

Spring 2019

## Analysis of Unbalanced Growth Caused by Foreign Direct Investment in China's Regional Economy

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### Recommended Citation

Zheng, Zewen, "Analysis of Unbalanced Growth Caused by Foreign Direct Investment in China's Regional Economy" (2019). *Senior Projects Spring 2019*. 233.

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Analysis of Unbalanced Growth Caused by Foreign Direct Investment in China's Regional  
Economy

Senior Project Submitted to  
The Division of Social Studies  
of Bard College

by  
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Annandale-on-Hudson, New York  
May 2019

## Acknowledgements

I would like to thank my advisor professor Sanjaya DeSilva. His profound knowledge and optimistic attitude always affect me. Thanks to Professor Mitra, who teaches me a principle that as long as working hard, there will be a good result waiting for me. Last but not least, thanks to all the economic professors who taught me, they made me interested in economy.

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## Introduction

Since reform and opening up in 1979, China's national economy has grown rapidly, and the national economic strength has been continuously enhanced. However, the regional economy has not grown in a balanced way. Economic imbalances in China's three regions (eastern, central, and western) has become increasingly large. The eastern region has become the largest beneficiary area for absorption of foreign direct investment (FDI), while the central and western regions have absorbed less, a trend of "high in the east and low in the west." Undoubtedly, FDI plays an important role in promoting China's economic growth and has become an important part of China's national economy. However, facts that have proved the expansion of regional economic differences has become a serious problem, which has had an impact on the national economy and social development. This paper analyzes the regional economic differences in China after reform and opening up, analyzes the main problems affecting the regional economic differences in China, and then puts forward suggestions for narrowing the regional economic differences and building a harmonious society.

## **Chapter 1: Topic Background and Framework of this Paper**

With the process of economic globalization and regional economic integration, the momentum of resource allocation on a global scale has significantly increased. Foreign direct investment (FDI) can bring the most profit in the world. As one of the fastest developing countries in terms of economic development, China has increasingly become a hot spot for FDI. Since the reform and opening up, FDI has increased year by year, especially since 1992 when China's FDI has grown at a faster rate.

After China entered the WTO, foreign economic development has entered a new stage. In 2002, China's FDI reached US\$52.743 billion, surpassing the United States for the first time to become the world's largest foreign direct investment country. According to data from the National Bureau of Statistics of China, from 1978 to 2017, the cumulative amount of foreign investment in China was as high as 653.75 billion US dollars. However, due to the differences in investment environment in various regions, the imbalance of foreign direct investment in various regions has been uneven, showing a pattern of high in the east and low in the west.

Over the past 30 years of reform and opening up, China's economic construction has achieved remarkable achievements. According to Ministry of Commerce of China, the average annual growth rate of the world economy is around 3.3%, and the Chinese economy is three times higher than this rate, creating a high growth rate of more than 9.6% per year. China's economic aggregate has grown from 1.8% to more than 5%. The total volume of trade has grown from 0.8% to more than 6.7%, and economic growth has contributed more than 15% to global economic growth. The sustained high-speed growth of the Chinese economy for 30 years has created a miracle of economic development and has become a new bright spot in the world economy.

However, this growth is considered as unbalanced growth and a growing regional gap. This also shows that the eastern region is developing much faster than the central and western regions. This is the economic phenomenon that the Chinese often say “the eastern uplift and the central and western collapse.” The said imbalance in the economic development of the eastern and western regions is formed by many factors such as history, natural factors, geographical location, openness policy, and social. However, there is no doubt that the uneven regional distribution of foreign direct investment has a very significant impact on China’s regional economy and the regional differences.

In the process of China’s rapid economic growth, differences between regions are inevitable. However, if the regional differences continue to expand, they will eventually lead to excessive accumulation and excessive production in developed regions, while production in underdeveloped regions is lacking, which will not be conducive to the sustainable development and harmonious development of the overall economy. If the gap of economic development becomes too large between the regions, and when the industries in the developed regions need to shift outwards, they need production support from the surrounding regions, but the surrounding regions do not have the relevant support of the industry. This will also hinder the sustained growth of the national economy. Therefore, in order to narrow regional differences and promote the coordinated development of the regional economy, the Chinese government has implemented strategies such as developing the west, revitalizing the old industrial bases in the northeast and the rise of the central region to promote the development of backwards regions.

Based on the situation of China’s regional economic development, this paper concludes that the imbalance of regional economic development in China is a distribution pattern that decreases from east to west. By using theories about regional development, it is easier to



understand that human capital, location, knowledge, costs, etc. causes the regional economics imbalance. Then, it analyzes the distribution of foreign direct investment in various regions of China, and draws a similar pattern with China's regional economic development. The distribution of foreign direct investment in various regions of China is unevenly distributed in the east and west. On this basis, it analyzes reasons for the imbalance of foreign direct investment in various regions of China. Finally, analyze the negative impact of FDI on China's regional economic development. Based on the lack of foreign direct investment in the central and western regions, it puts forward suggestions for the central and western regions and paths to promote the coordinated development of China's regional economy.

## Chapter 2: China's Regional Economic Development

China's economic construction has achieved remarkable achievements since 1978. During this period, the average annual growth rate of the world economy was about 3.3%, and the Chinese economy was three times higher than this rate, creating a high growth rate of more than 9.6% per year. China's total trade volume has grown from 0.8% to over 6.7%, and economic growth has contributed more than 15% to global economic growth. The sustained high-speed growth of the Chinese economy for 30 years has created a miracle of economic development and continued to write the "East Asian Miracle", which has become a new bright spot in the world economy. However, this rapid growth is uneven growth. With the rapid development of China's economy, the regional economic differences formed by history have not narrowed, but have been further expanded.

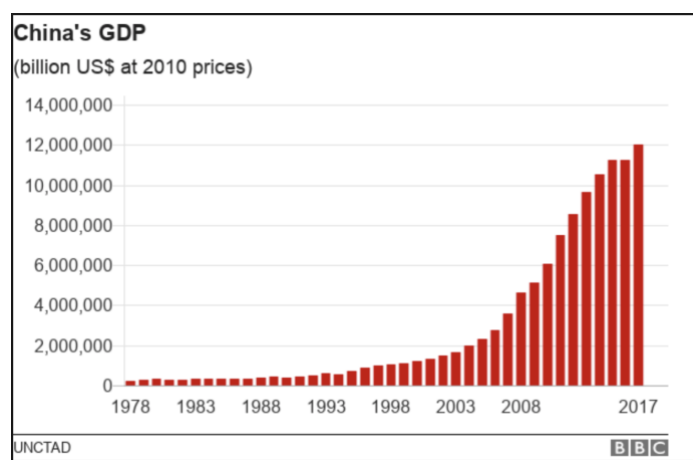


Figure 2.1  
Source: BBC

### 2.1 Rapid development of China's Economic Aggregate

Since the reform and opening up, China's economy has developed rapidly. By the end of 2017, the gross domestic product reached 82,075.43 billion yuan, and the per capita GDP reached 59,660 yuan. This is 97.4 times the GDP of 364.52 billion yuan in 1978, which is 61.2

times the per capita GDP in 1978. The average annual growth rate of GDP in the past 30 years has reached 9.5%. If calculated at the current year's price, the average annual growth rate is 16.8%. As can be seen from Figure 2.1, China's economic development can be divided into two stages: In the first stage (1978-1991), GDP growth was slow, and the GDP at the end of 1990 reached 186.678 million yuan, which was 5.12 times of GDP in 1978. During this period, the reforms carried out by the Chinese government were to repair the previous planned economy while maintaining the planned economic system. In the second period (1992-present), GDP grew rapidly, and the GDP in 2017 was 22.68 times that of 1992. Since 1992, China has established the market economic system as the goal of economic restructuring. Further, according to the 13<sup>th</sup> The Five-Year Plan, China will expand its opening up to the outside world and make strategic adjustments to state-owned enterprises.

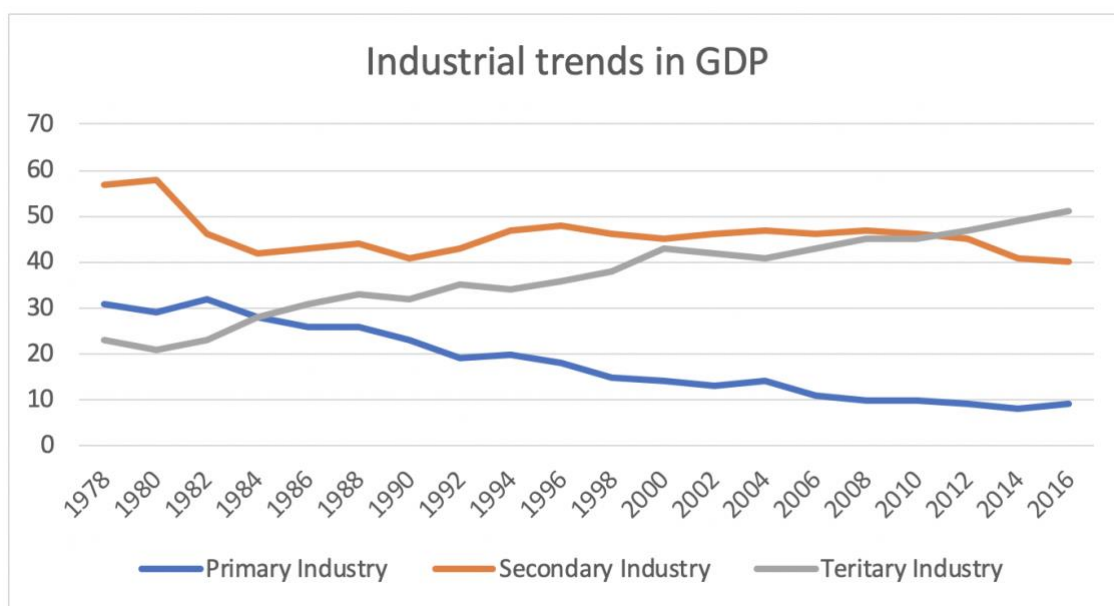


Figure 2.2

Source: National Statistics Bureau of China

Unit: Percentage

## 2.2 China's Economic Structure

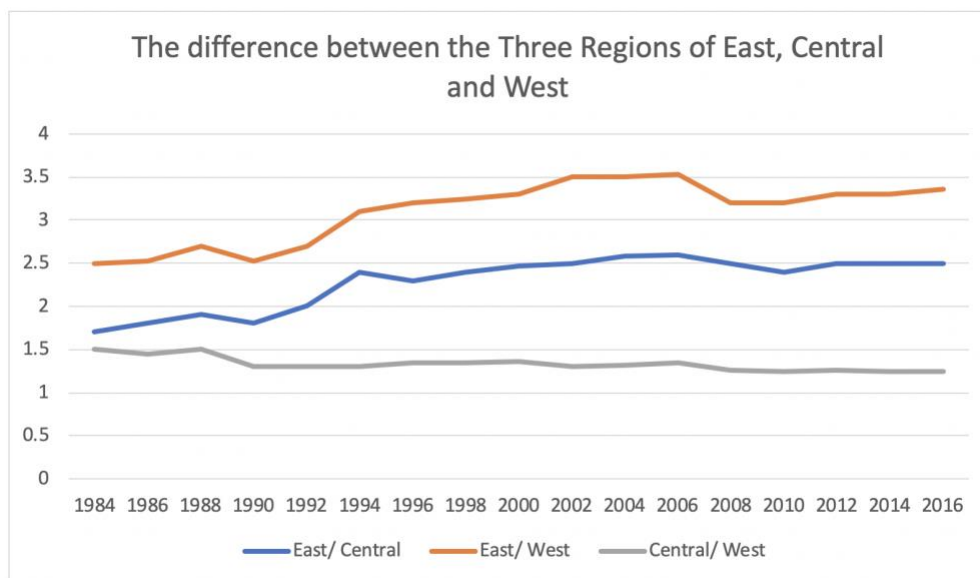
As can be seen from Figure 2.2, since 1978, China's economic structure has been gradually optimized, that is, the proportion of the primary industry to GDP has gradually declined, and has fallen to nearly 10%. The proportion of the secondary and tertiary industries have gradually increased. In particular, the proportion of the tertiary industry has risen even faster, accounting for more than 40%. Since the mid-1980s, the proportion of the tertiary industry has exceeded the proportion of the primary industry, but the tertiary industry has a lower proportion than the secondary industry. According to the stage of industrialization (Smail, 1992), China has entered the middle and late stages of industrialization. Judging from the development of various industries, the overall trend of the primary industry in 1978-2009, although some proportion of GDP increased, is gradually decreasing in general. During this period, the proportion of the primary industry dropped from a high of about 33% to nearly 10%. The secondary industry has experienced a wave of growth between 40% and 50% during this period and has shown a slow upward. During this period, although the proportion of the tertiary industry has declined, the overall trend is an upward trend, rising from 21% to 41%. Since 2010, the secondary industry has decreased by 15%, while the tertiary industry has surpassed, rising by 12%.





