreign currency reserves made poor allocation of resources.

State Administration of Foreign Exchange (SAFE) issued "Foreign Investment Foreign Exchange Management Measures". It suggests that the multinationals should pass foreign exchange risk review and examination of the source of funds. The process should be registered in the system. Additionally, when they registered, adjustment shall be 5% of the export amount of funds deposited in foreign exchange to repatriate profits margin. SAFE issued a notice announcing the year from November 15 to cancel repatriate profits overseas investment deposit system. In March 2003, the \$3 million the following sources of foreign exchange funds overseas investment projects are reviewed by local branch.

From 2006, SAFE is no longer on the local foreign exchange administration departments to purchase foreign exchange for overseas investment quota approved. Domestic investors to invest abroad needed foreign exchange can use their own foreign currency, the RMB purchase of foreign and domestic foreign exchange loans. This means relaxed foreign exchange funding review.

In 2009, SAFE put that "Domestic institutions overseas investment foreign exchange management approach". SAFE officially announced the cancellation of foreign exchange sources of funds to review. Companies abroad just register rather than explain of foreign exchange source of funds. Chinese demand for foreign exchange for foreign direct investment, capital controls still exist.

Funding support and incentives, the first is the National Development Bank since 1998, a joint venture with other domestic and foreign institutions set up three industrial investment funds and a development fund. Followed by the Chinese government since 2000 has introduced four involves the promotion of foreign investment in government special funds. Third, in October 2004, the National Development and Reform Commission, China Export-Import Bank issued "on the country to encourage foreign investment in key projects to give credit support notice" It annually arranges "special loans for overseas investment," enjoys preferential export credit interest rates. Policy financial institutions played a vital role in promoting foreign direct investment. However, financial institutions would like to support large projects rather small projects.

Development and Reform Commission in 2006 issued that "Foreign Investment Industrial Guidance Policy" and "Foreign Investment Industrial Guidance Catalogue". They clearly defined the encouraged and prohibited overseas direct investment projects. Encouraged projects: 1.) the projects get the resources or raw materials which domestic shortages and economic development of the needed. 2.)

The projects stimulate domestic products, equipment and technology export and labor export with comparative advantage. 3.) The projects improve significantly the Chinese technology research and development capabilities, and the ability to use international leading technology, advanced management experience and expertise. Prohibited items: 1.) the projects endanger national security and harm public interest. 2.) The use of particular techniques or ban the export of technology. 3.) The field which Chinese law prohibits. 4.) The industries which investment target country or regional law prohibit investment. 5.) Other circumstances laws, administrative regulations. With RMB freely convertible currency in some Asian countries, it is more convenient to international enterprise to invest abroad.

#### **4.7 Conclusions of pull and push factors of China's outward foreign investment**

Now China's outward foreign direct investment is a popular topic in China, with the developing of China comprehensive strength, China's firms explore the new world to find more profit. Our motivation is to test which main theory that explains China's OFDI and which special explanations we need. We add conventional and novel hypothesis to be tested. We find that China's OFDI has both special and conventional dimension.

In our main variables, there are conventional results for GDP per person employed, Asian countries' fuel, and ores and metals exports. Viewed together, these finding are in agreement with the popular expansion of resource motivation of China's OFDI. Further, the low regulatory quality makes the resource easier to get. With the living standard improving, China's OFDI will go to the richer Asian countries. Stronger consumption power brings more business opportunities.

It reveals that foreign reserves, exchange rate, patent and wage level have positive relationship with outward foreign direct investment, while export, saving rate have negative relationship with the China's outward foreign investment. China's outward foreign direct investment would like to use offshore company and subsidiary to get the advantages of high level of confidentiality, tax reduction, no exchange controls. From the channel of Hong Kong and Singapore, China's outward foreign direct investment can expand economies of scale and economies of scope. Then it can increase in turnover or market share and make the investment diversification. Finally it is convenient for the multinationals to resource transfers.