Figure 2.4 2010 Relative Per Capita GDP Ranking  
Source: GeoCurrent.com

China's opening up to the outside world is a gradual opening strategy from the coast to the mainland. Coupled with the differences in economic geography and environment, the openness of the western region lags far behind that of the eastern region, resulting in a significant gap in GDP per capita. At the same time, due to various reasons such as the geographical differences between the western provinces, the GDP per capita in the western provinces also showed an imbalance.



**Figure 2.5 Difference between the Three Regions**  
Source: National Statistics Bureau of China

As can be seen from Figure 2.5, the ratio of GDP in the eastern region to GDP in the western region has increased from 2.5 times in 1984 to 5.6 times in 2016. Although it declined slightly from the late 1980s to the early 1990s and after 2004, the overall trend is stable but rising. The ratio of GDP in the eastern region to GDP in the central region increased from about 1.7 to 2.8. In recent years, although the ratio between the two has declined, the overall trend is also on the rise. The ratio of GDP of the central region to the GDP of the western region has not changed much, but it is on a downward trend. In short, the imbalance of the eastern region and of the central and western regions are widening. The difference between the eastern region and western region is greater than the difference between the eastern region and the central region. But, the difference in economic size between the central and western regions is narrowing.

## 2.4 Differences in Industrial Structure by Region

In general, the industrial structure of the eastern region is better than the central and western regions due to geographical location and economic conditions. However, central regions have more natural resources for development than that of in western region. This means that the production in the eastern region is higher than in the central and western regions, and the central region is higher than in the western region.

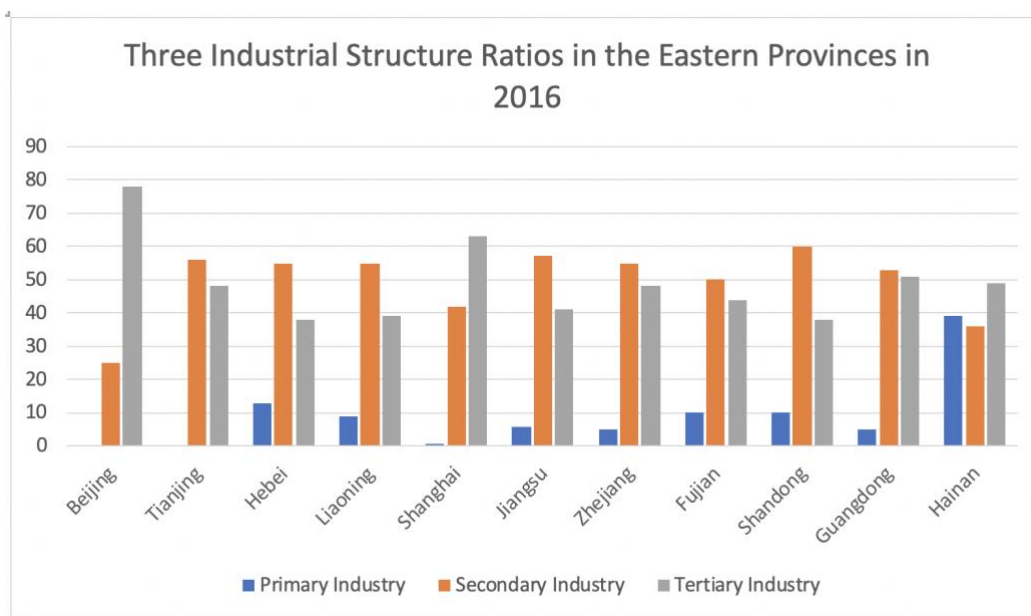


Figure 2.6 Three Industrial Structure Ratios in the Eastern Provinces in 2016

Source: National Statistics Bureau of China

Unit: Percentage

Figure 2.6 shows that the proportion of the tertiary industry in most regions exceeds 30%, of which more than 70% in Beijing and more than 50% in Shanghai. The proportion of the primary industry is relatively low, but except for Hebei and Hainan, the proportion of other primary industries is less than 10%. Among them, the tertiary industry in Beijing, Shanghai and Hainan has accounted for more than the secondary industry. However, the industrial structure of Hainan is a bit strange, and the proportion of the primary industry and the secondary industry is similar.



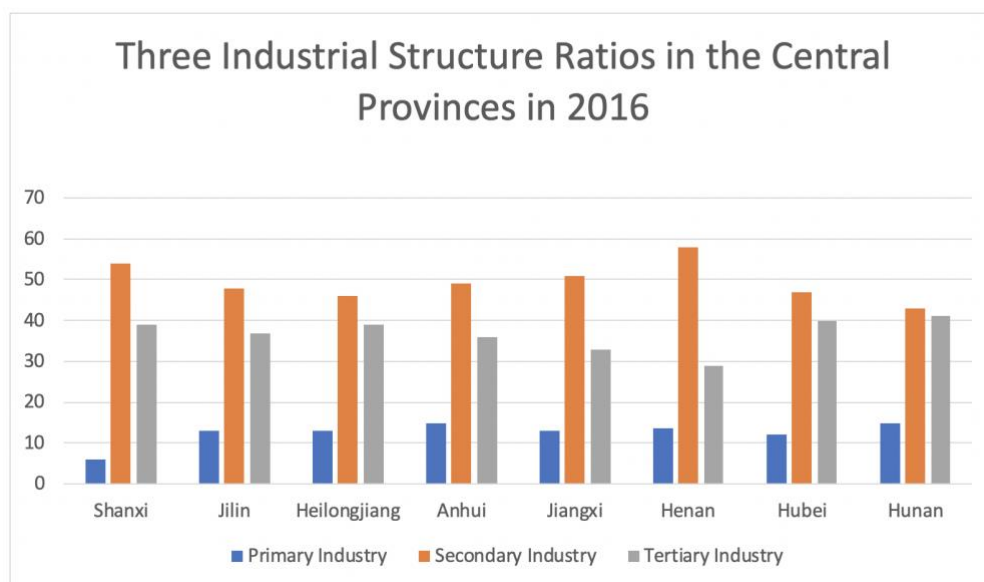


Figure 2.7 Three Industrial Structure Ratios in the Central Provinces in 2016  
 Source: National Statistics Bureau of China  
 Unit: Percentage

As can be seen from Figure 2.7, the GDP of the central region mainly comes from the secondary industry, but the tertiary industry seems to be constantly developing. The value of the first industry is around 15%, except for Shanxi, which is less than 10%. The output value of the secondary industry is greater than 40%. The value of the tertiary industry is less than 30% except for Henan, and other provinces are between 30% and 40%. Furthermore, the development of the industrial structure in the central region is related to the fact that the central region is at the intermediate stage of industrialization.

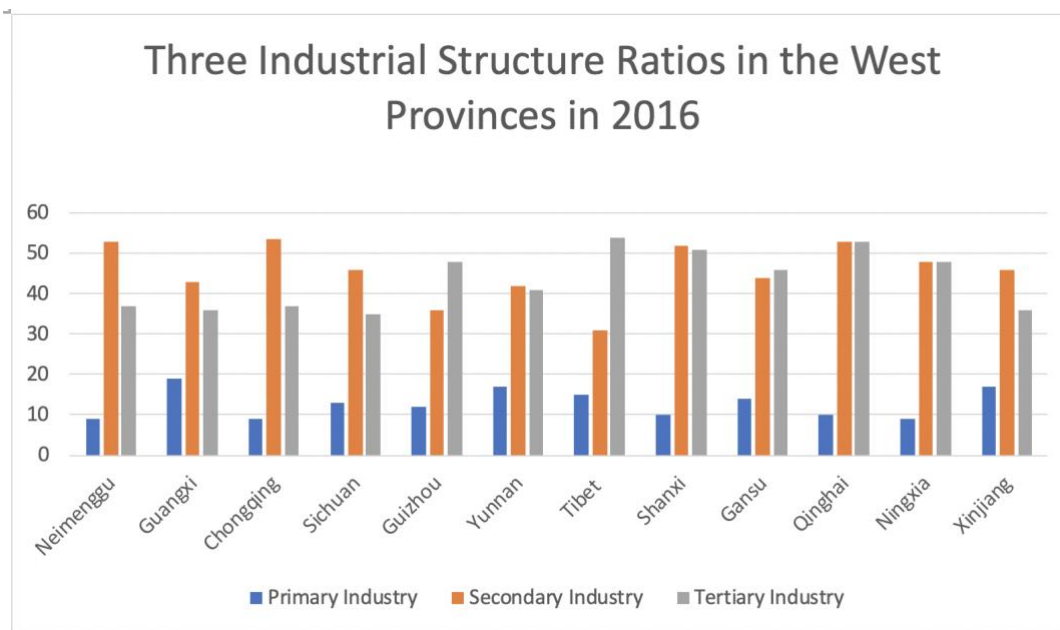


Figure 2.8 Three Industrial Structure Ratios in the West Provinces in 2016  
 Source: National Statistics Bureau of China  
 Unit: Percentage

Figure 2.8 shows that the proportion of the primary industry in the western region is between 10% and 20%, and the proportion of the secondary industry is more than 40% except for Tibet. The proportion of the tertiary industry is relatively high, both exceeding 30%. The secondary industry in the western region is mainly the mining industry, and the tertiary industry is mainly the traditional service industry. That is because the development of the modern service industry lagging behind. Moreover, the high proportion of the tertiary industry in the western region is not because they have better resources, but because the secondary industry is underdeveloped, and the mining and energy industries are underdeveloped. The west regions originally wanted to move directly from the primary industry to the second industry, but because of the underdevelopment of technology, they were transferred to the tertiary industry but more traditional service such as tourism. Moreover, the development of the tertiary industry in the

west is not supported by the secondary industry, which also affects the economic development of the western region.

### **Chapter 3: Theoretical Framework**

In the last chapter, it was found that China's economy has developed rapidly in general, while the economic development differences in the three regions of East, Central and West have been expanding, and the overall pattern is high in the east and low in west. This chapter will explain why there is a regional economic imbalance by theories.