Viewed from industrial structure, developed economies' foreign direct investment can be divided into two categories: horizontal and vertical. The main

vertical investment is to avoid the high costs of the export and to use the higher productivity or monopoly to achieve higher profits. The main motivation for vertical investment is taking advantages of national differences in resource endowments and factor prices. It separates the different stages of production the same product into different countries to reduce production costs and get more profits. China manufacturing and export companies depend on the process other foreign countries' product and Hong Kong as port to get the profit. They do not have outside market sales channels and marketing services network. So China's outward foreign investment is not a transfer of industry type, but the value chain extension type. This pattern of China's outward foreign direct investment for China's long – term economic growth is very important. (Tables 15 and 16)

**Table 13: The summary of China's outward foreign investment policy**

Time	Institution or conference and regulations	measures
October 2000	the Fifth Plenary Session of the 15th Party Congress	"going out" strategy
2001	In fifth plan	<p>1. Transnational corporation can take advantage of overseas intelligence resource to build research and development institutions and design center.</p> <p>2. International companies can do business abroad to international developing and to perfect serves system. In these fields: finance, insurance, foreign exchange, taxation, human resources, legal, information services, immigration and others can create good conditions.</p>

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		3. There are two means of implementation: strengthen service system and regulate foreign direct investment systems.
October 2004	the State Council  "About the state encourages foreign investment in key projects to give credit support policy notice".	1. National Development and Reform Commission and the China Export-Import Bank have jointly established overseas investment credit support mechanisms.  2. Ministry of Commerce standardized the Chinese government in overseas investment aspects of supervision and service work.
October 2004	Department of Commerce  "About Mainland enterprises to Hong Kong and Macao Special Administrative Region of investment companies set up regulations" and "Regulations on overseas investment approval to start a business matter".	They regulate that central enterprises approved by the Ministry of Commerce and local enterprises approved by the provincial commerce department.
March 2009	Ministry of Commerce issued "Foreign Direct Investment Management Approach".	1. The projects of amount of above \$100 million foreign direct investment approved by Ministry of Commerce.  2. The projects between \$10 million and \$100 million foreign direct investment

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		approved by the local governments.
		3. Others just register in the “Overseas investment management systems”, and then the transnationals can go abroad.
July 2009	State Administration of Foreign Exchange issued that "Foreign direct investment by domestic institutions of foreign exchange regulations."	The transnationals should pass foreign exchange risk review and examination of the source of funds. The process should be registered in the system.
November 15, 2009	State Administration of Foreign Exchange issued	It cancelled repatriate profits overseas investment deposit system.
2006	State Administration of Foreign Exchange issued	SAFE is no longer on the local foreign exchange administration departments to purchase foreign exchange for overseas investment quota approved.
2009	State Administration of Foreign Exchange issued	SAFE officially announced the cancellation of foreign exchange sources of funds to review. Companies abroad just register rather than explain of foreign exchange source of funds.
November 12, 2013	The Third Plenum of Chinese Communist Party decided to establish the state security committee, it will play a very important role in China's domestic security.	China has always draw attention to research, to plan and to implement energy security strategy. China's government found a number of departments to focus on the energy security.

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**Table 14: The summary of China's outward foreign investment policy support in state-owned company**

Time	Institution or conference and regulations
1998	the National Development Bank
October 2004	The National Development and Reform Commission, China Export-Import Bank issued "on the country to encourage foreign investment in key projects to give credit support notice"
2006	Development and Reform Commission issued that "Foreign Investment Industrial Guidance Policy" and "Foreign Investment Industrial Guidance Catalogue".

#### 4.8 The push factors and China's support policies.

About the factor of China's export, after more than 30 years increase high speed rate of China's GDP, China's GDP became the second in the world. However the structure is not healthy enough to carry on, it depends deeply on the export and domestic investment. Now China's government encourages domestic consumption to adjust the economic structure. The new goal of China's GDP growth in this year is 7.5%; the officers would like to lose some speed, then to get the balance in the economic. With the increasing the GDP, China's outward foreign direct investment will increase more in scale. Although the growth of flow and scale of the export from China to other countries go down, China is also the most important exporter around the world. The new goal is besides the processing manufacturing, financial services and high technology products export are also important. In the long term, export and outward foreign direct investment maybe have some replacement effect. With familiar with aboard markets, China multinationals would like to invest some countries which they do not export to there.

It is difficult context when we turn to savings. If we want to release more purchasing power, in the long term we should reduce the saving rate to encourage more people to consume. On the other hand, citizens worry about many family and personal things in the future. There are some problems, such as, college entrance examination, pension, and medical care. When social security system and social

system are more and more mature, citizens will withdraw the money from the banks and get more goods domestically. So the China's outward foreign direct investment will increase at the same time.