#### **3.1 Hymer's Monopolistic Advantage Theory**

Hymer (1960) believes that the motivation for multinational companies to make direct investments comes from market defects. The fundamental reason why a country needs direct investment is the incompleteness of the market. Multinational corporations must have a monopoly advantage in ownership in order to obtain profits from another country. This theory can explain that a branch or subsidiary of an overseas enterprise enters another country and can compete effectively with the local enterprise in the market, and has a long-term development goal (Rivard, 1994; Salimath, n.d.). Hymer's theory of monopoly advantage holds that multinational enterprises have advanced technology and favorable monopoly advantages. Comparing to the country, the costs of resources, human capital and other factors are relatively low. Therefore, multinational enterprises will choose to invest and build factories abroad, to make more profitable production. Hymer's theory can answer why multinational companies want to invest horizontally across regions, play a monopoly advantage in regions with more cost advantages in the world, and explained why multinational companies do not transfer all assets and technology to another country due to the problem of leaking the core technology to other countries (Salimath, n.d.). It is a vertical investment, which means that multinational companies transfer some of their processing production to other countries, such as transferring labor-

intensive industries to developing countries, thus protecting the monopoly of advanced technologies and the advantages of low cost in developing country to get more profit.

All of Apple's processing has done in China. Apple's core technology is the monopoly advantage and this is what attracts China. With a strong background like Apple, the Chinese government would like to move Apple's headquarters to here by all means. Even if China gives more policy benefits, Apple always refuses. Because they only want the process to be completed in China, not all technology transferred to China. The manufacturing cost in the United States was too high. At the time, the same type of mobile phones, such as the BlackBerry were in the market, which made the price of mobile phone manufacturers particularly high. However, because of the cheap labor and the large factory area, China was successfully attracted to Apple. But if Apple's core business is transferred, then China's mobile phone industry will become the second U.S., which will create a dilemma for Apple. Therefore, only the practice of "design in California, assemble in China" will make Apple gain more profits.

### **3.2 Kojima's Comparative Advantage Theory**

The theory of comparative advantage was proposed by Ricardo, but summarized by Kojima (1975). He explained the behavior of foreign direct investment based on Japanese companies investing abroad. According to him, Kojima believes that foreign direct investment by Japanese companies has been successful. The main reason is that Japanese investment companies can make good use of the basic principles of international trade division and appropriately adjust the domestic industrial structure. Japan focuses on the development of industries with comparative advantages, and shifts the industrial sectors that have lost or are

about to lose their advantages in the country to other countries, where they establish new production and processing bases and promote the development of import and export trade.

Almost all of the popular car brands in the Chinese market are now sold in two types: Chinese made and fully imported car. Of course, the prices are different. The price of the imported car is equivalent to third of the China made car. The price difference between the two cars lies in the core technology of it, the engine. If it is a Chinese-made engine, it will be cheaper than the imported engine from Japan, because most of the core engine technology is in there, and they will not tell China the most core technology. However, they gave the engine model and transferred some technology to let China complete the manufacturing process, which reduced the cost of Japanese companies and increased the profit margin. These auto companies will focus on other core car technical issues without worrying about manufacturing. However, if the consumer has a certain spending power, then, the car company will still manufacture and assemble all the parts of the car at a higher cost, then package it in the most complete sealed form, and export it to China. This example illustrates Kojima's theory of placing some auto parts production in China and developing other technologies at the company's headquarters. The reason why Japanese companies choose to manufacture these parts in China is because that since 2000, China has been famous in the world for parts processing, and many processing industries have been completed in China.

The core ideas of Kojima's comparative advantage theory are summarized as follows, according to him. First, shift the marginal industries that are already at a disadvantage in Japan or are about to be at a disadvantage, to other countries that are suitable for the production and development of these industries, and domestically concentrate on developing industries that have advantages now. Since the production cost in Japan at a higher rate, they put partial processing in

China with a low cost. Second, the issue of country selection regarding technology transfer. The technology gap between this country and Japanese companies cannot be too large. The smaller the gap, the better it is to establish a comparative advantage industry there. As the example shows, China has accumulated a lot of experience in processing industry, so it is reasonable for Japan to transfer some of its production to China. Japan can raise their requirements for product production at Chinese factories without investing large sums of money to build factories. Through such a transfer, Japan and China can benefit from foreign direct investment. The two countries can gain complementary advantages in terms of raw material supply, production and processing, supply and demand of intermediate products, product marketing, etc., and thus can obtain benefits to a greater extent.

### **3.3 Endogenous Growth Theory**

The growth of a country's economy depends not only on labor factors and capital factors, but also on the level of knowledge accumulation, technological progress, and human capital. The latter is more important than the former in a certain sense. This growth theory holds that technology, knowledge or human capital are internal factors in the process of economic development, rather than external variables in the process of economic growth.

*Increasing Returns and Long-Run Growth*, written by Romer (1986) who introduces the concept of "increasing returns to scale" to explain continued growth. The traditional theory holds that the rate of return on capital and the growth rate of per capita output will decrease as the per capita capital stock increases. The wage and capital labor ratios of countries will gradually converge, so the initial state and current changes, such as fiscal policy changes, have no long-term effects on output and consumption. Contrary to traditional theories of diminishing returns,

Romer's new model argues that private behaviors can amplify knowledge and technological changes, and that economic growth rates can therefore increase over time.

Knowledge is a public good, non-rivalry, and not exclusive—a person's use of knowledge does not prevent others from using knowledge, and it is difficult to exclude others from using the same. When this element is used as input for production, it will lead to an increase in returns to scale. Once there is an increase in the return on scale, there will be continuous growth. Because knowledge will gain additional economic benefits, but because of the spillover effect of knowledge and market power, knowledge will become common. Therefore, it is necessary to constantly update and create different knowledge from the existing knowledge, which will not be withdrawn from the market because there is no knowledge updated. William Easterly (2002) explains the importance of knowledge as a source of wealth in easy-to-understand terms. He believes that it is necessary to continuously update knowledge in order to obtain more benefits.

Overseas companies are the main inventors of the world's advanced technologies and the main source of supply for the world's advanced technologies. Overseas companies will experience technology transfer when investing domestic companies in other countries. This technology transfer has brought huge economics to the country, that is, technology spillovers. For example, as mentioned before, all of Apple's products and handsets are designed in California, but assembled in China. A technical spillover occurs during this process. Apple headquarters will send a team of experts to China to provide local Chinese people with step-by-step training from product design to production line. When they learn this set of training and accumulate certain experience, these people will start their own business with these technologies. Anyone who knows this process can take this technology to other mobile phone companies to



improve the other mobile phone companies. Over time, the mobile phone style in the Chinese market is very similar to that of the Apple mobile phone, but it does generate the revenue for China.

Apple's mobile phone shape design and production line is the knowledge described here, because knowledge is a public good. When someone is familiar with all the design of Apple's mobile phone and giving this knowledge to other companies, all mobile phone industries will learn Apple technology to make their own mobile phone products. Xiaomi is one of the largest mobile phone companies in the world. Its mobile phone is very similar in appearance to Apple, but it cannot be said that Xiaomi's mobile phone is exactly the same as Apple because Xiaomi has its own unique style. It is based on the knowledge learned from Apple to adjust its own products to meet the Chinese people's habits of using mobile phones. Moreover, the price of Xiaomi mobile phone is less than that of Apple, so as a person who cannot afford Apple's mobile phone can use Xiaomi instead. Because Xiaomi mobile phone is designed for Chinese, this makes Xiaomi particularly competitive in China's mobile phone market. When other companies discovered the pioneering work of Xiaomi, more Chinese niche mobile phone companies produced more similar products by learning Xiaomi's technology. This has brought the Chinese mobile phone industry to the next level. But if continuing to repeat such products, consumers will be bored, so the mobile phone industry must have more innovation based on existing technology. This requires investing in human capital to invent ideas that can improve the technology. Xiaomi realizes that mobile phones should be used by people of different ages. Older people usually use mobile phones to make phone calls to communicate with family and friends. Middle-aged people use mobile phones because of work needs. Children should receive more positive information from outside rather than searching for passive information that is

harmful for children's growth. Therefore, Xiaomi decided to produce three different mobile phone types for the public. The update of this technology has made the Chinese public more interested in Xiaomi, which has intensified the position of Xiaomi in the Chinese mobile phone market. Such technical updates will not be withdrawn from the mobile phone market by the public.

Thus, the theory of Endogenous Economic Growth believes that FDI will benefit domestic enterprises and it is to become a carrier for spreading new ideas, new technologies and the latest work experience. In the process of foreign investment entering the country, domestic companies can benefit from many channels. The competitive pressure brought by foreign enterprises can enable domestic companies to improve management and introduce new technologies. The spillover effect of foreign enterprises promotes technological advancement and management improvement of domestic enterprises and enhances the quality of domestic enterprises. International corporations use their international production networks to drive domestic companies to participate in international competition.

### **3.4 Cumulative Causation Model**

The economist Myrdal (1957) proposed the Cumulative Causation Model. He believes that the process of social development is dynamic, and there are cumulative causal relationships among various factors in the social economy (Setterfield, 1997). The main idea is that when a certain factor in the social economy changes, it may lead to another change in several factors. The latter change will have the effect of strengthening or weakening the former factor, so that the social economy will develop along the initial change direction. This process will be continuously circulated, thus forming a cumulative development of changes in social and economic factors.

He believes that the market will strengthen the imbalance between regions. That is to say, if a certain region develops faster than other regions due to its initial advantages in resource endowment, this advantage will develop cyclically and make the region develop faster.

Foreign investment often flows into areas with its own advantages. Foreign investors want to develop and benefit from other countries because they are obsessed with the innate natural conditions of this area, such as having more natural resources and lower labor costs. Therefore, there will be an imbalance in the development of the regional economy. The cumulative causation model holds that in the process of economic development, the widening of the regional economic gap is an inevitable stage of development (Toner, 1999). Developed regions have positive and negative effects on underdeveloped regions in development. The two types of regions have produced an increasing internal and external economy in mutual development, which has led to positive economic development in developed regions (Setterfield, 1997).

The underdeveloped areas have a negative developmental state, and thus regional differences have arisen and widened. The theory suggests that economically developed regions will be prioritized for development, and that certain factors in the underdeveloped regions will be affected by the developed regions, which in turn will have an impact or adverse impact. However, there is a countermeasure against this imbalance in regional economic development. Therefore, Myrdal proposed a solution to this contradiction to narrow the gap in economic development between developed and underdeveloped regions (Setterfield, 1997). For example, giving priority to the developed regions will enable them to take the lead in promoting the role, while taking appropriate measures to influence the development of underdeveloped and backwards regions, so that they will also develop positively.

### **3.5 Core and Periphery Theory**

Friedman (1980) studies regional inequality processes from a broader perspective. He believes that the regional system of any country is composed of two subspace systems, the center and the periphery. Regional distribution differences in resources, markets, technologies, and environments are objective. When the spatial accumulation of certain regions forms a cumulative development trend, it will gain a much stronger economic competitive advantage than its peripheral regions and form a center in the regional economic system (Hryniewicz, 2014). He regards the backwards areas as peripheral areas that maintain colonial relations with the center and rely on them and lack economic autonomy. They think that ideas, technology, capital and attitudes, etc., all of which are conducive to economic development are generated at the center. This leads to the emergence of spatial dual structures, and this dual structure becomes more and more obvious over time (Morton, 2010). He emphasized the impact of imbalances in political and economic power, investment and resource allocation.

### **3.6 Hirschman's Theory of Unbalanced Growth**

Hirschman (1958) believes that the economic development and progress of a country cannot be realized at the same time in the country, but it will first appear in one or several regions, so it may cause an imbalance in the growth of regional economy. When economic progress occurs in a certain area, it will generate momentum in the region, and the economic growth of the region will be further concentrated around this progress (Hirschman, 1971). The main factor of imbalance between regional growth is the sub-aggregate economy. Industries with development potential will gradually form an economic agglomeration in these regions, which

will bring up the economic growth of the industry, and thus there will be economic imbalanced growth phenomenon between regions. The imbalance between these regions is growing as the economy grows.

The theory mainly includes two parts: the theory of chain effect and the principle of maximizing investment. The theory mainly describes the process of economic imbalance growth. Developing countries should have priority to develop certain sectors (Hirschman, 1971). Specifically, they should first develop certain types of sectors with production advantages. With the development of these sectors, the external economy will lead other potential sectors to develop, so that all departments will be developed as well. Moreover, the theory of unbalanced growth puts forward the concept of chain effect. From the leading department to other departments, in order to form a regional industrial agglomeration, this industry should have a connected effect on other industries.

### **3.7 Williamson's Inverted "U" Theory Hypothesis**

Williamson (1985) proposed an inverted "U" theory hypothesis with time variables through empirical analysis. This theory analyzes the economic development gap in the eastern part of England. He collected and compiled economic statistics for a total of 10 years. Through cross-sectional analysis and time series analysis, it was found that there was an inverted "U" relationship between the regional economic development stage and regional economic differences in the early stage of economic development. That is, the spatial agglomeration of economic activities of a country or region is an inevitable stage in the initial economic development of the country or region (Riskin, 1987). However, as the economy continues to

develop, the economic differences in various regions will gradually decrease as the economy develops, and eventually disappear.

The “U” theory holds that a country that wants to develop the economy to achieve the full range of benefits can implement a series of imbalances development model. The core idea of the theory is that in the initial stage of economic development, it is impossible for each region to balance development. Some regions will develop first because of their own environment advantages and other privilege, so that the economy between the regions will have a gap. The gap between the cities will gradually expand. After a period of development, the gap between the regions will no longer continue to expand and will gradually show a stable state. When the national economy enters a mature period, the gap between the regions will begin to shrink gradually, and eventually the economies of each region will be in a state of regional balance. The inverted “U” theory is often the guiding ideology of current regional planning (Moran, 2005). This development mode from imbalance to balance is the development goal of regional development, and the theory pays more attention to the final equilibrium state, that is, the end point of the inverted “U.”

### **3.8 FDI’s Agglomeration Affects Regional Economic Development Imbalance in China**

FDI distribution and agglomeration theory are closely related when it comes to talk about regional economic development imbalance. First, Weber (1909) introduced the agglomeration factor in the least cost location theory. He pointed out that agglomeration is caused by cost savings. The amount of cost savings brought by the agglomeration to the company is generally greater than the labor costs in production operations. Losch (1940) said that the area selected by the production company should be as close as possible to the product market, and these two

conditions have to be considered to maximize company's profits. From the perspective of industrial agglomeration, Porter (2008) emphasizes the impact of agglomeration on the competitive advantage of the industry. Those products with international competitive advantages are often gathered together in certain areas. The concentration makes the enterprises more competitive than those scattered around. Krugman (1985) once again proposed the agglomeration effect of FDI. He conducted an overall study of economics and regional studies, and believed that the key to the agglomeration effect is to generate an external scale economy. Enterprise agglomeration will help to enlarge the economic scale, and at the same time gradually form the large scale of increasing profits.

The distribution of FDI has an agglomeration effect in China, and this effect directly affects which area the investor should invest in. The main factors that foreign investors choose when investing in China are these: urbanization, information technology, labor cost, human capital and agglomeration economies (Walz, 1996). Through the formation and development of its external economy, the effect of FDI agglomeration is further strengthened, and the number of FDI is increased. The more FDI in a certain region, the new foreign investment is even more tend to invest in the region.

Foreign direct investment also has great differences in industrial agglomeration. In general, the agglomeration effect has an important impact on the location choice for multinational corporations. Yang Xiaoming and Tian Wei (2005) used the seven location variables to explain the location choice of FDI in China in the Yangtze River Delta, Pearl River Delta, and Bohai Sea Economic Circles and the central and western regions. The results show that the main factors affecting FDI location selection are GDP, traffic conditions, education levels, land costs and industrial agglomeration effects. There are certain differences in location

decisions between regions. The cost of wages is one of the main considerations for FDI location selection in the Yangtze River Delta region. The industrial agglomeration effect has a greater impact on the Bohai Rim region, but the impact on other regions is relatively small. Yangtze River Delta and Bohai Rim regions pay attention to the educational level, so it attracts to FDI. FDI also consider traffic conditions as part of the location decision because most of the production works done on the central and western regions.

Li Guoping and Chen Xiaoling (2007) constructed a spatial panel data model. Studies have shown that the agglomeration effect is very important for the location decision of FDI in the following year. In the early stage, the developed areas with potential and high level of policies can attract more FDI in the next period. Market size and human capital, and both the infrastructure and the FDI are positively correlated, and labor costs are negatively correlated with FDI. That is to say, in the later time of economics development, the areas with high labor costs absorb more FDI, while the two factors of market potential and policies have no significant impact on FDI's location selection. Therefore, Industrial agglomeration effects, regional ownership structures and traditional location factors are the main reasons for the location choice of FDI in China. The industrial agglomeration effect is one of the most important factors for multinational enterprises to choose location in China. If a regional industry has an agglomeration effect, then the region can absorb more FDI in the future. Therefore, areas with resource endowments or preferential policies are more likely to introduce FDI, and increase in FDI in the certain areas.

This shows that the FDI agglomeration effect will also increase the size of regional economic development. The distribution of China's FDI is highly concentrated, mainly in Guangdong, Fujian, Shanghai, Jiangsu, Beijing, Shandong, Liaoning and other regions. The



eastern coastal region is the earliest region for China to open to the outside world. Location advantages and internal advantages of the coastal areas are inseparable reasons for FDI. Furthermore, the eastern region is close to Hong Kong, Macao and Taiwan, with convenient transportation by sea and land, and the construction of urban infrastructure is relatively complete, which is easy to form an industrial cluster, thus attracting numerous overseas investors (Ying, 2008). Li Shenghui (2008) selected the FDI data of the eastern and central regions from 1995 to 2005, and found that FDI is an upward trend. The amount of FDI in the east has increased rapidly, but the proportion in the country has been stable, while the amount of FDI in the central region has increased rapidly but not as fast as in the east, but at the same time, the proportion of FDI in the country is increasing. Each company has its own preference to select areas to develop production, so it has great differences in geographical distribution. When the amount of foreign capital in a certain country or region is larger, new foreign investors are more inclined to choose the regions.

In terms of the correlation between FDI agglomeration and regional economic development, foreign capital is one of the important factors that cause the economic disparity in China's eastern, central and western regions to expand (Ying, 2008). Foreign capital as a combination of capital and technology level has many effects on the economy. The trade effect brought by foreign capital makes FDI beneficial to China's increased exports and contributes to the upgrading of China's industrial structure. FDI technology spillovers can drive China's technological progress. The role of foreign capital in the growth of China's eastern, central and western GDP will increase China's economic growth, but it will also cause imbalances in regional economic development. Therefore, in the next chapter, It will describe how FDI increases the imbalance of regional economic development in China.

## Chapter 4: Unbalanced Regional Development of FDI

### 4.1 Development of FDI in China

With the signing of the 1987 “Law of the People’s Republic of China on Chinese-Foreign Equity Joint Ventures”, China’s foreign investment has developed rapidly. From the breakthrough of zero reform and opening up, to the early 1990s, multinational corporations began to make large-scale investments in China. In 1992, China became the developing country that absorbed the most FDI. Since China’s accession to the WTO, the scale of investment has continued to expand. In 2003, China overtook the United States to become the world’s largest foreign direct investment country, and has remained in the top positions of the world since then. By the end of 2016, China had approved a total of 836,404 foreign direct investment projects, with actual use of foreign investment of US \$126.42 billion.

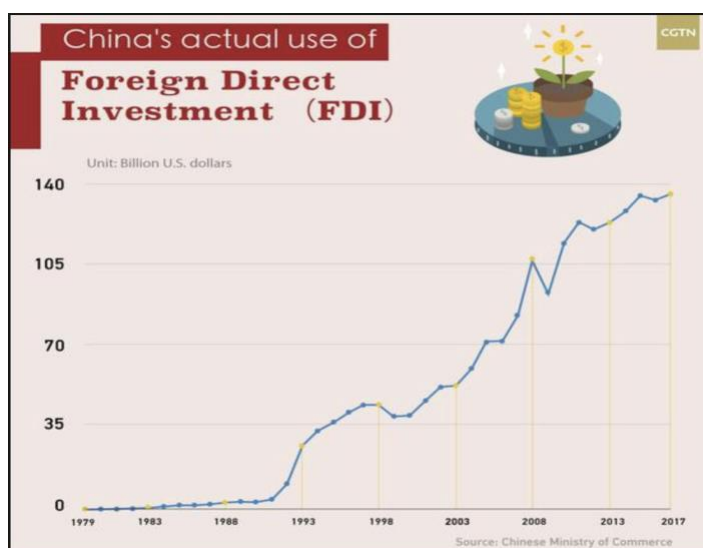


Figure 4.0  
Unit: U.S. billion  
Source: Ecns.cn

As the main factor of China's use of foreign capital, FDI plays an important role in promoting China's economic development. Foreign capital can be divided into three stages in China.

The initial stage (1979-1992). After the Third Plenary Session of the Eleventh Central Committee of the Party in 1978, China officially proposed a policy of opening to the outside world. In July 1979, the Congress passed and promulgated the Law of the People's Republic of China on Chinese-Foreign Equity Joint Ventures. This is the first official legal document encouraging the introduction of foreign direct investment, marking the starting stage of FDI in China. In order to improve the development environment of foreign direct investment enterprises, the state established the Ministry of Foreign Trade and Economic Cooperation to manage foreign direct investment, and successively opened five special economic zones, 14 coastal cities, three coastal economic development zones and one Taiwanese investment zone.

The first stage of FDI inflows has large regional differences, mainly because China has not yet fully opened up to the outside world, and many industries still restrict the entry of multinational enterprises. At the same time, the prospects for Chinese economic reforms are unclear, and multinational companies are faltering. In 1991, FDI flows into the eastern, central, and western regions were only \$4.052 billion, \$693 million, and \$172 million, respectively.

In the initial stage of China's foreign business opening, due to the lack of relevant investment experience and hardware and software facilities, the amounts of foreign direct investment are extremely limited. Although Hong Kong and Macao capital and US capital will have some investment in China, it has little impact on China's overall economy. At this stage, the development of foreign direct investment in China is characterized by exploratory development (Chen et al., 2005), meaning that most of the foreign direct investment is a

cooperative enterprise, and a small part of the production is completed in China. Although the number and benefits of foreign direct investment enterprises have gradually increased overall, the total foreign investment still in a small scale, and China's low technology has made it difficult for most foreign investors to enter the Chinese market.

The second stage of rapid development (1992-2001). In 1992, when Deng Xiaoping's southern speech and the party's 14th National Congress were held, reform and opening up entered a new stage. The state adopts a series of preferential policies to encourage foreign direct investment, further expand the scope of opening up to the outside world, expand from the coastal areas to inland provinces, and form a number of initiatives such as opening up along the Yangtze River, opening along the border, and opening the provincial capital (Chen & Xu, 2004).