It is well known that equilibrium of balance of payments is a major problem to each country. Surplus contribute to appreciation of RMB currency, it is advantage for the China's outward foreign direct investment, but not benefit to the export. Nowadays, Shanghai Trade Area was found, financial openness is one of the most attractive things, and currencies were freely exchanged to some extent. It is not only good for China's economic reform and finance reform, but stimulating the economy, and increasing employment. China's outward foreign direct investment will develop successfully with taking advantage of China's foreign reserves.

In the economic globalization world, international trade and investment are increasingly frequent. So the exchange rate is a key to the countries' economic. China use the fixed exchange rate for a long time, it makes our economic and financial system safe and stable. Nonetheless, the disadvantages appear in recent years, interest arbitrage and two currency markets have some influence on China's economic. China's government should continue to take measures about stability of China's currency, further, free convertibility of the RMB take place in some countries, such as ASEAN countries, some Europe countries. They can get some experience from the true world, and interest rates liberalization and marketization of exchange rate are improved to some extent. The China's currency sometimes have no relationship with the China's outward foreign direct investment, because many foreign direct investments come from the state-owned enterprises, and they can invest using the dollar in other countries. If the China's currency depreciates, the dollar state-owned enterprises will appreciate. This is all reasons that when the dollar depreciates and US bonds increases, China's government would like to make the RMB to the world currency.

The number of patents is the symbol of one country's science and technology level. China emphasizes the function of science and technology in the economic system. They invest a great amount of money to the science and technology. After the developing of that, multinationals can produce high technical products. When they master the technology, it is a good time to invest to some developing countries with low technology. It is benefit to the host countries, and benefit to the upgrade industries.

Foreign multinationals leave China since the advantages of low labor cost is gone. They move the factories to Vietnam and Laos to manage the production cost. During industrial upgrading, some labor-intensive industry in China will build in some low labor cost countries. Wage is an essential key role to the multinationals. With the increase of wage standard, China's outward foreign direct investment has negative relationship with it.



## CHAPTER V

### CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Conclusions

In this paper, we study China's outward foreign direct investment from pull and push factors. In the push factor we separated it by long-run and short-run. The pull factor data is from 2003 to 2011. The push factor data is from 1985 to 2011. In the pull factor we use the panel data from 24 countries and we separate Hong Kong from the database. Since Hong Kong is special administrative region, from "Hong Kong SAR basic law", the Central People's Government has responsible for all foreign affairs. Hong Kong can be individually manage their foreign affair with other countries, regions and relevant international organizations to maintain, develop, conclude, and implement agreements in the economic, trade, finance, shipping, communications, tourism, culture, sports and other areas. First we treat Hong Kong as province of China, so we drop Hong Kong from destination of China's outward foreign direct investment. Then we get the result as you can see in (APPENDIX A, B, and C). If we drop Hong Kong, the result is not valid. We can find that R-square is just 23.84%.

In the second test, we add the Hong Kong, and added the China's OFDI to other Asian countries through Hong Kong.

Further we also separates from the model into section fix model and period model. In the section fix model we found that the Asian countries' fuel, ores and metals exports as share of GDP has the very big positive impact on the China's OFDI. The GDP per person employed (constant 1990 PPP \$) has a positive impact on the China's OFDI which is different from the hypothesis. The Regulatory Quality has a negative relationship with China's OFDI. It means at the poorer regulatory quality, the more China's OFDI will go to the host countries.

On the other hand, we discussed the push factor about China's outward foreign investment. We used the co-integration to test the long-run relationship between China's OFDI and China important economic indicators. We get some results contrary to the hypothesis; the foreign reserves in China, China's exchange rate, the number of China's patents and China's average wage have positive relationship with the China's outward foreign direct investment in the long run. China's saving rate and export from China to Asian countries have negative impact on the China's OFDI.

In the short-run model, we use the Error Correction Model (ECM), we got the under the 15% level of significant, only patent was significant and positive, whereas others were not significant.

Last but not the least, China's outward foreign direct investment policy plays the very important role to China's outward foreign direct investment. In the last 10 years, as the state-owned enterprises are major subjects of China's outward FDI, so the investment policy and state-owned enterprises cooperated very well. The China's investment policy has big influence to the China's outward foreign direct investment.