At the same time, the government requires the provinces to introduce more investment strategies according to their own circumstances. Under the combined effect of various policies, FDI has grown rapidly and mainly flows into the eastern region with policy advantages. After 1997, with the decline in the regulation of foreign business supervision, coupled with the negative effect of the Asian financial crisis, the momentum of continuous increase in FDI inflows has been suppressed to some extent. After 1998, according to National Bureau of Statistics, the size of foreign capital inflows in the east was stable at more than 40 billion U.S. dollars. The central region fell from nearly 7 billion U.S. dollars to 5 billion U.S. dollars in 1997, and slightly exceeded 2 billion U.S. dollars in the west. In 2000, FDI flows into the east were \$39.234 billion, with \$4,872 million in the middle and \$2.113 billion in the west.

At this stage, the development of foreign direct investment enterprises in China is characterized by accelerated development (Chen & Xu, 2004). The number, scale, operation period and technology of foreign direct investment enterprises have been greatly improved; the

industry distribution of foreign direct investment enterprises has been greatly expanded; some well-known multinational companies have begun to invest heavily in China.

The third stage of innovation development(2002-present). With China's accession to the World Trade Organization, China has also entered a new era of investment and development. In 2002, the 16th National Congress of the Communist Party of China proposed to improve the quality and level of China's use of foreign capital, marking the stage of China's foreign direct investment enterprises entering the stage of innovation and development. At this stage, the development of foreign direct investment enterprises in foreign countries is characterized by innovative development (Chen & Xu, 2004). The capital and technology intensity of foreign direct investment enterprises in manufacturing industries has increased; foreign direct investment enterprises in individual service industries such as finance have developed rapidly; cross-border mergers and acquisitions have become a new form of development of foreign direct investment enterprises.

#### **4.2 Distribution of FDI in the eastern, central and western regions of China**

Since the reform and opening up, China has promoted various preferential policies, and by virtue of its cost advantage, it has attracted foreign investment to invest in areas where labor and land are richer and cheaper. Today, China has become one of the major FDI countries, and the amount of FDI inflows has been increasing year by year. However, due to the differences in FDI policies, resource endowments, economic conditions, and openness in various regions of China, the number of in-flowing FDIs shows a significant imbalance in regional distribution (Deng, 2003).

China's regional distribution of foreign direct investment has shown obvious non-equilibrium situation. The eastern region has always dominated, while the central and western regions have seen a small increase in the scale of foreign capital utilization, but their numbers are much lower than those in the eastern region. The eastern region has relatively complete infrastructure conditions, policy environment and high market efficiency. It has great attraction to foreign capital. By cooperating and competing with foreign companies, it can increase the high-quality human capital in the east and gain its own efficiency improvement.

Due to the geographical advantages and good economic infrastructure, the eastern region has quickly absorbed FDI under the encouragement of the national development strategy, and FDI has an agglomeration effect, which makes the eastern economy develop more rapidly, far ahead of the middle and west. Figure 4.1 shows the total inflow of FDI in the eastern, central and western regions from 1993 to 2016. It can be clearly seen from the figure that the amount of FDI in the eastern region is much larger than that in the central and western regions, and the central region is slightly larger than the western region. And it can be seen that the FDI inflows in the eastern, central and western regions all show a trend of increasing year by year. However, FDI in the western region is very rare. After 2012, there is a certain amount of FDI, but compared with the central and eastern regions, the overall FDI in the west is very small.

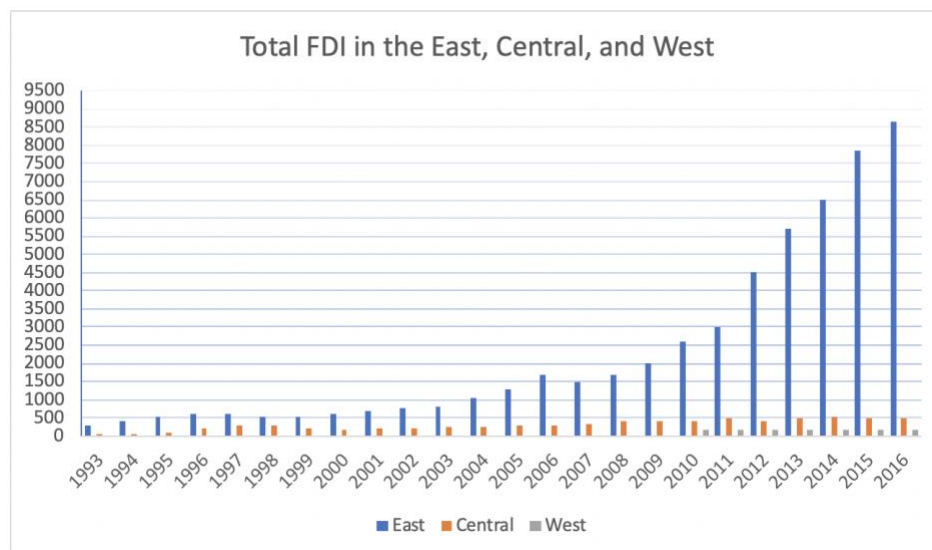


Figure 4.1

Source: National Statistical Bureau of China

Unit: Million of Dollars

From 2010, as shown in Figure 4.2, in 2016, the number of new projects in China was 27,406, and the actual use of foreign investment was US\$105.74 billion, a year-to-year increase of 16.9% and 17.4%. Among them, the number of new projects in the eastern region was 22,992, accounting for 83.9% of the national total. The actual use of foreign investment was US\$89.85 billion, accounting for 85% of the national total. The absorption of FDI in the central and western regions lags far behind the eastern region. Also, the number of new projects in the central region is 3,056, and the actual use of foreign capital is US\$6.86 billion, accounting for the national proportion. For the 11.1% and 6.5%, the number of projects in the western region was 1,358, while the actual use of foreign investment was 2 percentage points higher than that in the central region.

Region	Number of project	Proportion (%)	YoY (%)	Actual use of foreign investment (US Billion)	Proportion(%)	YoY(%)
Eastern	22992	83.9	16.7	89.85	85	15.8
Central	3056	11.1	16.4	6.86	6.5	28.6
West	1358	5.0	22.3	9.02	8.5	26.9
Whole nation	27406	100	16.9	105.74	100	17.4

Figure 4.2

Source: National Statistical Bureau of China

As can be seen from Figure 4.3, the actual use of foreign capital in the eastern, central and western regions is increasing year by year, and the distribution pattern of actual use of FDI in the three regions is not much changed. The actual use of FDI in the eastern region is much higher than that in the central and western regions. The actual use of FDI in the western region is less than the central region. Among them, due to the impact of the economic crisis in 1998 and 2008, the actual use of foreign capital in the eastern, central and western regions in 1999 and 2009 all declined, and continued to show a growth trend in 2016. Since 2007, the actual use of foreign investment in the western region has grown rapidly. In 2010, the actual use of foreign investment in the western region exceeded that of the central region.

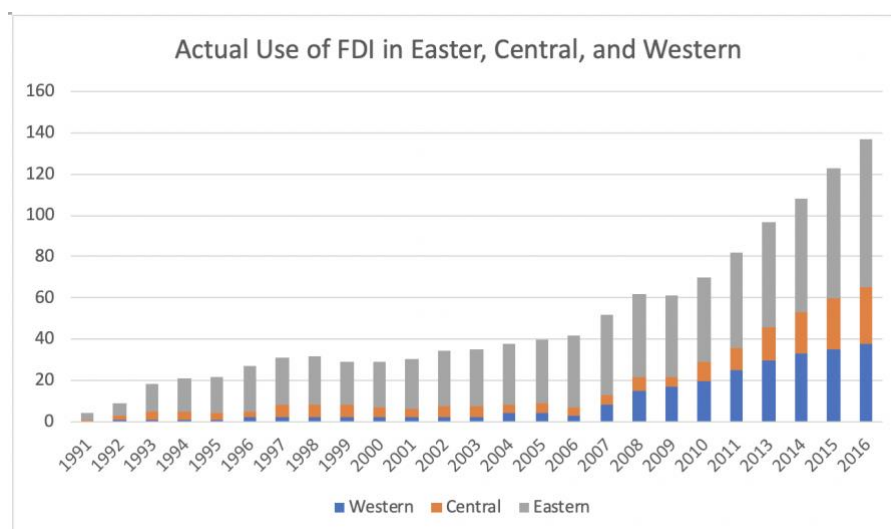


Figure 4.3



Source: National Statistical Bureau of China  
Unit: Billion of Dollars

The above explains the overall distribution of FDI inflows in the eastern, central and western regions. The following analysis shows the distribution of FDI in various provinces and cities. Figure 4.2 shows the absorption of FDI in the eastern, central and western provinces by 2015. It can be seen from the table that there were 22,992 new foreign investment projects in the eastern region, and the actual foreign investment was US \$89.85 billion. The largest number of projects in the eastern region is Guangdong Province, with a total of 5641 projects, accounting for 24.5% of the number of approved projects in the east, and the second is Jiangsu Province, with 4664 projects, accounting for 20.3%. The actual use of foreign investment is the largest in Jiangsu Province. The actual use of foreign capital is 25.19 billion US dollars, accounting for 28% of the total foreign investment in the eastern region, while the second largest is Guangdong Province. Meanwhile, the actual use of foreign investment is 16.75 billion US dollars, accounting for 18.6%, Shanghai (17%), Zhejiang Province (8.5%), Shandong (7.1%). These are provinces that actually use more FDI, while the number of approved projects and the actual amount of foreign investment in the eastern region is the lowest in Hainan Province, accounting for the proportion of the eastern region 0.3% and 0.5%.

In 2016, there were 3,056 new foreign investment projects in the central region, and the actual use of foreign investment was 6.858 billion US dollars. The number of projects in the central region and the actual amount of foreign investment actually used were all in Jiangxi Province, with a total of 1092 projects, accounting for 35.7% of the number of projects approved in the central region. The actual use of foreign capital was 1.634 billion US dollars, accounting

for 23.8% of the total foreign investment in the central region. The second place is Hunan Province, with 620 projects, accounting for 20.3% of the total, and the actual use of foreign funds is 1.531 billion US dollars, accounting for 22.3%. Hubei Province (13.9%) and Anhui Province (12.6%) are the provinces with more FDI use. The lowest number of approved and actually used foreign capital in the central region is in Shanxi Province, accounting for 1.7% and 5.1% respectively.

Province	Number of projects	Proportion (%)	Actual use of FDI (US billion)	Proportion (%)
Beijing	1629	7.1	5.34	5.9
Tianjin	638	2.8	3.21	3.6
Hebei	243	1.1	1.45	1.6
Liaoning	1478	6.4	8.88	9.9
Shanghai	3906	17.0	10.12	11.3
Jiangsu	4664	20.3	25.19	28
Zhejiang	1943	8.5	8.6	9.6
Fujian	1139	5.0	4.09	4.6
Shandong	1634	7.1	5.77	6.4
Guangdong	5641	24.5	16.75	18.6
Hainan	77	0.3	0.45	0.5
<b>Eastern Total</b>	<b>2292</b>	<b>100</b>	<b>89.85</b>	<b>100</b>
Shanxi	53	1.7	34.99	5.1
Jilin	200	6.5	34.54	5.0
Heilongjiang	148	4.8	50.59	7.4
Anhui	281	9.2	0.86	12.6
Jiangxi	1092	35.7	1.63	23.8
Henan	356	11.7	0.67	9.8
Hubei	306	10.0	0.95	13.9
Hunan	620	20.3	1.53	22.3
<b>Central Total</b>	<b>3056</b>	<b>100</b>	<b>6.86</b>	<b>100</b>
Inner Mongolia	82	6.0	0.337	3.7
Guangxi	190	14.0	0.76	8.4
Chongqing	226	16.6	2.63	29.1
Sichuan	379	27.9	3.37	37.4
Guizhou	38	2.8	0.22	2.4
Yunnan	166	12.2	0.6	6.7
Tibet	/	/	/	/
Shaanxi	142	10.5	0.91	10.1
Gansu	28	2.1	0.13	1.4
Qinghai	/	/	/	/
Ningxia	25	1.8	0.04	0.5
Xinjiang	62	4.6	0.03	0.4
<b>Western Total</b>	<b>1358</b>	<b>100</b>	<b>9.2</b>	<b>100</b>

Figure 4.4a

Source: National Statistical Bureau of China and Chinese Ministry of Commerce

In 2016, there were 1,358 new foreign investment projects in the western region, and foreign investment was US\$9.02 billion, an increase of 22.3% and 26.9% over the same period in 2015. Among them, Sichuan Province ranked first in the amount of foreign investment in the western region, accounting for 379 and 3.373 billion US dollars respectively, accounting for 27.9% and 37.4% of the total amount of FDI in the western region. The number of foreign investment projects and the actual use of foreign investment in Chongqing are ranked second. The number of foreign-invested projects was 226, accounting for 16.6% of the central region, and the actual use of foreign investment was 2.727 billion US dollars. In the central region, the actual use of foreign investment was 29.1%. Shaanxi Province (10.1%) and Guangxi Province (8.4%) are actually using more FDI provinces in the western region.