To sum up, the pull factor shows that China's outward foreign direct investment seeks rich resources and poor institutions. And they are not market-seeking foreign direct investment. They would like to supply for the domestic economic developing. The push factors shows that with China's enormous foreign reserve and average wage growing, China's outward foreign direct investment prefer to developed countries to get technology and high management to exploit the domestic big market. Actually, China's outward foreign direct investment serves the domestic market and domestic economic. No matter from resources and technology skill. This is finally goal.

## 5.2 Policy Recommendations

For the China's savings, China's government will improve the society system to make the households have more confidence to consume. Further the corporations and household will invest abroad more with the government relaxing the regulations about the investment abroad. As the new generations growing, the new consumption habits will reform.

Exchange rate, foreign reserves and export to Asian countries have impact on each other. Nowadays, the government will reform the structure of China's economy. The export is not the key energy to China's economy. They begin to find other ways to stable the growth of China's economy. Then the foreign reserves will not increase so fast, it will make less pressure to China's currency and China's exchange rate. It is convenient for the exchange rate and interest rate reforms. Invest abroad have substitute effect on the China's export and consume some China's foreign reserves. Additionally, foreign reserves and export react to China's foreign direct investment. After China's interest rate and exchange rate reformed, China's foreign direct investment has more support from that.

China's patents and wage have their own reasons to developing, China's OFDI has positive relationship with them. We can forecast that China's technology and science develops very quickly, and the China's average wage increases fast, China's OFDI will get more support from that.

On the other hand, China's support policies are key reason for China's OFDI. Since China's government have more experience on investment abroad, corporations and multinationals will be encouraged by the government policies.



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APPENDIX

จุฬาลงกรณ์มหาวิทยาลัย  
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## APPENDIX A

Table 155: In the first test, we drop the Hong Kong, and do not add the China's OFDI to other Asian countries through Hong Kong.

Variable	Coefficient	Std. Error	Prob.
C	3581.4490* (0.4999)	7163.7380	0.6178
GDP	1.36E-09 (0.5252)	2.59E-09	0.6001
CPI	-64.6831 (-0.2516)	257.0319	0.8016
TRA	166.6140 (2.9730)	56.0415	0.0034
IFDI	-1098.0740 (-1.7377)	631.8993	0.0842
OM	1167.5980 (1.6733)	697.7621	0.0962
GDPPE	0.30058 (1.0435)	0.2880	0.2983
PS	-16.2004 (-0.1607)	100.7601	0.8725
GE	-138.3222 (-0.4902)	282.1500	0.6246
RQ	-10.3351 (-0.0363)	284.0640	0.9710
RL	-222.5830 (-0.7845)	283.6985	0.4339
CC	148.9048 (0.5509)	270.2657	0.5824
Obs.		171	
R2		0.11124	

\*Indicates significance at 5% level. \*\*Indicates significance at 10% level.

## APPENDIX B

Table 166: We use the fixed effects to test the regression to focus on each country.

Variable	Coefficient	Significant.	Fixed Effects (Cross)	Coefficient
C	-21957.62	0.5382	BANGLADESH--C	16835.92
	(-0.6169)		CAMBODIA--C	43191.46
GDP	3.85E-08	0.2158	INDIA--C	-33738.17
	(1.2434)		INDONESIA--C	-2660.05
CPI	111.68	0.7023	JAPAN—C	-184886.20
	(0.3829)		KAZAKHSTAN--C	19692.32
TRA	-83.46	0.5774	KYRGYZREPUBLIC--C	18986.04
	(-0.5584)		MALAYSIA--C	-2552.97
IFDI	-2086.63	0.0056	PAKISTAN--C	27050.15
	(-2.8164)		PHILIPPINES--C	-133.67
OM	1479.42	0.5019	QATAR--C	-4687.67
	(0.6732)		SAUDIARABIA--C	11885.07
PS	92.89	0.7786	SINGAPORE--C	73316.09
	(0.2816)		THAILAND--C	12579.76
GE	535.75	0.3344	UNITEDARABEMIRATES—	-5864.94
	(0.9685)		VIETNAM--C	32702.82
RQ	297.45	0.5644	YEMEN—C	28357.94
	(0.5776)			
RL	-649.09	0.2528	R-squared	0.238468
	(-1.1482)		Adjusted R-squared	0.081841
CC	297.79	0.5174	Log likelihood	-1929.549
	(0.6489)		Obs.	171

\*Indicates significance at 5% level. \*\*Indicates significance at 10% level.