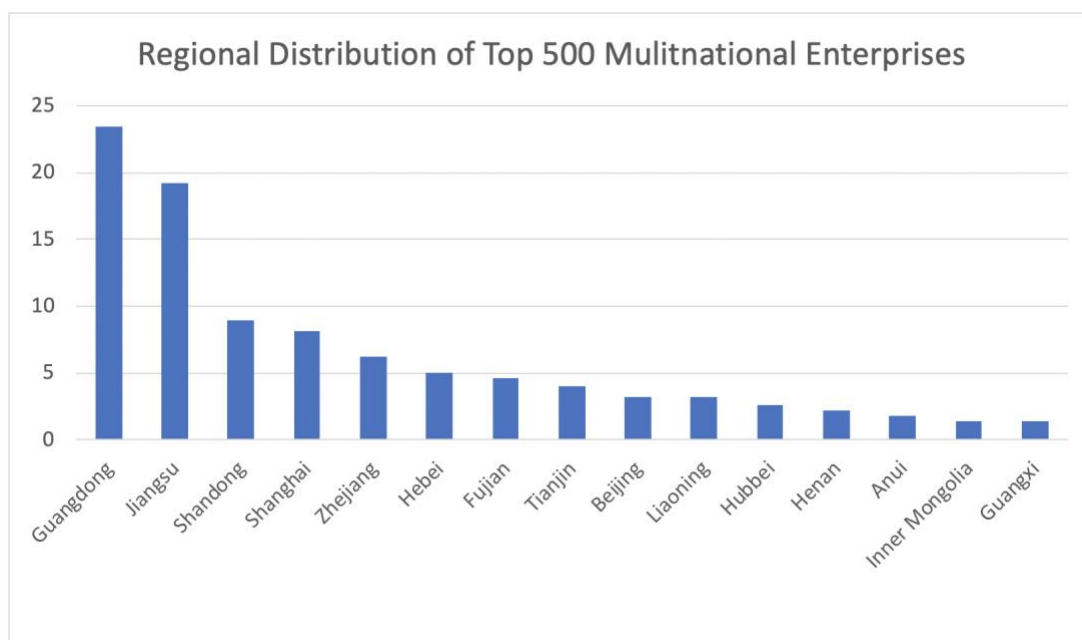


Figure 4.4b

Source: National Statistical Bureau of China and Chinese Ministry of Commerce  
Unit: Number of Multinational Enterprises

The distribution of foreign-invested enterprises in various provinces and cities can also explain the uneven distribution of FDI inflows in various provinces and cities. The statistics here

show the distribution of investment of the top 500 multinational enterprises in different regions. As shown in Figure 4.4b, the largest 500 multinational enterprises in 2009 were mainly distributed in the eastern region, such as Guangdong, Jiangsu, Shanghai, and Shandong. There are 117 provinces in Guangdong, accounting for 23.4% of the total, and it is the province with the largest distribution of 500 foreign-invested enterprises. The second place is Jiangsu Province, with 96 companies. Multinational enterprises are distributed in Hubei, Hunan and Anhui provinces in the central region, accounting for about 2%. The western region is the least relative to the eastern and central regions, including Inner Mongolia and Guangxi provinces.

The above analysis shows that the distribution gap in China's FDI region is obvious, showing the distribution pattern of "East high and low west." Figure 4.5 shows the evolution of the distribution gap of FDI regions in the country and provinces from 1993 to 2010. It will be divided into six time periods from 1993 to 2010. No matter which time period, the number of FDI in the east, middle and west is increased as the year increases. However, it can be seen that the increase in the number of FDI shows a trend of widening regional disparities. From 1993 to 1995, the amount of FDI inflows in the eastern region was higher than that in the central and western regions, and with the development of time, the number of FDI inflows in the east increased rapidly. Its growth rate is much higher than that of the central and western regions. It can be seen from the figure that the gap in FDI between provinces and cities has been widening in six time periods. From 1993 to 1995, the largest number of FDI inflows was in Guangdong Province, followed by Jiangsu Province and Shanghai Municipality. The number of FDI in the western region is relatively small, and after 2002, the number of FDI inflows in Shanghai and Jiangsu has increased significantly. From 2008 to 2010, Jiangsu Province has become the

province with the largest FDI inflows, and the FDI in the eastern region. The gap between the central and western regions is much larger than it was 20 years ago.

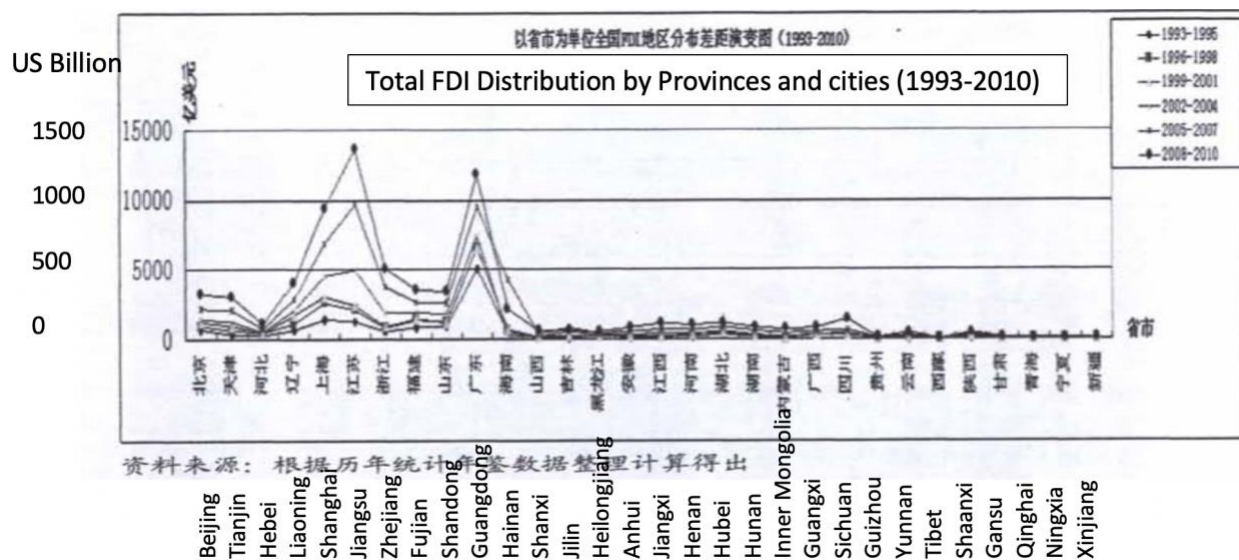


Figure 4.5

Source: From "The Effect of FDI Spillover on Technological Difference Between the East and Mid-west China"

From this, it can be concluded that the eastern region has absorbed most of the FDI flowing into China, and the central and western regions have absorbed less. The distribution of foreign direct investment in the eastern region is uneven. The total of Guangdong, Jiangsu, Shanghai, Shandong and Fujian provinces accounts for 69.28% of the total in the eastern region, accounting for 56.19% of the national total. Therefore, this proves that foreign direct investment is mainly distributed in the southeast coastal areas. Such unevenness has led to an imbalance in regional development.

## **Chapter 5: How FDI Causes Regional Economic Imbalance**

The imbalance of regional distribution of FDI has aggravated the imbalance of regional economic growth in China. The huge differences in the geographical distribution of foreign direct investment have led to regional economic imbalances, which have had a major impact on the growth of the national economy. To this end, this chapter analyzes the reasons for the imbalance of FDI.

### **5.1 Market and Human Capital**

In general, if the level of economic development of a region is low, the savings rate of the region will be low and so does the purchasing power. Although there may be potential opportunities for the development of emerging industries in the region, due to the small actual demand and the concentration of such demand in low-level, it does not attract FDI from relatively developed regions (Li, 2002). In areas with high levels of economic development factors such as high per capita GNP, purchasing power, and high demand for products, it will form a development stage gap between regions with low development. FDI is more interested in looking for two conditions: regions with small development gaps and with better location. Conversely, the greater the difference in the development stage, the more barriers that prevent FDI from entering. In coastal areas, especially in several provinces and cities where foreign capital accounts for more than the national average, the foreign investment is positively correlated with regional economic growth (Li, 2004). Foreign capital in Guangdong, Fujian, Shanghai and Jiangsu has a high coefficient for economic growth. Good investment location in coastal areas is an important aspect of foreign direct investment considerations. Foreign capital can obtain a relatively good technical base condition by using the resources of these regions, and

can quickly occupy a larger regional market. Therefore, the impact of foreign direct investment in China on the regional economy is clearly manifested as more extensive and obvious in economically developed regions than in other regions.

According to the endogenous growth theory, changes in the stock of capital and labor will affect economic growth in the short term and will stabilize in the long run. The difference in human capital stocks may directly affect total factor productivity. That is to say, when other conditions are the same, the spillover effect of human capital is the source of technological progress and innovation. Countries or regions with large human capital stocks may maintain relatively high economic growth rates for a long period (Chen, 2018). According to this, the difference in human capital is an important reason that affects the long-term divergence between regions. The gap in economic development between the east and the west is caused by the gap in high educated people, education gap and technology gap (Li, 2004). The difference in human capital has brought more serious negative impacts on the less developed western region, which is the key reason for the lag in economic development in underdeveloped regions.

At present, the supply of labor resources in the eastern region is abundant. As the central and western labor population continues to flow to the east, the eastern region is now the region with the most labor supply. Many of these migrants are highly educated and trained scientists, experts, scholars and senior management (Geng, 2004). At the same time, due to the abundant labor supply, the wage payment of the labor force can be maintained at a stable high level, maintaining the sustainable competitive advantage of the eastern economic growth. The skilled workers in the eastern region is relatively high. According to the results of the sixth census, the average length of education in the east is 7.9 years, 7.7 years in the central, and 7.0 years in the west. The proportion of illiterate and semi-literate people in the eastern part is lower than the



national average of 9.16%. The overall situation of China's literacy and education level are higher in the eastern region, followed by the central region and the western region.

The eastern coastal areas have attracted a large inflow of educated people because they can provide better environment and higher wages, which has attracted a large amount of human capital to the east, thus forming a large-scale spontaneous labor transferring flow phenomenon (Hu, 1999). A large number of human capital in the western region, including most people with higher education degree and skilled workers, continue to flow into the eastern region. A large inflow of human capital has made a major contribution to the development of the eastern region's economy and is a factor that cannot be ignored in promoting its economic growth and social progress. For the western region, the outflow of a numerous high quality labor is undoubtedly slowing the pace of economic development.