## APPENDIX C

Table 177: We fix the period in the model to focus on the period effect.

Variable.	Coefficient.	Std. Error.	Significant.	Fixed Effects (Period).	Coefficient
C	8000.82 (1.1005)	7269.61	0.2728	2003--C 2004--C	-9752.06 -9366.70
GDP	7.45E-10 (0.2924)	2.55E-09	0.7703	2005--C 2006--C	-6169.88 -7534.14
CPI	-158.28 (0.5848)	289.08	0.5848	2007--C 2008--C	2921.71 7458.16
TRA	182.04* (0.0012)	55.20	0.0012	2009—C 2010--C	7086.71 4485.01
IFDI	-1472.67* (0.0217)	634.85	0.0217	2011—C	10871.18
OM	1216.98** (0.0711)	669.53	0.0711		
GDPPE	0.3680 (0.1853)	0.28	0.1853		
PS	18.39 (0.8508)	97.60	0.8508		
GE	-170.88 (0.5346)	274.52	0.5346		
RQ	-131.70 (0.6304)	273.20	0.6304		
RL	-250.15 (0.3608)	272.89	0.3608	R-squared Adjusted R <sup>2</sup>	0.550423 0.497035
CC	225.50 (0.3890)	261.02	0.3890	Log likelihood Obs.	-2564.714 180

\*Indicates significance at 5% level. \*\*Indicates significance at 10% level.

## APPENDIX D

Table 188: The Eview result of panel data about the pull factors

Variable.	Coefficient.	Std. Error.	Prob.
C	-63733.16 (-0.4889)	130355.40	0.6255
GDP	2.11E-08 (0.4482)	4.71E-08	0.6545
CPI	-5433.06 (-1.1761)	4619.46	0.2412
TRA	369.69 (0.3737)	989.20	0.7091
IFDI	49010.50* (4.7727)	10268.80	0.0000
OM	33138.99* (2.7280)	12147.32	0.0070
GDPPE	10.64* (2.0792)	5.12	0.0391
PS	-5369.23* (-3.0263)	1774.14	0.0029
GE	300.24 (0.05967)	5031.15	0.9525
RQ	-11509.70* (-2.2700)	5070.35	0.0245
RL	1325.41 (0.2571)	5154.62	0.7974
CC	7277.62 (1.5007)	4849.37	0.1353
R-squared	0.532968	Obs.	180
Adjusted R-squared	0.502388	Log likelihood	-2568.142

\*Indicates significance at 5% level. \*\*Indicates significance at 10% level.

## APPENDIX E

Table 199: The Eview result of fixed the period panel data about the pull factors

Variable	Coefficient	Std. Error	Prob.	Fixed Effects (Period)	Coe.
C	-75228.29 (0.5412)	138977.50	0.5891	2003--C	59126.18
GDP	2.32E-08 (0.476)	4.87E-08	0.6344	2004-- C	-40352.80
CPI	-5099.8 (-0.9360)	5448.18	0.3507	2005--C	-10570.1
TRA	162.18 (0.1574)	1029.79	0.8751	2006--C	-04758.40
IFDI	52520.20* 4.8397	10851.92	0.0000	2007--C	-1.37E+05
OM	31063.21* (2.5266)	12294.03	0.0125	2008--C	84300.13
GDPPE	10.41* (2.0122)	5.18	0.0459	2009--C	66825.50
PS	-5323.28* (-2.9474)	1806.08	0.0037	2010--C	41243.47
GE	1717.91 (0.3326)	5163.79	0.7398	2011--C	40939.47
RQ	-11713.18* (-2.2869)	5121.72			R-squared 0.550423
RL	803.16 (0.1539)	5217.29	0.8779		Adjusted R <sup>2</sup> 0.497035
					Log likelihood -2564.714
CC	6774.07 (1.3753)	4925.21	0.1709	Obs.	180

\*Indicates significance at 5% level. \*\*Indicates significance at 10% level.





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