## **5.2 Agglomeration Effect**

Foreign invested manufacturing investment tends to choose areas with relatively strong economic base, relatively complete infrastructure and nice industrial support, in order to obtain agglomeration economic benefits. On the one hand, the agglomeration effect is reflected in the economies of scale of the city, and on the other hand, it is reflected in the economies of scale of the industry. A large number of related companies are geographically concentrated together, which can save production costs, expand production and consumption demand, and facilitate mutual competition and collaboration to improve management and efficiency (Jiang, 2001). Therefore, the economic base, infrastructure status, and industrial supporting capacity of a region play an important role in the location selection of foreign direct investment.

Now, the concentration of the central and western regions is far behind that of the eastern region. This is because the central and western regions have not yet formed a large-scale, low population density, well-structured and competitive urban agglomeration. Also, West has very low population densities. This makes it difficult to benefit from agglomeration. Most of the industries are state-owned enterprises and military industrial enterprises to support the country's political need, so it is disconnected with the outside world. Moreover, the overall industrial structure level in the central and western regions is relatively low, which leads to the slow growth of high-tech industries and the difficulty of supporting the industry (Jin, 2006). Therefore, the ability to provide multinational companies with a wide range of resources or specialized skill is weak.

European, American and Japanese investment is concentrated in Shanghai, Guangzhou, Pearl River Delta, and the Yangtze River Delta, mainly because of the well-established infrastructure and agglomeration economy in these areas. The agglomeration effect of the Yangtze River Delta centered around Shanghai is reflected in the strong industrial base. After 40 years of construction, Shanghai has developed into the largest industrial base in China in the early 1990s and has formed a complete industrial system (Tian, 2004). Since the reform and opening up, Shanghai has increased its investment in urban infrastructure and created a good hardware environment for foreign investment. Foreign investment in the financial and insurance industry is one of the fastest growing industries in Shanghai. Since the entry of foreign financial and insurance institutions at the end of 1993, Shanghai is accelerating its growth into an international financial and trade center.

The gradual formation of Shanghai's international financial center is particularly conducive to the development of capital-intensive industries such as automobiles,

telecommunications, electronics, fine chemicals and other high value-added industries (Tian, 2004). There are many research institutions in Shanghai, with a large pool of human capital, a high level of research and development capabilities to become an information gathering center. This is especially beneficial for multinational companies to set up R&D institutions in Shanghai. In short, the role of the agglomeration effect is obvious in Shanghai, which has an important impact on the entry of FDI. Moreover, after some large multinational companies take the lead, they will drive other related enterprises to follow up accordingly, and the agglomeration effect will be further amplified.

### **5.3 Natural Environment**

As the basis of human survival and economic development, the natural environment has a great impact on human activities, which has also affected the development of regional economy. China has a vast territory and a wide geographical area. The climate, water patterns, traffic, topography and land forms of various regions are complex and varied, and the regions vary widely.

The eastern region has good climatic conditions, sufficient water and heat, low terrain, and smooth internal traffic. It has the advantage of coastal location and has fewer poor people than central and western regions, and is mainly distributed in low hilly areas with less cultivated land (Liu, 1998). The central part is the transition zone from the plateau to the plain, the terrain is undulating, the terrain is complex, and the natural conditions are sensitive and fragile. The Qinba Mountain area is a concentrated area of poverty-stricken people (Song, 2001). It is located at the junction of Shaanxi, Henan, Hubei and Sichuan provinces, with more than 40 poverty-stricken counties. The western region is a desert and alpine environment (Song, 2001). Xinjiang and the

western sand area of Inner Mongolia are important poverty-stricken areas, especially the poverty-stricken counties in the Taklimakan Desert. Some poverty-stricken counties are located in the northern and eastern parts of Xinjiang, the southern part of Qinghai and the western part of Tibet.

In natural geographical conditions, traffic conditions are the most basic link to economic development. For a newly opened China, shipping is the lowest cost transportation method connecting domestic and foreign markets. Yet, the eastern part has a strong advantage. The eastern part of the country has moderate temperatures throughout the year and is ideal for growing crops, according to Song (2001). The eastern coastal areas are located in the lower reaches of the rivers and the delta plains. Good climatic conditions, abundant water resources and fertile soil provide a guarantee for agricultural development. These natural conditions have strong support for the development of other industries and form a virtuous circle of economic development (Song, 2005; Chen, 2013). Most of the western regions are located in plateau mountains and deserts, and the natural environment is harsh, which is not conducive to people's production activities, which seriously affects the improvement of residents' living standards. At the same time, the traffic in the western region is inconvenient and the information is blocked, which greatly increases transaction costs, reduces production efficiency, and seriously hinders regional economic and cultural development. In this way, the poverty of the residents further degrades the otherwise fragile environment and falls into a vicious cycle.

Historically, the economic prosperity of ancient China evolved from west to east and from north to south, from the Guanzhong and Zhongyuan areas of the Yellow River Basin to the Huaihe River and the Yangtze River, and finally to the coastal areas. However, since the Opium War, the eastern region first accepted Western civilization and took the lead in modern industry

(Song, 2001). Before the founding of the new country, Guangdong, Zhejiang, Jiangsu, and Shanghai in the east were already provinces with relatively developed industrial bases. When New China was founded in 1949, the 12 coastal provinces and regions concentrated more than 70% of the industrial output value of the country. It can be seen that historically, the development differences between the eastern and the central and western regions have also been affected to some extent by historical factors.

#### **5.4 Location Selection**

In Guangdong and Fujian provinces on the southeast coast of China, the large concentration of foreign direct investment is closely related to the favorable geographical locations such as Hong Kong, Macao and Taiwan. It is the role of location factors that makes foreign direct investment show its own agglomeration and spreading effect, and thus leads to the unique attributes of foreign direct investment in China (Brown, 2002). Guangdong, Fujian and other provinces have the same cultural backgrounds as Hong Kong, Macao and Taiwan, which provide convenient conditions for attracting FDI. All of this is in a disadvantageous position for the central and western regions. As a result, foreign direct investment is concentrated on the eastern coastal areas, while foreign investment in the central and western regions is relatively scarce.

The eastern part has a long coastline and numerous ports, which brings convenience to transportation conditions. The location advantage determined by geographical location and maritime transportation conditions is an important factor to promote the rapid development of the southeast coastal areas, and thus widens the regional differences in China (Chen, 2013). The

export-oriented development strategy of the Chinese economy is based on the manufacturing industry to develop export products, while the eastern region is close to Hong Kong, Macao and Taiwan and the Asia-Pacific region, forming a unique geographical advantage. Due to the proximity of Guangdong Province and Hong Kong and Macao, the central government first set up a special economic zone in the coastal city of Shenzhen, which in turn led to the development of processing trade in the Pearl River Delta. With the further acceleration of reform and opening up, the convenient marine transportation in the southeast coastal areas connects it with Japan, South Korea, Europe, America and Australia, which greatly reduces transportation costs, and makes these areas have obvious location advantages in trading to outside world and in-flowing of external resources (Song, 1998; He 2004). With continuous inflows, domestic capital has also been attracted to a large number. Capital first gathers in ports and central cities close to the port, and then gradually spreads out and shifts. At the same time, these coastal areas are the channels and windows for foreign exchanges between the two countries. The concentration of internal and external resources to the coastal areas has accelerated the development of these areas, and thus formed a positive interaction between economic development and the investment environment, making the location of the coastal areas more advantages (Lu, 1994; Song, 2005).

FDI's choice of development location is characterized by convenient and economical transportation conditions (Song, 2005; Peng 2005), especially close to major international trade routes. Close to the international transportation line can reduce the transportation cost of raw materials import and product export. If the transportation conditions are inconvenient, it will not only increase the cost of transportation, but also may affect the production enterprises because raw materials cannot be transported in time. Therefore, multinational corporations attach great importance to the transportation conditions of investment location when making FDI regional

selection decisions. Since China is using export-oriented development model, and the eastern part of China is close to the convenient transportation conditions in ports and foreign economic relations, under the guidance of this policy, the rational choice of investors is to invest in areas that are conducive to foreign economic relations and trade (Peng, 2005). Foreign direct investment enterprises are mostly export processing enterprises. In order to minimize production and transportation costs and shorten delivery time, relatively favorable transportation conditions and smooth logistics circulation are needed. Therefore, the regional choice of FDI is mostly in the eastern coastal areas.

The distance from the market will affect the transportation cost of the company's products from the production site to the market (Ma, 1996). In addition, the information of the market can be obtained in time when it is close to the market. Some products are highly competitive in the market, and demand changes rapidly. There are many changes in the quality, style, specifications and packaging requirements of the products. The feedback of the market is very important for enterprises. Such FDI companies tend to choose areas close to the market. Another type of FDI companies also tend to invest directly in areas close to the market because of the large amount of raw materials put into production, the weight of the products, or the difficulty of transportation due to damage and perishable products (Li, 2004). In a general sense, the reasons that affect the distribution of foreign direct investment regions in China can be attributed to the difference in location.

## **5.5 Preferential Policy and System Reform**

Government policy factors such as development planning in a region also have a greater impact on foreign direct investment. The government's preferential policy for foreign investment

is conducive to eliminating foreign investors' concerns about the uncertainty of the country's market and promoting the attraction of foreign investment (Li, 2004).

Foreign direct investment enterprises are more adaptable to the market economy system, so the degree of regional development is also an important factor in the choice of foreign direct investment. Foreign direct investment usually faces higher costs, so it is necessary to have a comprehensive understanding of the regional market, regulations, economic, cultural and other factors, while foreign investors will also face higher transaction costs in the process of actual investment, but developed areas will reduce this cost (Liu, 1998; Hu, 1999; Wang, 2004). Local finance is an important factor in the choice of foreign direct investment (Wang, 2005). In the initial stage of investment, the main source of funds for foreign direct investment is its own company. However, after entering the later investment period, multinational enterprises will also face the problem of funding sources when expanding their business scale. If local finance can meet its funding needs, it will become an important factor in attracting foreign direct investment. All of these aspects require the local government to give effective support to foreign investment in policy to facilitate the entry of foreign capital. At the beginning of China's reform and opening up, special economic zones were established in Guangdong Province and Fujian Province to implement various preferential policies, attracting a large amount of foreign investment development as well as manufacturing and export trade.

When China introduced various policies, most of them adopted a model of promotion from the coastal areas to the mainland. This kind of strategy is what Chinese saying "make the east rich first and then west", so that the coastal areas and other areas with good basic conditions enjoy various preferential policies and rapidly develop the regional economy, so that "some people get rich first", so the eastern region attracts most foreign investment. The government



hopes that after the development of the eastern region, there will be spillover effects to the west, which will eventually promote the balanced development of the national economy (Jiang, 2001). However, this kind of promotion will be beneficial to those areas that are reforming and opening up first, and not to the areas of post-reform and opening up, which will exacerbate the imbalance between regions. At the same time, because the regional differences have not been considered, the macro-policy implemented by the central government has adopted a one size fits all approach, which has also affected the development of economically backwards regions with weaker development capabilities (Wang, 2004).

The commodity economy in the eastern region is active because it is affected by foreign capital (Wang, 2004). State-owned enterprises play significant role in Chinese society. The establishment of state-owned enterprises in the early days of New China means that all enterprises are owned by the state and are directly managed by government departments. State-owned enterprises follow the government's policies, complete the production tasks of the state plan, and sell products at predetermined prices (Sheng, 2013; Zhao, 2013). At that time, because of the long-term war and backwardness, all the hopes of the people were placed in the state and state-owned enterprises. Therefore, state-owned enterprises are the main form of economic organization for building the Chinese economy.

However, as the Chinese economy becomes a competitive mechanism, prices are increasingly determined by the market, and the profits of many state-owned enterprises are eroded, especially in the central and western regions. By the mid-1990s, Chinese state-owned industrial enterprises in the central and west cannot generally pay their net profits to the government, but instead consumed financial resources from government estimated to be as high as 5% of GDP (Chen, 2011). Under such circumstances, there are still new companies joining,

which will make the government unable to handle. Therefore, many state-owned enterprises are inefficient. Chinese state-owned enterprises need reforms to change the outdated enterprise system. However, there are more state-owned enterprises in the west and central, but the pace of reform of state-owned enterprises is very slow. As a result, foreign capital in the western region will be blocked by the state-owned enterprise system, which is also the reason for the imbalance of regional economic development.

Since there are relatively few state-owned enterprises in the eastern region, the resistance to reform is also small, so the eastern region took the lead in institutional reform (Wang, 2006). The system of reform of the state-owned enterprise property rights is first piloted in the eastern region, and then gradually promoted to the central and western regions. The reform of the eastern marketization has been carried out smoothly is largely due to the flexible institutional environment (Wei, 2004). Market owned economy supports the high growth rate of the economy in the southeastern coastal areas. Surprisingly, the development of the private owned economy has created conditions for the reform of state-owned enterprises. After 2003, in the leaping development of the western region, a large amount of capital investment is an indispensable driving force for the western region (Zhang, 2005). However, the government's investment focus can only be placed in the field of infrastructure. The large amount of construction funds in the west should also rely on the capital obtained from the operation of the market (Zhang, 2005). Therefore, the development of the market owned economy is of great significance to the development of the western (Zhang, 2005). However, the biggest drawback of all institutional structures in the western region is that the state owned structure is too simply, and the proportion of public ownership is too large, and the proportion of private ownership is too small (Li, 2004). Due to the small number of state-owned enterprises and the active new ideas, the coastal areas

have become the center of the commodity economy, according to Zhang (2005). On the contrary, due to the relatively heavy state-owned economy in the central and western regions, these areas have severely hampered its hands and feet, so the gap between the eastern, central and western regions has continued to widen.

As the economic gap between the eastern and western regions of China continues to widen, the central government has formulated a series of preferential policies that are conducive to foreign investment in the central and western regions, such as tax incentives, relaxation of conditions for the use of foreign capital, and preferential policies to encourage foreign investment in the development of mineral resources.

However, with the gradual formation of China's accession to the WTO and comprehensive reform programs, regional preferential policies have gradually lost their effectiveness (Zhang, 2005). Although the state has formulated a series of strategies such as the development of the western region and the rise of the central region in order to narrow the economic gap between the eastern and western regions, the enthusiasm of multinational corporations for investment in economically developed cities and central economic zones is still much higher than that of new ones. So the situation of "high east and low west" has not changed. Although the preferential policies have helped attract more foreign direct investment, the effect of the central government's preferential policies has shown a declining trend.

China's foreign direct investment has undergone a four-stage process and has grown to become one of the countries that accept foreign direct investment in the world (Zhang 2005). Foreign direct investment has made irreplaceable great contributions to China's economic development. At the same time, due to the influence of these different factors, the foreign direct

investment in the eastern, central and western regions of China is imbalanced, leading to an imbalance in regional economic development.

## **Chapter 6: Suggestions**

Through the analysis in the previous chapter, it is found that the economic differences in regions of China have shown a trend of increasing, especially after the 1990s, this gap has further expanded. This section analyzes the negative impact of regional economic imbalance and then points out the need for regional coordinated development to reduce economic gap.

### **6.1 Negative impact of regional economic imbalance**

The western region is located inland, with few external communication channels and poor intermediary channels. Due to the lack of information, the central and western regions are not well aware of international capital markets and the international rules of investment attraction, and lack of systematic understanding of new methods of attracting foreign investment (Hu, 1999; Li, 2004). After the development strategy of the western region was put forward, although some multinational companies have become increasingly interested in investing in the western region, it is still a completely strange place for those company. They are not familiar with the local investment environment and customs. Due to the lack of formal information consulting institutions in the country to provide services to those companies about current situation of the central and western regions, it is difficult for them to accurately understand the investment environment and business opportunities in the central and western regions, especially in the western region.

The infrastructure in the central and western regions is backwards, and the preferential policies for using foreign capital to develop infrastructure are incomplete (Li, 2000; Jin, 2006). The backwards infrastructure in the central and western regions has become a barrier to economic development. There are few types of transportation routes, poor road conditions,

inadequate transportation networks and services, high transportation costs, few communication channels, small coverage, and poor external communication, which makes the product cost in the central and western regions actually higher than the coastal areas (Lin, 1996; Song, 2001; Wang, 2004). As a result, the income from investment infrastructure construction is not expected to be high, and the central government's investment in infrastructure is not enough to fully establish complete infrastructure, which makes the effect of investment on economic growth difficult to show (Lin, 1996). The government has not yet formed clear implementation rules for the use of foreign capital to develop the western infrastructure. The preferential policies for attracting capital from various regions are not perfect, which has led to more concerns among enterprises, which has affected the enthusiasm of foreign investment to a certain extent.

The regional differences have brought many social and political issues while the regional disparity has brought quite a lot of political problems. The primary political issue is that excessive differences may jeopardize political stability (Liu, 1996; Zhang, 2004). If the regional gap is too large, it will cause people's psychological imbalances, split the society into two classes of the poor and the rich. For those in backwards areas, they will think that their backwardness and poverty are caused by discriminatory policies (Zhou, 2003). A good social and psychological environment is a necessary prerequisite and an important guarantee for institutional reform (Liu, 1996; Zhang, 2004). Chinese people have a strong sense of social stability and patience, but if this patience exceeds the bottom line of poverty, it will also reach the opposite side (Liu, 1996). Under this circumstance, the opposition and conflict of the class will become more and more obvious, and it will inevitably lead to two opposing groups of the poor and the rich. In addition, if the backwards areas cannot improve the backwards status due to

the long-term, they will gradually become dissatisfied with the government, and over time will produce independent requirements.

## **6.2 leading industries in different regions**

As far as China's current situation is concerned, China is still in the primary stage of market economy, and the market development needs to be improved (Zhu, 2003). China has a vast territory, and the geographical conditions are complex and variable, with ethnic minorities in the northwest. In addition, the government's policy on regional economic development is based on The Five-Year Plan. Therefore, the government intervention is necessary for China's construction of a harmonious society.

They should actively adjust the trade structure on the premise of expanding the scale of trade and promote the refinement of the domestic industrial division of labor (Liu, 2003; Liu, 2005). Therefore, the government must rationally divide the industry into each regions in order to accelerate the economic development of the less developed provinces in the central and western regions and narrow the gap with the provinces and cities (Wu, 1998; Zhang, 2001). Due to the late start of the opening up of the central and western provinces, the ability to attract foreign investment is lacking behind from that of the coastal areas. Therefore, foreign investment projects that restrict development in coastal areas, such as labor-intensive and resource-development projects, should be properly approved in the central and western regions. The transfer of such industries to the central and western provinces will encourage and guide more foreign investors to invest in the those regions. The central and western regions can also appropriately introduce foreign capital to develop resource processing, such as the construction of petrochemical, salinization, coalification and non-ferrous metal processing projects, in order

to support the development of processing industries in these regions and change the status of output resources (Lu, 1996; Li, 2000).

The central government should provide policy support for industrial transfer between regions. The society must respect the laws of the market and promote the industrial development between regions. The government should make room for the market to play a role, letting the market guide the adjustment of the industrial structure of the region (Wang, 2001; Lou, 2002). The government should respect the choice of industries in various regions and the various industrial development cooperation between them (Wu, 1998). What the government needs to do is to provide information and guidance to the development industries in various regions according to the general trend of world industrial development and the overall needs of national economic development, without having to directly intervene in their decision-making. The government can encourage policy support for industries that meet market requirements. At the same time, the government should formulate policies and apply laws to establish new market rules, and protect the legitimate behaviors of the industrial cooperation between regions and the legitimate rights and interests of relevant parties (Wang, 2001; Tian, 2000). This will promote cooperation in the long run.

The adjustment of foreign direct investment in the central and western industries should be carried out in the following aspects according to Wang (2001). First, manufacturing will continue to be a major area of investment in the western regions, but investment priorities should shift from traditional labor-intensive industries to capital, technology-intensive industries. Second, guide and encourage foreign investment in agriculture, especially in the northwest region to develop high quality, high efficiency, high yield and ecological agriculture. Third, infrastructure such as transportation, communications, energy, and public utilities are the



bottlenecks for the development of the central and western regions. The use of foreign-invested infrastructure will be a priority when the country's fiscal resources are insufficient and private funds are difficult to mobilize.

### **6.3 Developing agglomeration effect in center cities**

Creating a number of areas with initial industrial agglomeration effects is conducive to the development of central cities and urban economic circles, which can attract more foreign direct investment (Lu, 2001). According to the agglomeration effect, when more foreign capital is concentrated on a certain area, new manufacturers are more inclined to invest in the region. From the current situation of the central and western regions of China, the provincial capital cities and some medium-sized cities with better development bases also have a certain foreign investment base (Wang et al., 2004). Therefore, foreign capital should be based on these cities to form an economic center that attracts foreign capital, and then pass them to surrounding areas. Within these urban economic circles, some economic and technological development zones or industrial parks can be established, and special preferential policies are implemented to attract more foreign investment, thus forming agglomeration effects of attracting foreign investment on a small scale (Xia, 2005). In addition, it is also possible to establish a multi-city economic circle by building convenient expressways in the central city, and to promote the development of the surrounding economy.

### **6.4 More infrastructure construction in the central and western regions**

The lag in the construction of infrastructure such as transportation, communication and water conservancy in the central and western regions of China is an important reason for the

long-term imbalance in the regional gap (Zhang, 2000; Zhao, 2003). Infrastructure is not only related to attracting foreign and foreign investment, but also an important factor in industrial agglomeration and lowering corporate costs. To this end, the government must increase investment in infrastructure construction in the central and western regions, especially in transportation and information construction.

For the central region, it is necessary to focus on road construction, strengthen the construction of railways, airports, and natural gas pipelines, especially to strengthen the accessibility of transportation networks, and build the central part into the center of the national transportation hub. Information is the key to reducing the cost of trading (Zhao, 2003). At present, the density of optical fiber and cable in the central region is not enough, and the construction of information must be strengthened. For the western region, the infrastructure is relatively backwards in the country (Zhu, 2003). The state should increase the pace of the construction of transportation facilities in the west. The roads and railways should be extended to poor areas to strengthen the contact with the outside world. Energy is also an important factor restricting enterprises' investment in the west (Zhou, 2003). Therefore, strengthening the construction and pace of power grids and electronic communications is necessary for the development of the western region. In addition, it is necessary to highlight the key position of developing agriculture. Most of the central and western provinces are large agricultural provinces. Therefore, it is necessary to strengthen the construction of water infrastructure in these areas, especially to put the rational development and conservation of water resources in a prominent position (Xiao, 2003). Finally, to fully improve the basic transfer of the living standards of the residents concerned, the government should concentrate on building a number of

important projects such as the West-East Gas Pipeline, the West-East Power Transmission, and the Qinghai-Tibet Railway (Xiao, 2003; Lu, 2001).

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